Appendix A – Notice of Intent

in File No. 4–747, between FINRA and LTSE, filed pursuant to Rule 17d–2 under the Act, is approved and declared effective.

It is further ordered that LTSE is relieved of those responsibilities allocated to FINRA under the Plan in File No. 4–747.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[18]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2019–17208 Filed 8–9–19; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

Sunshine Act Meeting; Cancellation

FEDERAL REGISTER CITATION OF PREVIOUS ANNOUNCEMENT: 84 FR 38321, August 6, 2019.

PREVIOUSLY ANNOUNCED TIME AND DATE OF THE MEETING: Thursday, August 8, 2019 at 10:00 a.m.

CHANGES IN THE MEETING: The Open Meeting scheduled for Thursday, August 8, 2019 at 10:00 a.m., has been cancelled.

CONTACT PERSON FOR MORE INFORMATION: For further information; please contact Vanessa A. Countryman from the Office of the Secretary at (202) 551–5400.

Dated: August 7, 2019.

Vanessa A. Countryman,

Secretary.

[FR Doc. 2019–17248 Filed 8–8–19; 11:15 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

Sunshine Act Meetings

TIME AND DATE: 2:00 p.m. on Thursday, August 15, 2019.

PLACE: The meeting will be held at the Commission's headquarters, 100 F Street NE, Washington, DC 20549.

STATUS: This meeting will be closed to the public.

MATTERS TO BE CONSIDERED: Commissioners, Counsel to the Commissioners, the Secretary to the Commission, and recording secretaries will attend the closed meeting. Certain staff members who have an interest in the matters also may be present.

In the event that the time, date, or location of this meeting changes, an announcement of the change, along with the new time, date, and/or place of the meeting will be posted on the Commission's website at *https://www.sec.gov.*

The General Counsel of the Commission, or his designee, has certified that, in his opinion, one or more of the exemptions set forth in 5 U.S.C. 552b(c)(3), (5), (6), (7), (8), 9(B) and (10) and 17 CFR 200.402(a)(3), (a)(5), (a)(6), (a)(7), (a)(8), (a)(9)(ii) and (a)(10), permit consideration of the scheduled matters at the closed meeting.

The subject matters of the closed meeting will consist of the following topics:

Institution and settlement of injunctive actions;

Institution and settlement of administrative proceedings;

Resolution of litigation claims; and

Other matters relating to enforcement proceedings.

At times, changes in Commission priorities require alterations in the scheduling of meeting agenda items that may consist of adjudicatory, examination, litigation, or regulatory matters

CONTACT PERSON FOR MORE INFORMATION: For further information; please contact Vanessa A. Countryman from the Office of the Secretary at (202) 551–5400.

Dated: August 8, 2019.

Vanessa A. Countryman,

Secretary.

[FR Doc. 2019–17353 Filed 8–8–19; 4:15 pm]

BILLING CODE 8011–01–P

TENNESSEE VALLEY AUTHORITY

Sugar Camp Energy LLC Mine Expansion (Revision 6) Environmental Impact Statement

AGENCY: Tennessee Valley Authority.

ACTION: Notice of intent.

SUMMARY: The Tennessee Valley Authority (TVA) intends to prepare an Environmental Impact Statement (EIS) on the proposed expansion of mining operations by Sugar Camp Energy, LLC to extract TVA-owned coal reserves in Hamilton and Franklin counties, Illinois. A portion of the expansion area contains coal reserves owned by TVA that are leased to Sugar Camp Energy, LLC. TVA will consider whether to approve the company's application to mine approximately 12,125 acres (''project area'') of TVA-owned coal reserves.

DATES: Comments must be received or postmarked by September 11, 2019.

ADDRESSES: Written comments should be sent to Elizabeth Smith, NEPA Specialist, Tennessee Valley Authority, 400 W Summit Hill Drive #WT11B, Knoxville, Tennessee 37902. Comments may be sent electronically to *esmith14@tva.gov.*

FOR FURTHER INFORMATION CONTACT: Elizabeth Smith, by phone at 865–632–3053, by email at *esmith14@tva.gov,* or by mail at the address above.

SUPPLEMENTARY INFORMATION: This notice is provided in accordance with the Council on Environmental Quality's regulations (40 CFR parts 1500 to 1508) and TVA's procedures for implementing the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR part 800).

Sugar Camp Energy, LLC (Sugar Camp) proposes to expand its underground longwall mining operations at its Sugar Camp Mine No. 1 in southern Illinois by approximately 37,972 acres. TVA owns coal reserves underlying approximately 12,125 acres of the Herrin No. 6 seam within the expansion area. In November 2017, Sugar Camp obtained approval for the expansion from the State of Illinois, when the Illinois Department of Natural Resources (IDNR), Office of Mines and Minerals (OMM) Land Reclamation Division (LRD) approved Significant Revision (SR) No. 6 to the company's Surface Coal Mining and Reclamation Operations Permit—Underground Operations (Number 382). TVA will consider whether to approve the company's application to mine approximately 12,125 acres (''project area'') of the TVA-owned coal reserves.

Under the proposal, surface and underground disturbance would occur. Surface activities to support the underground mining would be limited to the construction of bleeder shafts and installation of associated utilities to operate the bleeder shafts to support the extraction of TVA-owned coal. The exact location of these surface activities is unknown at this time, but they would occur within the project area. Other activities to support the underground mining of TVA-owned coal would be located outside of the project area and include operation of the coal preparation plant (approximately 3.5 miles southwest of Macedonia, Illinois).

Underground mining would be performed using two techniques. Coal would be extracted using room and pillar and continuous mining techniques during a development period, followed by longwall mining and associated planned subsidence. Subsidence would only occur under a portion of the project area. Sugar Camp would utilize its existing Mine No. 1

[18] 17 CFR 200.30–3(a)(34).

facilities to process and ship extracted coal.

Background

TVA is a federal corporation and instrumentality of the United States government, created in 1933 by an act of Congress to foster the social and economic well-being of the residents of the Tennessee Valley region. As part of its diversified energy strategy, TVA completed a series of land and coal mineral acquisitions from the 1960s through the mid-1980s that resulted in the coal ownership of two large coal reserve blocks in the southwestern section of the Illinois Basin. TVA owns coal reserves underlying approximately 65,000 acres of land containing approximately 1.35 billion tons of Illinois No. 5 and No. 6 coal seams.

TVA executed a coal lease agreement with Sugar Camp in July 2002 which allows Sugar Camp to mine the TVA coal reserves in the Illinois Basin coalfield. The purpose of this agreement is to facilitate the recovery of TVA coal resources in an environmentally sound manner. Under the terms of the agreement, Sugar Camp may not commence any mining activity pursuant to a mining plan or revisions until satisfactory completion of all environmental and cultural resource reviews by TVA required for compliance with all applicable law and regulations. Sugar Camp submitted to TVA a plan for the mining of 12,125 acres of coal reserves within the area previously approved by the State of Illinois as SBR No. 6. The EIS initiated by TVA will assess the environmental impact of approving this plan. In doing so, TVA also expects to address the cumulative impacts from the mining of the larger 37,972-acre area previously approved by the State of Illinois as SBR No. 6.

The operations of Sugar Camp Mine No. 1 have previously been subject to TVA review and approval. In 2008, Sugar Camp obtained a permit from the State of Illinois for underground longwall mining operations on approximately 12,103 acres in Franklin and Hamilton counties; the original permit did not include TVA-owned coal reserves. In 2010, Sugar Camp applied to the state for a SBR of that permit to mine TVA-owned coal under an additional 817-acre area. The permit was issued in May 2010. In 2011, TVA prepared an EA to document the potential effects of Sugar Camp's proposed mining of TVA-owned coal underneath a 2,600-acre area for Sugar Camp Mine No. 1.

In November 2017, Sugar Camp obtained approval from the IDNR to expand Sugar Camp Mine No. 1 by 37,792 acres. The Sugar Camp proposal included the expansion of operations along the north perimeter of its original mine perimeter, into a 2,250-acre area referred to as Viking District #2. In November 2018, TVA completed an EA entitled ''Sugar Camp Coal Mine Expansion Viking District #2'' which addressed expansion of mining operations into the area. In May 2019, TVA supplemented this EA to consider Sugar Camp's proposal to expand its mining into a 155-acre area within the Viking District #3, adjacent to Viking District #2.

Alternatives

TVA has initially identified two alternatives for consideration in the EIS: TVA's approval of Sugar Camp's application to mine 12,125 acres of TVA-owned coal reserves within the expansion area of Sugar Camp Mine No. 1, as approved by the State of Illinois; and the No Action Alternative. Under the action alternative, TVA proposes to assess the direct and indirect effects of the mining operations to extract TVA-owned coal reserves underlying approximately 12,125 acres within the expansion area. The mining of the remaining acreage within the 37,792-acre expansion area is not a connected action; however, TVA will address the effects of mining the remaining acreage in the cumulative impacts section of the EIS. The description and analysis of these alternatives in the EIS will inform decision makers, other agencies and the public about the potential for environmental impacts associated with the mining operations. TVA solicits comment on whether there are other alternatives that should be assessed in the EIS.

Proposed Resources and Issues To Be Considered

Public scoping is integral to the process for implementing NEPA and ensures that issues are identified early and properly studied, issues of little significance do not consume substantial time and effort, and the analysis of those issues is thorough and balanced. This EIS will identify the purpose and need of the project and will contain descriptions of the existing environmental and socioeconomic resources within the area that could be affected by mining operations. Evaluation of potential environmental impacts to these resources will include, but not be limited to, water quality, soil erosion, floodplains, aquatic and terrestrial ecology, threatened and endangered species, botany, wetlands, land use, historic and archaeological resources, as well as solid and hazardous waste, safety, socioeconomic and environmental justice issues. The final range of issues to be addressed in the environmental review will be determined, in part, from scoping comments received. TVA is particularly interested in public input on other reasonable alternatives that should be considered in the EIS. The preliminary identification of reasonable alternatives and environmental issues in this notice is not meant to be exhaustive or final.

Public Participation

The public is invited to submit comments on the scope of this EIS no later than the date identified in the **DATES** section of this notice. Federal, state and local agencies and Native American Tribes are also invited to provide comments. After consideration of comments received during the scoping period, TVA will develop and distribute a scoping document that will summarize public and agency comments that were received and identify the schedule for completing the EIS process. Following analysis of the issues, TVA will prepare a draft EIS for public review and comment; the draft EIS is scheduled for completion in late 2020. In finalizing the EIS and in making its final decision, TVA will consider the comments that it receives on the Draft EIS.

Authority: 40 CFR 1501.7.

M. Susan Smelley,

Director, Environmental Compliance and Operations.

[FR Doc. 2019–17214 Filed 8–9–19; 8:45 am]

BILLING CODE 8120–08–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

Hazardous Materials: Notice of Applications for Modifications to Special Permits

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: List of applications for modification of special permits.

SUMMARY: In accordance with the procedures governing the application for, and the processing of, special permits from the Department of Transportation's Hazardous Material Regulations, notice is hereby given that the Office of Hazardous Materials Safety has received the application described herein. Each mode of transportation for

Appendix B – Scoping Comments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 1 2 2019

REPLY TO THE ATTENTION OF:

Elizabeth Smith
Tennessee Valley Authority
400 West Summit Hill Drive, WT 11B-K
Knoxville, Tennessee 37902

Re: Comments on the Notice of Intent to Prepare an Environmental Impact Statement for Sugar Camp Energy LLC Mine Expansion (Revision No. 6), Franklin and Hamilton Counties, Illinois

Dear Ms. Smith:

The U.S. Environmental Protection Agency has reviewed the materials published by the Tennessee Valley Authority (TVA) regarding the intent to prepare an Environmental Impact Statement (EIS) for the Sugar Camp Mine Expansion – Revision No. 6 in Franklin and Hamilton Counties, Illinois. This letter provides EPA's review of these scoping materials, pursuant to our authorities under the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

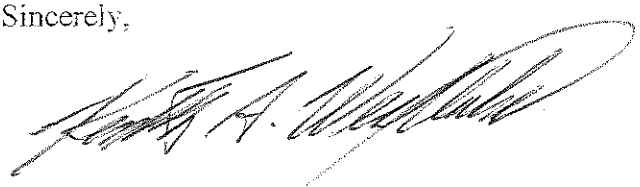
TVA is preparing a Draft EIS to consider whether to allow Sugar Camp Mine LLC (the project proponent) to mine approximately 12,125 acres of TVA-owned coal reserves, as part of the full Sugar Camp Mine – Revision No. 6. The full proposed expansion is 36,972 acres and has been approved under the Illinois Department of Natural Resources (Illinois DNR) Surface Mining Control and Reclamation Act (SMCRA) permit. Surface and underground disturbances would occur. Surface activities include construction of a bleeder ventilation shaft and associated infrastructure. Underground mining would be performed using both room-and-pillar mining and longwall mining and include planned subsidence under portions of the project area. The project proponent would use existing coal transfer and processing facilities. There are two alternatives proposed for analysis: no action and the preferred alternative (pursue the project as permitted by the Illinois DNR).

We recognize that at this stage in the process, details regarding the proposed actions and potential impacts associated with the alternatives are limited. Based on our review of the available materials, EPA recommends clarifications regarding potential impacts to water quality, surface waters, air quality, and human health. We are also providing comments regarding purpose and need, range of alternatives, project description, and scope. Our detailed comments are enclosed.

Our goal is to provide meaningful comments and recommendations that will improve the quality of the NEPA documentation, improve the permitting and NEPA processes, and better protect human health and the environment. Given this, EPA would appreciate serving as a Cooperating Agency to provide consultation as TVA develops a comprehensive and defensible document, with the goal of efficiently resolving environmental issues early in the environmental review process.

Thank you in advance for your consideration of comments to help inform the Draft EIS and better protect human health and the environment. We are happy to answer any questions or to further discuss our comments -- please contact me or Elizabeth Poole of my staff at poole.elizabeth@epa.gov or 312-353-2087 to arrange a call or meeting.

Sincerely,



Kenneth A. Westlake
Deputy Director, Office of Multi-Media Programs
Office of the Regional Administrator

Enclosure (2): Detailed Comments
Construction Emission Control Checklist

cc: Robert Gramke, Chief, Regulatory Branch, U.S. Army Corps of Engineers
Tyson Zobrist, Regulatory Project Manager, U.S. Army Corps of Engineers
Matt Mangan, U.S. Fish and Wildlife Service
Bradley Hayes, Office of Mines and Mineral, Illinois Department of Natural Resources
Ray Pilapil, Air Permits Manager, Illinois Environmental Protection Agency
Darin LeCrone, 401 Program, Illinois Environmental Protection Agency

Enclosure 1: EPA's Detailed Comments on the Notice of Intent (Scoping) to Prepare an Environmental Impact Statement for the Sugar Camp Mine Expansion (No. 6) Franklin and Hamilton Counties, Illinois

Background Documentation

EPA reviewed the following documents, referred to collectively as the scoping package in these comments:

- Notice of Intent (NOI) to Prepare an Environmental Impact Statement for the project in the Federal Register (dated August 12, 2019);
- Project Map provided by the Tennessee Valley Authority (TVA) by email on August 22, 2019;
- Illinois Department of Natural Resources (Illinois DNR) Surface Mining Control and Reclamation Act (SMCRA) Permit Number 382 (Revision 6);
- Illinois Environmental Protection Agency (Illinois EPA) Construction Permit 18050018
- Illinois EPA National Pollution Discharge Elimination System (NPDES) Permit No. IL0078565; and,
- Previous NEPA documentation prepared by TVA, including the 2019 Supplemental Draft Environmental Assessment – Viking District #2.

Purpose and Need

NEPA regulations require that the Draft EIS "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action" (40 CFR § 1502.13). The purpose and need statement should be specific enough to allow for a reasonable range of alternatives, but not so narrow as to pre-select a single alternative. The statement should also justify the need for project impacts on the human and natural environment.

> **Recommendations:** The Draft EIS should articulate the purpose and need for the proposed action, which should include consideration of trends in coal demand and of alternative sources of energy production. If a CWA Section 404 review is triggered (see comments on Aquatic Resources – Streams and Wetlands below), the USACE's public interest review would also require review of "reasonable alternative locations and methods to accomplish the objective of the proposed structure or work."[1]

Project Description

Range of Alternatives

NEPA regulations require an EIS to "rigorously explore and objectively evaluate all reasonable alternatives" (40 CFR § 1502.14). The NOI identifies a single alternative.

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[1] See "U.S. Army Corps of Engineers Permitting Process Information" at https://www.lrl.usace.army.mil/Portals/64/docs/regulatory/Permitting/PermittingProcessInformation.pdf

Recommendations: Based on articulation of the purpose and need, as discussed above, the Draft EIS should consider a sufficient range of alternatives. EPA understands that coal resources are in a fixed location; however, alternatives may consider alternative site configuration, mining methods, mine locations, coal resources, or sources of energy, among other factors.

Description of Actions

The scoping package describes the following general activities as planned for the proposed project: room-and-pillar mining; continuous mining; longwall mining; associated planned subsidence (under a portion of the site); surface and underground disturbances; and both on-site and off-site infrastructure needs (such as a new bleeder ventilation shaft and use of the existing coal processing and transportation facilities, respectively).

Recommendations: The Draft EIS should outline all specific proposed activities associated with each alternative in order to accurately assess potential impacts. This should include temporary staging of equipment, placement of fill or waste materials, temporary holding areas, planned subsidence, and locations of applicable on-site and off-site permanent facilities, among other potential proposed actions.

Connected Actions

TVA's coal reserves are located within the footprint of the full mine expansion, as approved by Illinois DNR. The scoping package indicates that coal transport and processing facilities would be shared by both the TVA- and privately-owned recovered coal. Other facilities, such as the bleeder ventilation shaft, would be constructed "to support the extraction of the TVA-owned coal". The scoping package also indicates that the Draft EIS would consider only TVA-owned coal and associated infrastructure as direct actions; impacts associated with mining the privately-owned coal would be considered under cumulative actions.

Recommendation: The Draft EIS should articulate which actions are considered within the scope of the analysis, including whether privately-owned coal extraction and associated actions should be considered connected actions under the NEPA regulations at 40 CFR 1508.25(a)(1).

Aquatic Resources

Streams and Wetlands

The scoping package states:

The existing permit and shadow areas are located in the glaciated upland area of northeastern Franklin County and western Hamilton County. These areas are situated within the reaches of two streams, Akin Creek and the Middle Fork Big Muddy River. Unnamed tributaries and associated branches pass through the permit area and shadow

area. Although no surface disturbance is proposed in this revision, post-subsidence mitigation may be necessary to restore pre-existing drainage patterns which could result in impacts to streams and wetlands. Activities in the project area that would alter these streams or wetlands may require a Section 404 permit from the US Army Corps of Engineers.

Subsidence is planned and would potentially cause impacts to aquatic resources on the site and possible within the larger watershed. The scoping package states:

Pursuant to the terms of Permit No. 382 and Revision No. 2 to Permit No. 382, the permittee recognizes the potential for short term stream alterations as well as the potential for flooding as a result of subsidence in the upper reaches of the Middle Fork Big Muddy River and Akin Creek. Stream flows may be interrupted, causing water to pool in the existing stream channels or over bank flooding into low lying areas. Each of these streams is classified as perennial streams. Pursuant to the terms in Permit No. 382 and Revision No. 2 to Permit No. 382, the permittee proposes to excavate, or dredge, stream channels to drain the subsided, flooded stream area back into its stream channel. Dredging of the chain pillars is also proposed. If this dredging is necessary, it will allow for continued uninterrupted stream flow. The mining-related effects are expected to be only temporary in nature and stream flows are required to be restored to pre-mining conditions.

Surface impacts are also anticipated as a result of the construction of the bleeder shaft and associated utilities; the exact location is unknown, but within the project area.

Based on the information provided, EPA recommends:

- The Draft EIS should explain how the project would comply with the CWA Section 404(b)(1) Guidelines if impacts to streams and wetlands are proposed. We recommend that the applicant exhaust all efforts to first avoid and then minimize stream and wetland impacts due to surface disturbance and the planned subsidence associated with longwall mining, to the greatest extent possible. Subsidence could affect hydrology, which could lead to impacts to streams and wetlands. If surface impacts are anticipated under CWA Section 404, the alternatives analysis would need to consider off-site alternatives, rather than just the preferred site and no action alternative.
- If a CWA Section 404 permit is required then an appropriate mitigation plan should be developed and coordinated with the U.S. Army Corps of Engineers (USACE), EPA, and USFWS. Mitigation should be proposed only after avoidance and minimization of impacts is pursued.
- The Draft EIS should contain one or more map(s) to indicate potential subsidence locations and the anticipated impacts to aquatic resources. The Draft EIS should also include maps that depict full boundaries of wetland features and a delineation of all streams on site (ephemeral, intermittent, and perennial). If impacts to streams and

wetlands are anticipated due to subsidence, it will be necessary to describe the baseline condition and quality of the resources that would be impacted using appropriate assessment methods.

- Consider the need for an Individual CWA Section 404 permit. Based on our review of the information available at this point, the potential cumulative impacts of the project would likely qualify this site for an Individual CWA Section 404 permit rather than a General Permit. For example, there is the potential for stream alterations and flooding within the shadow area, which may result from the longwall mining subsidence.
- Develop a plan for monitoring of stream and wetland resources post-construction as part of the Draft EIS. While the applicant suggests that the quality of streams and wetlands within the proposed permit shadow area would not likely change as a result of the proposed operations, those resources should be monitored to further support this assumption. EPA recommends TVA and the project proponent develop a plan to assess the impacts to wetlands as the alterations discussed above could also impact wetland resources by potentially impacting hydrology and wetland functional capacity in general. If impacts are realized, appropriate remediation or mitigation may be required.
- Include a discussion in the Draft EIS addressing the existing refuse disposal facility's capacity to manage waste that would be generated from the processing of additional coal from the proposed underground mine expansion project.
- The scoping package indicates a history of violations and noncompliance related to aquatic resources at the Sugar Camp Mine No. 1. The Draft EIS should address current violations individually and discuss the proactive measures the applicant has taken/will take to ensure that these issues do not recur at the Sugar Camp Mine No. 1. Any mitigation commitments, including adaptive management, to address these violations should be outlined.

Water Quality

Appendix B of the SMCRA Results of Review states that no changes are planned to the NPDES permit (Illinois EPA permit No. IL007865). Increasing the mine area would increase the quantity of wastewater needing treatment and disposal under the NPDES program. The expanded operation would have an increase on the volume of water, pumped from the underground mine works, which is a categorical wastestream. The coal and refuse removal from the operation would create additional wastewater volumes at the coarse refuse disposal sites and at the coal fine slurry disposal. All three of these wastestreams are categorical wastestreams under the NPDES program. Further, the existing NPDES permit contains water-quality-based effluent limits for chloride and sulfate.

Recommendation: The Draft EIS should evaluate pollutant loading limits to reflect increased production and provide additional documentation should the conclusion remain that no changes to the existing NPDES permit are required.

The existing NPDES permit had effluent exceedances at four different outfalls in July 2019. This includes three of the categorical limits and two water-quality-based effluent limits. There have been effluent exceedances in five of the past twelve quarters of operation. Expanded operations would likely stress the existing treatment system and may result in more effluent exceedances.

> **Recommendations:** Implement more effective treatment systems; and outline any completed and/or proposed improvements to the treatment system in the Draft EIS.

Aerial photos of the current waste management facilities show deep red pools, which are consistent with acidic conditions. The NPDES categorical standards are determined based on the quality of water prior to treatment and a deep red pool is an indication that the facility has an acid/ferruginous wastewater stream. The current NPDES permit only authorizes the facility to discharge Alkaline Mine Drainage, not Acid Mine Drainage.

> **Recommendations:** Verify that the facility has the appropriate authorization to dispose of Acid Mine Drainage; and modify the current NPDES permit as needed. Document these actions in the Draft EIS.

Within the project area, the Middle Fork Big Muddy River (The Upper Big Muddy River watershed) is listed as an impaired water under CWA Section 303(d) for general use due to surface mining and contaminations from sedimentation and siltation. The proposed mine expansion could negatively impact agricultural lands through contaminated discharge overflow.

> **Recommendations:** The Draft EIS should address potential impacts to water quality, including but not limited to permitting requirements, outfall locations, and potential mitigation measures. EPA recommends TVA and the project proponent establish additional berms and install retaining walls, swales, or basins to divert runoff and overflow from sedimentation basins and coal impoundments. We recommend TVA and the project proponent install additional silt fencing, as a means of temporary sediment control to protect water quality from stormwater runoff. EPA also recommends increased monitoring frequency to ensure any additional berms, retaining walls, swales, or basins would be regularly inspected to avoid negative impacts to adjacent landowners.

Cumulative Impacts to Water Quality

In Indiana, similar mining operations have overlapped with historic oil and gas wells. Some of these wells were associated with Underground Injection Control Type II disposal and recovery operations.

> **Recommendations:** The Draft EIS should identify whether there are historic oil and gas wells in the area. If historic wells exist, EPA recommends increased monitoring frequency to monitor for fluctuations in the qualtiy of wastewater, including having treatment and storage facilities which are capable of accommodating fluctuations in the quality of the wastewater.

Air Quality

Construction and operation of the proposed project would produce air emissions. Construction truck trips for material hauling, exhaust from heavy machinery, and generation of fugitive dust, are among anticipated air pollution sources. During operations, consider routine operations of the mine as well as maintenance and hauling activities.

> **Recommendations:** In the Draft EIS, identify all reasonably foreseeable sources of air emissions. Provide quantitative estimates of emissions totals and identify measures to minimize emissions. To minimize fugitive dust emissions during construction and operation, the fugitive coal dust emissions control plan may need to be updated. Consider the enclosed Construction Emissions Control Checklist as a resource.

Based on the scoping package there would be construction of bleeder shafts and installation of associated utilities to operate the bleeder shafts to support the extraction of coal. Any equipment that has the potential to emit air pollution may be required to obtain a Clean Air Act (CAA) permit before installation at the site.

> **Recommendation:** Prior to beginning actual construction of such equipment, the applicant should consult with Illinois EPA to determine whether a CAA permit is required.

Based on the scoping package and the 2019 Supplemental Environmental Assessment – Viking District #2, the mined coal would be processed at an existing coal preparation plant located outside the project area. It is unclear whether t physical or operational changes to the plant would be necessary due to the proposed project.

> **Recommendation:** The Draft EIS should describe any physical or operational changes to process equipment at the coal preparation plant (including any modifications to existing conveyors or construction of new conveyors). Coal processing plant changes should be evaluated for applicability of CAA permitting requirements, including all federal requirements for New Source Performance Standards – specifically 40 CFR 60, Subpart Y. Any modifications to CAA permitting requirements should be disclosed in the Draft EIS.

It is unclear whether there would be increased throughput to the coal preparation plant due to Revision 6 and whether that throughput would require revisions to construction and operating permits for this facility. Our review of the facility's Illinois EPA Construction Permit Number 18050018 suggests that the primary crushers and belt conveyers may experience increased use due to the project, which could lead to an increase in particulate matter emissions from the source.

> **Recommendations:** The Draft EIS should state whether there would be an increase in throughput to the coal preparation plant as a result of the project. The analysis should include whether Construction Permit Number 18050018 would need to be revised to address the increased emissions or whether and new permit would be required.

Greenhouse Gas Emissions

The obligation to consider climate change as part of a NEPA analysis derives from the NEPA statute's requirement to consider environmental impacts of proposed actions and to evaluate alternatives. Estimated emissions may serve as a useful proxy for assessing their effects and comparisons among alternatives to meet that statutory obligation.

Recommendations:

- Include an estimate of the direct and indirect greenhouse gas emissions caused by the proposal and alternatives. The estimated indirect emissions should include emissions from end use combustion.
- Consider practicable mitigation of direct greenhouse gas emissions, such as using best practices to minimize construction emissions.
- In the affected environmental section, discuss projected future environmental trends (i.e., increasing flooding and severe precipitation events) that may impact the proposed project. Include consideration of future climate scenarios, such as those provided by the National Climate Assessment[2]. If projected changes could exacerbate environmental impacts of the project, these likely changes should be considered in the Draft EIS.

Health and Safety

Adherence to occupational health and safety standards are part of the human environment under NEPA; NEPA calls on the Federal government to, "attain the widest range of beneficial uses of the environmental without degradation, risk to health or safety, or other undesirable and unintended consequences.[3]" Information regarding human health protections are an important part of public disclosure and the decision-making process.

Recommendation: The Draft EIS should include information about how TVA and the project proponent ensure occupational health and safety onsite; this might be in the form of incorporation by reference. The Draft EIS should include clear and specific mitigation measures regarding human health and occupational safety.

Children's Health

Children are more vulnerable to environmental exposure. According to EPA's publicly-available environmental and human health database *NEPAssist*[4], there are several schools near the proposed project area.

Recommendation: The Draft EIS should clarify whether identified places where children live, learn, and play would be impacted by the proposed project (if, for example,

[2] http://nca2018.globalchange.gov/
[3] Section 101(b)(3) [42 USC 4331]
[4] https://www.epa.gov/nepa/nepassist

schools are located downwind of the ventilation shafts or near coal transportation routes). If TVA and the project proponent identify potential exposures, the Draft EIS should include outreach to impacted populations and mitigation measures to reduce potential harm.

Threatened and Endangered Species

The proposed project area is within range of the Federally-listed endangered Indiana bat, endangered piping plover, and the threatened northern long-eared bat. There may be maternity roost(s) for the Indiana bat near the mine site. Changes to surface waters per CWA Section 404 permitting or water quality as a result of discharge may impact listed species.

Recommendations: Continue coordination with USFWS regarding potential impacts to the Indiana bat, piping plover, and northern long-eared bat. The Draft EIS should include mitigation measures to reduce impacts to threatened and endangered species. Consult with Illinois DNR to determine whether any state-listed species could be affected by the proposed project.

Consultation and Coordination

The Draft EIS should document consultation and coordination, for example with: USACE, USFWS, and EPA on impacts to Waters of the U.S.; USFWS and Illinois DNR regarding state- and Federally-listed threatened or endangered species; the State Historic Preservation Office on historic resources; and applicable Tribal governments on historic tribal artifacts or other potential impacts.

Enclosure 2: U.S. Environmental Protection Agency Construction Emission Control Checklist

Diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer term exposure may worsen heart and lung disease. We recommend the Tennessee Valley Authority consider the following protective measures and commit to applicable measures in the Draft Environmental Impact Statement (EIS).

Mobile and Stationary Source Diesel Controls

Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.

- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).[1]
- Locomotives: Locomotives servicing infrastructure sites should meet, or exceed, the U.S. EPA Tier 4 exhaust emissions standards for line-haul and switch locomotive engines where possible.[2]
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available

Consider requiring the following best practices through the construction contracting or oversight process:

- Establish and enforce a clear anti-idling policy for the construction site.
- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Repower older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric vehicles, battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.).
- Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and

[1] http://www.epa.gov/otaq/standards/nonroad/nonroadci.htm
[2] http://www.epa.gov/otaq/standards/nonroad/locomotives.htm

the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards.

Fugitive Dust Source Controls

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Occupational Health

- Reduce exposure through work practices and training, such as maintaining filtration devices and training diesel-equipment operators to perform routine inspections.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the type of work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.

NEPA Documentation

- Per Executive Order 13045 on Children's Health[3], EPA recommends the lead agency and project proponent pay particular attention to worksite proximity to places where children live, learn, and play, such as homes, schools, and playgrounds. Construction emission reduction measures should be strictly implemented near these locations in order to be protective of children's health.
- Specify how impacts to sensitive receptors, such as children, elderly, and the infirm will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

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[3] Children may be more highly exposed to contaminants because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Also, children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in higher exposures to contaminants as compared with adults. Children may be more vulnerable to the toxic effects of contaminants because their bodies and systems are not fully developed and their growing organs are more easily harmed. EPA views childhood as a sequence of life stages, from conception through fetal development, infancy, and adolescence.

September 12, 2019

Tennessee Valley Authority
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Submitted via USPS and e-mail

Re: NEPA Scoping Comments on TVA's Sugar Camp Coal Mine No. 1 Proposed Expansion

Dear Ms. Smith:

The Sierra Club submits the following comments on the scope of Tennessee Valley Authority's ("TVA's") upcoming environmental review of the proposed expansion at the Sugar Camp Coal Mine No. 1 in Illinois. The proposal entails mining approximately 12,125 acres of TVA-owned coal reserves as part of a larger 36,000-acre Sugar Camp Mine No. 1 expansion.[1] Although not included in the scoping notice, TVA stated in an email to Sierra Club counsel that the expansion would allow the company to mine approximately 105 million tons of TVA-owned coal.[2]

This area is part of a larger block of TVA coal reserves in Illinois, and, according to TVA's 2019 Supplemental Environmental Assessment ("EA") at Sugar Camp, "TVA owns coal reserves underlying 64,959 acres of land containing approximately 1.35 billion tons of the Illinois Springfield (No. 5) and Herrin (No. 6) coal seams."[3] Sugar Camp Mine is owned by Foresight Energy, and, according to Foresight's website, Sugar Camp produced 14.5 million tons of coal in 2018 and has more than 1.3 billion tons of coal reserves, even without the proposed 105 million

[1] Tennessee Valley Authority, Scoping Notice at 1 (Sept. 9, 2019). Attached as Exhibit 1.
[2] Elizabeth Smith, TVA NEPA Specialist, email to Nathaniel Shoaff, Sierra Club (Sept. 9, 2019) (on file with Sierra Club).
[3] TVA, Sugar Camp Coal Mine Expansion, Supplemental Environmental Assessment at 2 (May 2019), available at https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Environmental%20Reviews/Sugar%20Camp%20Mine/sugar_camp_coal_mine_viking_district_2__supplemental_ea_may_9_2019.pdf, (last accessed Sept. 11, 2019). Attached as Exhibit 2.

ton expansion.[4] This means – by its own calculations as to reserves and current production rate – that Sugar Camp already has an approximately 90-year supply of coal without the additional 105 million ton expansion sought here.

As explained more fully below, we are at a critical juncture in national and international efforts to prevent the worst effects of climate disruption. Rather than commit to using our federally-owned lands and minerals to further the fossil fuel industry's agenda, we must ensure our public resources are managed to benefit all Americans. Sierra Club requests that TVA reject the proposed lease of TVA reserves by application in favor of the No Action alternative. At a minimum, TVA's upcoming environmental analysis must address the following issues, discussed in detail below.

Sierra Club is America's largest grassroots environmental organization, with more than 3 million members and supporters nationwide and more than 30,000 members in Illinois. Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives.

On behalf of our millions of members and supporters, we urge TVA to deny Sugar Camp's proposed expansion into TVA-owned coal reserves in favor of the No Action alternative.

I. TVA MUST ADEQUATELY ADDRESS IMPACTS TO WATER RESOURCES.

As explained in detail in the attached comments submitted by Sierra Club in April 2019 regarding TVA's Supplemental Assessment at Sugar Camp Mine, the proposed expansion poses a serious threat to water resources that has not been previously analyzed.[5]

Sierra Club members are concerned and potentially affected by pollutant discharges from the Sugar Camp Mine into the Middle Fork Big Muddy River and creeks in Franklin County, including an unnamed tributary to Middle Fork Big Muddy River, an unnamed tributary to Akin Creek. Further, our members are concerned with the growing levels of chloride and other water pollutants in the Middle Fork Big Muddy River and Big Muddy River, which are Waters of the State as part of the Mississippi River Basin. The Middle Fork Big Muddy River is listed on the draft 2016 303(d) list of impaired waters for reasons that may include pollutants from coal mining.

[4] Foresight Energy, "Operations," http://www.foresight.com/operations/ (last accessed Sept. 11, 2019) (stating "Coal Production: 14.5 million tons in 2018 . . . Coal Reserves: 1,309.9 million tons."). Attached as Exhibit 3.

[5] Sierra Club, Letter to Tennessee Valley Authority, "Comment Regarding Sugar Camp Coal Mine Expansion Viking District #2 Draft Supplemental Environmental Assessment, Franklin and Hamilton Counties, Illinois," (April 11, 2019). Attached as Exhibit 4.

At a minimum, TVA's upcoming Environmental Impact Statement ("EIS") for the 105 million ton expansion must address the following issues regarding impacts to water resources:

Repeated history of water discharge violations at Sugar Camp: The repeated history of violations and non-compliance on record for the Sugar Camp Mine clearly shows this mine has consistently failed to remove coal in an environmentally sound manner as evidenced by its repeated quarters in non-compliance with basic permit levels, including 125 state and federal violations from 2015 to 2018.[6] There have been at least two formal enforcement actions in recent years, and unpermitted construction activities, including creation of two deep underground injection wells before being permitted to do so. According to the EPA ECHO database, Sugar Camp has a repeated history of contaminated water releases and coal slurry releases to area waterways. The mine has a history of failing to maintain its waste containment structures, to the detriment of area creeks and discharging to the Middle Fork Big Muddy River. There are also recorded instances of coal waste overflowing mine containment structures.[7]

In the forthcoming EIS, TVA must analyze and disclose the environmental impacts of the mine's water pollution and its struggles to keep discharges within permitted levels. Given the fact that the applicant has been discharging chloride at high concentrations (higher even than its current permit allows), the EIS must also consider impacts from chloride toxicity and other effects on the environment.

Cumulative impacts of pollution loading on the Big Muddy River: TVA must analyze and disclose the cumulative impacts to the Big Muddy River that would result from this massive expansion when combined with past, present, and future mining at Sugar Camp and other nearby projects. For example, the Williamson Energy Pond Creek No. 1 Mine, located near Johnston City, Williamson County, but also with shadow area in Franklin County, has proposed a 12.5-mile pipeline to pump contaminated mine water for direct discharge into the Big Muddy River. The proposal would entail discharges of up to 2,700,000 to 3,500,000 gallons per day of high chloride and sulfate contaminated water. The cumulative impacts of mine discharges to the Big Muddy River and its tributaries must be analyzed and disclosed.

Impacts to Rend Lake: The Sugar Camp Mine obtains water from Rend Lake and TVA must analyze impacts to water quantity and water quality at Rend Lake based on the proposed and past withdrawals, both from Sugar Camp and other projects.[8] For example, a contract signed in 2007 with Adena Resources, LLC for direct withdrawal of water from Rend Lake to supply Sugar Camp and Pond Creek mines, states that the daily withdrawal quota will initially be set at 6 million gallons per day. That amount is likely to be higher now. Rend Lake provides public water

[6] *Id.* at 2 and Exhibit 1. For a summary of water discharge violations and enforcement actions, see attachment 1 to Sierra Club's April 2019 letter, which shows the Sugar Camp data posted on the U.S. Environmental Protection Agency's ECHO (Enforcement and Compliance History Online) database.
[7] *Id.*
[8] *Id.* at 3.

for all or part of seven counties in Southern Illinois. A water main break in 2018 put 60 communities at risk due to lack of water and resulted in school and business closures and extended boil orders for the water users. In 2007, drought conditions caused a significant drop in Rend Lake water levels and restrictions on lake use. According to the latest data we have obtained, the Sugar Camp Mine can use up to 4.3 million gallons per day of Rend Lake water. The EIS must disclose these prior impacts and address cumulative withdrawals on the lake when evaluating the proposed expansion.

II. TVA MUST ADDRESS SUBSIDENCE-RELATED IMPACTS.

Room and pillar mining can cause subsidence, resulting in massive costs to the public and governmental entities. Coal mine subsidence insurance is mandatory in Franklin County, where this Sugar Camp Mine expansion is located, and is also mandatory in other near-by counties. Thirty four counties in Illinois require mine subsidence insurance because of subsidence risks. The EIS should consider eventual subsidence and potential societal harm to the public, as well as private costs that will be incurred. The EIS must also consider the applicant's specific plans to determine whether the risk of subsidence has been minimized.

III. TVA MUST ADEQUATELY ADDRESS THE CLIMATE IMPACTS OF THE PROPOSED COAL MINE EXPANSION.

A. TVA Must Provide the Public with a Thorough, Objective, and Transparent Accounting of the Climate Impacts of Expanded Mining at Sugar Camp.

In evaluating a proposal that would result in the mining and burning of more than 105 million tons of federally-managed coal, TVA must do more than simply quantify carbon dioxide (CO_2) and methane (CH_4) emissions that will result from burning the TVA reserves at Sugar Camp.

Climate scientists' understanding of climate disruption has increased significantly in recent years, and we have clear scientific consensus that we must quickly and dramatically reduce greenhouse gas ("GHG") emissions in the U.S. if we are going to avoid the most damaging effects of climate change.

Specifically, we request TVA analyze and disclose the following issues, which must be accounted for in the forthcoming Environmental Impact Statement:

1) Acknowledge the robust scientific consensus on the need to drastically cut global CO_2 emissions;

2) Assess whether the proposed mining and related burning of approximately 105 million tons of federal coal are inconsistent with guidance from recent climate reports, including the Fourth National Climate Assessment and reports prepared by the Intergovernmental Panel on Climate Change and U.S. Geological Survey;

3) Model the market impacts of the proposed expansion of federal coal mining in order to understand the differences in GHG emissions when comparing Action and No Action alternatives;

4) Use the social cost of carbon to analyze and disclose the climate impacts of the proposal and the mining of other TVA-managed coal reserves; and

5) Recognize the scale of the carbon emission problem and take into account the remaining carbon budget for CO_2 emissions from the U.S.

B. TVA Must Disclose Scientific Consensus on the Urgent Need to Cut U.S. Greenhouse Gas Emissions.

Based on an overwhelming amount of climate evidence published in recent years, TVA must acknowledge the findings of recent climate reports, including the Fourth National Climate Assessment of 2018 and those prepared by the Intergovernmental Panel on Climate Change ("IPCC") and U.S. Geological Survey. Additionally, information published in January 2019 by Oil Change International specifically highlights the urgent need for federally-managed fossil fuels to remain in the ground in order to effectively combat climate change. The findings of these recent and important climate reports are summarized below.

1. Fourth National Climate Assessment

Prepared by the U.S. Global Change Research Program and published in 2018, the Fourth National Climate Assessment, Volume II ("NCA4") identifies and evaluates the risks of climate change that threaten the U.S., and how a lack of mitigation and adaptation measures will result in dire climate consequences for the U.S. and its territories. This report builds upon the foundational physical science set out in the first volume of NCA4, the 2017-released *Climate Science Special Report*, which analyzed how climate change is affecting geological processes across the U.S.[9] Volume II focuses on national and regional impacts of human-induced climate change since the Third National Climate Assessment in 2014, as well as highlighting the future of global warming that will jeopardize human health, economy, and the environment.

The report affirms that it is no longer reliably true that current and future climate conditions will resemble the recent past. Due to human activities that produce greenhouse gas emissions, the atmospheric concentration of carbon dioxide has increased approximately 40 percent since the beginning of the industrial era in the 19th century.[10] In fact, USGCRP concludes that evidence of anthropogenic climate change is staggering, and that the impacts of climate change

[9] USGCRP, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II: Report-in-Brief* (2018), 1. Attached as Exhibit 5.
[10] *Id.* at 30.

are intensifying across the U.S. and its territories. These impacts are multiplying climate risks to Americans' physical, social, and economic well-being.[11] Climate risks threatening the U.S. and its territories include: impacts to the economy, such as property losses up to $1 trillion in coastal property destruction; loss of reliable and affordable energy supplies and damaged energy infrastructure; declines in agricultural productivity; loss of two billion labor hours annually by 2090 due to temperature extremes; recreational and cultural losses of wildlife and ecosystems such as coral reefs; decreased water quality and security; diminished snowpack, sea level rise, and frequent flooding; increase in droughts, wildfires, and invasive species; and rise in deaths across vulnerable populations due to extreme weather events and heat waves.[12] To avoid these grave scenarios, the U.S. public and private sectors must invest in and implement mitigation actions to reduce greenhouse gas emissions, as well as adopt adaptation plans to prepare for future impacts.

Furthermore, while cutting carbon dioxide production is most efficient in reducing greenhouse gas emissions and limiting global warming, the report also mentions the need to reduce other climate pollutants such as methane. Methane (CH_4) is removed naturally from the atmosphere at a faster rate than carbon dioxide, and can help slow the global rise in temperature.[13] In terms of methane reduction, NCA4 specifically calls for the replacement of coal with other sources of energy, like wind and solar renewables, in order to mitigate greenhouse gas emissions.[14] As mentioned previously in this letter, fossil fuel combustion accounts for approximately 85 percent of total U.S. greenhouse gas emissions, of which methane from fossil fuel extraction and processing accounts for most of the remainder.[15] NCA4 demonstrates how it is essential to phase-out fossil fuel extraction in favor of more renewable energy sources. Renewable energy will not only create less greenhouse gas emissions, but will provide other economic and societal benefits including improving air quality and public health and increasing energy independence and security through increased reliance on domestic sources of energy.[16]

These findings are significant in regards to TVA moving forward with the proposed coal lease expansion, since no matter the amount of methane and carbon dioxide produced from fossil fuel extraction and end-source combustion, NCA4 unequivocally states that we must immediately reduce U.S. greenhouse gas emissions. TVA must take into account this updated climate report, and explicitly acknowledge its findings. We urge TVA to consider the report's conclusions and not move forward with the proposed federal coal lease expansion at Sugar Camp.

[11] *Id.* at 26.
[12] *Id.* at 36-48.
[13] *Id.* at 31.
[14] *Id.* at 51.
[15] *Id.*
[16] *Id.* at 53.

2. IPCC SR 1.5

In October 2018, the Intergovernmental Panel on Climate Change ("IPCC") released a special report on the impacts of global warming, commissioned by the Paris Agreement of 2016. *Global Warming of 1.5°C*, finds greenhouse gas emissions produced by human activity have significantly contributed to global warming since the industrial revolution of the 19th century, increasing the rise in global temperature by 0.2°C per decade at present.[17] The report forecasts the state of climate at 1.5°C and 2°C, describing the devastating consequences continued warming has for our earth – destroying ecosystems, disrupting global economy, and jeopardizing public health. The report is a stark warning that delayed actions to cut greenhouse gas emissions, as well as the implementation of other mitigation and adaptation measures to climate change, will be extremely costly.

The IPCC report assessed scientific, technical, and socio-economic literature to compare the impacts of global warming at 1.5°C to 2.0°C above pre-industrial levels of greenhouse gas emissions, and the results are severe. At 2.0°C warming, as compared to 1.5°C, the following will be even more certain to occur: heavy precipitation and flooding; loss of ice sheets in Antarctica and Greenland triggering multi-meter sea level rise; heat waves, heat-related morbidity and mortality, and spread of vector-borne diseases; species loss and extinction, including doubling the number of insects, plants, and invertebrates losing over half of their geographic range; increased risks of forest fires and the spread of invasive species; increase in ocean temperature, acidity, and deoxygenation; risks to marine biodiversity, fisheries, and the near extinction of coral reef ecosystems; climate-related risks to health, livelihoods, food security, and freshwater supply; and risks to economic growth and the increase of poverty by several hundred million by 2050.[18]

Global Warming of 1.5°C concludes that anthropogenic CO_2 emissions must decline approximately 45 percent from 2010 levels by 2030 in order to stay within the range of 1.5°C, reaching net zero emissions around 2050.[19] In addition to cutting carbon emissions, the IPCC reports other non-CO_2 emissions, including methane, must be deeply reduced to achieve limiting global warming to 1.5°C with no or limited overshoot.[20] To progress in reducing global greenhouse gas emissions, rapid and transformative changes must be made to our global economy, particularly energy infrastructure. For instance, the IPCC suggests the complete phase-out of coal, explaining "the use of coal, with no or limited overshoot of 1.5°C, shows a

[17] IPCC, *Global Warming of 1.5°C*, An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty, Summary for Policymakers at SMP-4 (2018) (hereafter "IPCC "). Attached as Exhibit 6.
[18] *Id.* IPCC at 8-14.
[19] *Id.* at 15.
[20] *Id.* at 16.

steep reduction in all pathways and would be reduced to close to 0% (0-2%) of electricity (*high confidence*)."[21]

In summary, the lower the greenhouse gas emissions in 2030, the less challenging it will be to limit global warming to 1.5°C. Far-reaching climate mitigation and adaptation efforts are needed to both slow the rise in global temperature as well as prepare the planet for climate change impacts that are already in place, due to past and ongoing greenhouse gas emissions. The report specifically notes that "the challenges from delayed actions to reduce greenhouse gas emissions include the risk of cost escalation, lock-in carbon-emitting infrastructure, stranded assets, and reduced flexibility in future options in the medium- and long-term (*high-confidence*)."[22] Therefore, collective, international cooperation on all levels is needed to limit global warming to 1.5°C.

Given this report from the IPCC and its strong evidence of the rise in global temperature and severity of future climate change impacts, TVA should deny the proposed coal mine expansion and instead take steps to ensure that its decisions do not further exacerbate the climate crisis.

3. U.S. Geological Survey

The U.S. Geological Survey ("USGS"), a bureau within the U.S. Department of the Interior, released a study in November 2018 that calculates the amount of greenhouse gases emitted from fossil fuel extraction and combustion on federal lands, as well as the sequestration, or absorption of carbon that naturally occurs on undisturbed public lands. Specifically, from 2004 to 2015, USGS quantified the amounts of carbon (CO_2), methane (CH_4), and nitrous oxide (N_2O) produced from coal, gas, and oil activities, as a result of public lands management.

Using data collected from 28 states (not including tribal lands) and offshore Gulf and Pacific continental shelves, USGS concludes that 1,279.0 million metric tons (MMT) CO_2, 47.6 MMT CO_2 equivalent CH_4, and 5.5. MMT CO_2 equivalent N_2O were released between 2004 and 2015.[23] During the same time period, federal lands sequestered an average of 343 MMT CO_2, of which nine states accounted for 60 percent of carbon storage.[24] Therefore, only approximately 15 percent of CO_2 emissions resulting from fossil fuel extraction and end-use combustion were offset by sequestration. Depending on public lands management, federal lands can either be a net sink or source of greenhouse gas emissions.

Significantly, over the 10-year period of this study, the report finds emissions from fossil fuels produced on federal lands represent, on average, 23.7 percent of national emissions for carbon

[21] *Id.* at 21.
[22] *Id.* at 24.
[23] Matthew D. Merrill et al., *Federal lands greenhouse gas emissions and sequestration in the United States—Estimates for 2005–14*, (2018), 6. Attached as Exhibit 7.
[24] *Id.* at 13.

dioxide, 7.3 percent for methane, and 1.5 percent for nitrous oxide.[25] In 2014, Wyoming, offshore Gulf areas, New Mexico, Louisiana, and Colorado had the highest CO_2 emissions from fossil fuels produced on federal lands. CO_2 emissions attributed to federal lands in Wyoming are 57 percent of the total from federal lands in all states and offshore areas combined.[26] In addition, in 2014, methane emissions were highest from federal lands in Wyoming (28 percent), New Mexico (23 percent), offshore Gulf areas (20 percent), Colorado (13 percent), and Utah (7 percent).[27]

In short, TVA must not only acknowledge this new scientific information, but it must address the policy implications that necessarily follow. Releasing additional methane and carbon dioxide into the atmosphere intensifies global warming, and thus the impacts of climate change.[28] TVA must disclose the scientific conclusions about rising global temperatures and the need to keep carbon in the ground if we are to avoid the worst effects of climate disruption.

4. Oil Change International: Drilling Towards Disaster

In January 2019, Oil Change International in collaboration with another 17 not-for-profit organizations published a report called *Drilling Towards Disaster: Why U.S. Oil and Gas Expansion is Incompatible with Climate Limits* ("Report").[29] In addition to discussing why further oil and gas expansion must be halted to avoid climate crisis, the Report discusses the dire need of saying "no" to additional coal reserve development. Already with all developed reserves of coal, gas, oil, and cement combined, we have surpassed the threshold of a 50 percent chance of only a 1.5°C global temperature increase.[30] In fact, we have surpassed this threshold by so much that we are now on the doorstep of a 66 percent chance of a 2°C increase with developed reserves alone.[31] Approving this proposed coal expansion at Sugar Camp for mining an additional 105 million tons of coal would only further lock us into an unsustainable and catastrophic climate trajectory.

To date, the U.S. is still the world's third-largest coal producer, behind China and India.[32] Federally leased coal is a huge player as "[a]round 40% of all U.S. coal production comes from federally leased land."[33] Existing U.S. mines already contain far more coal than the U.S. can extract under a coal phase-out timeline that is consistent with the Paris Agreement goals.[34]

[25] *Id.* at 6.
[26] *Id.*
[27] *Id*.
[28] USGCRP, 30.
[29] Kelly Trout and Lorne Stockman, *Drilling Towards Disaster: Why U.S. Oil and Gas Expansion is Incompatible with Climate Limits,* Oil Change International, (January 2019). Attached as Exhibit 8.
[30] *Id*. at 5.
[31] *Id*.
[32] *Id*. at 21.
[33] *Id*. at 22.
[34] *Id*.

Based on both economic efficiency and equity, the U.S. should phase out coal much faster than the global average to meet responsibilities under the Paris goals.[35] To be consistent with Powering Past Coal Alliance's (an alliance that include 28 national governments) coal mining phase out of 2030, more than 70 percent of coal reserves in existing mines need to remain in the ground.[36]

Although U.S. coal mining is currently in decline, it is not being managed in a way that is fast enough for climate or fair for workers. Again, "[i]f U.S. coal production is phased out over a timeframe consistent with equitably meeting the Paris goals, at least 70 percent of coal reserves in already-producing mines would [need] to stay in the ground."[37] Federal agencies as well as policymakers need to focus on accelerating the phase out of coal by 2030 or sooner, while ensuring a just transition for communities and workers.

Based on the overwhelming scientific consensus that we must drastically reduce GHG emissions as quickly as possible in order to avoid a climate catastrophe, TVA should reject further mining of TVA-owned coal reserves at Sugar Camp Mine.

C. TVA Must Discard the Perfect Substitution Theory and Properly Analyze the Market Impacts of the Proposed Coal Mine Expansion.

NEPA requires TVA to analyze and disclose the reasonably foreseeable direct, indirect, and cumulative climate impacts of the proposed mining, and evaluate the "significance" of these impacts. 40 C.F.R. §§ 1508.7, 1502.16. In the 2019 Supplemental Environmental Assessment at Sugar Camp, TVA improperly rejected the mine's contribution to climate change by claiming, incorrectly, that leasing TVA reserves would have no impact on the amount of coal mined in the U.S. or on the amount of carbon dioxide emitted from burning coal to generate electricity. Under this theory, which has been squarely rejected by the federal courts, even if federal agencies were to deny a particular coal lease, the same amount of coal would ultimately be mined elsewhere, and thus the greenhouse gas emissions from our electricity sector would remain the same regardless of agency decisions. This "perfect substitution" theory defies economics and ignores the fundamental economic principles of supply and demand, denying the public and decision makers a full and fair opportunity to review and consider a project's climate impacts, as required by NEPA. TVA's upcoming EIS for the proposed 105 million ton expansion must not repeat this error.

Under NEPA, agencies must provide a clear basis for choice among considered alternatives, and, in particular here, TVA must distinguish between the climate impacts of Action and No Action alternatives. 42 U.S.C. §§ 4332(2)(C), 4332(2)(E), and 40 C.F.R. §§ 1502.14(f), 1508.9(b). In the context of climate change, TVA must, at the bare minimum, analyze and disclose the

[35] *Id*.
[36] *Id*.
[37] *Id*. at 7 (emphasis in original).

difference in greenhouse gas emission levels between considered alternatives, including the No Action alternative.

TVA must address the key climate question: whether there is a measurable difference in greenhouse gas emissions between approving and rejecting this approximately 105 million ton mine expansion. TVA must answer this question in order to make an informed decision. Without such an answer, neither TVA nor the public can adequately distinguish between the climate impacts of the Action and No Action alternatives.

TVA's 2019 Supplemental EA at Sugar Camp improperly dodged this critical issue, stating:

> Under the No Action Alternative, the energy that would have been produced by the Sugar Camp mined coal would most likely be replaced by alternate energy sources (including coal from other production areas). While the production and consumption of those replacement energy sources would have associated GHG emissions, the emissions from the replacement sources of energy are unknown because they would not be under TVA's control. *For the purposes of analysis, TVA assumes that the No Action Alternative could result in actions* to be taken by Sugar Camp and other entities, *ranging from complete replacement of the coal mined from the project area to no replacement. TVA anticipates, then, that GHG emissions would be the same or less under the No Action Alternative than under the proposed Action Alternative* because, typically, coal combustion is more carbon intensive per unit energy than other forms of fossil fuels (EPA 2018f).[38]

As an initial matter, stating that "TVA assumes that the No Action Alternative could result in action . . . ranging from complete replacement of the coal mined from the project area to no replacement" is a meaningless sentence because the range TVA provides spans the entire gamut of possibilities from complete substitution of other coal under the No Action alternative to no replacement by other coal and a switch to less GHG-intensive sources of energy such as gas or renewables like wind and solar.

Second, TVA's conclusion that "GHG emissions would be the same or less under the No Action Alternative than under the proposed Action Alternative" is similarly non-specific. Stating that impacts may be "the same or less" does not tell the public or decisionmakers whether TVA's proposed decision matters when it comes to climate impacts. Moreover, the statement directly contradicts TVA's acknowledgement that other forms of energy could substitute for coal under the No Action alternative and its recognition that "coal combustion is more carbon intensive . . . than other forms of fossil fuels."[39]

TVA cannot repeat this improper dodge here.

[38] TVA, Sugar Camp Supplemental EA at 15-16 (May 2019) (emphasis added).
[39] *Id.*

1. Federal Courts Have Rejected the Myth of Perfect Substitution.

The Tenth Circuit, Eighth Circuit, and other courts have repeatedly rejected agency attempts to assert near perfect substitution of fossil fuels, and federal courts have consistently required agencies to study the market impacts of agency decisions. Most directly on point here, in 2017 the Tenth Circuit rejected the Bureau of Land Management's ("BLM's") refusal to study the market effects of its decision to authorize the expansion of two coal mines on public lands in the Powder River Basin. BLM's assertion in the Wright Area coal mine EIS, like the one made by TVA in 2019, was that even if the agency rejected the proposed expansion in favor of the No Action alternative, an equivalent amount of coal would be mined elsewhere, making the climate impacts a wash. The Tenth Circuit rejected BLM's conclusion and its analytic approach to the problem, holding that the notion of "perfect substitution" was unsupported in the record and illogical based on sound economic principles, stating, "[e]ven if we could conclude that the agency had enough data before it to choose between the preferred and no action alternatives, we would still conclude this perfect substitution assumption arbitrary and capricious because the assumption itself is irrational (i.e., contrary to basic supply and demand principles)."*WildEarth Guardians v. BLM*, 870 F.3d 1222, 1236 (2017).

Notably, the D.C. Circuit expressly rejected a Federal Energy Regulatory Commission ("FERC") NEPA review for the Sabal Trail natural gas pipeline where the Commission refused to study this question, instead cloaking its analysis in an assertion of uncertainty as to the likely effect of the agency action on the energy market. In Sabal Trail, the D.C. Circuit rejected FERC's analysis, which stated that the project's greenhouse gas emissions "might be partially offset" by the market replacing the project's gas with either coal or other gas supply. *Sierra Club v. Fed. Energy Regulatory Comm'n*, 867 F.3d 1357, 1375 (D.C. Cir. 2017). The Court dismissed FERC's failure to study this issue, stating:

> An agency decision maker reviewing this EIS would thus have no way of knowing whether total emissions, on net, will be reduced or increased by this project, or what the degree of reduction or increase will be. In this respect, then, the EIS fails to fulfill its primary purpose.

Id.

Similarly, the federal district court in Montana recently rejected a Department of the Interior environmental assessment where the agency claimed its decision would not likely have any impact on nationwide greenhouse gas emissions from the electric sector because other coal mines would be available to meet a supposedly immutable demand for coal. *Montana Environmental Information Center v. OSM*, 274 F.Supp.3d 1074, 1098 (D. Mont. 2017). In *MEIC*, OSM asserted in its environmental assessment that:

> The No Action Alternative would not likely result in a decrease in CO_2 emissions attributable to coal-burning power plants in the long term. There are multiple other sources of coal that could supply the demand for coal.

Id.

The *MEIC* court squarely rejected OSM's assertion:

> This conclusion is illogical, and places [OSM's] thumb on the scale by inflating the benefits of the action while minimizing its impacts. It is the kind of "inaccurate economic information" that "may defeat the purpose of [NEPA analysis] by impairing the agency's consideration of the adverse environmental effects and by skewing the public's evaluation of the proposed agency action."

Id. (quoting *NRDC v. Forest Service*, 421 F.3d 797, 811 (9th Cir. 2005)).

Similarly, the Eighth Circuit in *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 550 (8th Cir. 2003), and more recently the District of Colorado, *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F.Supp. 3d 1174, 1197-98 (D.Colo. 2014) have rejected similar unsupported, "illogical" assumptions of perfect substitution in essentially identical contexts. As the Eight Circuit explained:

> [T]he proposition that the demand for coal will be unaffected by an increase in availability and a decrease in price . . . *is illogical at best*. The increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas. . . . [The railroad] will most certainly affect the nation's long-term demand for coal.

Mid-States Coal. for Progress v. STB, 345 F.3d at 549. The Eighth Circuit then concluded that even if the "extent" of the increase in coal use was not reasonably foreseeable, the "nature" of the effect was, and that in this circumstance, "the agency may not simply ignore the effect." *Id.* (citing 40 C.F.R. §1502.22).

The Forest Service's error in *High Country* is also on point. The Forest Service in *High Country*, like TVA in 2019, argued that "if the coal does not come out of the ground in the North Fork consumers will simply pay to have the same amount of coal pulled out of the ground from somewhere else—overall [greenhouse gas] emissions from combustion will be identical under either scenario." 52 F.Supp. 3d 1174, 1197-98. The court in *High Country* held that the Forest Service's FEIS was deficient, concluding that the increased supply made possible by the Forest Service's decision would "impact the demand for coal relative to other fuel sources" and that "[t]his reasonably foreseeable effect must be analyzed." *Id.* at 1198.

These federal court decisions illustrate that TVA must answer this question: whether its decision to allow the proposed mine plan amendment will change greenhouse gas emissions, and, if so, by what amount. Basic economic principles of supply and demand dictate that as holder of more than 1 billion tons of coal reserves in the Illinois Basin, TVA's choices matter. Federal agencies cannot legally avoid analyzing the impact that their decisions have on greenhouse gas emissions and climate change, either by flatly denying any responsibility for greenhouse gas emissions (as BLM did in Wright Area and elsewhere) or by blandly asserting that it is uncertain whether the agency's decision will affect overall carbon dioxide and methane emission levels (as FERC did in Sabal Trail).

NEPA requires federal agencies to study and disclose the effects of their decisions; it does not permit agencies to leave key questions unanswered or deny responsibility for environmental harms without adequate review. There is no doubt that agencies must provide a clear basis for choice among alternatives, and in particular between the climate impacts of Leasing and No Leasing alternatives here. 42 U.S.C. §§ 4332(2)(C), 4332(2)(E); 40 C.F.R. §§ 1502.14(f), 1508.9(b). In the context of climate change, TVA must, among other obligations, analyze and disclose the difference in greenhouse gas emission levels between alternatives, including the No Action alternative.

2. <u>The Secretary of the Interior Has Recognized that the Supply of Federally-Managed Coal Affects Energy Markets and the Climate.</u>

In addition to federal courts, the Secretary of the Interior has recognized that opening up more federal lands for fossil fuel production could not only affect the amount of coal produced, but also the amount of wind and solar generation in our energy grid. That is why, in ordering a comprehensive study of the climate impacts of the federal coal program – since cancelled for political purposes – then-Secretary Sally Jewell directed the Department of the Interior to evaluate "how the administration, availability, and pricing of Federal coal affect regional and national economies (including job impacts), and energy markets in general, including the pricing and viability of other coal resources... and other energy sources."[40] The Secretary further directed the Department to study, "[t]he impact of possible program alternatives on the projected fuel mix and cost of electricity in the United States."[41]

More recently, in releasing a scoping report on the now-cancelled Programmatic Environmental Impact Statement ("PEIS") process, the Department of the Interior acknowledged that the climate impacts of various alternatives for the federal coal leasing program are "largely contingent on the degree to which the substitute fuel sources are less carbon intensive (e.g., natural gas-fired generation or renewable generation) as opposed to similarly carbon intensive

[40] Secretarial Order 3338 at 8, (January 15, 2016). Attached as Exhibit 9.
[41] *Id.*

(e.g., non-Federal coal)."[42] The Department acknowledged that this issue has not yet been studied and evaluated by either the Department or BLM, explaining that "BLM will develop and use economic models to assess these substitution dynamics and the impact they have on the costs and benefits of any changes."[43] The fact that BLM cancelled that PEIS process only highlights the need for TVA to study and disclose the market effects of its decision here.

3. TVA Cannot Ignore Basic Economic Principles.

Simply put: supply and demand matter. TVA cannot ignore basic economic principles or refuse to analyze their effects. Under NEPA, agencies have a duty to "insure the professional integrity" of the analyses in an EIS, 40 C.F.R. § 1502.24, and must present "high-quality" information and "[a]ccurate scientific analysis." 40 C.F.R. § 1500.1(b). TVA's prior use of the flawed "perfect substitution" assumption is illogical, unsupported, and has been soundly rejected by the courts. TVA must correct these past errors here by adequately studying the market effects using available tools.

In the U.S. energy market – where coal, gas, wind, solar, and nuclear all compete for market share, where utilities can choose among these competing options on an on-going basis, and where utilities and grid operators can quickly alter the rates at which these commodities are utilized – price, supply, and demand interact in predictable ways. As mentioned previously, though Department of the Interior agencies have at various times asserted that other coal mines "could supply the demand" if they were to reject a coal mine expansion proposal, that statement fundamentally misunderstands how supply and demand work.

Economic demand is not a fixed threshold that suppliers of a commodity will necessarily rise to meet; it is instead a relationship among economic parameters that ultimately leads to certain levels of consumption.[44] As the supply of a good is restricted, price increases, and this in turn affects demand. As explained by Judge Posner, these "straightforward, intuitive premises" dictate that "[i]f quantity falls, price will rise. . . [i]f price rises, quantity falls because consumers buy less of the good."[45] In the energy context, that means that if TVA restricts the supply of coal, coal prices will increase. This is particularly true if TVA were to stop new coal leasing at all of its billion-plus ton reserves in the Illinois Basin. This increase in coal price would cause some utilities to switch from coal to a cheaper alternative. Because switching from coal to anything else – gas, wind, solar, geothermal or nuclear energy, etc. – results in decreased carbon dioxide emissions, fuel switching results in quantifiable decreases in greenhouse gas emissions.

4. TVA Cannot Ignore Available Economic Models.

[42] DOI, Federal Coal Program Programmatic EIS Scoping Report, Vol. II, (January 2017). Attached as Exhibit 10.
[43] *Id.*
[44] Richard Posner, *Economic Analysis of the Law* 5-6 (9th Ed. 2014). Excerpts attached as Exhibit 11.
[45] *Id.*

As noted, NEPA does not allow TVA to refuse to analyze the environmental effects of its decisions. NEPA affirmatively requires "reasonable forecasting," and requires agencies to provide information that is "essential to a reasoned choice among alternatives," where the cost of obtaining the information is not exorbitant. 40 C.F.R. § 1502.22(a). In order to comply with NEPA, TVA must either use available tools to provide that essential information or explain why it cannot do so. Under NEPA regulations, the agency "shall" explain in its EIS (1) why such essential information is incomplete or unavailable; (2) its relevance to reasonably foreseeable impacts; (3) a summary of existing science on the topic; and (4) the agency's evaluation based on any generally accepted theoretical approaches. 40 C.F.R. § 1502.22(b).

In order to fully understand the climate impacts of its decision to authorize this massive expansion, TVA must use one of the available climate energy models to evaluate market changes. There are several relevant factors that TVA must address in assessing the market and climate impacts of its decision, including, for example, the price and availability of substitute sources of coal, and other alternative fuels such as gas; shipping prices; existing reserves; sulfur or heat content of other sources of coal; the relationship between supply, price, and demand in the U.S. energy market; and the price and availability of other sources of electricity generation such as renewables.

Fortunately, as described in detail below, there are multiple models available that TVA could use to study these market dynamics and provide the public and decisionmakers with critical information. Without using available tools to compare the greenhouse gas emission levels between Leasing and No Leasing alternatives, TVA cannot make an informed decision or take the hard look NEPA requires.

Here, TVA cannot merely assert without substantiation that emissions differences between Leasing and No Leasing alternatives would be uncertain. In fact, there are multiple energy-economy models that could supply TVA with the projected levels of emissions in comparing the Leasing and No Leasing alternatives. These tools are already widely used by private parties and federal agencies to evaluate market effects of agency proposals in the coal mining and energy sectors.

For example, the U.S. Department of Energy has a computer model created by the EIA that has been in use since 1994, and it could be utilized by TVA here to undertake precisely the kind of analysis that would be useful to decisionmakers. EIA's National Energy Modeling System ("NEMS") is an energy-economy model that projects future energy prices and supply and demand, and can be used to isolate variables such as changes in coal supply and variations in delivered coal price.[46]

Similarly, ICF International's Integrated Planning Model has been used to evaluate these types of market responses to numerous federal proposals in recent years. Examples include, but are

[46] EIA, National Energy Modelling System: An Overview, at 1 (2009). Attached as Exhibit 12.

not limited to the following projects: EPA, Clean Power Plan; U.S. State Department, Keystone XL Pipeline; Surface Transportation Board, Tongue River Railroad; U.S. Forest Service, Colorado Roadless Rule; Washington Department of Ecology, Millennium Bulk Export Terminal. Critically, every time these robust modeling tools discussed above have been used, they have documented market impacts.

D. OSM Must Evaluate the Significance of Greenhouse Gas Emissions by Using Available Methodologies.

1. TVA Should Use the Social Cost of Carbon to Analyze Climate Impacts.

TVA must analyze and assess the climate impacts of mining the Sugar Camp TVA reserves using the social cost of carbon protocol. The social cost of carbon is a tool that was created by federal agencies, and is one method TVA can use to quantify and disclose the harm caused by the proposed project's carbon dioxide emissions. The social cost of carbon provides a metric for estimating the economic damage, in dollars, of each incremental ton of carbon dioxide emitted into the atmosphere.[47]

2. TVA Should Use Carbon Budgets to Assess Climate Impacts

One of the measuring standards available to the agency for analyzing the magnitude and severity of TVA-related fossil fuel emissions is by applying those emissions to the remaining global carbon budget. A "carbon budget" offers a cap on the remaining stock of greenhouse gasses that can be emitted while still keeping global average temperature rise below scientifically-backed warming thresholds – beyond which climate change impacts may result in severe and irreparable harm to the biosphere and humanity. Utilizing carbon budgets would offer TVA a methodology for analyzing how the proposed mine expansion and the continued coal combustion from the Sugar Camp Mine, and specifically from the TVA-managed reserves at the mine, may affect the country's ability to meet recognized greenhouse gas emission reduction targets.

Scientific research has estimated the global carbon budget – the cumulative amount of carbon dioxide that can be emitted – for maintaining a likely chance of meeting the Paris Agreement target of 1.5°C or well below 2°C. According to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change total cumulative anthropogenic CO_2 emissions must remain below 400 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 1.5°C, and below 1,000 $GtCO_2$ from 2011 onward for a 66 percent probability of

[47] Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Updated of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (May 2013, Revised August 2016). Attached as Exhibit 13.

limiting warming to 2°C above pre-industrial levels.[48] The 2018 IPCC report *Global Warming of 1.5°C* provided a revised carbon budget for a 66 percent probability of limiting warming to 1.5°C, estimated at 420 $GtCO_2$ and 570 $GtCO_2$ depending on the temperature dataset used, from January 2018 onwards.[49] At the current emissions rate of 42 $GtCO_2$ per year, this carbon budget would be expended in just 10 to 14 years, underscoring the urgent need for transformative global action to transition from fossil fuel use to clean energy.[50]

Importantly, a 2016 global analysis found that the carbon emissions that would be emitted from burning the oil, gas, and coal in the world's *currently operating* fields and mines would fully exhaust and exceed the carbon budgets consistent with staying below 1.5°C or 2°C.[51] Further, the reserves in currently operating oil and gas fields alone, even excluding coal mines, would lead to warming beyond 1.5°C. An important conclusion of the analysis is that *most* of the existing oil and gas fields and coal mines will need to be closed before their reserves are fully extracted in order to limit warming to 1.5°C.[52] Some existing fields and mines will need to be closed to limit warming to 2°C.[53]

In short, there is no room in the carbon budget for *new* fossil fuel extraction *anywhere*, including in the United States.[54] Additionally, most of the world's existing oil and gas fields and coal mines will need to be closed before their reserves are fully extracted to meet the 1.5°C target. The U.S. has an urgent responsibility to lead in this transition from fossil fuel production

[48] IPCC, Summary for Policymakers, in: Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F. et al. (eds.)], Cambridge University Press (2013) at 25; IPCC, in: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], IPCC, Geneva, Switzerland, (2014), at 63-64, Table 2.2.

[49] IPCC, *Global Warming of 1.5°C*, SPM, (2018).

[50] *Id.*

[51] Greg Muttitt et al., *The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production*, Oil Change International, (September 2016), http://priceofoil.org/2016/09/22/the-skys-limit-report/. Attached as Exhibit 14.

[52] Kelly Trout et al., *The Sky's Limit California: Why the Paris Climate Goals Demand That California Lead in a Managed Decline of Oil Extraction*, Oil Change International, (May 2018), http://priceofoil.org/ca-skys-limit at 7, 13. Exhibit 15.

[53] Oil Change International, *The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production*, at 5, 7.

[54] This conclusion was reinforced by the IPCC Fifth Assessment Report which estimated that global fossil fuel reserves exceed the remaining carbon budget (from 2011 onward) for staying below 2°C (a target incompatible with the Paris Agreement) by 4 to 7 times, while fossil fuel resources exceed the carbon budget for 2°C by 31 to 50 times. *See* Bruckner, Thomas et al., 2014: Energy Systems. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press (2014), http://ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter7.pdf at Table 7.2. Attached as Exhibit 16.

to 100 percent clean energy as a wealthy nation with ample financial resources and technical capabilities, as well as due to our dominant role in driving climate change and its harms. The U.S. is the world's largest historic emitter of greenhouse gas pollution, responsible for 26 percent of cumulative global CO_2 emissions since 1870, and is currently the world's second highest emitter on an annual and per capita basis.[55]

Research on the U.S.' carbon budget and the carbon emissions locked in U.S. fossil fuels similarly establish that the U.S. must halt new fossil fuel production and rapidly phase out existing production to avoid the worst dangers of climate change. Scientific studies have estimated the U.S. carbon budget consistent with a 1.5°C target at 25 $GtCO_2eq$ to 57 $GtCO_2eq$ on average,[56] depending on the sharing principles used to apportion the global budget across countries.[57] The estimated U.S. carbon budget consistent with limiting temperature rise to 2°C – a level of warming well above what the Paris Agreement requires and which would result in devastating harms – ranges from 34 $GtCO_2$ to 123 $GtCO_2$,[58] depending on the sharing principles

[55] Global Carbon Project, Global Carbon Budget, (November 13, 2017) at 10, 18, 32, http://www.globalcarbonproject.org/carbonbudget/17/presentation.htm. Attached as Exhibit 17.

[56] Robiou du Pont, Yann et al., Equitable mitigation to achieve the Paris Agreement goals, 7 Nature Climate Change 38 (2016), and Supplemental Tables 1 and 2. Quantities measured in $GtCO_2eq$ include the mass emissions from CO_2 as well as the other well-mixed greenhouse gases (CO_2,methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and SF_6) converted into CO_2-equivalent values, while quantities measured in $GtCO_2$ refer to mass emissions of just CO_2 itself. Attached as Exhibit 18.

[57] Robiou du Pont et al. (2016) averaged across IPCC sharing principles to estimate the U.S. carbon budget from 2010 to 2100 for a 50 percent chance of returning global average temperature rise to 1.5°C by 2100, consistent with the Paris Agreement's "well below 2°C" target, and based on a cost-optimal model. The study estimated the U.S. carbon budget consistent with a 1.5°C target at 25 $GtCO_2eq$ by averaging across four equity principles: capability (83 $GtCO_2eq$), equal per capita (118 $GtCO_2eq$), greenhouse development rights (-69 $GtCO_2eq$), and equal cumulative per capita (-32 $GtCO_2eq$). The study estimated the U.S. budget at 57 $GtCO_2eq$ when averaging across five sharing principles, adding the constant emissions ratio (186 $GtCO_2eq$) to the four above-mentioned principles. However, the constant emissions ratio, which maintains current emissions ratios, is not considered to be an equitable sharing principle because it is a grandfathering approach that "privileges today's high-emitting countries when allocating future emission entitlements." For a discussion of sharing principles, see Kartha, S. et al., Cascading biases against poorer countries, 8 Nature Climate Change 348 (2018).

[58] Robiou du Pont et al. (2016) estimated the U.S. carbon budget for a 66 percent probability of keeping warming below 2°C at 60 $GtCO_2eq$ based on four equity principles (capability, equal per capita, greenhouse development rights, equal cumulative per capita), and at 104 $GtCO_2eq$ based on five principles (adding in constant emissions ratio, but see footnote above). For a 66 percent probability of keeping warming below 2°C, Peters et al. (2015) estimated the U.S. carbon budget at 34 $GtCO_2$ based on an "equity" approach for allocating the global carbon budget, and 123 $GtCO_2$ under an "inertia" approach. The "equity" approach bases sharing on population size and provides for equal per-capita emissions across countries, while the "inertia" approach bases sharing on countries' current emissions. Similarly using a 66 percent probability of keeping warming below 2°C, Gignac et al. (2015) estimated the U.S. carbon budget at 78 to 97 $GtCO_2$, based on a contraction and convergence framework, in which all countries adjust their emissions over time to achieve equal per-capita emissions. Although the

used. Under any scenario, the remaining U.S. carbon budget compatible with the Paris Climate targets is extremely small.

An analysis of U.S. fossil fuel resources demonstrates that the potential carbon emissions from already leased fossil fuel resources on U.S. federal lands would essentially exhaust the remaining U.S. carbon budget consistent with the 1.5°C target. This analysis estimated that recoverable fossil fuels on U.S. *federal lands* would release up to 349 to 492 $GtCO_2eq$ of carbon emissions, if fully extracted and burned.[59] Of that amount, *already leased* fossil fuels would release 30 to 43 $GtCO_2eq$ of emissions, while as yet unleased fossil fuels would emit 319 to 450 $GtCO_2eq$ of emissions. Thus, carbon emissions from *already leased* fossil fuel resources *on federal lands alone* (30 to 43 $GtCO_2eq$) would essentially exhaust the U.S. carbon budget for a 1.5°C target (25 to 57 $GtCO_2eq$), if these leased fossil fuels are fully extracted and burned. The potential carbon emissions from unleased fossil fuel resources (319 to 450 $GtCO_2eq$) would exceed the U.S. carbon budget for limiting warming to 1.5°C many times over.[60] This does not include the additional carbon emissions that will be emitted from fossil fuels extracted on non-federal lands, estimated up to 500 $GtCO_2eq$ if fully extracted and burned.[61] This research further establishes that the United States must halt new fossil fuel projects and close existing fields and mines before their reserves are fully extracted to achieve the Paris Climate targets and avoid the worst damages from climate change.

Furthermore, research that models emissions pathways for limiting warming to 1.5° or 2°C shows that a rapid end to fossil fuel extraction in the United States is critical. Specifically, research indicates that global fossil fuel CO_2 emissions must *end entirely* by mid-century and likely as early as 2045 for a reasonable likelihood of limiting warming to 1.5° or 2°C. [62] Due to the small U.S. carbon budget, our country must end fossil fuel CO_2 emissions even earlier:

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contraction and convergence framework corrects current emissions inequities among countries over a specified time frame, it does not account for inequities stemming from historical emissions differences. When accounting for historical responsibility, Gignac et al. (2015) estimated that the United States has an additional cumulative carbon debt of 100 $GtCO_2$ as of 2013. *See* Peters, Glen P. et al., Measuring a fair and ambitious climate agreement using cumulative emissions, 10 Environmental Research Letters 105004 (2015); Gignac, Renaud and H. Damon Matthews, Allocating a 2C cumulative carbon budget to countries, 10 Environmental Research Letters 075004 (2015).

[59] Mulvaney, Dustin et al., "The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels," EcoShift Consulting, prepared for Center for Biological Diversity & Friends of the Earth (2015), http://www.ecoshiftconsulting.com/wpcontent/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf. Attached as Exhibit 19.

[60] Mulvaney, Dustin et al., *The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels*, at 4.

[61] Mulvaney, Dustin et al., *The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels*, at 3 ("the potential GHG emissions of federal fossil fuels (leased and unleased) are 349 to 492 Gt CO2e, representing 46% to 50% of potential emissions from all remaining U.S. fossil fuels").

[62] Rogelj, Joeri et al., Energy system transformations for limiting end-of-century warming to below 1.5°C, 5 Nature Climate Change 519 (2015); IPCC, *Global Warming of 1.5°C*, IPCC, (2018). Attached as Exhibit 20.

between 2025 and 2030 on average for a reasonable chance of staying below 1.5°C, and between 2040 and 2045 on average for a reasonable chance of staying below 2°C.[63] Ending U.S. fossil fuel CO_2 emissions between 2025 and 2030, consistent with the Paris Climate targets, would require an immediate halt to new production and closing most existing oil and gas fields and coal mines before their reserves are fully extracted.

> Ending the approval of new fossil fuel production and infrastructure is also critical for preventing "carbon lock-in," where approvals and investments made now can lock in decades' worth of fossil fuel extraction that we cannot afford. New approvals for wells, mines, and fossil fuel infrastructure – such as pipelines and marine and rail import and export terminals – require upfront investments that provide financial incentives for companies to continue production for decades into the future.[64] Given the long-lived nature of fossil fuel projects, ending the approval of new fossil fuel projects avoids the lock-in of decades of fossil fuel production and associated emissions.[65]

IV. CONCLUSION

For all of the reasons explained above, we request that TVA reject the proposed Sugar Camp expansion in favor of the No Action alternative. That is the only responsible choice. Should you have any questions about the information presented in this letter or the attached exhibits, please feel free to contact me at the phone number or email address listed below.

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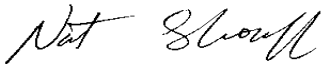
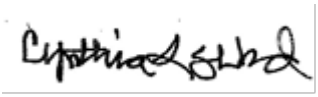
[63] Climate Action Tracker, USA (last updated 30 April 2018), http://climateactiontracker.org/countries/usa at Country Summary figure showing U.S. emissions versus year. Attached as Exhibit 21.

[64] Davis, Steven J. and Robert H. Socolow, Commitment accounting of CO2 emissions, Environmental Research Letters 9: 084018 (2014); Erickson, Peter et al., Assessing carbon lock-in, 10 Environmental Research Letters 084023 (2015); Erickson, Peter et al., Carbon lock-in from fossil fuel supply infrastructure, Stockholm Environment Institute, Discussion Brief (2015); Seto, Karen C. et al., Carbon Lock-In: Types, Causes, and Policy Implications, 41 Annual Review of Environmental Resources 425 (2016); Green, Fergus and Richard Denniss, Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies, Climatic Change https://doi.org/10.1007/s10584-018-2162-x (2018).

[65] Erickson et al. (2015): "The essence of carbon lock-in is that, once certain carbon-intensive investments are made, and development pathways are chosen, fossil fuel dependence and associated carbon emissions can become "locked in," making it more difficult to move to lower-carbon pathways and thus reduce climate risks." Green and Denniss (2018): "When production processes require a large, upfront investment in fixed costs, such as the construction of a port, pipeline or coalmine, future production will take place even when the market price of the resultant product is lower than the long-run opportunity cost of production. This is because rational producers will ignore 'sunk costs' and continue to produce as long as the market price is sufficient to cover the marginal cost (but not the average cost) of production. This is known as 'lock-in.'"

Sincerely,





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From:
Sent: Monday, September 9, 2019 5:42 PM
To: Smith, Elizabeth <esmith14@tva.gov>
Subject: Public Comment on Expansion of Coal Mining Operations by Sugar Camp Energy, LLC

Dear Ms. Smith,

I am a member of the public, with little to no experience with coal mining. However, I know that the federal government took away a requirement for coal and oil companies to set aside funds for cleanup costs. I also know the coal industry has been declining for over a decade. The expansion of this company demonstrates a misinformed business decision, not sustainable growth. The writing is on the wall: companies will take the resources at minimal costs and wages then leave the mess. The coal industry has not changed and never will if their actions and pollution do not have consequences. In this case, coal mining will take place on public land, the mere fact of which is absurd and backwards on its face. Heavy metals from the mining will pollute the numerous local lakes and public lands like the Shawnee National Forest. I urge you and any sensible people left in a regulatory capacity to prevent the decades of pollution, illness, and death that this project could cause.

Best Regards,

Appendix C – Draft EIS Comments and Responses

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
1	Purpose and Need; Record of Decision	Environmental impacts would result in net losses to taxpayers, who collectively own TVA, and could cause billions of dollars in environmental liabilities for U.S. taxpayers.	Lisa Salinas	TVA is a corporate agency of the United States that receives no taxpayer funding and derives virtually all of its revenues from sales of electricity to local power companies and industrial and government customers. Moreover, any financial liabilities accrued by Sugar Camp due to environmental liabilities are unrelated to the agreed-upon lease payments and royalties under the authority of the 2002 Illinois Coal Lease for TVA Tract No. XENC-3L. Finally, the net losses regarding the environmental impacts are speculative and do not create environmental liabilities for TVA or the Federal government.	n/a
2	Purpose and Need; Record of Decision	Rather than commit to using federally owned lands and minerals to further the fossil fuel industry's agenda, we must ensure our public resources are managed to benefit all Americans. We request that TVA reject the proposed lease of TVA reserves by application in favor of the No Action alternative.	Sierra Club	TVA's mission is described in Section 1.1 of the EIS. The Action Alternative would help fulfill TVA's mission to provide safe, clean, reliable, and affordable electricity to the residents of the Tennessee Valley region and would implement the terms of the lease agreement with Sugar Camp.	n/a
3	Action Alternative	We recommend that Figure 1-1 of the Draft EIS depict the boundary of the overall 37,972-acre SBR No. 6 expansion area.	USEPA	The overall 37,972-acre SBR No. 6 expansion area is depicted in Figure 1-2 of the EIS. Figure 1-1 shows the location of the TVA-owned coal proposed to be mined under the Action Alternative (the "shadow area") and the location of facilities (the "indirect effects area") used to process that coal as well as other coal mined under Permit No 382.	n/a
4	Public Involvement	The Draft EIS does not address impacts to water resources identified in our scoping letter on this project as well as in comments we made in April 2019 regarding TVA's Supplemental Environmental Assessment pertaining to Sugar Camp Mine No. 1.	Sierra Club	EIS Sections 3.2 and 3.14.3.2 analyze Project-related and cumulative impacts to water resources including effects on the quality and quantity of these resources. Significant impacts to water resources associated with the Proposed Action would not occur due to implementation of the IDNR-OMM-required groundwater monitoring program, water quality sampling activities, and reclamation plan.	n/a

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
4 (cont.)				See responses to Comments 18 and 19 for more details on changes in the Final EIS per related comments. See also Appendix B of the Final EIS for the scoping comments received.	
5	Public Involvement	We suggest that the Final EIS include complete copies and summaries of scoping and Draft EIS comments and responses to these and/or reference to how these were addressed in the EIS.	USEPA	The comments received during scoping for this EIS are summarized in Final EIS Section 1.4 and provided in Appendix B. Section 1.4 also references the specific EIS sections where scoping comments were addressed.	Section 1.4 and Appendix B
6	Permits	Prior to bleeder shaft construction, Sugar Camp should consult with IEPA to determine if bleeder shaft construction should be evaluated for applicability of Clean Air Act permitting requirements.	USEPA	As discussed in Section 1.5 of the Final EIS, prior to construction of the Bleeder Shaft Facilities, Sugar Camp would submit Insignificant Permit Revisions in association with UCM Permit No. 382 to IDNR-OMM for review and approval. This would require documentation of permits received or applied for associated with each bleeder shaft facility, including any air permits issued by IEPA. In addition, TVA would conduct environmental reviews to consider the existing conditions surrounding each Bleeder Shaft Facility location, any required permits associated with the Bleeder Shaft Facilities, and impacts associated with construction and operation of each Bleeder Shaft Facility.	Section 1.5 and 1.5.3
7	Permits; Action Alternative	The Final EIS should state whether the increased throughput associated with the Project would have an impact on the existing Coal Preparation Plant, such as physical or operations changes to the plant. In addition, TVA should consult with IEPA and indicate whether an additional permit, such as a Clean Air Act permit, would be required for the additional volume the plant would need to process.	USEPA	In the Final EIS, Section 1.5.3 has been revised to clarify the Clean Air Act permitting associated with the plant, and Section 2.1.2.1 clarifies that the Project would not affect capacity. The Coal Preparation Plant is currently processing both privately owned coal and TVA coal previously approved for mining. The plant was approved by IDNR-OMM in 2008 and did not require TVA approval. The plant operates under Title V Permit No. 12070021, and the addition of the TVA coal that is the subject of the Proposed Action would not require additional surface facilities or increase the capacity of the plant. As the physical processing of the plant would not change, a permit modification is not necessary for the processing of additional TVA coal.	Sections 1.5.3 and 2.1.2.1

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
8	No Action Alternative	Sugar Camp Mine No. 1 has approximately 37 years of existing coal reserves even without the proposed 186 million ton expansion. Therefore, we see no reason to push the review through now given that the mine has nearly four decades worth of coal already under lease.	Sierra Club	Under SBR No. 6, Sugar Camp's ongoing activities include extraction of approximately 359 million unprocessed tons of coal, which equates to 179.5 million processed tons of coal. At an annual production rate of 9.5 million processed tons of coal, Sugar Camp's current supply of private/TVA-approved coal would be mined over a period of approximately 19 years. The addition of the coal associated with the Action Alternative would extend this period by approximately 10 years. However, while the existing and planned coal reserves are less than the commenter reported, a maximum planning period for the leased coal reserves is not stipulated in the lease agreement, is not a condition of the IDNR permit, is unrelated to the decision to be made by TVA except in calculating environmental impacts, and is solely a decision of Sugar Camp and/or its parent company.	n/a
9	Project Description; Permits	I am concerned that the Chapter 11 bankruptcy of Foresight Energy, the parent company of Sugar Camp, LLC, complicates the permitting, insurance, bonding, reclamation, etc., of the proposed mining.	Lisa Salinas	TVA understands the company is undergoing bankruptcy proceedings; however, the IDNR permit has been received by Sugar Camp, and TVA is currently determining whether to approve the mining plan per the 2002 Illinois Coal Lease for TVA Tract No. XENC-3L. In the case of Foresight Energy being declared bankrupt, TVA has the right to immediately terminate the lease without further notice. TVA would then pursue other means to recoup its investment.	n/a
10	Project Description	The TVA coal lease is technically under contract with Ruger Coal; the EIS should therefore describe the involvement of Ruger Coal in the proposed action.	Lisa Salinas	The 2002 Illinois Coal Lease for TVA Tract No. XENC-3L with Illinois Fuel Company, LLC was assigned to Ruger Coal Company, LLC in the 2009 Assignment and Assumption Agreement for TVA Tract No. XENC-3L. Per the 2009 agreement, upon assignment of the lease to Ruger, TVA consented to permit the lease reserves to be mined by Sugar Camp Energy, LLC, an affiliate of Ruger. For purposes of the NEPA review, the IDNR permit holder pertaining to the mine expansion (i.e., Sugar Camp) is the relevant party of focus.	n/a

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
11	Action Alternative; Environmental Impacts - Water	We recommend the Final EIS include information on the low permeability liner of the proposed East Refuse Disposal Area and how leachate would be managed, the composition of the waste rock and water being discharged from the East Refuse Disposal Area, and how the mine closure plan would affect the East Refuse Disposal Area. We recommend that water quality monitoring be employed to ensure compliance with standards during operation and post-closure.	USEPA	Refer to Sections 2.1.2.1, 3.2.4.1, and 3.2.4.2 of the Final EIS. The proposed East Refuse Disposal Area would be constructed similarly to the existing refuse disposal areas by installing a low permeability liner as approved by IDNR-OMM. The East Refuse Disposal Area would require a revision of the NPDES permit issued by IDNR to include any new discharge outfalls. The permit revision may include additional groundwater monitoring wells. No leachate is anticipated. As described in Section 2.1.2.3, the East Refuse Disposal Area would not be fully reclaimed to existing conditions and, instead, would be filled to capacity, capped with soil, and made to adequately drain. Due to the lack of full reclamation, this area could likely be used as pasture land following partial restoration.	Sections 2.1.2.1, 3.2.4.1, and 3.2.4.2
12	Action Alternative; Environmental Impacts - Environmental Justice	We encourage TVA to include more detail in the Final EIS about the siting considerations for the bleeder ventilation shafts, such as a smaller area where bleeder shafts may be constructed. TVA should commit to siting these away from communities, schools, environmental justice populations, or other potentially sensitive receptors. EPA further recommends that the Final EIS show a map figure depicting environmental justice populations.	USEPA	Final EIS Sections 2.1.2.1 and 3.12.2.2 have been updated to include details regarding siting of the Bleeder Shaft Facilities. The siting of the Bleeder Shaft Facilities is influenced by environmental constraints and state regulations, and proposed facility locations are also coordinated with landowners. Details on landowner coordination have been added to Section 2.1.2.1 of the EIS. Environmental justice populations are specifically considered in EIS Section 3.12, which documents that low-income populations (one type of environmental justice population) are present in the Project area. However, TVA concluded that the Project would not disproportionately affect the identified low-income populations because the overall impacts of the Action Alternative would be minor, and off-site impacts would generally be negligible. These populations were identified through USCB data assigned to the large 2010 Census tracts that encompass the Project Area and not through means that would allow more detailed mapping of low-income populations. Figure 3-16 has been added to the Final EIS to show the census tracts in the Project Area, which can be correlated with the poverty	Sections 2.1.2.1 and 3.12.2.2 and Figure 3-16

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
12 (cont.)				percentages given in the text of the EIS to know the general locations of low-income populations. Environmental justice populations will also be considered in future environmental reviews conducted by TVA in conjunction with the siting of the Bleeder Shaft Facilities.	
13	Alternatives Considered but Eliminated	Alternative project locations were not adequately considered in the Draft EIS or shown to be environmentally or economically more or less impactful than the current Project Area. EPA recommends that the Final EIS provide information to support that shifting the shadow area to the north, west, or south offers no environmental or economical advantage, perhaps by adding a table that presents potential impacts to each resource within alternate shadow areas.	USEPA	Figure 2-5 in the Final EIS shows the extent of the TVA Illinois Coal Reserve under lease to Sugar Camp, as well as the portions of the reserve that have been previously mined or approved for mining and the portions that are the subject of the current Proposed Action. TVA is responding to the request by Sugar Camp to mine the subject 12,125 acres of TVA coal in conjunction with 25,847 acres of non-TVA coal under SBR No. 6. The overall 37,972-acre permitted area was configured to maximize the efficient and economical mining of coal, while utilizing existing surface facilities and minimizing impacts to the extent feasible. Mining TVA coal in alternative locations would not necessarily result in reduced environmental impacts or economic advantages.	Section 2.1.3 and Figure 2-5
14	Environmental Impacts - Floodplains	We suggest that the Final EIS clarify the regulatory requirements that the Floodplains No Practicable Alternatives analysis addresses.	USEPA	While there is no direct regulatory requirement for the Floodplains No Practicable Alternative analysis referenced in the EIS, TVA's NEPA procedures involve these analyses as standard operating practices due to the requirements of EO 11988, Floodplain Management. The EO requires that agencies avoid the 100-year floodplain unless there is no practicable alternative. In response to the EO, TVA developed the 1981 *Class Review of Repetitive Actions in the 100-Year Floodplain*. Because bleeder shaft facilities are not one of the repetitive actions evaluated in the class review, the Floodplains No Practicable Alternative analysis needs to be completed for any bleeder shaft facilities that are proposed to be constructed in 100-year floodplains. These details have been added to Section 3.2.3.2.2 of the Final EIS.	Section 3.2.3.2.2

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
15	Preferred Alternative; Record of Decision	Has TVA made a decision on the proposed mine plan approval? I am asking this in light of Foresight Energy, the parent company of Sugar Camp, entering into Chapter 11 bankruptcy.	Lisa Salinas	The final decision on the proposed mine plan approval has not yet been made but is expected by the end of 2020.	n/a
16	Preferred Alternative; Record of Decision	I am concerned about the potential for federal coal royalty lease rates to be set to zero, per national news and a letter sent to the U.S. President, Speaker of the House, and Senate Majority Leader from the National Mining Association. The potential low to no royalty payments call into question the justification by TVA to approve the mining of coal when considering the net loss for the federal government alongside the environmental impacts.	Lisa Salinas	Per the attachments to this comment, TVA understands that this comment refers to recent requests by the National Mining Association and other entities for royalty payment reductions for fossil fuels on U.S. Department of Interior (USDOI)-administered leases in light of recently decreased demand for fossil fuels. USDOI administers these leases under the authority of the Mineral Leasing Act of 1920. The lease rates and royalty payments for TVA-owned coal are established through contract with other parties under the authority of the TVA Act, independent of the authority of the Mineral Leasing Act or any USDOI jurisdiction, and are defined in the 2002 Illinois Coal Lease for TVA Tract No. XENC-3L and the subsequent the 2009 Assignment and Assumption Agreement for TVA Tract No. XENC-3L.	n/a
17	Environmental Impacts	Environmental impacts have not been "fully scoped out, nor investigated" and would result in unacceptable consequences for affected parties.	Lisa Salinas	The EIS analyzes the potential for impacts to a variety of resources with consideration of applicable measures to reduce those impacts. Several of the impacts of the Proposed Action would be short-term and insignificant. Other impacts would be longer term and/or adverse. The implementation of the Proposed Action, including the coal mining and processing, would comply with applicable environmental laws and regulations.	Executive Summary

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
18	Environmental Impacts - Water Resources	Considering the effluent exceedances by Sugar Camp Mine No. 1 over the past four quarters, including 125 state and federal violations from 2015 to 2018, TVA should confirm and report in the Final EIS whether the existing onsite treatment systems would be able to treat an increased volume of wastewater that would occur with mine expansion and whether monitoring is being conducted on the schedule required by the NPDES permit. TVA's NEPA review should consider impacts from the discharge of chloride at higher concentrations than its current permit allows and the effects of this on the environment.	USEPA; Sierra Club	Per Section 3.2.4.2.2 of the Final EIS, when a release of water from permitted discharge points registers one or more parameters above the water quality standard, Sugar Camp Mine personnel correct the non-compliant situation and also provide applicable reports to IEPA. IDNR provides oversight and monitoring of Sugar Camp activities and would take appropriate enforcement actions to remedy any violations. As of July 2020, all Notice of Violations issued by IDNR had been abated. IEPA Division of Water Pollution Control reviews, approves, and issues NPDES permits. These permits dictate discharge limitations, monitoring, and reporting requirements. Sugar Camp's NPDES Permit No. IL0068565, valid through April 30, 2021, concluded that effluent mixing in Middle Fork Big Muddy River, which is allowed by the NPDES permit, functions to dissipate chloride to water quality standard levels and, overall, that no adverse impacts to streams would occur. Overall processing capacity of the existing Coal Preparation Plant, and associated permitted discharges that are covered under the current NPDES permit, would not increase under the proposed action; however, the Coal Preparation Plant would likely operate and discharge over a longer time period. Any revisions to the NPDES permit, including revisions associated with the proposed East Refuse Disposal Area to treat wastewater discharges, would require review and approval by IEPA.	Section 3.2.4.2.2
19	Environmental Impacts - Water Resources	The EIS should analyze and report the cumulative impacts to the Big Muddy River and to Rend Lake, via withdrawals, that would result from the mine expansion when combined with past, present, and future mining at Sugar Camp and other nearby projects, such as the 12.5-mile water discharge pipeline proposed by Williamson Energy Pond Creek No. 1 Mine, located near Johnston City in Williamson County.	Sierra Club	The analysis of cumulative effects in Section 3.14 of the Final EIS has been revised to address impacts to water resources that would result from the mine expansion when combined with past, present, and future mining at Sugar Camp and other nearby projects. These include discharges from the Williamson Energy Pond Creek No. 1 Mine. Similar changes were applied to Section 3.2.5.2.2.	Sections 3.2.5.2.2 and 3.14

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
20	Environmental Impacts - Surface Water	We recommend the Final EIS provide relevant site-specific information to facilitate compliance determination under Section 404 of the Clean Water Act and provide the document to USACE St. Louis District for review and comment. TVA should also consult with USACE to determine what information should be provided in the Final EIS to meet Clean Water Act permit requirements.	USEPA	Please refer to Sections 1.5 and 3.2.2.2 of the Final EIS. Per IDNR-OMM permit requirements, Sugar Camp Energy has committed to securing all necessary approvals from other agencies, including but not limited to, USACE and IDNR Office of Water Resources. Any impacts to waters of the U.S would be subject to USACE 404 permits and IEPA 401 Water Quality Certifications and would be mitigated as required by these permits.	Sections 1.5 and 3.2.2.2
21	Environmental Impacts - Surface Water	We recommend that the Final EIS include a map figure showing how subsidence would impact water resources and how impacts to water resources would be addressed.	USEPA	Planned subsidence would occur within the sections of the Shadow Area where longwall mining techniques would be employed. Areas proposed for longwall mining where impacts to water resources are anticipated are illustrated in Figure 3-5. Impacted areas cannot be predicted with high specificity prior to subsidence; however, predicted subsidence profiles and post-subsidence contours were modeled using the Surface Deformation Prediction System software developed for the U.S. Office of Surface Mining. Due to limitations in computer modeling, the actual extent of subsidence may vary from what is projected. The anticipated Project impacts to water resources from subsidence and associated mitigation measures are described in Section 3.2.2.2.2 of the EIS. As required and approved by IDNR-OMM, the subsidence mitigation plan is site specific and consists of re-establishing pre-mining drainage patterns by grading and/or tilting to drain areas of trapped or standing water, as necessary, with input from the surface property owner and applicable government agencies.	Section 3.2.2.2

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
22	Environmental Impacts - Biological Resources, Surface Water	We recommend that an onsite biological and water resource survey be conducted to provide information to delineate these resources and assess their characteristics and use those data to fully evaluate impacts to these resources in regards to severity and to discuss specific minimization and mitigation efforts that would be employed. These additional data, along with additional information on the presence of aquatic life in impacted watersheds such as reference to existing state and watershed ecological assessments, should be incorporated into the Final EIS and would help prepare for a Clean Water Act Section 404 permit application.	USEPA	Sections 3.2 and 3.4 of the Final EIS present information on the biological and water resource identification efforts that have been performed to date and employs these in analyses of anticipated impacts. Water resource and vegetation surveys were conducted for the known disturbance area (the East Refuse Disposal Area). For impacts to surface waters, per IDNR-OMM permit requirements, Sugar Camp would secure all necessary approvals from other agencies, including, but not limited to, USACE, IEPA, and the IDNR Office of Water Resources and implementing IDNR-OMM-approved mitigation plans. Federally listed threatened and endangered species have been the subject of consultation and review by IDNR-OMM, IDNR Office of Realty and Environmental Planning, and USFWS. As a standard practice for surface disturbances, Sugar Camp coordinates with USFWS to conduct presence/absence threatened and endangered bat surveys or assumes threatened and endangered bat presence and limits tree clearing to between October 15 and March 31. USFWS also consults on coal extraction-related activities such as subsidence.	Sections 3.2 and 3.4
23	Environmental Impacts - Air Quality	We recommend that additional consideration be given the potential for particulate matter and hazardous emissions from the Bleeder Shaft Facilities. Additionally, Sugar Camp should consider whether the fugitive dust emissions control plan needs updating.	USEPA	As clarified in Section 1.5.3 of the Final EIS, Insignificant Permit Revision requests would be submitted to IDNR-OMM for the Bleeder Shaft Facilities. Dust (particulate matter emissions) is not associated with the operation of these facilities; thus, the Bleeder Shaft Facility operations are not included in the fugitive dust emissions control plan associated with the Sugar Camp Mine No. 1 Coal Preparation Plant. Regarding hazardous emissions, the Bleeder Shaft Facilities are permitted under the same Clean Air Act permit that is associated with the Coal Preparation Plant.	Section 1.5.3

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
24	Environmental Impacts - Air Quality	The Draft EIS states that between 53 and 77 percent of the coal produced at Sugar Camp Mine No. 1 was shipped to U.S. power plants during the period 2014 through 2018. EPA recommends the transportation emissions and consumption data be updated and recalculated to reflect changes in the coal market, wherein coal-fired plants are being closed in the U.S. and more domestic coal is being shipped abroad.	USEPA	The reported period for coal shipments used in the EIS is the most current data available from USEIA's *Coal Data Browser*, as of July 2020. These data show that the amount of coal shipped from the mine to domestic power plants between 2014 and 2018 increased each year rather than decreased. Whether this trend will continue is not known, particularly given the very recent decline in coal consumption, both domestically and internationally.	n/a
25	Environmental Impacts - Greenhouse Gas Emissions	The Draft EIS asserts that "emissions from the replacement sources of energy are unknown because they would not be under TVA's control," yet NEPA regulations require analysis of indirect impacts "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." The assumptions made in the Draft EIS do not fully consider the range of potentials that could occur in the No Action Alternative scenario. For example, the Draft EIS does not tell the public or decision-makers which sources of electricity (coal, wind, solar, gas, etc.), the amount of those resources (or combination of resources) would replace electricity generated by burning Sugar Camp coal if TVA rejects the proposed expansion, or what the difference in GHG emissions would be between the Action and No Action alternatives. We recommend that TVA analyze whether there is a measurable difference in greenhouse gas emission levels between considered alternatives, including the No Action alternative, and report that difference to avoid "perfect substitution."	Sierra Club	The analyses of cumulative effects in Section 3.14 of the Final EIS have been revised, as discussed in response to Comment 27. The anticipated GHG emissions of the No Action and Action Alternatives are described in EIS Section 3.3.2.2. The GHG analysis was prepared in accordance with recent court rulings.	Sections 3.3.2.2 and 3.14

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
26	Environmental Impacts - Greenhouse Gas Emissions	The Draft EIS does not provide information on the nature, scale, or causes of climate change or adequately present details on the Project's potential to effect climate change. TVA should 1) acknowledge the scientific consensus on the need to cut global CO2 emissions; 2) assess whether the proposed mining and burning of TVA-owned coal extracted by Sugar Camp are inconsistent with guidance from recent climate reports, including the including the 2018 Fourth National Climate Assessment prepared by the U.S. Global Change Research Program, the 2018 special report by the Intergovernmental Panel on Climate Change on global warming, the U.S. Geological Survey's 2018 study of the climate impacts associated with federal lands and minerals extraction, and Oil Change International's 2019 study on the impact of fossil fuel development on the global carbon budget; 3) model the market impacts of the proposed expansion of federal coal mining to understand the differences in GHG emissions between the No Action and Action Alternatives, per substitution of different fuel types in the No Action case, and report the difference, if measurable; 4) use the "social cost of carbon" tool to analyze the climate impacts of the proposal and the mining of other TVA-managed coal reserves; and 5) recognize the scale of the carbon emission problem and take into account the remaining carbon budget for CO2 emissions from the U.S. Further, TVA should report the GHG emissions associated with the proposed expansion by using the current 20-year global warming potential for methane.	Sierra Club	TVA considered using the social cost of carbon (SCC) metric in the assessment of climate change impacts on downstream GHG emissions resulting from combustion of the coal mined under the Action Alternative. However, after due consideration, TVA believes that the SCC metric is not an appropriate measure or proxy of project-level climate change impacts and their significance under NEPA. The SCC metric is not appropriate or informative in the current context because (1) the SCC tool does not measure the actual incremental impacts of a project on the environment; (2) there are no established criteria identifying the monetized values considered significant for NEPA purposes; and 3) the EIS does not contain a rigorous cost-benefit analysis, the context where SCC is most useful. The evaluation of GHG included in the EIS was prepared per the court rulings in place at the time of preparation.	n/a

Comment No.	Topic	Comment	Commenter(s)	Response	Final EIS Section, if edited per comment
27	Cumulative Effects	EPA recommends that the cumulative effects analysis of the Final EIS incorporate more specifics regarding the specific avoidance, minimization, and mitigation efforts that would be employed per IDNR permit requirements and more detail regarding the individual resource areas, as follows: the vicinity within which cumulative effects are being considered as pertains to the resource area, the current health of the resource area per past actions or trends and future predicted health of the resource, other reasonably foreseeable coal projects or public or private project or development and their impacts to the resource area, and consideration of the combined effects of the proposed project and these reasonably foreseeable actions on the resource area.	USEPA	The analyses of cumulative effects in Section 3.14 of the Final EIS have been revised to more clearly identify the geographic area of study for each resource area, describe the current condition of each resource area within the cumulative effects analysis area, present the specific IDNR-OMM permit requirements that would help avoid, minimize, or mitigate impacts, and consider known past, present, and reasonably foreseeable projects in the study area with similar effects to the Proposed Action. Where appropriate, other sections of Chapter 3 have also been revised.	Cumulative Effects subsections of Sections 3.1–3.13 and Section 3.14
28	(No Comment)	USDOI has no comments on the Draft EIS at this time.	USDOI	TVA appreciates USDOI's review of the Draft EIS and encourages review of the Final EIS.	n/a

From: Smith, Elizabeth
To: RichardsonSeacat, Harriet; Colverson, Colin
Subject: FW: Sugar Camp EIS
Date: Monday, April 6, 2020 10:10:53 AM
Attachments: ATT00001.png
XENC_3L Assignment.pdf
XENC-3L Amendment One_Redacted-1.pdf
XENC-3L Amendment Two_Redacted-1.pdf
031820 Covid19 Response Letter Final-1.pdf

FYI

Due to COVID-19 safety precautions enacted by TVA, I am currently teleworking.

Should you need to speak with me directly, my mobile phone # is listed below.

Elizabeth R. Smith
NEPA Specialist

NEPA Programs
Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, TN 37902

865-632-3053 (w)
865-250-9138 (m)
esmith14@tva.gov

From: Lisa Salinas [redacted]
Sent: Monday, April 6, 2020 11:01 AM
To: Smith, Elizabeth <esmith14@tva.gov>
Cc: McKenzie, Jeffrey T. <jtmckenzie@tvaoig.gov>
Subject: Re: Sugar Camp EIS

Please find attached the letter I referenced related to the call for lower federal coal lease rates.

Note that the letter is erroneous in its assertion of the higher federal royalty rate paid in the "East", at least related to the TVA deposit.

It is not publicly known at present what the rate is that Ruger Coal pays to TVA (as it appears there is a sealed court settlement between Ruger and TVA which could
have further modified the terms in the publicly available contracts).

However, the lease rate even at the low rate of 5% for a 1.1 billion ton reserve is very low for coal that is not located in the Powder River Basin, and note that Ruger Coal was at one point receiving a 3.5% or thereabouts lease override for allowing Sugar Camp to mine the reserve (this fact is noted in Foresight Energy SEC filings).

I am uncertain of the current lease rates and arrangements on the TVA coal deposit between the parties, but nonetheless, there in no justification for a national energy security argument for any federal coal lease, especially at a likely huge net loss for the federal government, when extensive environmental impacts that have not been fully scoped out, nor investigated, are the net loss taxpayers will fund, and affected parties will experience will have their properties ruined, their health affected, their water polluted and in short, the devastation from mining the TVA deposit has no positive effect for a corporation we, as US Taxpayers, own.

Lisa Salinas

On 4/6/20 10:21 AM, Smith, Elizabeth wrote:

> Ms. Salinas,
>
> Thank you for your comment.
>
> Elizabeth
>
> ***Due to COVID-19 safety precautions enacted by TVA, I am currently teleworking.***
>
> ***Should you need to speak with me directly, my mobile phone # is listed below.***
>
> **Elizabeth R. Smith**
>
> NEPA Specialist
>
> NEPA Programs
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> Tennessee Valley Authority
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> Knoxville, TN 37902
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> 865-632-3053 (w)
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> 865-250-9138 (m)
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> esmith14@tva.gov

From: Lisa Salinas [redacted]
Sent: Monday, April 6, 2020 10:19 AM
To: Smith, Elizabeth <esmith14@tva.gov>
Cc: McKenzie, Jeffrey T. <jtmckenzie@tvaoig.gov>
Subject: Re: Sugar Camp EIS

Thank you.

You are aware that Foresight Energy (parent co. of Sugar Camp) is in bankruptcy?

Ch 11 adds multiple other dimensions in permitting, insurance, bonding, reclamation , etc. matters.

And last I was aware, the TVA coal lease was technically under contract to Ruger Coal, with contract language stating Sugar Camp was granted the right to mine the reserve.

It is relevant to understand who currently owns and controls Ruger.

It is also noteworthy that there was recent discussion in the national news about setting federal coal royalty lease rates at zero.

That notion is troubling. First of all, it appears on its face to be a bias toward coal operators to keep them in business for Trump donors.

Foresight is controlled by Trump donor Robert Murray, and Ruger Coal, last I knew, was controlled by billionaire Chris Cline (now the Cline estate) , who was also a VIP Trump donor.

What is the Purpose for TVA to approve an EIS for a coal ci. when the US government cannot possibly justify the income from the deposit vs. the incredible damage and reclamation and off site pollution and the like caused from mining the deposit.

The TVA deposit could cause literally billions in environmental liabilities for US taxpayers.

Please add my comments to the public comments.

Lisa Salinas

Sent from my iPhone

> On Apr 6, 2020, at 9:44 AM, Smith, Elizabeth <esmith14@tva.gov> wrote:
>
> No, TVA issued the draft Environmental Impact Statement for public comment period through May 27, 2020. The final decision is expected by the end of the year.
>
> More information is available by visiting www.tva.com/nepa.
>
> Thanks,

Elizabeth

Due to COVID-19 safety precautions enacted by TVA, I am currently teleworking.

Should you need to speak with me directly, my mobile phone # is listed below.

Elizabeth R. Smith

NEPA Specialist

NEPA Programs

Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, TN 37902

865-632-3053 (w)

865-250-9138 (m)

esmith14@tva.gov

<image001.png>

From: Lisa Salinas [redacted]
Sent: Sunday, April 5, 2020 1:16 PM
To: Smith, Elizabeth <esmith14@tva.gov>
Subject: Sugar Camp EIS

Ms Smith,

Did TVA issue a final decision on the attached Environmental Impact review of Sugar Camp?

Just wondering because the parent of Sugar Camp is in Ch 11 bankruptcy.

https://www.federalregister.gov/documents/2019/08/12/2019-17214/sugar-camp-energy-llc-mine-expansion-revision-6-environmental-impact-statement

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

In re:	)	Chapter 11
	)	
FORESIGHT ENERGY LP, *et al.*,	)	Case No. 20-41308-659
	)	
Debtors.	)	(Jointly Administered)
	)	
	)	Objection Deadline: April 10, 2020
	)	Hearing Date: April 17, 2020
	)	Hearing Time: 10:00 a.m. (Central Time)
	)	Hearing Location: Courtroom 7 North

DEBTORS' APPLICATION FOR AN ORDER AUTHORIZING THE RETENTION AND EMPLOYMENT OF BAILEY & GLASSER LLP AS SPECIAL COUNSEL FOR THE DEBTORS AND DEBTORS IN POSSESSION *NUNC PRO TUNC* TO PETITION DATE

Foresight Energy LP and its affiliated debtors and debtors in possession in the above-captioned cases (each a "Debtor" and, collectively, the "Debtors"), hereby move this Court for entry of an order (the "Proposed Order"), pursuant to sections 327(e), 328, and 1107(b) of title 11 of the United States Code, 11 U.S.C. §§ 101 *et seq.* (the "Bankruptcy Code"), Rules 2014 and 2016 of the Federal Rules of Bankruptcy Procedure (the "Bankruptcy Rules") and Rules 2014 and 2016-1 of the Local Rules of Bankruptcy Procedure for the United States Bankruptcy Court for the Eastern District of Missouri (the "Local Rules"), authorizing the retention and employment of Bailey & Glasser, LLP ("Bailey Glasser" or the "Firm") as special counsel to the Debtors in these chapter 11 cases, effective *nunc pro tunc* to March 10, 2020. In support of this Application (the "Application"), the Debtors rely upon the Declarations of Nicholas S. Johnson (the "Johnson Declaration") and Robert D. Moore (the "Moore Declaration"), attached hereto as Exhibits A and B and respectfully represent as follows:

Jurisdiction

1. This Court has jurisdiction to consider this matter pursuant to 28 U.S.C. §§ 157 and 1334. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1408 and 1409. This matter is a core proceeding pursuant to 28 U.S.C. § 157(b)(2).

2. The statutory and legal predicates for the relief requested are sections 327(e), 328, and 1107(b) of the Bankruptcy Code, Bankruptcy Rules 2014 and 2016 and Local Rules 2014 and 2016.

Background

3. On March 10, 2020 (the "Petition Date"), each of the Debtors filed a voluntary petition for relief under chapter 11 of the Bankruptcy Code thereby commencing the instant cases (the "Chapter 11 Cases").

4. The Debtors continue to manage and operate their businesses as debtors-in-possession under 1107 and 1008 of the Bankruptcy Code.

5. The Court has entered an order [Docket No. 86] providing for the joint administration of these chapter 11 cases pursuant to Bankruptcy Rule 1015(b).

6. No request for the appointment of a trustee or examiner has been made in these Chapter 11 Cases. On March 17, 2020, the United States Trustee appointed the Official Unsecured Creditors Committee.

7. Additional information about the Debtors' businesses and the events leading up to the Petition Date can be found in the *Declaration of Robert D. Moore, President and Chief Executive Officer of Foresight Energy LP, in Support of Chapter 11 Petitions* (the "Moore Declaration") [Docket No. 17], the *Declaration of Alan Boyko, Senior Managing Director of FTI Consulting, Inc., in Support of Chapter 11 Petitions and First Day Relief* (the "Boyko

Declaration") [Docket No. 18], and the declaration of Seth Herman in support of the Debtors' motion for approval of debtor-in-possession financing and use of cash collateral (the "Herman Declaration" [Docket No. 29-3] (the "First Day Declarations").

Relief Requested

8. By this Application, the Debtors seek authority to employ and retain Bailey Glasser, pursuant to sections 327(e), 328, and 1107(b) of the Bankruptcy Code, Bankruptcy Rules 2014 and 2016 and Local Rules 2014-1, as special counsel with regard to the Chapter 11 Cases *nunc pro tunc* to the Petition Date.

9. Specifically, the Debtors seek this Court's approval to employ and retain Bailey Glasser as special counsel to the Debtors to provide legal services related to environmental, regulatory, and other discrete corporate transaction and commercial litigation matters, services that Bailey Glasser has provided to the Debtors for many years prior to the commencement of these cases.

10. Particularly in light of its extensive experience in representing the Debtors and the specialized coal-industry services Bailey Glasser provides to the Debtors, the Debtors submit that the engagement and retention of Bailey Glasser as their special counsel in these Chapter 11 Cases is necessary and in the best interests of the Debtors, their estates, their creditors, and other parties in interest and should be approved.

Basis of Relief Requested

11. A debtor is required to obtain bankruptcy court approval before it is permitted to hire certain professionals and compensate them with funds from property of the estate. In addition to authorizing the employment of general counsel for the debtor, the Bankruptcy Code also allows a debtor — with court approval — to employ "for a specified special purpose" a

lawyer who has previously represented the debtor. 11 U.S.C. § 327(e). In contrast to general counsel for the debtor which must, in accordance with Section 327(a) of the Bankruptcy Code, be "disinterested," an attorney employed as special counsel must only not represent or hold an interest adverse to the debtor or its estate with respect, particularly, to the matters on which he or she is to be employed. *Id.*

12. Bailey Glasser has represented the Debtors in many capacities since their inception and formation. Beginning in 1999, Bailey Glasser began representing the Debtors' founder, Chris Cline, personally and his various business interests generally. In that regard, Bailey Glasser assisted Mr. Cline in forming the entities that eventually comprised the Foresight Energy, LP family of companies ("Foresight") beginning in 2004. From that time until Mr. Cline sold a portion of his interests in Foresight to Murray Energy Corporation ("Murray") in 2015, Bailey Glasser acted as general counsel to both Mr. Cline and Foresight. After Murray acquired a majority of the economic interests in Foresight, Bailey Glasser continued to represent Foresight through the commencement of these Chapter 11 cases on a more limited basis on environmental, regulatory, and other discrete corporate transaction and commercial litigation matters. Both in connection with and after the Murray transaction, Bailey Glasser continued to represent generally Mr. Cline and his business interests, including his business interests in Foresight through Foresight Reserves LP, until his untimely death in 2019. Since the Murray transaction, Bailey Glasser has also represented certain Murray subsidiaries in connection with various matters unrelated to the Debtors. Since his death, Bailey Glasser has represented generally Mr. Cline's estate and his various ongoing business interests, including his business interests in Foresight through Foresight Reserves LP.

13. To enable Bailey Glasser to represent Foresight and various of its subsidiaries while simultaneously representing Mr. Cline and the Cline-related entities, both in connection with Foresight and other unrelated matters and the Murray subsidiaries, Foresight has entered into a series of conflict waivers with Mr. Cline and the Cline-related entities and the Murray subsidiaries stretching back to 2015.

14. From its long history of representation of Mr. Cline and Foresight, Bailey Glasser has gained a detailed institutional knowledge of Debtors' operations, corporate structure, material agreements, and personnel that cannot be replicated in the short term at another law firm.

15. Given Bailey Glasser's extensive prepetition experience in representing the Debtors, the Debtors have determined that it is essential that the employment of Bailey Glasser be continued to avoid disruption of the Debtors' normal business operations. In connection therewith, the Debtors submit that the proposed employment of Bailey Glasser on the terms set forth below is in the best interest of their estates and their creditors.

Services To Be Rendered

16. Subject to the approval of this Court, Bailey Glasser will provide legal services to the Debtors on the following specific matters:

a. Seeking various environmental permits necessary to construct pipelines and diffusers in the Big Muddy River to allow discharges of chloride water into mixing zones approved under Clean Water Act mixing zones, a matter which Bailey Glasser has handled for five years;

b. Advising on groundwater management zones at Macoupin Energy and related Consent Orders, a matter which Bailey Glasser has handled since Macoupin Energy acquired the affected assets from Exxon in 2009;

c. To the extent any litigation occurs during the pendency of Debtors' cases, continuing to represent Williamson Energy, LLC in the claims brought by an alleged partnership (Mitchell-Roberts), a matter which Bailey Glasser has handled since 2014;

d. Advising on chloride and sulfate water treatment at Sugar Camp Energy, a matter which Bailey Glasser has assisted on since 2014;

e. Pursuing an injunction related to unconstitutional regulations in Kentucky involving coal price bidding, an expedited matter which Bailey Glasser has assisted on since December 2019; and

f. Other day-to-day environmental, permitting, regulatory, commercial, and land matters for which Bailey Glasser has provided similar assistance since inception of Foresight Energy.

17. In addition to those specified matters, Bailey Glasser will provide legal services, as requested by the Debtors, with respect to (a) other environmental litigation, regulatory and compliance matters, including monitoring permits, negotiating with state and federal environmental entities regarding compliance matters, and advising the Debtors as to state and federal environmental compliance standards and (b) other commercial advice or lawsuits.

18. Bailey Glasser's representation will be limited to the matters set forth above (the "Special Counsel Matters"). Bailey Glasser will not provide general bankruptcy advice or legal service. Neither the Debtors' bankruptcy counsel nor Bailey Glasser anticipate any overlap in

responsibility or duplication of efforts between them. Bailey Glasser and the Debtors' other counsel will work together to ensure that legal services are coordinated and that there is no unnecessary duplication of services performed or charged to the Debtors' estates.

Compensation

19. Bailey Glasser intends, generally and subject to the caveat discussed below, to apply for compensation for professional services rendered on an hourly basis and reimbursement of expenses incurred in connection with these chapter 11 cases, subject to the Court's approval and in compliance with applicable provisions of the Bankruptcy Code, the Bankruptcy Rules, the Local Rules, and any other applicable procedures and orders of the Court.

20. Prior to the Petition Date, the Debtors prepaid Bailey Glasser on a flat-fee basis for its services, plus reimbursement of expenses, through March 31, 2020. Bailey Glasser intends to honor that arrangement. Although it will apply for approval of its compensation for services rendered and reimbursement of expenses prior to March 31, 2020 in accordance with the rules of the Court and the United States Trustee, Bailey Glasser will not seek payment of compensation for the services by that prepetition arrangement during that period.[1] Beginning April 1, 2020, Bailey Glasser will seek compensation for professional services in accordance with its hourly rates described below.

21. Because of the long-standing and broad relationship between Debtors and Bailey Glasser, Bailey Glasser provides Debtors a substantially discounted hourly rate as compared to its standard rates. The range of Bailey Glasser's rates applicable to Debtors' matters are as follows:

a. Partners $475–$850

[1] For the avoidance of doubt, the Debtors understand that Bailey Glasser may seek compensation for services rendered in connection with this application and the Debtors' bankruptcy cases, services that fall outside of the prepetition fee arrangement.

b. Associates/Of Counsel $400–$450

c. Paraprofessionals (Including Investigators) $250–$300

22. The following attorneys and paraprofessionals are currently expected to provide legal services to the Debtors at the substantially discounted hourly rates specified below, which may change from time-to-time based upon agreement with Debtors:

Name	Position	Hourly Rate
Brian A. Glasser	Partner	$650
Nicholas S. Johnson	Partner	$500
Jennifer S. Fahey	Partner	$550
Jeffrey R. Baron	Partner	$500
Amy S. Rubin	Of Counsel	$450
Joshua I. Hammack	Associate	$425
Christopher D. Smith	Associates	$400
John C. Ailes, Jr.	Investigator	$300
Linda Sadler	Paralegal	$250

23. Other Bailey Glasser lawyers and paraprofessionals will be utilized or consulted from time-to-time and may appear on behalf of the Debtors in these chapter 11 cases, as necessary.

24. Bailey Glasser's hourly rates are set at a level designed to compensate Bailey Glasser fairly for the work of its attorneys and paraprofessionals and to cover fixed and routine overhead expenses of the Firm. Hourly rates vary with the experience and seniority of the individuals assigned. These hourly rates are subject to periodic adjustments to reflect economic and other conditions.

25. The rate structure provided by Bailey Glasser is appropriate and not significantly different, and in fact is substantially discounted, from (a) the rates that Bailey Glasser charges for other similar types of regulatory and commercial litigation representations or (b) the rates that other comparable counsel would charge to do work substantially similar to the work Bailey Glasser will perform on behalf of the Debtors.

26. In addition to the fees set forth above, the Debtors have agreed, subject to the Court's approval and pursuant to applicable orders of this Court, the Bankruptcy Code, the Bankruptcy Rules and the Local Rules, to reimburse Bailey Glasser for direct expenses incurred in connection with the performance of the Special Counsel Matters. Direct expenses include reasonable and customary out-of-pocket expenses such as travel, meals, accommodations, and other expenses specifically related to the Special Counsel Matters.

27. Consistent with the firm's policy with respect to its other clients, Bailey Glasser will charge the Debtors for all charges and disbursements incurred in rendering services to the Debtors, including those services rendered through March 31, 2020.

28. The Debtors understand and have agreed that Bailey Glasser will apply to the Court for allowances of compensation and reimbursement of expenses from and after the Petition Date in accordance with sections 330 and 331 of the Bankruptcy Code, the Bankruptcy Rules, the Local Rules, and this Court's *Order (A) Establishing Procedures for Interim Compensation and Reimbursement of Expenses of Retained Professionals and (B) Granting Related Relief* [Docket No. 122].

Compensation Received by Bailey Glasser

29. In the 12-month period preceding the Petition Date, the Debtors paid Bailey Glasser $1,958,097.39 in the aggregate. Bailey Glasser has been paid for all prepetition services rendered and expenses incurred prior to March 31, 2020.

30. Of the amounts paid to Bailey Glasser during that 12-month period, the Debtors paid Bailey Glasser $325,000 on January 7, 2020 as an advance payment retainer covering all services Bailey Glasser was to provide through March 31, 2020. That advance payment retainer was, in accordance with Bailey Glasser's agreement, earned by Bailey Glasser upon receipt. As stated, Bailey Glasser intends to abide by that agreement and provide the covered services through March 31, 2020 at no additional expense to the Debtors, other than expenses Bailey Glasser incurs.

31. Pursuant to Bankruptcy Rule 2016(b), Bailey Glasser has neither shared nor agreed to share (a) any compensation it has received or may receive with another party or person, other than with the partners, associates, and contract attorneys associated with Bailey Glasser or (b) any compensation another person or party has received or may receive.

32. As of the Petition Date, the Debtors did not owe Bailey Glasser any amounts for legal services rendered or expenses incurred before the Petition Date.

No Adverse Interest

33. Based on the Johnson Declaration and Moore Declaration, to the best of the Debtors' knowledge and except as set forth in the Johnson Declaration and otherwise as set forth herein, Bailey Glasser does not represent or hold any interest adverse to the Debtors or their estates with respect to the Special Counsel Matters on which Bailey Glasser is to be employed. Furthermore, to the best of the Debtors' knowledge and based on the Johnson Declaration,

Bailey Glasser does not have any connection with the Debtors or any creditor or other parties in interest in these Chapter 11 Cases, or their respective attorneys or accountants, except as otherwise set forth in the Johnson Declaration and otherwise as set forth herein. None of the connections disclosed in the Johnson Declaration or otherwise herein relate to or constitute an adverse interest with respect to the matters on which Bailey Glasser is to be employed, and thus the Debtors believe Bailey Glasser has no connections that would disqualify it as serving as their special counsel herein.

34. Prior to the Petition Date, the Debtors provided Bailey Glasser with a list of all known parties in interest in connection with the Debtors' cases. Bailey Glasser has advised the Debtors that it has conducted a preliminary review and disclosed all currently known contacts with those parties in interest in the Johnson Declaration. Bailey Glasser has also advised the Debtors that it is continuing to and will in the future conduct an ongoing review of its records to ensure that no conflicts or other disqualifying circumstances exist or arise. Bailey Glasser has informed the Debtors that if there is a material change to any of the foregoing statements and representations or the statements and representations in the Johnson Declaration during the course of these cases, Bailey Glasser will supplement the Johnson Declaration as needed.

Notice

35. Notice of this Application will be provided to: (a) the Office of the United States Trustee for Region 13; (b) counsel to the Ad Hoc First Lien Group; (c) counsel to the Ad Hoc Crossover Group; (d) counsel to the Facilities Agent; (e) counsel to the Term Agent; (f) counsel to the Indenture Trustee; (g) counsel to the collateral trustee under the Debtors' secured debt facilities; (h) counsel to the DIP Agent; (i) counsel to DIP Lenders; (j) counsel to Murray Energy Corporation; (k) counsel to Foresight Reserves LP; (l) counsel to Javelin; (m) counsel to Uniper

Global Commodities UL Limited; (n) the Internal Revenue Service; (o) the Securities and Exchange Commission; (p) the United States Attorney's Office for the Eastern District of Missouri; (q) the state attorneys general for all states in which the Debtors conduct business; (r) the holders of the thirty (30) largest unsecured claims against the Debtors, on a consolidated basis; (s) counsel to the Committee; and (t) any party that has requested notice pursuant to Bankruptcy Rule 2002 (collectively, the "Notice Parties"). Notice of this Application and any order entered hereon will be served in accordance with Local Bankruptcy Rule 9013-3(A)(1). In light of the nature of the relief requested herein, the Debtors submit that no other or further notice is necessary.

No Prior Request

36. No prior request for the relief sought in this Application has been made to this or any other court.

WHEREFORE, the Debtors respectfully request that the Court enter an order granting the relief requested in this Application and such other and further relief as may be just and proper.

Dated: March 31, 2020
St. Louis, Missouri

Respectfully submitted,

FORESIGHT ENERGY LP
(for itself and on behalf of each of its affiliated Debtors and Debtors in Possession)

/s/ Robert D. Moore
Name: Robert D. Moore
Title: President and Chief Executive Officer
Foresight Energy LP

EXHIBIT A

JOHNSON DECLARATION

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

In re:	)	Chapter 11
	)	
FORESIGHT ENERGY LP, *et al.*,	)	Case No. 20-41308-659
	)	
Debtors.	)	(Jointly Administered)
	)	

DECLARATION OF NICHOLAS S. JOHNSON IN SUPPORT OF THE DEBTORS' APPLICATION TO EMPLOY BAILEY & GLASSER LLP AS SPECIAL COUNSEL

I, Nicholas S. Johnson, hereby declare:

1. I am a Partner of the law firm Bailey & Glasser LLP ("Bailey Glasser"), which maintains offices for the practice of law at, among other places, 1055 Thomas Jefferson Street NW, Suite 540, Washington, D.C., 20007.

2. I am admitted, practicing, and a member in good standing of the Bars of the State of West Virginia, the State of Missouri, the Commonwealth of Virginia, and the District of Columbia, and I have been admitted to practice in the United States District Courts for the Southern and Northern District of West Virginia.

3. I submit this declaration ("Declaration") in support of *Debtors' Application for an Order Authorizing the Retention and Employment of Bailey & Glasser LLP as Special Counsel for the Debtors and Debtors-in-Possession Nunc Pro Tunc to Petition Date* (the "Application") and pursuant to Bankruptcy Rules 2014 and 2016 and sections 327(e), 328(a), and 329 of the Bankruptcy Code.

4. I am authorized to make this Declaration on behalf of Bailey Glasser.

5. Except as otherwise indicated herein, I have personal knowledge of the matters set forth herein and, if called as a witness, would testify competently thereto. Indeed, I was

Assistant General Counsel for Foresight Energy Services, LLC, one of the Debtors in these cases, from 2014-2015, advising on operational issues across the company, with a focus on commercial and environmental matters.

6. I am in all respect competent to make this Declaration pursuant to sections 327, 328, and 329 of the Bankruptcy Code and Bankruptcy Rules 2014 and 2016.

Bailey Glasser's Qualifications

7. Foresight Energy LP and its subsidiaries that are debtors and debtors in possession in the above referenced proceedings (collectively the "Debtors") have requested that Bailey Glasser continue to provide services to the Debtors similar to those Bailey Glasser provided prior to the Petition Date, and Bailey Glasser has consented to provide those services.

8. Bailey Glasser has represented the Debtors in many capacities since their inception and formation. Beginning in 1999, Bailey Glasser began representing the Debtors' founder, Chris Cline, personally and his various business interests generally. In that regard, Bailey Glasser assisted Mr. Cline in forming the entities that eventually comprised Foresight Energy, LP and its family of companies ("Foresight") beginning in 2004. From that time until Mr. Cline sold a portion of his interests in Foresight to Murray Energy Corporation ("Murray") in 2015 (the "Murray Acquisition"), Bailey Glasser acted as general outside counsel to both Mr. Cline and Foresight.

9. After Murray acquired a majority of the economic interests in Foresight, Bailey Glasser continued to represent Foresight through the commencement of these chapter 11 cases on a more limited basis on environmental, regulatory, and other discrete corporate transaction and commercial litigation matters.

10. A non-exhaustive list of Bailey Glasser's prior representative matters of Foresight includes:

a. Litigating against WPP, LLC in a $800 million claim pressed as a result of spontaneous combustion and subsequent declaration of force majeure by Hillsboro Energy, LLC;

b. Negotiating and drafting sale-leaseback style transactions at each of the Debtor's mining facilities (Macoupin Energy, LLC; Hillsboro Energy, LLC; Sugar Camp Energy, LLC; and Williamson Energy, LLC) pre-Murray Acquisition;

c. Representing Foresight Coal Sales, LLC in multiple coal pricing arbitrations;

d. Representing Williamson Energy, LLC, both pre-and post-Murray Acquisition, in long-running dispute with an alleged partnership over mineral rights related to Williamson Energy, LLC's mine plan;

e. Representing Foresight Coal Sales, LLC, both pre-and post-Murray Acquisition, in commercial disputes with railroads and railcar leasing companies;

f. Representing the debtors mining facilities in every regulatory appeal made to the Illinois Department of Natural Resources ("IDNR") and/or the Illinois Environmental Protection Agency ("IEPA") since inception; and

g. Representing the debtors mining facilities in every enforcement action initiated by either the IDNR or IEPA since inception.

11. Both in connection with and after the Murray Acquisition, Bailey Glasser also continued to represent generally Mr. Cline and his business interests, including his business interests in Foresight through Foresight Reserves LP, until his untimely death in 2019. Since his

death, Bailey Glasser has represented generally Mr. Cline's estate and his various ongoing business interests, including his business interests in Foresight through Foresight Reserves.

12. Since the Murray Acquisition, Bailey Glasser has also represented certain subsidiaries of Murray in connection with various matters unrelated to the Debtors.

13. To enable Bailey Glasser to represent Foresight and various of its subsidiaries while simultaneously representing Mr. Cline and the Cline-related entities, both in connection with Foresight and other unrelated matters, and subsidiaries of Murray, Foresight has entered into a series of conflict waivers with Mr. Cline and the Cline-related entities and certain Murray subsidiaries stretching back to 2015.

14. As a result of its long history of representation of Mr. Cline and Foresight, Bailey Glasser has gained a detailed institutional knowledge of Debtors' operations, corporate structure, material agreements, and personnel that cannot be replicated in the short term at another law firm and that cannot be replicated without substantial cost to the Debtors.

Services to be Rendered

15. Subject to the approval of this Court, Bailey Glasser will provide legal services to the Debtors on the following specific matters:

a. Seeking various environmental permits necessary to construct pipelines and diffusers in the Big Muddy River to allow discharges of chloride water into mixing zones approved under Clean Water Act mixing zones, a matter which Bailey Glasser has handled for five years;

b. Advising on groundwater management zones at Macoupin Energy, LLC and related Consent Orders, a matter which Bailey Glasser has handled since Macoupin Energy, LLC acquired the affected assets from Exxon in 2009;

c. Advising on chloride and sulfate water treatment at Sugar Camp Energy, LLC a matter which Bailey Glasser has assisted on since 2014;

d. To the extent any litigation occurs during the pendency of Debtors' cases, continuing to represent Williamson Energy, LLC in the claims brought by an alleged partnership (Mitchell-Roberts), a matter which Bailey Glasser has handled since 2014;

e. Pursuing an injunction related to unconstitutional regulations in Kentucky involving coal price bidding, an expedited matter which Bailey Glasser has assisted on since December 2019; and

f. Other day-to-day environmental, permitting, regulatory, and land matters for which Bailey Glasser has provided similar assistance since inception of Foresight Energy.

16. In addition to those specified matters, Bailey Glasser will provide legal services, as requested by the Debtors, with respect to (a) other environmental litigation, regulatory and compliance matters, including monitoring permits, negotiating with state and federal environmental entities regarding compliance matters, and advising the Debtors as to state and federal environmental compliance standards and (b) other commercial advice and lawsuits.

17. Bailey Glasser will also undertake legal work related to this application to retain Bailey Glasser as special counsel, periodic applications for payment of professional fees and expenses, and related matters.

18. Bailey Glasser's representation will be limited to the matters set forth above (the "Special Counsel Matters"). Bailey Glasser will not provide general bankruptcy advice or legal service. Neither the Debtors' bankruptcy counsel nor Bailey Glasser anticipate any overlap in

responsibility or duplication of efforts between them. Bailey Glasser and the Debtors' other counsel will work together to ensure that legal services are coordinated and that there is no unnecessary duplication of services performed or charged to the Debtors' estates.

Compensation

19. Subject to Court approval and the caveat described below, Bailey Glasser will charge the Debtors for its legal services on an hourly basis in accordance with its ordinary and customary rates for this client and for matters of the types in effect on the date such services are rendered and for reimbursement of its actual and necessary expenses and other charged incurred by Bailey Glasser.

20. The Debtors prepaid Bailey Glasser on a flat-fee basis for its services, plus reimbursement of expenses, through March 31, 2020. Bailey Glasser intends to honor that arrangement. Although it will apply for approval of its compensation for services rendered and reimbursement of expenses prior to March 31, 2020 in accordance with the rules of the Court and the United States Trustee, Bailey Glasser will not seek payment of compensation for the services by that prepetition arrangement during that period.[1] Beginning April 1, 2020, Bailey Glasser will seek compensation for professional services in accordance with its hourly rates described below.

21. Because of the long-standing and broad relationship between Debtors and Bailey Glasser, Bailey Glasser provides Debtors a substantially discounted hourly rate as compared to its standard rates. The range of Bailey Glasser's rates applicable to Debtors' matters are as follows:

a. Partners $475–$850

[1] For the avoidance of doubt, the Debtors understand that Bailey Glasser may seek compensation for services rendered in connection with this application and the Debtors' bankruptcy cases, services that fall outside of the prepetition fee arrangement.

b. Associates/Of Counsel $400–$450

c. Paraprofessionals (Including Investigators) $250–$300

22. The following attorneys and paraprofessionals are currently expected to provide legal services to the Debtors at the substantially discounted hourly rates specified below, which may change from time-to-time based upon agreement with Debtors:

Name	Position	Hourly Rate
Brian A. Glasser	Partner	$650
Nicholas S. Johnson	Partner	$500
Jennifer S. Fahey	Partner	$550
Jeffrey R. Baron	Partner	$500
Amy S. Rubin	Of Counsel	$450
Joshua I. Hammack	Associate	$425
Christopher D. Smith	Associates	$400
John C. Ailes, Jr.	Investigator	$300
Linda Sadler	Paralegal	$250

23. Other Bailey Glasser lawyers and paraprofessionals will be utilized or consulted and may appear on behalf of the Debtors in these chapter 11 cases, as necessary.

24. None of the professionals included in this engagement increase their rate based on the geographical location of these chapter 11 cases.

25. The hourly rates set forth above reflect a substantial discount from Bailey Glasser's standard hourly rates, owing to the age of many of the matters which we are handling and the long-standing attorney-client relationship with Debtors. These rates are set at a level designed to fairly compensate Bailey Glasser for the work of its attorneys and paralegals and to cover fixed and routine overhead expenses of the Firm.

26. Additionally, it is Bailey Glasser's policy to charge its clients in all areas of practice for all other expenses incurred in connection with the client's case or transaction, subject to any modification to such policies that Bailey Glasser may be required to comply with sections 330 and 331 of the Bankruptcy Code, the Bankruptcy Rules, the Local Bankruptcy Rules, and Orders of this Court.

27. These hourly rates are subject to periodic adjustments to reflect economic and other conditions, and to reflect their increased experience and expertise in this area of the law. Bailey Glasser may make periodic applications for compensation, and if, at the completion of the case the results merit it, may make application to the Court for the allowance of a premium above their designated hourly rates.

28. Bailey Glasser intends to apply to the Bankruptcy Court for allowance of compensation for professional services rendered and reimbursement of expenses incurred in these cases in accordance with applicable provisions of the Bankruptcy Code, the Federal Rules of Bankruptcy Procedure, and the Local Rules and Orders of this Court.

Compensation Received by Bailey Glasser

29. In the 12-month period preceding the Petition Date, the Debtors paid to Bailey Glasser $1,958,097.39 in the aggregate for legal services rendered and expenses incurred. Bailey Glasser has been paid for all prepetition services rendered and expenses incurred prior to March 31, 2020.

30. Of the amounts paid to Bailey Glasser during that 12-month period, the Debtors paid Bailey Glasser $325,000 on January 7, 2020 as an advance payment retainer covering all services Bailey Glasser was to provide through March 31, 2020. That advance payment retainer was, in accordance with Bailey Glasser's agreement, earned by Bailey Glasser upon receipt. As

stated, Bailey Glasser intends to abide by that agreement and provide covered services through March 31, 2020 at no additional expense to the Debtors, other than expenses Bailey Glasser incur on Debtors' behalf.

31. The Debtors owe the firm $0.00 for prepetition services and Bailey Glasser has been paid for all prepetition services and expenses rendered prior to March 31, 2020.

32. Neither I nor any partner or associate of Bailey Glasser has shared or agreed to share (a) any compensation it has received or may receive with another party or person, other than with the partners, associates, and contract attorneys associated with Bailey Glasser or (b) any compensation another person or party has received or may receive.

No Adverse Interest

33. Bailey Glasser has performed services in the past and may perform services in the future, in matters unrelated to these chapter 11 cases, for persons that are parties in interest in the Debtors' chapter 11 cases. As part of its customary practice, Bailey Glasser is retained in cases, proceedings, and transactions involving many different parties, some of whom may represent or be claimants or employees of the Debtors, or other parties in interest in these chapter 11 cases. Except as specifically set forth herein, Bailey Glasser does not and will not perform services for any such person in connection with these chapter 11 cases.

34. Bailey Glasser does not have any relationship with any person, any such persons' attorneys, or any such persons' accountants that would be adverse to the Debtors or their estates with respect to the matters on which Bailey Glasser is to be retained.

Bailey Glasser's Connections with the Debtors

35. As set forth above, over a period of approximately 15 years, Bailey Glasser has provided extensive general legal and corporate advice and other professional services to the

Debtors. Bailey Glasser has represented the Debtors as their outside counsel, working closely with and advising the Debtors in connection with a wide range of matters including significant corporate transactions and commercial and environmental litigation.

36. In connection therewith and insofar as is pertinent to the Application, Bailey Glasser has served as Debtors' legal advisors regarding environmental and other regulatory compliance, and has provided as well advice to the Debtors' board of directors and other services for the Debtors in relation to the issues that have a direct and significant impact on the Debtors' day-to-day operations. If authorized to so by this Court, Bailey Glasser will continue to act as special counsel for the Debtors with respect to those matters, advising the Debtors with respect, specifically, to the Special Counsel Matters set forth in the Application.

Bailey Glasser's Connections with Parties in these Chapter 11 Cases

37. To confirm that Bailey Glasser did not have any conflicts or other connections that might preclude its representation of the Debtors as special counsel, I caused Bailey Glasser attorneys under my supervision to conduct a review of potential connections and relationships between Bailey Glasser and parties in interest in these chapter 11 cases within the categories articulated in the *Potential Parties in Interest List* (ECF No. 33) hereto (the "Potential Parties in Interest").

38. Bailey Glasser has conducted a preliminary investigation and review of its connections to the Potential Parties in Interest. To the best of my knowledge, all such entities and the nature of Bailey Glasser's representation of, or connections to, such entities are set forth in this Declaration or in Exhibit 1 to this Declaration (the "Disclosure Schedule").

Connections with the Debtors and Their Representatives

39. As noted, Bailey Glasser has represented Foresight Energy and various of its subsidiaries for more than fifteen years. [2]

40. In connection with its representation of the Debtors during that period of time, Bailey Glasser and various of its attorneys, paralegals, and investigators have had professional and personal relationships with many of the Debtors' current and former officers and directors, some of whom are (or were) representatives or appointees of Cline-related entities and Murray that Bailey Glasser also represented as described below, and various of the Debtors' attorneys, advisors, and accountants.

41. In addition, Bailey Glasser has had contacts with those persons listed as Former Officers and Directors on the List of Potential Parties in their activities after departing Foresight Energy LP, and in some instances, has been retained by such former officers and directors to represent them and their new employers in matters unrelated to the Debtors. Bailey Glasser currently represents Lesslie Ray, a former director of the Debtors, in her capacity as Executor of the Estate of Chris Cline in a litigation matter pending in Florida.

Cline-Related Connections

42. Bailey Glasser, and the partners, counsel, and associates of Bailey Glasser, represented Chris Cline and his estate and business interests in the past, and currently represent and expect to represent his estate and business interests in the future, in connection with matters unrelated to the Debtors.

[2] Bailey Glasser has represented and/or assisted in the formation of each of the Debtors listed on the *Potential Parties in Interest List* (ECF No. 33), except for Foresight Energy Employee Services.

43. In addition, Bailey Glasser represented Chris Cline, his estate and certain of his business interests in the past, currently represent, and may represent in the future the following Cline-related entities in connection with matters directly related to the Debtors:

a. Foresight Reserves, LP, a 20% equity holder of the limited partnership interests in Foresight Energy LP;

b. Colt, LLC, which leases coal reserves to the Debtors and entered into a restructuring support agreement with the Debtors; and

c. New River Royalty LLC, which leases property to the Debtors.

44. Prior to the Petition Date, Bailey Glasser simultaneously represented certain of the Debtors and those identified Cline-related entities in connection with matters directly related to the Debtors pursuant to conflict waivers executed by each of the relevant parties.

45. As set forth in the Moore Declaration, the Debtors have agreed to waive the same conflicts to allow Bailey Glasser to continue to represent the Debtors and such Cline-related entities in such matters directly related to the Debtors in connection with Bailey Glasser's employment as special counsel.

Other Non-Cline-Related Connections

46. In addition to those Cline-related entities, Bailey Glasser, and the partners, counsel, and associates of Bailey Glasser, presently represent, have represented in the past, and may represent in the future entities (or affiliates of entities) that are claimants of and/or interest holders in the Debtors, and/or are parties in interest in these chapter 11 cases, in matters unrelated to these chapter 11 cases. To the best of my knowledge, all such parties and Bailey Glasser's relationship thereto are specifically described in Exhibit 1.

47. Bailey Glasser has also represented certain Murray Energy Company subsidiaries: Consolidation Coal Company, McElroy Coal Company, and The American Coal Company (the "Murray Subsidiaries") in providing compliance advice and in litigation matters unrelated to the Debtors. Bailey Glasser's representation of the Murray Subsidiaries was undertaken with all potentially interested parties consenting in writing. Bailey Glasser expects to continue to represent the Murray Subsidiaries in matters unrelated to these chapter 11 cases.

48. Bailey Glasser currently represents Javelin Global Commodities (UK) LTD ("Javelin") in various bankruptcy or litigation matters unrelated to the Debtors. Bailey Glasser's representation of Javelin was undertaken with all potentially interested parties consenting in writing. Bailey Glasser will continue to represent Javelin in matters unrelated to these chapter 11 cases.

49. Lastly, certain of Bailey Glasser's attorneys acquired and continue to hold *de minimis* amounts of limited partnership interests in Foresight, which limited partnership interests are expected to receive no distributions or other consideration in connection with these Chapter 11 cases.

50. Except as set forth in the preceding paragraphs and Exhibit 1 hereto, and based on the conflicts review conducted to date and described herein, to the best of my knowledge, neither I, nor any member, counsel, associate, or other attorney of Bailey Glasser, insofar as I have been able to ascertain, currently represents or has represented any of the other Potential Parties in Interest.

51. Bailey Glasser is, however, continuing to conduct a review of its records for connections to the Potential Parties in Interest and reserves the right to supplement this disclosure as to its relationships with the Potential Parties in Interest.

52. In addition, and in light of the extensive number of the Debtors' creditors and parties in interest and because definitive lists of all such creditors and other parties have not yet been generated or obtained, neither I nor Bailey Glasser are able to conclusively identify all potential relationships with the Debtors' creditors and other parties at this time, and we reserve the right to supplement this disclosure as additional relationships that may be relevant to Bailey Glasser come to our attention.

53. The records upon which this investigation is based are maintained by Bailey Glasser in the ordinary course of business and are believed to be accurate; to the extent I become aware hereafter that any such records or other information contained herein is not accurate, I will promptly apprise the Court.

54. I am not related, and to the best of my knowledge, no attorney at Bailey Glasser is related, to any United States Bankruptcy Judge in the Eastern District of Missouri or the United States Trustee for such district or any employee in the office thereof, or any clerk, deputy, or personnel working in the Court, except (i) to the extent any partner, counsel, or associate (a) may have appeared in the past and may appear in the future in cases where one or more of such parties may be involved; and (b) may have represented or may represent one or more of such parties in interest in matters unrelated to these chapter 11 cases.

55. To the best of my knowledge and insofar as I have been able to ascertain, neither Bailey Glasser nor any of its partners, counsel, or associates holds or represents any interest adverse to the Debtors or their estates with respect to the matters upon which it is to be engaged.

56. With respect to the foregoing representations, and any other representation set forth in Exhibit 1, the identified, ongoing, and potential future representations of any Cline-related entities or any other creditor or party in interest will not affect Bailey Glasser's

representation of the Debtors in the specific matters for which it is to be retained as set forth in the Application.

57. Bailey Glasser further states that it has not shared, nor agreed to share (a) any compensation it has received or may receive with another party or person, other than with the partners, counsel, associates of Bailey Glasser and other employees generally retained by Bailey Glasser in the ordinary course of business and that have not been specifically retained for this particular matter; or (b) any compensation paid by the Debtors to any other person or party in these chapter 11 cases.

58. The foregoing constitutes the statement of Bailey Glasser pursuant to sections 327(e), 328, and 329 of the Bankruptcy Code, Bankruptcy Rules 2014(a) and 2016(b), and Local Bankruptcy Rules 2014 and 2016.

59. Pursuant to 28 U.S.C § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct, and that this

Dated: March 31, 2020.

Respectfully submitted,

/s/ Nicholas S. Johnson
Name: Nicholas S. Johnson
Title: Partner
Bailey & Glasser LLP

EXHIBIT 1

DISCLOSURE SCHEDULE

Debtors

Bailey Glasser has represented and/or assisted in the formation of each of the Debtors listed on the *Potential Parties in Interest List* (ECF No. 33), except for Foresight Energy Employee Services.

Non-Debtor Affiliates

Matched Entity	Relationship to Bailey Glasser
Adena Minerals, L.L.C.	Former Client[1]
Consolidation Coal Company	Current Client
McElroy Coal Company	Former Client
Colt LLC	Current Client
Javelin Global Commodities (UK) LTD	Current Client
Foresight Reserves LP	Current Client
Ruger Coal Company, LLC	Current Client
Ruger, LLC	Current Client

Current Officers and Directors

Matched Entity	Relationship to Bailey Glasser
Lesslie Ray	Current Client

Former Officers and Directors

Matched Entity	Relationship to Bailey Glasser
Anthony Webb	Former Client

Joint Ventures, Partnerships and Consortiums

Matched Entity	Relationship to Bailey Glasser
Foresight Reserves LP	Current Client

Fiver Percent and Greater Shareholders and Beneficial Owners

Matched Entity	Relationship to Bailey Glasser
Cline Trust Company, LLC	Current Client
[Estate of] Christopher Cline	Current Client

Significant Financial Institutions (Including Administrative Agents, Lenders and Equipment Financing)

Matched Entity	Relationship to Bailey Glasser

[1] The term "current client" means an entity or person identified as presently having a matter open with Bailey Glasser. The term "former client" means an entity or person identified as having a closed matter with Bailey Glasser.

PNC Bank, National Association	Current Client

Royalty Contract Counterparties

Matched Entity	Relationship to Bailey Glasser
New River Royalty, LLC	Current Client

1L Lenders[2]

Matched Entity	Relationship to Bailey Glasser
Cline Resource and Development Company	Current Client
The Cline Trust Company	Current Client
Midtown Acquisitions L.P.	Former Client

2L Lenders[3]

Matched Entity	Relationship to Bailey Glasser
The Cline Group	Current Client
Davidson Kempner Capital Management L.P.	Former Client

Significant Customers

Matched Entity	Relationship to Bailey Glasser
The American Coal Company	Current Client

Top 50 Unsecured Creditors

Matched Entity	Relationship to Bailey Glasser
State Electric Supply Co.	Former Client

[2] Neither Cline Trust Company LLC nor Cline Resource and Development Company, Inc. owned any 1L debt as of the bankruptcy petition.

[3] The Cline Group is a d/b/a for Cline Resource and Development Company, Inc. It owed no 2L debt as of the bankruptcy petition.

EXHIBIT B

MOORE DECLARATION

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

In re:	)	Chapter 11
	)	
FORESIGHT ENERGY LP, *et al.*,	)	Case No. 20-41308-659
	)	
Debtors.	)	(Jointly Administered)
	)	

DECLARATION OF ROBERT D. MOORE IN SUPPORT OF THE DEBTORS' APPLICATION FOR ENTRY OF AN ORDER AUTHORIZING THE RETENTION AND EMPLOYMENT OF BAILEY & GLASSER LLP AS SPECIAL COUNSEL, *NUNC PRO TUNC* TO THE PETITION DATE

I, Robert D. Moore, under penalty of perjury, declare as follows:

1. I am the President and Chief Executive Officer of Foresight Energy LP located at One Metropolitan Square, 211 North Broadway, Suite 2600, St. Louis, Missouri 63102.

2. I submit this declaration (the "Declaration") in support of *Debtors' Application for an Order Authorizing the Retention and Employment of Bailey & Glasser LLP as Special Counsel for the Debtors and Debtors in Possession Nunc Pro Tunc to Petition Date* (the "Application"). Except as otherwise noted, all facts in this Declaration are based on my personal knowledge of the matters set forth herein, information gathered from my review of relevant documents, and information supplied to be by members of the Debtors' senior management and the Debtors' advisors.

3. The Debtors are seeking the employment of Bailey Glasser despite Bailey Glasser's continuing representation of parties-in-interest who hold or may hold an interest adverse to the Debtors in these chapter 11 cases. However, the Debtors have determined that Bailey Glasser, by its representation of those parties-in-interest listed below, does not hold an

interest adverse to the Debtors in the matters for which the Debtors seek their representation in these cases, i.e. the Special Counsel Matters as defined in the Application.

4. Additionally, the Debtors, as debtors in possession, hereby agree to waive any actual or potential conflicts now existing or arising from Bailey Glasser's continued representation of other parties-in-interest in any business or litigation matter relating to the Debtors and as to which the Debtors' interests are adverse:

a. The Estate of Chris Cline;

b. Foresight Reserves LP;

c. Colt, LLC; and

d. New River Royalty, LLC.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct to the best of my information, knowledge, and belief.

Dated: March 31, 2020
St. Louis, Missouri

Respectfully submitted,

/s/ Robert D. Moore
Robert D. Moore
Title: President and Chief Executive Officer
Foresight Energy LP

March 18, 2020

The President
The White House
1600 Pennsylvania Ave, NW
Washington, DC 20500

The Honorable Nancy Pelosi
The Speaker of the House of Representatives
United States Capitol
Washington, DC 20515

The Honorable Mitch McConnell
Majority Leader
United States Senate
Washington, DC 20510

Dear Mr. President, Speaker Pelosi, and Majority Leader McConnell:

As the country faces this unique and mounting challenge around the COVID-19 pandemic, U.S. coal miners continue to work to provide the resources necessary to power America while bracing for the severe financial distress facing all sectors across the nation. To minimize the impact of this crisis on the coal industry, Congress should ensure all businesses have the financial resources necessary to ride out the pandemic.

The coal industry is absolutely critical to securing a domestic, secure supply of affordable energy. As global supply chains are disrupted, countries close their borders and the shock of national quarantines buffets the global economy, American-mined coal is here when it is needed. The industry remains steadfast. The fuel security provided by coal reserves at power plants offers resiliency to a system that is bracing for uncertainty, and it is imperative to keep these plants online—whether through the use of the Defense Production Act or other means—in the interest of national security. Further, as an essential industry for the processing of raw materials for equipment essential to primary operations in the electric power sector under Presidential Policy Directive 21 (PPD-21) and the 2013 Department of Homeland Security National Infrastructure Protection Plan, additional designation is necessary to ensure the continued national operation of critical infrastructure and supply chains to allow uninterrupted operations.

To maintain this essential role, it is imperative that coal companies have access to the necessary cash flow they need to continue operations. Even before the recent crisis, the coal industry was struggling to recover from a series of disabling public policies

impairing coal demand and production. Compounding the impacts, late last year Congress imposed a $220 million tax increase on the industry through the Black Lung Excise Tax (BLET). The U.S. Department of Labor recently testified that increasing the tax rate was unnecessary as the lower tax rate is sufficient to cover beneficiary payments and program administration costs. Congress should immediately reduce—not eliminate—the BLET to its 2019 levels. Doing so would provide much needed relief for the coal industry and ensure continued revenue for the payment of benefits under the program that could otherwise face financial stress.

Separately, coal companies paid approximately $150 million in fees in fiscal year 2019 into the Abandoned Mine Land Fund to reclaim high-priority coal mines abandoned or not sufficiently reclaimed before 1977. Over the last 40 years, more than $11 billion plus interest have been collected into the fund. Reclamation projects at existing operations and historic sites continue today even during this time of crisis. With an estimated $2.2 billion already in the fund, Congress should provide a temporary 50 percent reduction in the amount of fees collected for surface-, underground- and lignite-mined coal to ensure the continued purpose of reclaiming high priority abandoned and active coal mines.

Congress should also suspend or reduce the federal royalty payments to the treasury. Royalty rates for federal coal are 30 percent to 65 percent higher than the prevailing rates for private coal in the East. Moreover, federal coal lessees pay bonus bids and surface rentals, financial features rarely found in private coal leasing transactions. Between taxes, fees and royalties, the federal, state and local governments receive almost 40 cents on every dollar of coal sold from the Powder River Basin. This relief, well in line with other industries, would help companies operating on federal lands to mitigate the economic impacts of COVID-19 while maintaining operational capacity and ensuring access to in-demand energy resources.

Recent policy announcements to immediately increase the availability of credit must also be expanded to make certain that the credit is readily available to all operating businesses in the short term without prejudice or discrimination. Under pressure from environment groups, financial institutions have divested from carbon-intensive industries, specifically coal, over the last decade, leaving very limited options available to the coal industry. Without access to available credit, the operations of hundreds of mines will be threatened, together with the nearly 81,000 miners they employ.

In a perilous time, the essential work of our coal miners to produce the fuel to keep the lights on and homes warm and the certainty and security provided by coal power is just what we need to keep the country moving forward. We appreciate your consideration and thank you for your leadership during these very difficult times.

Sincerely,

Rich Nolan

TVA Tract No. XENC-3L

Prepared by and return to:

Michael B. Tindle, Attorney
Tennessee Valley Authority
1101 Market Street, SP 3L
Chattanooga, Tennessee 37402-2801
(423) 751-6317

ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS ASSIGNMENT AND ASSUMPTION AGREEMENT (sometimes hereinafter referred to as an "Assignment Agreement") effective this 4th day of August 2009 (such date sometimes hereinafter referred to as the "Effective Date"), by and among the UNITED STATES OF AMERICA (sometimes hereinafter referred to as "Lessor"), acting herein by and through its legal agent, the Tennessee Valley Authority (sometimes hereinafter referred to as "TVA"), a government corporation created and existing under an Act of Congress, known as the Tennessee Valley Authority Act of 1933, as amended, 1101 Market Street, Chattanooga, Tennessee 37402 - 2801, and Illinois Fuel Company, LLC, a Kentucky limited liability company ("sometimes hereinafter referred to as "Assignor" and sometimes hereinafter referred to as "Lessee" and sometimes hereinafter referred to as "Illinois Fuel"), 1500 North Big Run Road, Ashland, Kentucky, 41102, and Ruger Coal Company, LLC, a Delaware limited liability company, 3801 PGA Boulevard, Suite 903, Palm Beach Gardens, Florida, 33410 (sometimes hereinafter referred to as "Assignee" and sometimes hereinafter referred to as "Ruger").

WITNESSETH:

WHEREAS TVA as legal agent for the Lessor, and Illinois Fuel, as Lessee, executed the Illinois Coal Lease effective July 1, 2002, which Lease is to a tract designated in the TVA land files as TVA Tract No. XENC-3L, a copy of which Lease is attached hereto and made a part hereof as Exhibit A (the "Lease"), and a memorandum of which is of record as Document Number 2007-5822 in the office of the Recorder of Franklin County, Illinois, as Instrument Number 2007005805 in the office of the Recorder of Hamilton County, Illinois, and as Instrument Number 200706923 in the office of the Recorder of Jefferson County, Illinois; and

WHEREAS Illinois Fuel, as Lessee, desires to assign to Ruger all of Illinois Fuel's estate, right, title, and interest in, to, and under the Lease, and Ruger desires to (i) accept from Illinois Fuel the assignment of all of its right, title, and interest in, to, and under the Lease, and (ii) assume all of its duties and obligations under the Lease; and

WHEREAS pursuant to Section 12 of the Lease, the assignment of the Lease requires TVA's prior written consent; and

WHEREAS TVA desires to consent to Illinois Fuel's assignment to Ruger of all of Illinois Fuel's estate, right, title, and interest in, to, and under the Lease, provided that Ruger agrees to be bound by and subject to all of the terms of the Lease;

WHEREAS, Ruger further desires to obtain TVA's consent, upon the assignment of the Lease to Ruger, to permit the Lease reserves to be mined by Sugar Camp Energy, LLC, a Delaware limited liability company that is an affiliate of Ruger ("Sugar Camp");

WHEREAS, TVA further desires to consent to the mining of the Lease reserves by Sugar Camp after assignment of the Lease to Ruger.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties covenant and agree as follows:

Assignment: Assignor, as of the Effective Date, does hereby grant, assign, transfer, convey, and set over unto Assignee and its successors and assigns, all of the right, title, and interest of the Assignor in, to, and under the Lease. Assignee, as of the Effective Date, hereby accepts Assignor's right, title, and interest in, to, and under the Lease.

Assumption: Assignee hereby assumes, as of and after the Effective Date, all of the terms, covenants, agreements, conditions, duties, and obligations of the Assignor pursuant to the Lease. Assignee agrees that it will perform and comply with the terms and conditions of the Lease as of and after the Effective Date as if Assignee had been an original party to the Lease.

Lease Payments: Ruger hereby covenants and agrees that it shall pay to TVA the full amount of any payments that may become due under the Lease on or after the Effective Date. Illinois Fuel hereby covenants and agrees that on or after the Effective Date, TVA will be under no duty or obligation to make any payments to it under, on account of, or with respect to the Lease, including but not limited to, on account of or with respect to any lease payments, minimum royalty payments, production royalty payments, recoupments, repayments, or any coal production that may or may not occur on the leased premises on or after the Effective Date. For the sake of clarity and avoidance of all doubt, TVA shall be under no duty or obligation whatsoever, on or after the Effective Date, to make any payments or repayments to Illinois Fuel under, on account of, with respect to, or in connection with the Lease.

The Lease Term: TVA, Illinois Fuel, and Ruger acknowledge and agree that the parties have not agreed to any change, revision, modification, or extension of the term of the Lease.

Ratification: The parties understand and agree that the terms and conditions contained in the Lease shall remain in full force and effect and the copy of the Lease attached hereto is incorporated herein by reference and is hereby ratified and confirmed.

Defaults: Assignor and TVA acknowledge and represent to Assignee that, as of the Effective Date and to the best of Assignor's and TVA's knowledge and belief, (a) the Lease is in full force and effect, (b) the assignment of the Lease to Assignee will not conflict with or result in any breach or violation of or default under the Lease, (c) no defaults exist under the Lease on the part of any party to the Lease, and (d) no fact, circumstance, or event exists that with notice or the passage of time, or both, would constitute a default under the Lease or give rise to a right of termination, cancellation, or acceleration of any obligation or loss of any right or benefit under the Lease.

Consent: TVA hereby consents to Assignor's assignment of the Lease to Assignee and releases Assignor from any obligations or liabilities under the Lease arising on or after the Effective Date. TVA further consents to the mining of the Lease reserves by Sugar Camp after the Lease is assigned to Ruger. This consent shall not be construed as a waiver of TVA's rights under Section 12, Assignment and Insolvency, of the Lease with respect to any subsequent assignments, and Ruger shall not assign in whole or in part any of the estate, right, or benefit accruing to it under the terms of the Lease and/or under the terms of this Assignment Agreement, without the prior written consent of TVA, which consent shall not be unreasonably withheld.

Entire Agreement: This Assignment Agreement and the attachment hereto constitute the entire agreement among the parties hereto with respect to the subject matter hereof and supersedes all prior agreements, representations, understandings, and communications of the parties.

Binding Effect: This Assignment Agreement shall be binding upon and inure to the benefit of each of the parties hereto and their respective successors and assigns.

Amendments: No term or provision of this Assignment Agreement may be terminated, modified, or amended or compliance therewith waived, except by an instrument in writing executed by each party hereto.

Headings: The headings of the sections of this Assignment Agreement are inserted for purposes of convenience only and shall not be construed to affect the meaning or construction of any of the provisions hereof.

Construction: The parties acknowledge that each party and its counsel have reviewed this Assignment Agreement and that the terms of this agreement have been arrived at after mutual negotiation and drafting and, therefore, the rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this agreement or any term or provision thereof.

Governing Law: This Assignment Agreement will be governed by and construed in accordance with Federal law and, to the extent not inconsistent with Federal law, the laws of the State of Illinois.

Choice of Forum: The parties agree that any lawsuit between them that asserts a claim or claims arising out of or related to this Assignment Agreement and/or the Lease shall be filed and litigated to conclusion only in the United States District Court for the Eastern District of Tennessee at Knoxville, and each party hereby consents to the jurisdiction and venue of that

court for all such lawsuits. The parties further agree that in any such litigation (1) each will stipulate to have a United States Magistrate Judge conduct any and all proceedings in the litigation in accordance with 28 U.S.C. § 636(c) and Fed. R. Civ. P. 73, and (2) each will waive any right it may have to a trial by jury. This provision is not a "disputes" clause within the meaning of the Contract Disputes Act, 41 U.S.C. §§ 601-613, and this Agreement is not subject to that Act.

Counterparts. This Assignment Agreement may be executed in any number of counterparts, including by means of facsimile signatures, each of which shall be an original, but all of which shall constitute one and the same instrument.

Surface Lands. Assignor agrees that simultaneously with the assignment of the Lease, and as a condition of TVA's consent to the assignment of the Lease, Assignor will convey, or cause its affiliates to convey, to Assignee all right, title, and interest Assignor, or its affiliates have acquired in and to the surface overlying the lands described in the Lease, pursuant to Section 1 of the Lease or otherwise.

Performance Assurance - Minimum Royalty Payments. Assignee and Assignor agree as a condition of TVA's consent to the assignment of the Lease that Assignee shall pay or pre-pay all the remaining unpaid twelve minimum royalty payments under Section 3 of the Lease which amounts have not been paid to TVA prior to August 4th, 2009 through the initial, ten year Lease term, by paying the amount of $1,310,290.20 United States Dollars by wire transfer to TVA, no later than August 4th 2009, to the following TVA account at the United States Treasury:

BANK NAME: TREAS NYC (OFFICIAL ABBREVIATION)

BANK ADDRESS: NEW YORK FEDERAL RESERVE BANK
33 LIBERTY STREET
NEW YORK, NEW YORK 10045

ABA NUMBER: 021030004

ACCOUNT NO.: 4912

Taxpayer ID: 62-0474417

OBI: Provide your organization name and invoice number or explanation of payment.

TVA Contacts:

Stephanie Raley	(865) 632-7143
Neva Berger	(865) 632-4410
Marcia Riner	(865) 632-8127

Performance Assurance - Production Royalty Payments. Assignee shall provide TVA written notice at least thirty (30) calendar days prior to the date Assignee reasonably estimates Assignee will initially begin removing coal from the leased premises. In the event coal is being produced pursuant to the Lease from the leased premises, TVA may, from time to time and upon written notice to Assignee, require Assignee to furnish performance assurance for the protection

of TVA in an amount that is equal to the greater of $1,000,000 or four (4) times TVA's reasonable determination of the Assignee's estimated average monthly production royalty payment to TVA in the form of an standby irrevocable letter of credit issued by a U.S. commercial bank having a senior unsecured credit ratings of 'A-' or higher with Standard and Poor's and 'A3' or higher with Moody's Investors Service. Such irrevocable letter of credit shall be in the form attached hereto and shall guarantee all payments to TVA of amounts due under the Lease and this Assignment Agreement and shall not be terminated prior to 90 days following the expiration of the Lease. Upon receipt of notice from TVA requiring performance assurance pursuant to this paragraph, Assignee shall have fifteen (15) calendar days after the day of receipt of such notice to provide such letter of credit to TVA. In the event such letter of credit is not provided within fifteen calendar days, TVA will be entitled to the remedies set forth in Section 15, Default and Termination, of the Lease. The Assignee acknowledges and agrees that TVA may, from time to time, require an increase or reduction in the amount of such letter of credit based on TVA's reasonable determination of the Assignee's estimated average monthly production royalty payment under the Lease. Assignee may, upon written notice to TVA, provide a substitute or additional or renewed letter of credit in order to meet its obligations under this provision, provided that the financial institution issuing such letter of credit satisfies all of the requirements of this provision and the letter of credit is in the form attached hereto.

IN WITNESS WHEREOF, the Tennessee Valley Authority, acting herein as legal agent of the United States of America and being duly authorized to do so, has caused this Assignment Agreement to be executed, in the name of the United States of America, by its duly authorized representatives this 4th day of August, 2009, and Ruger Coal Company, Inc., and Illinois Fuel Company, LLC have caused this instrument to be executed by their duly authorized representatives this 4th day of August, 2009.

[SIGNATURE PAGE FOLLOWS]

TVA Tract No. XENC-3L

UNITED STATES OF AMERICA
By TENNESSEE VALLEY AUTHORITY,
its legal agent

DAISY A. SMIPES
Manager, Realty Services

ILLINOIS FUEL COMPANY, LLC.,
a Kentucky limited liability company

By:
Name: Stephen Addington
Title: President

RUGER COAL COMPANY, LLC.
a Delaware limited liability company

By:
Name: Donald R. Holcomb
Title: Authorized Person

TVA Tract No. XENC-3L

STATE OF TENNESSEE)
) SS
COUNTY OF HAMILTON)

On the 4th day of August, 2009, before me appeared DAISY A. SNIPES, to me personally known, who, being by me duly sworn, did say that she is the Manager, Realty Services of the TENNESSEE VALLEY AUTHORITY, a corporation; and that said instrument was signed and delivered on behalf of said corporation, by authority of its Board of Directors, and as legal agent for the UNITED STATES OF AMERICA; and she acknowledged said instrument to be the free act and deed of the UNITED STATES OF AMERICA, as principal, and the TENNESSEE VALLEY AUTHORITY, as its agent.

WITNESS my hand and official seal of office in Chattanooga, Tennessee, the day and year aforesaid.

Charles W Matthews
Notary Public

CHARLES W. MATHIS
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

My commission expires: 7-08-2013

STATE OF Kentucky)
) SS
COUNTY OF Boyd)

Before me appeared Stephen Addington, to me personally known, who, being by me duly sworn did say that he is the President of Illinois Fuel Company, LLC a limited liability company, and that said instrument was signed and delivered on behalf of said limited liability company, by authority of its Board of Directors, and he/she, as such officer, acknowledged said instrument to be the free act and deed of said limited liability company on the day and year herein mentioned.

WITNESS my hand and seal of office, this 4th day of August, 2009.

Gwendolyn M Rogers
Notary Public

My commission expires: 6/28/10

TVA Tract No. XENC-3L

STATE OF Florida)
) SS
COUNTY OF Palm Beach)

Before me appeared Donald Holcomb, to me personally known, who, being by me duly sworn did say that he is the authorized person, of Ruger Coal Company, LLC, a Delaware limited liability company, and that said instrument was signed and delivered on behalf of said company, by authority of its Board of Directors, and he/she, as such officer, acknowledged said instrument to be the free act and deed of said corporation on the day and year herein mentioned.

WITNESS my hand and seal of office, this 4th day of August, 2009.

Stephanie M. DeRetro
Notary Public

My commission expires: 3/5/2011

TVA Tract No. XENC-3L

FORM LETTER OF CREDIT

[LETTERHEAD]

[DATE]

Irrevocable Standby Letter of Credit No.

Beneficiary: **Applicant:**

Tennessee Valley Authority
400 West Summit Hill Drive, WT 4C
Knoxville, TN 37902-1401

Attn: Kirk A. Kelley
Senior Manager, Corporate Credit

Dear Madam or Sir:

We hereby establish for the account of _____(Seller)_____ ("Seller's name" or "Applicant"), our irrevocable standby letter of credit in your favor for an amount of USD ___ ___ (_____ Dollars United States currency). Applicant has advised us that this letter of credit is issued in connection with the _____ Agreement dated as of _____, 20__, between Applicant and Beneficiary (as amended and as may be further amended, supplemented or otherwise modified, the "_____ Agreement"). This letter of credit shall; (i) become effective immediately and shall expire on _____ (the "Expiration Date"), and (ii) is subject to the following:

1. Funds under this letter of credit shall be made available to Beneficiary against its draft drawn on us in the form of Annex 1 hereto, accompanied by (a) a certificate in the form of Annex 2 hereto, appropriately completed and signed by an authorized officer of Beneficiary, dated the date of presentation and (b) the original of the letter of credit (the "Accompanying Documents") and presented at our office located at _____, attention _____ (or at any other office which may be designated by us by written notice delivered to you). A presentation under this letter of credit may be made only on a day, and during hours, in which such office is open for business (a "Business Day"). If we receive your draft and the Accompanying Documents at such office on any Business Day, all in strict conformity with the terms and conditions of this letter of credit, we will honor the same by making payment in accordance with your payment instructions on the third succeeding Business Day after presentation.

2. This letter of credit shall terminate upon the earliest to occur of (i) our receipt of a notice in the form of Annex 3 hereto signed by an authorized officer of Beneficiary, accompanied by this letter of credit for cancellation, (ii) our close of business at our aforesaid office on the Expiration Date, or if the Expiration Date is not a Business Day, then on the preceding Business Day. This letter of credit shall be surrendered to us by you upon the earlier of presentation or expiration.

3. It is a condition of the letter of credit that it shall be deemed to be automatically extended without amendment for periods of one (1) year from the present or any future expiration date, unless at least forty-

five (45) days prior to any such expiration date we send you notice by registered mail, return receipt requested or courier service or hand delivery at the above address that we hereby elect not to consider this letter of credit extended for any such additional period.

4. This letter of credit is issued and subject to the International Standby Practices 1998 (ISP98).

5. This letter of credit sets forth in full our undertaking, and such undertaking shall not in any way be modified, amended, amplified or limited by reference to any document, instrument or agreement referred to herein, except for Annexes 1, 2 and 3 hereto and the notices referred to herein; and any such reference shall not be deemed to incorporate herein by reference any document, instrument or agreement except as otherwise provided in this paragraph 5.

6. Communications with respect to this letter of credit shall be in writing and shall be addressed to us at the address referred to in paragraph 1 above, and shall specifically refer to this letter of credit no.

Very truly yours,

[LOC Issuer]

Authorized signature

TVA Tract No. XENC-3L

ANNEX 1
TO LETTER OF CREDIT NO. _____

Draft under Letter of Credit No. _____

[*Month Day Year*]

On [*third business day next succeeding date of presentation*]

Pay to Tennessee Valley Authority U.S. $ _____ [not to exceed amount available to be drawn]
400 West Summit Hill Drive, WT 4C
Knoxville, TN 37902-1401

[*insert any wire instructions*]

For value received and charge to account of Letter of Credit No. _____ of _____

By: _____

Title: _____

TVA Tract No. XENC-3L

ANNEX 2
TO LETTER OF CREDIT NO. _____

Drawing under Letter of Credit No. _____

The undersigned, a duly authorized officer of the **Tennessee Valley Authority**, a corporate instrumentality and agency of The United States of America ("Beneficiary"), hereby certifies on behalf of Beneficiary to _____ with reference to Irrevocable standby Letter of Credit No. _____ (the "Letter of Credit") issued for the account of _____, ("X"), that:

1) [pursuant to the _____ Agreement between Beneficiary and X, as of the date hereof Beneficiary is entitled to draw under the Letter of Credit;]

--or--

[Beneficiary has received notice from the Issuing Bank pursuant to Section 3 of the Letter of Credit and, as such, as of the date hereto Beneficiary is entitled to draw under the Letter of Credit;]

2) by prescribing this certificate and the accompanying sight draft, Beneficiary is requesting that payment in the amount of $_____, as specified on said draft, be made under the Letter of Credit by wire transfer or deposit of funds into the account specified on said draft;

3) the amount specified on the sight draft accompanying this certificate does not exceed the amount to which Beneficiary is entitled to draft under said _____ Agreement.

In witness whereof, Beneficiary has caused this certificate to be duly executed and delivered by its duly authorized officer as of the date and year written below.

Date: _____ _____

By: _____
Title: _____

TVA Tract No. XENC-3L

ANNEX 3
TO LETTER OF CREDIT NO. _____

Notice of surrender of Letter of Credit No. _____

Date: _____

Attention: Letter of Credit Department

Re: Letter of Credit No. _____ issued for the account of ___(Seller)___

Ladies and Gentlemen:

We refer to your above-mentioned irrevocable standby Letter of Credit (the "Letter of Credit"). The undersigned hereby surrenders the Letter of Credit to you for cancellation as of the date hereof. No payment is demanded of you under this Letter of Credit in connection with this surrender.

Very truly yours,

_____

By: _____

Title: _____

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

IN REPLY REFER TO:

May 21, 2020

9043.1
ER 20/0144

Elizabeth Smith
NEPA Specialist
400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902

Dear Ms. Smith:

The Department of the Interior (Department) does not have comments at this time on the Draft Environmental Impact Statement by the Tennessee Valley Authority for the Mine Plan Approval for Illinois Coal Mineral Rights Lease at Sugar Camp Mine No. 1, located in Franklin and Hamilton Counties, Illinois.

We appreciate the opportunity to provide these comments.

Sincerely,

Lindy Nelson
Regional Environmental Officer

May 27, 2020

Tennessee Valley Authority
Elizabeth Smith, NEPA Specialist
400 West Summit Hill Drive, WT 11B-K
Knoxville, TN 37902
esmith14@tva.gov

Submitted via e-mail

Re: NEPA Draft EIS Comments on TVA's Sugar Camp Coal Mine No. 1 Proposed Expansion Boundary Revision 6

Dear Ms. Smith:

The Sierra Club submits the following comments on Draft Environmental Impact Statement (DEIS) that Tennessee Valley Authority (TVA) recently prepared on the proposed expansion of the Sugar Camp Coal Mine No. 1 in Illinois. The proposal entails mining approximately 12,125 acres of TVA-owned coal reserves as part of a larger 36,972-acre Sugar Camp Mine No. 1 expansion.[1] The proposed expansion would allow Sugar Camp to mine approximately 186 million tons of coal over 16 years through a combination of room-and-pillar and longwall mining. DEIS at 1-5, 2-1.

This area is part of a larger block of TVA coal reserves in Illinois, and, according to TVA's 2019 Supplemental Environmental Assessment (EA) at Sugar Camp, "TVA owns coal reserves underlying 64,959 acres of land containing approximately 1.35 billion tons of the Illinois Springfield (No. 5) and Herrin (No. 6) coal seams."[2] According to TVA's DEIS, the No Action alternative would still entail Sugar Camp mining 359 million tons of coal at a rate of approximately 9.5 million tons per year. DEIS at 2-1. Thus, under TVA's own estimates, Sugar Camp mine has approximately 37 years of existing coal reserves even without the proposed 186

[1] Tennessee Valley Authority, DEIS Public Notice at 1. Attached as Exhibit 1.
[2] TVA, Sugar Camp Coal Mine Expansion, Supplemental Environmental Assessment at 2 (May 2019), available at https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Environmental%20Reviews/Sugar%20Camp%20Mine/sugar_camp_coal_mine_viking_district_2__supplemental_ea_may_9_2019.pdf, (last accessed Sept. 11, 2019) (previously attached as Exhibit 2 to Sierra Club's scoping comments).

million ton expansion. There is no reason to push this review through now given that the mine has nearly four decades worth of coal already under lease.

As explained below, we are at a critical juncture in national and international efforts to prevent the worst effects of climate disruption. Rather than commit to using our federally-owned lands and minerals to further the fossil fuel industry's agenda, we must ensure our public resources are managed to benefit all Americans. Sierra Club requests that TVA reject the proposed lease of TVA reserves by application in favor of the No Action alternative.

Sierra Club is America's largest grassroots environmental organization, with more than 3 million members and supporters nationwide and more than 30,000 members in Illinois. Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives.

On behalf of our millions of members and supporters, we urge TVA to deny Sugar Camp's proposed expansion into TVA-owned coal reserves in favor of the No Action alternative.

I. TVA MUST ADEQUATELY ADDRESS IMPACTS TO WATER RESOURCES.

The DEIS fails to address serious threats to water resources which were identified in Sierra Club's scoping letter on this project as well as in comments (attached as an exhibit to our scoping letter) made by Sierra Club in April 2019 regarding TVA's Supplemental Assessment at Sugar Camp Mine.[3]

Sierra Club members are concerned and potentially affected by pollutant discharges from the Sugar Camp Mine into the Middle Fork Big Muddy River and creeks in Franklin County, including an unnamed tributary to Middle Fork Big Muddy River, an unnamed tributary to Akin Creek. Further, our members are concerned with the growing levels of chloride and other water pollutants in the Middle Fork Big Muddy River and Big Muddy River, which are Waters of the State as part of the Mississippi River Basin. The Middle Fork Big Muddy River is listed on the draft 2016 303(d) list of impaired waters for reasons that may include pollutants from coal mining. The concerns highlighted below, which were raised in our scoping letter, have not been adequately addressed in the DEIS.

Repeated history of water discharge violations at Sugar Camp: The DEIS fails to acknowledge or evaluate the repeated history of violations and non-compliance on record for the Sugar Camp Mine, which clearly shows this mine has consistently failed to remove coal in an

[3] Sierra Club, Letter to Tennessee Valley Authority, "Comment Regarding Sugar Camp Coal Mine Expansion Viking District #2 Draft Supplemental Environmental Assessment, Franklin and Hamilton Counties, Illinois," (April 11, 2019). Attached as Exhibit 4 to Sierra Club's scoping comments on this project.

environmentally sound manner as evidenced by its repeated quarters in non-compliance with basic permit levels, including 125 state and federal violations from 2015 to 2018.[4] There have been at least two formal enforcement actions in recent years, and unpermitted construction activities, including creation of two deep underground injection wells before being permitted to do so. According to the EPA ECHO database, Sugar Camp has a repeated history of contaminated water releases and coal slurry releases to area waterways. The mine has a history of failing to maintain its waste containment structures, to the detriment of area creeks and discharging to the Middle Fork Big Muddy River. There are also recorded instances of coal waste overflowing mine containment structures.[5]

The DEIS fails to analyze and disclose the environmental impacts of the mine's water pollution and its struggles to keep discharges within permitted levels. Given the fact that the applicant has been discharging chloride at high concentrations (higher even than its current permit allows), TVA's NEPA review must also consider impacts from chloride toxicity and other effects on the environment. Sierra Club requests TVA analyze these issues, and those raised below, in a supplemental DEIS and provide the public with a meaningful opportunity to review and comment on TVA's new information.

Cumulative impacts of pollution loading on the Big Muddy River: TVA must analyze and disclose the cumulative impacts to the Big Muddy River that would result from this massive expansion when combined with past, present, and future mining at Sugar Camp and other nearby projects. For example, the Williamson Energy Pond Creek No. 1 Mine, located near Johnston City, Williamson County, but also with shadow area in Franklin County, has proposed a 12.5-mile pipeline to pump contaminated mine water for direct discharge into the Big Muddy River. The proposal would entail discharges of up to 2,700,000 to 3,500,000 gallons per day of high chloride and sulfate contaminated water. The cumulative impacts of mine discharges to the Big Muddy River and its tributaries must be analyzed and disclosed. The DEIS makes no mention of this reasonably foreseeable project and fails to address it in the cumulative impacts to water resources section.

Impacts to Rend Lake: The Sugar Camp Mine obtains water from Rend Lake and TVA must analyze impacts to water quantity and water quality at Rend Lake based on the proposed and past withdrawals, both from Sugar Camp and other projects.[6] For example, a contract signed in 2007 with Adena Resources, LLC for direct withdrawal of water from Rend Lake to supply Sugar Camp and Pond Creek mines, states that the daily withdrawal quota will initially be set at 6 million gallons per day. That amount is likely to be higher now. Rend Lake provides public water

[4] *Id.* at 2 and related documentation attached as Exhibit 1 to Sierra Club's scoping comments. For a summary of water discharge violations and enforcement actions, see attachment 1 to Sierra Club's April 2019 letter, which shows the Sugar Camp data posted on the U.S. Environmental Protection Agency's ECHO (Enforcement and Compliance History Online) database.
[5] *Id.*
[6] *Id.* at 3.

for all or part of seven counties in Southern Illinois. The EIS must disclose prior impacts and address cumulative withdrawals on the lake when evaluating the proposed expansion.

II. TVA FAILED TO ADEQUATELY ADDRESS THE CLIMATE IMPACTS OF THE PROPOSED COAL MINE EXPANSION.

In evaluating a proposal that would result in the mining of more than 186 million tons of federally-managed coal, of which TVA states 92.8 million tons would be sold into the market at processed coal, DEIS at 3-34, TVA must do more than simply quantify carbon dioxide (CO_2) and methane (CH_4) emissions that will result from burning the TVA reserves at Sugar Camp and compare those levels to national and global totals for greenhouse gas emissions. Doing so only provides a statement about the nature of the climate problem: many small projects add up to one very big impact. Here TVA's exceedingly limited climate analysis fails to provide any relevant science on the nature, scale, or causes of climate change; and it fails to adequately consider or disclose the project's contribution to the climate crisis in several critical ways, as discussed in detail below.

"Accurate scientific analysis … [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). Accordingly, taking the required "hard look" at environmental impacts requires agencies to "utiliz[e] … the best available scientific information." *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1171 (10th Cir. 1999). Climate scientists' understanding of climate disruption has increased significantly in recent years, and we have clear scientific consensus that we must quickly and dramatically reduce greenhouse gas ("GHG") emissions in the U.S. if we are going to avoid the most damaging effects of climate change.

In our scoping comments, Sierra Club requested TVA analyze the following aspects of the proposed expansion's climate impacts, none of which TVA analyzed or disclosed in the DEIS:

1) Acknowledge the robust scientific consensus on the need to drastically cut global CO_2 emissions;
2) Assess whether the proposed mining and burning of the federal coal from Sugar Camp are inconsistent with guidance from recent climate reports, including the Fourth National Climate Assessment and reports prepared by the Intergovernmental Panel on Climate Change and U.S. Geological Survey;
3) Model the market impacts of the proposed expansion of federal coal mining in order to understand the differences in GHG emissions when comparing Action and No Action alternatives;
4) Use the social cost of carbon to analyze and disclose the climate impacts of the proposal and the mining of other TVA-managed coal reserves; and
5) Recognize the scale of the carbon emission problem and take into account the remaining carbon budget for CO_2 emissions from the U.S.[7]

[7] Sierra Club Scoping Comments on TVA Sugar Camp Expansion, at 4-5 (Sept. 12, 2019).

TVA, however, failed to disclose any of these impacts or related climate science addressed above in its DEIS. Instead, TVA includes a cursory, 5-page section addresses GHG emissions that impermissibly downplays the significance of TVA's action and makes no mention of the looming climate crisis. Instead, despite disclosing that the direct and indirect GHG emissions (even when totaled using an improperly low global warming potential for methane) of 224.9 million tons of CO2e, DEIS at 3-36, TVA asserts that the climate impact of its action would be "immeasurably small." DEIS at 3-37.

A. TVA Failed to Acknowledge the Role of Coal Mining and Combustion as a Leading Cause of Climate Change, Failed to Acknowledge the Looming Climate Crisis, and Improperly Downplayed the Impact of Its Decision to Approve the Sugar Camp Expansion.

The DEIS fails to acknowledge any of the recent, robust scientific literature on climate change, including the Fourth National Climate Assessment prepared in 2018 by the U.S. Global Change Research Program, the Intergovernmental Panel on Climate Change (IPCC)'s special report on global warming released in 2018, the U.S. Geological Survey's 2018 study of the climate impacts associated with federal lands and minerals extraction, and Oil Change International's 2019 study on the impact of fossil fuel development on the rapidly diminishing global carbon budget. Each of these reports, summarized below, was included as an exhibit to Sierra Club's 2019 scoping comments to TVA. It is particularly troubling that TVA failed to even acknowledge the current climate crisis, the role of coal combustion to the climate problem, or the need to reduce GHG emissions as a means to begin to address the existential threat posed to humanity by climate change. The DEIS contains an inexcusable lack of information on the current climate crisis, its causes, and the contributions made by TVA's own actions, all of which must be corrected in a supplemental DEIS and recirculated for public comment.

Prepared by the U.S. Global Change Research Program and published in 2018, the Fourth National Climate Assessment, identifies and evaluates the risks of climate change that threaten the U.S., and how a lack of mitigation and adaptation measures will result in dire climate consequences for the U.S. and its territories.

The IPCC released a special report on the impacts of global warming in October 2018, as commissioned by the Paris Agreement of 2016.[8] *Global Warming of 1.5°C*, finds greenhouse gas emissions produced by human activity have significantly contributed to global warming since the industrial revolution of the 19th century, increasing the rise in global temperature by 0.2°C per decade at present.[9] The report forecasts the state of climate at 1.5°C and 2°C, describing

[8] USGCRP, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II: Report-in-Brief* (2018).

[9] IPCC, *Global Warming of 1.5°C*, An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty, Summary for Policymakers at SMP-4 (2018).

the devastating consequences continued warming has for our earth – destroying ecosystems, disrupting global economy, and jeopardizing public health. The report is a stark warning that delayed actions to cut greenhouse gas emissions, as well as the implementation of other mitigation and adaptation measures to climate change, will be extremely costly.

The U.S. Geological Survey (USGS), a bureau within the U.S. Department of the Interior, released a study in November 2018 that calculates the amount of greenhouse gases emitted from fossil fuel extraction and combustion on federal lands, as well as the sequestration, or absorption of carbon that naturally occurs on undisturbed public lands.[10]

In January 2019, Oil Change International in collaboration with another 17 not-for-profit organizations published a report called *Drilling Towards Disaster: Why U.S. Oil and Gas Expansion is Incompatible with Climate Limits*.[11] In addition to discussing why further oil and gas expansion must be halted to avoid climate crisis, the Report discusses the dire need of saying "no" to additional coal reserve development. Already with all developed reserves of coal, gas, oil, and cement combined, we have surpassed the threshold of a 50 percent chance of only a 1.5°C global temperature increase.

At a minimum, TVA must acknowledge the robust scientific consensus, as demonstrated in these reports, on the need to reduce GHG emissions and fossil fuel development in order to stave off the worst effects of climate change. Instead, the closest TVA comes to acknowledging the danger of increasing GHG emissions is a single sentence, reading: "GHG emissions have the potential to affect both global and regional climate." DEIS at 3-33. TVA never even provides any indication as to whether this "potential to affect" would improve or exacerbate climate change, which is the most important environmental impact facing humanity today. It is an existential threat that TVA chose to gloss over in its DEIS. This error must be corrected.

B. TVA Failed to Disclose Scientific Consensus on the Urgent Need to Cut U.S. Greenhouse Gas Emissions and Failed to Adequately Assess the Impact of Its Decision to Approve the Proposed Sugar Camp Expansion.

Based on an overwhelming amount of climate evidence published in recent years, TVA must acknowledge the findings of recent climate reports, including the Fourth National Climate Assessment of 2018 and those prepared by the IPCC and U.S. Geological Survey. Additionally, information published in January 2019 by Oil Change International specifically highlights the urgent need for federally-managed fossil fuels to remain in the ground in order to effectively combat climate change.

[10] Matthew Merrill, USGS, *Federal lands greenhouse gas emissions and sequestration in the United States—Estimates for 2005–14* (2018).
[11] Kelly Trout and Lorne Stockman, *Drilling Towards Disaster: Why U.S. Oil and Gas Expansion is Incompatible with Climate Limits,* Oil Change International (January 2019).

Instead, TVA's assessment of the climate impact of its decision is a mere three sentences, two of which raise and then waive off any concern about an unexplained term that TVA calls "urban heat islands."

> *Climate Effects*
> Given the Proposed Action's very small percentage increase in global GHG emissions, the effects of the action's GHG emissions on global or regional climate would be immeasurably small. Microclimate or regional climate effects can also occur with changes in land use, for example, as with urban heat islands. Because the Proposed Action would cause only very minor changes in land use over relatively small areas, no significant heat island or other local climate changes are expected with implementation of the Proposed Action.

DEIS at 3-37. This is an irresponsible approach to discussing climate change impacts associated with one of the largest coal mine expansions currently proposed in the Illinois Basin.

C. TVA Failed to Analyze the Market Impacts of the Proposed Coal Mine Expansion.

NEPA requires TVA to analyze and disclose the reasonably foreseeable direct, indirect, and cumulative climate impacts of the proposed mining, and evaluate the "significance" of these impacts. 40 C.F.R. §§ 1508.7, 1502.16.

Here, TVA's assessment of the market effects of its decision amounts to an impermissible dodge that give the public and decision-makers no information as to TVA's assessment of the net GHG emissions that will result from the proposed Sugar Camp expansion. First, TVA asserts that "emissions from the replacement sources of energy are unknown because they would not be under TVA's control." DEIS at 3-35. NEPA requires federal agencies to analyze the foreseeable impacts of its decisions, without regard to whether those agencies control every aspect of a project. The ownership of other resources is irrelevant, as TVA implicitly recognizes throughout the DEIS. As one example, TVA does not control every federal power plant where Sugar Camp would send its coal, but TVA nonetheless discloses the emissions from burning Sugar Camp coal to generate electricity. NEPA regulations require not only analysis of direct project impacts, but also indirect impacts "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Where impacts are foreseeable, they must be disclosed regardless of TVA's ownership.

Next, TVA states that "[f]or the purposes of analysis, TVA assumes that the No Action Alternative could result in actions to be taken by Sugar Camp and other entities, ranging from complete replacement of the coal mined from the Project Area to no replacement." *Id.* This statement provides no information to the public, as the impacts that TVA "assumes" will occur range from 0% of the impact occurring, to 100% of the impacts occurring. This tells the public and decision-makers no useful information regarding the impacts of the proposed expansion.

TVA then states that it "anticipates that GHG emissions would be less under the No Action Alternative" "because, typically, coal combustion is more carbon intensive per unit energy than

other forms of fossil fuels, or non-fossil energy sources." Again, this dodge does not tell the public or decision-makers which sources of electricity (wind, solar, gas, etc.), the amount of those resources (or combination of resources) would replace electricity generated by burning Sugar Camp coal if TVA rejects the proposed expansion, or what the difference in GHG emissions would be between the Action and No Action alternatives. For a decision-maker or member of the public that cares about climate change, knowing the difference in GHG emissions between two competing alternatives is crucial information. TVA cannot make an informed decision without knowing this information.

Under NEPA, agencies must provide a clear basis for choice among considered alternatives, and, in particular here, TVA must distinguish between the climate impacts of Action and No Action alternatives. 42 U.S.C. §§ 4332(2)(C), 4332(2)(E), and 40 C.F.R. §§ 1502.14(f), 1508.9(b). In the context of climate change, TVA must, at the bare minimum, analyze and disclose the difference in greenhouse gas emission levels between considered alternatives, including the No Action alternative.

TVA must address the key climate question: whether there is a measurable difference in greenhouse gas emissions between approving and rejecting this approximately 186 million ton mine expansion. TVA must answer this question in order to make an informed decision. Without such an answer, neither TVA nor the public can adequately distinguish between the climate impacts of the Action and No Action alternatives.

1. Federal Courts Have Rejected the Myth of Perfect Substitution.

The Tenth Circuit, Eighth Circuit, and other courts have repeatedly rejected agency attempts to assert near perfect substitution of fossil fuels, and federal courts have consistently required agencies to study the market impacts of agency decisions. Most directly on point here, in 2017 the Tenth Circuit rejected the Bureau of Land Management's ("BLM's") refusal to study the market effects of its decision to authorize the expansion of two coal mines on public lands in the Powder River Basin. BLM's assertion in the Wright Area coal mine EIS, like the one made by TVA in 2019, was that even if the agency rejected the proposed expansion in favor of the No Action alternative, an equivalent amount of coal would be mined elsewhere, making the climate impacts a wash. The Tenth Circuit rejected BLM's conclusion and its analytic approach to the problem, holding that the notion of "perfect substitution" was unsupported in the record and illogical based on sound economic principles, stating, "[e]ven if we could conclude that the agency had enough data before it to choose between the preferred and no action alternatives, we would still conclude this perfect substitution assumption arbitrary and capricious because the assumption itself is irrational (i.e., contrary to basic supply and demand principles)."*WildEarth Guardians v. BLM*, 870 F.3d 1222, 1236 (2017).

Notably, the D.C. Circuit expressly rejected a Federal Energy Regulatory Commission ("FERC") NEPA review for the Sabal Trail natural gas pipeline where the Commission refused to study this question, instead cloaking its analysis in an assertion of uncertainty as to the likely effect of the agency action on the energy market. In Sabal Trail, the D.C. Circuit rejected FERC's analysis,

which stated that the project's greenhouse gas emissions "might be partially offset" by the market replacing the project's gas with either coal or other gas supply. *Sierra Club v. Fed. Energy Regulatory Comm'n*, 867 F.3d 1357, 1375 (D.C. Cir. 2017). The Court dismissed FERC's failure to study this issue, stating:

> An agency decision maker reviewing this EIS would thus have no way of knowing whether total emissions, on net, will be reduced or increased by this project, or what the degree of reduction or increase will be. In this respect, then, the EIS fails to fulfill its primary purpose.

Id.

Similarly, the federal district court in Montana recently rejected a Department of the Interior environmental assessment where the agency claimed its decision would not likely have any impact on nationwide greenhouse gas emissions from the electric sector because other coal mines would be available to meet a supposedly immutable demand for coal. *Montana Environmental Information Center v. OSM*, 274 F.Supp.3d 1074, 1098 (D. Mont. 2017). In *MEIC*, OSM asserted in its environmental assessment that:

> The No Action Alternative would not likely result in a decrease in CO_2 emissions attributable to coal-burning power plants in the long term. There are multiple other sources of coal that could supply the demand for coal.

Id.

The *MEIC* court squarely rejected OSM's assertion:

> This conclusion is illogical, and places [OSM's] thumb on the scale by inflating the benefits of the action while minimizing its impacts. It is the kind of "inaccurate economic information" that "may defeat the purpose of [NEPA analysis] by impairing the agency's consideration of the adverse environmental effects and by skewing the public's evaluation of the proposed agency action."

Id. (quoting *NRDC v. Forest Service*, 421 F.3d 797, 811 (9th Cir. 2005)).

Similarly, the Eighth Circuit in *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 550 (8th Cir. 2003), and more recently the District of Colorado, *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F.Supp. 3d 1174, 1197-98 (D.Colo. 2014) have rejected similar unsupported, "illogical" assumptions of perfect substitution in essentially identical contexts. As the Eight Circuit explained:

> [T]he proposition that the demand for coal will be unaffected by an increase in availability and a decrease in price . . . *is illogical at best*. The increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other

> potential fuel sources, such as nuclear power, solar power, or natural gas. . . . [The railroad] will most certainly affect the nation's long-term demand for coal.

Mid-States Coal. for Progress v. STB, 345 F.3d at 549. The Eighth Circuit then concluded that even if the "extent" of the increase in coal use was not reasonably foreseeable, the "nature" of the effect was, and that in this circumstance, "the agency may not simply ignore the effect." *Id.* (citing 40 C.F.R. §1502.22).

The Forest Service's error in *High Country* is also on point. The Forest Service in *High Country*, like TVA in 2019, argued that "if the coal does not come out of the ground in the North Fork consumers will simply pay to have the same amount of coal pulled out of the ground from somewhere else—overall [greenhouse gas] emissions from combustion will be identical under either scenario." 52 F.Supp. 3d 1174, 1197-98. The court in *High Country* held that the Forest Service's FEIS was deficient, concluding that the increased supply made possible by the Forest Service's decision would "impact the demand for coal relative to other fuel sources" and that "[t]his reasonably foreseeable effect must be analyzed." *Id.* at 1198.

These federal court decisions illustrate that TVA must answer this question: whether its decision to allow the proposed mine plan amendment will change greenhouse gas emissions, and, if so, by what amount. Basic economic principles of supply and demand dictate that as holder of more than 1 billion tons of coal reserves in the Illinois Basin, TVA's choices matter. Federal agencies cannot legally avoid analyzing the impact that their decisions have on greenhouse gas emissions and climate change, either by flatly denying any responsibility for greenhouse gas emissions (as BLM did in Wright Area and elsewhere) or by blandly asserting that it is uncertain whether the agency's decision will affect overall carbon dioxide and methane emission levels (as FERC did in Sabal Trail).

NEPA requires federal agencies to study and disclose the effects of their decisions; it does not permit agencies to leave key questions unanswered or deny responsibility for environmental harms without adequate review. There is no doubt that agencies must provide a clear basis for choice among alternatives, and in particular between the climate impacts of Leasing and No Leasing alternatives here. 42 U.S.C. §§ 4332(2)(C), 4332(2)(E); 40 C.F.R. §§ 1502.14(f), 1508.9(b). In the context of climate change, TVA must, among other obligations, analyze and disclose the difference in greenhouse gas emission levels between alternatives, including the No Action alternative.

2. <u>The Secretary of the Interior Has Recognized that the Supply of Federally-Managed Coal Affects Energy Markets and the Climate.</u>

In addition to federal courts, the Secretary of the Interior has recognized that opening up more federal lands for fossil fuel production could not only affect the amount of coal produced, but also the amount of wind and solar generation in our energy grid. That is why, in ordering a comprehensive study of the climate impacts of the federal coal program – since cancelled for political purposes – then-Secretary Sally Jewell directed the Department of the Interior to

evaluate "how the administration, availability, and pricing of Federal coal affect regional and national economies (including job impacts), and energy markets in general, including the pricing and viability of other coal resources... and other energy sources."[12] The Secretary further directed the Department to study, "[t]he impact of possible program alternatives on the projected fuel mix and cost of electricity in the United States."[13]

More recently, in releasing a scoping report on the now-cancelled Programmatic Environmental Impact Statement ("PEIS") process, the Department of the Interior acknowledged that the climate impacts of various alternatives for the federal coal leasing program are "largely contingent on the degree to which the substitute fuel sources are less carbon intensive (e.g., natural gas-fired generation or renewable generation) as opposed to similarly carbon intensive (e.g., non-Federal coal)."[14] The Department acknowledged that this issue has not yet been studied and evaluated by either the Department or BLM, explaining that "BLM will develop and use economic models to assess these substitution dynamics and the impact they have on the costs and benefits of any changes."[15] The fact that BLM cancelled that PEIS process only highlights the need for TVA to study and disclose the market effects of its decision here.

3. TVA Cannot Ignore Basic Economic Principles.

Simply put: supply and demand matter. TVA cannot ignore basic economic principles or refuse to analyze their effects. Under NEPA, agencies have a duty to "insure the professional integrity" of the analyses in an EIS, 40 C.F.R. § 1502.24, and must present "high-quality" information and "[a]ccurate scientific analysis." 40 C.F.R. § 1500.1(b). TVA's prior use of the flawed "perfect substitution" assumption is illogical, unsupported, and has been soundly rejected by the courts. TVA must correct these past errors here by adequately studying the market effects using available tools.

In the U.S. energy market – where coal, gas, wind, solar, and nuclear all compete for market share, where utilities can choose among these competing options on an on-going basis, and where utilities and grid operators can quickly alter the rates at which these commodities are utilized – price, supply, and demand interact in predictable ways. As mentioned previously, though Department of the Interior agencies have at various times asserted that other coal mines "could supply the demand" if they were to reject a coal mine expansion proposal, that statement fundamentally misunderstands how supply and demand work.

Economic demand is not a fixed threshold that suppliers of a commodity will necessarily rise to meet; it is instead a relationship among economic parameters that ultimately leads to certain levels of consumption.[16] As the supply of a good is restricted, price increases, and this in turn

[12] Secretarial Order 3338 at 8, (January 15, 2016).
[13] *Id.*
[14] DOI, Federal Coal Program Programmatic EIS Scoping Report, Vol. II, (January 2017).
[15] *Id.*
[16] Richard Posner, *Economic Analysis of the Law* 5-6 (9th Ed. 2014).

affects demand. As explained by Judge Posner, these "straightforward, intuitive premises" dictate that "[i]f quantity falls, price will rise. . . [i]f price rises, quantity falls because consumers buy less of the good."[17] In the energy context, that means that if TVA restricts the supply of coal, coal prices will increase. This is particularly true if TVA were to stop new coal leasing at all of its billion-plus ton reserves in the Illinois Basin. This increase in coal price would cause some utilities to switch from coal to a cheaper alternative. Because switching from coal to anything else – gas, wind, solar, geothermal or nuclear energy, etc. – results in decreased carbon dioxide emissions, fuel switching results in quantifiable decreases in greenhouse gas emissions.

4. TVA Cannot Ignore Available Economic Models.

As noted, NEPA does not allow TVA to refuse to analyze the environmental effects of its decisions. NEPA affirmatively requires "reasonable forecasting," and requires agencies to provide information that is "essential to a reasoned choice among alternatives," where the cost of obtaining the information is not exorbitant. 40 C.F.R. § 1502.22(a). In order to comply with NEPA, TVA must either use available tools to provide that essential information or explain why it cannot do so. Under NEPA regulations, the agency "shall" explain in its EIS (1) why such essential information is incomplete or unavailable; (2) its relevance to reasonably foreseeable impacts; (3) a summary of existing science on the topic; and (4) the agency's evaluation based on any generally accepted theoretical approaches. 40 C.F.R. § 1502.22(b).

In order to fully understand the climate impacts of its decision to authorize this massive expansion, TVA must use one of the available climate energy models to evaluate market changes. There are several relevant factors that TVA must address in assessing the market and climate impacts of its decision, including, for example, the price and availability of substitute sources of coal, and other alternative fuels such as gas; shipping prices; existing reserves; sulfur or heat content of other sources of coal; the relationship between supply, price, and demand in the U.S. energy market; and the price and availability of other sources of electricity generation such as renewables.

Fortunately, as described in detail below, there are multiple models available that TVA could use to study these market dynamics and provide the public and decisionmakers with critical information. Without using available tools to compare the greenhouse gas emission levels between Leasing and No Leasing alternatives, TVA cannot make an informed decision or take the hard look NEPA requires.

Here, TVA cannot merely assert without substantiation that emissions differences between Leasing and No Leasing alternatives would be uncertain or that it anticipates that the No Action would be less based on generic statements about the carbon intensities of other forms of energy generation. In fact, there are multiple energy-economy models, each of which TVA has entirely ignored in the DEIS, that could supply TVA with the projected levels of emissions in comparing the Leasing and No Leasing

[17] *Id.*

alternatives. These tools are already widely used by private parties and federal agencies to evaluate market effects of agency proposals in the coal mining and energy sectors.

For example, the U.S. Department of Energy has a computer model created by the EIA that has been in use since 1994, and it could be utilized by TVA here to undertake precisely the kind of analysis that would be useful to decisionmakers. EIA's National Energy Modeling System (NEMS) is an energy-economy model that projects future energy prices and supply and demand, and can be used to isolate variables such as changes in coal supply and variations in delivered coal price.[18]

Similarly, ICF International's Integrated Planning Model has been used to evaluate these types of market responses to numerous federal proposals in recent years. Examples include, but are not limited to the following projects: EPA, Clean Power Plan; U.S. State Department, Keystone XL Pipeline; Surface Transportation Board, Tongue River Railroad; U.S. Forest Service, Colorado Roadless Rule; Washington Department of Ecology, Millennium Bulk Export Terminal. Critically, every time these robust modeling tools discussed above have been used, they have documented market impacts.

D. OSM Must Evaluate the Significance of Greenhouse Gas Emissions by Using Available Methodologies.

1. TVA Failed to Use the Social Cost of Carbon.

TVA must analyze and assess the climate impacts of mining the Sugar Camp TVA reserves using the social cost of carbon protocol. The social cost of carbon (SCC) is a tool that was created by federal agencies, and is one method TVA can use to quantify and disclose the harm caused by the proposed project's carbon dioxide emissions. The social cost of carbon provides a metric for estimating the economic damage, in dollars, of each incremental ton of carbon dioxide emitted into the atmosphere.[19]

Multiple courts have concluded that NEPA analysis merely quantifying – as TVA did here – the anticipated tonnage of GHG emissions from combustion of the resource and comparing it to national or global GHG emissions was inadequate to meet the requirement to disclose indirect impacts. These courts found that the SCC is a tool that can provide meaningful analysis of the actual harm associated with the carbon pollution. *MEIC v. OSMRE,* 274 F. Supp. 3d 1074, 1097-98 (D. Mont. 2017); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d. 1174, 1198 (D. Colo. 2014), and *WildEarth Guardians v. Zinke*, No. CV 17-80-BLG-SPW-TJC, 2019 WL 2404860, at *10-12 (D. Mont. Feb. 11, 2019). These decisions are well grounded in NEPA, since a bare emissions volume number does not give the decisionmaker or the public an

[18] EIA, National Energy Modelling System: An Overview, at 1 (2009).

[19] Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Updated of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (May 2013, Revised August 2016).

understanding of the scale of the project's "ecological," "economic," and "social" impacts, or their significance, nor does it permit a meaningful comparison among alternatives, as NEPA requires. 40 C.F.R. §§ 1508.8(b), 1502.16(b). Stopping at a volumetric disclosure is akin to, for example, an agency disclosing the effects of a decision to allow dumping a million tons of pesticide into a river by specifying that quantity, without disclosing the extent of actual impacts on drinking water, fish, or aquatic habitat. Federal courts have struck down such an approach. *See Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 995 (9th Cir. 2004).

Instead of using the social cost of carbon here, TVA offers two excuses for not using this scientifically-accepted tool. First, TVA asserts that "the SCC tool does not measure the actual incremental impacts of a project on the environment." DEIS at 3-35. Second, TVA states that "there are no established criteria identifying the monetized values considered significant for NEPA purposes." *Id.* Neither excuse has merit.

First, the SCC does provide a measurement of environmental impacts caused by each additional ton of CO2 emitted into the atmosphere and puts those in dollar terms that are readily understood by the public and decisionmakers. The SCC, developed by an interagency working group of experts convened in 2009, is based on multiple peer-reviewed models, and represents a facially reasonable approach for assessing the environmental impacts of carbon emissions. It was created with the input of several agencies, public comments, and technical models, and is based on widely accepted research methods, models, and peer-reviewed scientific and economic studies.[20] The SCC is intended to capture various damages associated with climate disruption, including changes in net agricultural productivity, human health, property damages, and the value of ecosystem services, all of which climate change can degrade.

NEPA regulations explicitly contemplate that, in many situations, the available scientific information may be incomplete. 40 C.F.R. § 1502.22. In such instances, the regulations direct agencies to nonetheless consider and disclose the valid scientific information they *do* have. Agencies must provide "a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment," and evaluate a project's impacts "based upon theoretical approaches or research methods generally accepted in the scientific community," 40 C.F.R. § 1502.22(b)(3)-(4). The regulations thus make clear to agencies that, when faced with incomplete scientific information, disregarding that information altogether is not an option.

The SCC was a valid and generally-accepted scientific tool that TVA should have used pursuant to 40 C.F.R. §§ 1500.1(b) and 1502.22 to monetize the impact of GHG emissions in its estimation of the mine expansion's impacts. *See High Country,* 52 F. Supp. 3d at 1190 (in response to agency claim that "[s]tandardized protocols designed to measure factors that may contribute to climate change, and to quantify climatic impacts, are presently unavailable," the court responded, "[b]ut a tool is and was available: the social cost of carbon protocol.").

[20] The IWG's Technical Support Document 2016 update, which was attached to Sierra Club's scoping comments, succinctly describes the usefulness of the SCC to decisionmakers.

Second, TVA's statement that there is "no established criteria identifying the monetized values considered significant for NEPA purposes," DEIS at 3-35, does not excuse TVA's failure to disclose the extent of climate harms, even if it chooses not to label those harms as "significant" or "insignificant." Moreover, TVA quantified 224,970,018 tons of CO2e from the direct and indirect effects of the Sugar Camp expansion. DEIS at 3-36. Using a conservative approach, assessing SCC based on the IWG's central 3% discount rate, each additional tons of CO2 emitted into the atmosphere causes $42 of global economic harm. At $42/ton, the global climate harm from the amount of CO2e disclosed by TVA is $9,448,740,756.[21] If TVA's assertion is that more than $9 billion in global economic harm is not significant, it should say so. By any reasonable standard, $9 billion in harm is significant and TVA cannot pretend otherwise. TVA cannot dodge use of a scientifically valid tool for estimating climate harms on the assertion that NEPA does not set a specific threshold that would assist TVA in stating whether the $9 billion in harms disclosed by use of that tool is significant or not.

2. TVA Failed to Use Carbon Budgets.

One of the measuring standards available to the agency for analyzing the magnitude and severity of TVA-related fossil fuel emissions is by applying those emissions to the remaining global carbon budget. A "carbon budget" offers a cap on the remaining stock of greenhouse gasses that can be emitted while still keeping global average temperature rise below scientifically-backed warming thresholds – beyond which climate change impacts may result in severe and irreparable harm to the biosphere and humanity. Utilizing carbon budgets would offer TVA a methodology for analyzing how the proposed mine expansion and the continued coal combustion from the Sugar Camp Mine, and specifically from the TVA-managed reserves at the mine, may affect the country's ability to meet recognized greenhouse gas emission reduction targets. The DEIS offers no explanation for TVA's refusal to use carbon budgets to assess the climate impacts of the proposed project. Additional information on carbon budgets is available in the scoping comments Sierra Club submitted on the project.

E. TVA Underreported the GHG Emissions From the Project By Using an Outdated and Improperly Low Global Warming Potential for Methane.

TVA underreported the GHG emissions associated with the proposed expansion by using an outdated global warming potential (GWP) for methane. GWP is a measure of the amount of

[21] Calculated by multiplying total CO2e from direct and indirect emissions by the $42 per ton. This is conservative in that it does not include estimates at lower discount rates, it does not account for the fact that SCC values increase in later years, it does not separate out the higher social cost of methane values, and it does not translate $2007 dollars into $2020 dollars, all of which would increase the quantifiable climate harms from the proposed expansion.

warming caused by the emission of one ton of a particular greenhouse gas relative to one ton of carbon dioxide.[22]

For each greenhouse gas, a GWP has been calculated to reflect how long each gas remains in the atmosphere, on average, and how strongly it absorbs energy. The methane GWP estimates how many tons of carbon dioxide would need to be emitted to produce the same amount of global warming as a single ton of methane. This is important because methane is a much more potent greenhouse gas than carbon dioxide. Relative to carbon dioxide, methane has much greater climate impacts in the near term than the long term, and, therefore, also including a short-term measure of climate impacts would be most effective in considering policies to avoid significant global warming in the near-term.

Here, TVA has completely ignored the 20 year GWP of methane, which EPA calculates as 84-87. As EPA explains, "for CH_4, which has a short lifetime, the 100-year GWP of 28-36 is much less than the 20-year GWP of 84-87." *Id.* Instead, although TVA states that it us using a methane GWP of 28, DEIS 3-33, Table 3-4 "Action Alternative GHG Emissions," which shows annual GHG emissions, indicates that TVA used a GWP of 25 for methane. DEIS at 3-37, T.3-4. This is a significant error. TVA reports the total GHG emissions, including those for methane, in carbon dioxide equivalent (CO_2e). DEIS at 3-37. That is a defensible approach. However, in converting methane to CO2e, TVA used 25 as the GWP multiplier instead of 87. The result is that TVA dramatically underreported the GHG emissions associated with the proposed expansion.

In calculating annual GHG emissions, TVA reports direct methane emissions of 447,653 million tons CO2e per year, and indirect methane emissions of 48,676 metric tons CO2e per year. DEIS 3-37, T.3-4. However, using a methane GWP of 87 to reflect methane's short-term warming influence produces very different CO2e numbers: 1,662,232 metric tons CO2e per year for direct emissions, and 169,392 tons CO2e per year for indirect emissions. Thus, TVA underreported the proposed expansion's emissions by 1,335,295 metric tons of CO2e per year.[23]

The federal district court in Montana previously invalidated a BLM NEPA review for two resource management plans that improperly relied only on the 100-year GWP of methane while ignoring calls to also report the 20-year GWP. *Western Org. of Res. Councils v. U.S. Bureau of Land Mgmt.*, CV16-21-GF-BMM, 2018 WL 1475470, at *15 (D. Mont. Mar. 26, 2018). As the court explained, NEPA requires federal agencies to ensure the "scientific integrity" of their analyses (citing 40 C.F.R. § 1502.24), and obliges agencies to consider "both short- and long-term effects." *Id.* (quoting 40 C.F.R. § 1508.27(a)). Thus, BLM's use of the 100 year GWP for methane "when other more appropriate time horizons remained available,

[22] U.S. Environmental Protection Agency, "Understanding Global Warming Potentials," https://www.epa.gov/ghgemissions/understanding-global-warming-potentials (last visited May 26, 2020) (attached as Exhibit 2).

[23] (1,662,232 – 447,653) + (169,392-48,676)
(Direct CO2e difference) + (Indirect CO2e difference)

qualifies as arbitrary and capricious." *Id.* The same is true for TVA here: TVA cannot continue to misrepresent the climate impact of the project by relying on an outdated 100-year GWP of 25 that both ignores the much larger 20-year GWP available for methane and utilizes an old figure (25) for the 100 year GWP when more recent EPA science shows that figure should be 36. To resolve this issue, TVA should recirculate an SDEIS that utilizes the most recent science to disclose CO2e for the project with regard to both short and long term impacts of methane, using 36 as the 100 year GWP and 87 as the 20 year GWP per EPA and more recent IPCC updates.

F. TVA Failed to Adequately Consider the Cumulative Climate Impacts of the Project.

NEPA regulations mandate that agencies, in taking a "hard look" at environmental consequences, consider not only direct and indirect project impacts but also cumulative impacts, meaning the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Here, TVA failed to adequately consider the combined climate impact of Sugar Camp Mine's proposed action by not including prior mining at Sugar Camp or reasonably foreseeable future mining of TVA reserves at the mine and elsewhere in the Illinois Basin.

TVA's cumulative climate assessment consists of one sentence:

> *Cumulative Effects*
> Cumulatively, the emissions of GHGs from future mining associated with the overall 37,972-acre SBR No. 6 mine expansion, including the TVA-owned coal associated with the Proposed Action, would total about 660 million metric tons of CO2e.

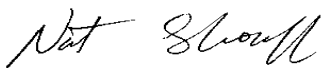
DEIS at 3-37.

TVA has failed to include any past mining at Sugar Camp – of TVA or other reserves – and failed to include reasonably foreseeable future mining for other mine expansions. Instead, TVA limited the analysis to a single expansion of 37,972 acre-expansion in what it calls "SBR No. 6," without any discussion of the more than 1 billion tons of coal that TVA owns in the Illinois Basin and whether it is reasonably foreseeable that those reserves will be developed at Sugar Camp or by a different mine. DEIS App. A at 2 ("TVA owns coal reserves underlying approximately 65,000 acres of land containing approximately 1.35 billion tons of Illinois No. 5 and No. 6 coal seams.") TVA must take this broader view in order to adequately disclose the climate impacts of the proposed Sugar Camp mine expansion when combined with prior Sugar Camp and TVA mining and the foreseeable future mining and burning of the 1.35 billion tons of TVA-owned coal in Illinois.

III. CONCLUSION

For all of the reasons explained above, we request that TVA reject the proposed Sugar Camp expansion in favor of the No Action alternative. At a minimum, the many significant gaps in TVA's analysis, once corrected, should be recirculated in a supplemental DEIS and made available for public review and comment.

Sincerely,



Nathaniel Shoaff
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Oakland, CA 94612
[redacted]
[redacted]

Environmental Reviews

TVA conducts environmental reviews in accordance with the National Environmental Policy Act, which requires federal agencies to consider the effects of their proposed projects on the human and natural environment before final decisions are made. These environmental reviews under NEPA typically also include assessments that facilitate compliance with other environmental review requirements such as those under the National Historic Preservation Act and the Endangered Species Act.

Open for Public Comment

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

Franklin and Hamilton Counties, Illinois

Since 2011, TVA has conducted several environmental reviews of proposals to mine TVA-owned coal reserves underlying areas of Franklin and Hamilton counties, Illinois by Sugar Camp Energy LLC, with whom TVA has executed a lease to mine its coal reserves. TVA's reviews have considered expansions of underground mining operations of the Sugar Camp Energy Mine No. 1 (Illinois Mine Permit No. 382) into areas of TVA-owned coal reserves. The State of Illinois must approve operations and expansions of Mine No. 1; mining of TVA-owned coal reserves by Sugar Camp Energy requires approval by TVA.

In 2011, TVA approved Sugar Camp Energy's plan for Mine No. 1 to mine coal from approximately 2,600-acres of TVA holdings in Hamilton County, Illinois. In 2013, TVA approved a mine expansion to allow Sugar Camp Energy to mine additional coal reserves underlying an 880.3-acre area. In 2018, TVA approved another mine expansion into the Viking District #2 area, encompassing almost 2,250 acres in Franklin and Hamilton counties. Operations to extract TVA-owned coal reserves are conducted primarily underground, although the 2013 and 2018 expansions required the construction of bleeder shafts and associated surface infrastructure.

On May 9, 2019, TVA completed a Supplemental Environmental Assessment (SEA) to review an additional expansion of Mine No. 1 and issued a finding of no significant impact. The expanded mining operations would extract approximately 85 acres of TVA-owned coal reserves within an area known as the Viking District #3. There would be no surface disturbance resulting from this expansion. The SEA supplements the analysis completed by TVA in November 2018 that addresses mining of the adjacent Viking District #2 area. The expansions for Viking Districts #2 and #3 were included in the approval granted by the State of Illinois in November 2017 to expand Sugar Camp Mine No. 1.

On August 12, 2019, TVA issued a Notice of Intent (NOI) in the Federal Register to conduct an environmental impact statement (EIS) for the proposed Sugar Camp Energy LLC Mine Expansion (Revision 6). TVA will consider whether to approve the company's application to mine approximately 12,125 acres of TVA-owned coal reserves in Illinois, as part of the Sugar Camp Mine No. 1 expansion.

TVA has identified two alternatives for consideration in the EIS: TVA's approval of Sugar Camp's application to mine 12,125 acres of TVA-owned coal reserves within the expansion area (36,972 acres) of Sugar Camp Mine No. 1, as approved by the State of Illinois; and the No Action Alternative. TVA is soliciting comments on whether there are other alternatives that should be assessed in the EIS.

Under the proposal, surface and underground disturbance would occur. Surface activities to support the underground mining would be limited to the construction of bleeder shafts and installation of associated utilities to operate the bleeder shafts to support the extraction of TVA-owned coal. The exact location of these surface activities is unknown at this time, but they would occur within the project area. Other activities to support the underground mining of TVA-owned coal would be located outside of the project area and include operation of the coal preparation plant (approximately 3.5 miles southwest of Macedonia, Illinois).

Underground mining would be performed using two techniques. Coal would be extracted using room and pillar and continuous mining techniques during a development period, followed by longwall mining and associated planned subsidence. Subsidence would only occur under a portion of the project area. Sugar Camp would utilize its existing Mine No. 1 facilities to process and ship extracted coal.

Submitting Comments

The draft EIS is available for public review and comment through May 27, 2020. Any comments received, including names and addresses, will become part of the administrative record and will be available for public inspection.

Comments may be submitted online, via email to esmith14@tva.gov or by mail to the contact below. To be considered, comments must be submitted or postmarked no later than May 27, 2020.

NOTE: Due to current federal requirements for TVA employees working remotely, TVA recommends the public submit comments online or by email to ensure timely review and consideration.

Related Documents:

Sugar Camp Energy, LLC Mine No. 1 - Boundary Revision 6 Draft Environmental Impact Statement (DEIS)

Sugar Camp Federal Register Notice of Intent

2019 Supplemental Environmental Assessment – Viking District #2 (PDF, 0.9mb)

2019 Finding of No Significant Impact – Viking District #2 (PDF, 0mb)

Sugar Camp Viking 2 Draft Supplemental Environmental Assessment (EA)

2018 Final Environmental Assessment – Viking District #2 (PDF, 5.6mb)

2018 Finding of No Significant Impact – Viking District #2 (PDF, 0.1mb)

2013 Finding of No Significant Impact (PDF, 0.1mb)

2013 Supplemental Environmental Assessment (PDF, 5.8mb)

2011 Finding of No Significant Impact (PDF, 0.1mb)

2011 Environmental Assessment (PDF, 1.8mb)

2011 Appendices (PDF, 4.7mb)

Contact

More information on this environmental review can be obtained from:

Elizabeth Smith
NEPA Specialist
esmith14@tva.gov
865-632-3053
400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902

Programs, Plans and Policies

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

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On May 9, 2019, TVA completed a Supplemental Environmental Assessment (SEA) to review an additional expansion of Mine No. 1 and issued a finding of no significant impact. The expanded mining operations would extract approximately 85 acres of TVA-owned coal reserves within an area known as the Viking District #3. There would be no surface disturbance resulting from this expansion. The SEA supplements the analysis completed by TVA in November 2018 that addresses mining of the adjacent Viking District #2 area. The expansions for Viking Districts #2 and #3 were included in the approval granted by the State of Illinois in November 2017 to expand Sugar Camp Mine No. 1.

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Power Generation – Coal and Gas

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On May 9, 2019, TVA completed a Supplemental Environmental Assessment (SEA) to review an additional expansion of Mine No. 1 and issued a finding of no significant impact. The expanded mining operations would extract approximately 85 acres of TVA-owned coal reserves within an area known as the Viking District #3. There would be no surface disturbance resulting from this expansion. The SEA supplements the analysis completed by TVA in November 2018 that addresses mining of the adjacent Viking District #2 area. The expansions for Viking Districts #2 and #3 were included in the approval granted by the State of Illinois in November 2017 to expand Sugar Camp Mine No. 1.

On August 12, 2019, TVA issued a Notice of Intent (NOI) in the Federal Register to conduct an environmental impact statement (EIS) for the proposed Sugar Camp Energy LLC Mine Expansion (Revision 6). TVA will consider whether to approve the company's application to mine approximately 12,125 acres of TVA-owned coal reserves in Illinois, as part of the Sugar Camp Mine No. 1 expansion.

TVA has identified two alternatives for consideration in the EIS: TVA's approval of Sugar Camp's application to mine 12,125 acres of TVA-owned coal reserves within the expansion area (36,972 acres) of Sugar Camp Mine No. 1, as approved by the State of Illinois; and the No Action Alternative. TVA is soliciting comments on whether there are other alternatives that should be assessed in the EIS.

Under the proposal, surface and underground disturbance would occur. Surface activities to support the underground mining would be limited to the construction of bleeder shafts and installation of associated utilities to operate the bleeder shafts to support the extraction of TVA-owned coal. The exact location of these surface activities is unknown at this time, but they would occur within the project area. Other activities to support the underground mining of TVA-owned coal would be located outside of the project area and include operation of the coal preparation plant (approximately 3.5 miles southwest of Macedonia, Illinois).

Underground mining would be performed using two techniques. Coal would be extracted using room and pillar and continuous mining techniques during a development period, followed by longwall mining and associated planned subsidence. Subsidence would only occur under a portion of the project area. Sugar Camp would utilize its existing Mine No. 1 facilities to process and ship extracted coal.

Submitting Comments

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Contact

More information on this environmental review can be obtained from:

Elizabeth Smith
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865-632-3053
400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902

Power Generation – Nuclear

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

Franklin and Hamilton Counties, Illinois

Since 2011, TVA has conducted several environmental reviews of proposals to mine TVA-owned coal reserves underlying areas of Franklin and Hamilton counties, Illinois by Sugar Camp Energy LLC, with whom TVA has executed a lease to mine its coal reserves. TVA's reviews have considered expansions of underground mining operations of the Sugar Camp Energy Mine No. 1 (Illinois Mine Permit No. 382) into areas of TVA-owned coal reserves. The State of Illinois must approve operations and expansions of Mine No. 1; mining of TVA-owned coal reserves by Sugar Camp Energy requires approval by TVA.

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TVA has identified two alternatives for consideration in the EIS: TVA's approval of Sugar Camp's application to mine 12,125 acres of TVA-owned coal reserves within the expansion area (36,972 acres) of Sugar Camp Mine No. 1, as approved by the State of Illinois; and the No Action Alternative. TVA is soliciting comments on whether there are other alternatives that should be assessed in the EIS.

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Power Generation – Solar and Other Renewables

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

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Economic Development

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

Franklin and Hamilton Counties, Illinois

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Land, Facilities and Permitting

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

Franklin and Hamilton Counties, Illinois

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River System Operations

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

Franklin and Hamilton Counties, Illinois

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Transmission

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400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902

Natural Resources Management

Mine Plan Approval for Illinois Coal Mineral Rights Lease, Sugar Camp Mine No. 1

Franklin and Hamilton Counties, Illinois

Since 2011, TVA has conducted several environmental reviews of proposals to mine TVA-owned coal reserves underlying areas of Franklin and Ham counties, Illinois by Sugar Camp Energy LLC, with whom TVA has executed a lease to mine its coal reserves. TVA's reviews have considered expans of underground mining operations of the Sugar Camp Energy Mine No. 1 (Illinois Mine Permit No. 382) into areas of TVA-owned coal reserves. The of Illinois must approve operations and expansions of Mine No. 1; mining of TVA-owned coal reserves by Sugar Camp Energy requires approval by T

In 2011, TVA approved Sugar Camp Energy's plan for Mine No. 1 to mine coal from approximately 2,600-acres of TVA holdings in Hamilton County, Illinois. In 2013, TVA approved a mine expansion to allow Sugar Camp Energy to mine additional coal reserves underlying an 880.3-acre area. In 201 TVA approved another mine expansion into the Viking District #2 area, encompassing almost 2,250 acres in Franklin and Hamilton counties. Operat to extract TVA-owned coal reserves are conducted primarily underground, although the 2013 and 2018 expansions required the construction of blee shafts and associated surface infrastructure.

On May 9, 2019, TVA completed a Supplemental Environmental Assessment (SEA) to review an additional expansion of Mine No. 1 and issued a fin of no significant impact. The expanded mining operations would extract approximately 85 acres of TVA-owned coal reserves within an area known Viking District #3. There would be no surface disturbance resulting from this expansion. The SEA supplements the analysis completed by TVA in November 2018 that addresses mining of the adjacent Viking District #2 area. The expansions for Viking Districts #2 and #3 were included in the approval granted by the State of Illinois in November 2017 to expand Sugar Camp Mine No. 1.

On August 12, 2019, TVA issued a Notice of Intent (NOI) in the Federal Register to conduct an environmental impact statement (EIS) for the propos Sugar Camp Energy LLC Mine Expansion (Revision 6). TVA will consider whether to approve the company's application to mine approximately 12,12 acres of TVA-owned coal reserves in Illinois, as part of the Sugar Camp Mine No. 1 expansion.

TVA has identified two alternatives for consideration in the EIS: TVA's approval of Sugar Camp's application to mine 12,125 acres of TVA-owned coa reserves within the expansion area (36,972 acres) of Sugar Camp Mine No. 1, as approved by the State of Illinois; and the No Action Alternative. TV soliciting comments on whether there are other alternatives that should be assessed in the EIS.

Under the proposal, surface and underground disturbance would occur. Surface activities to support the underground mining would be limited to th construction of bleeder shafts and installation of associated utilities to operate the bleeder shafts to support the extraction of TVA-owned coal. The exact location of these surface activities is unknown at this time, but they would occur within the project area. Other activities to support the underground mining of TVA-owned coal would be located outside of the project area and include operation of the coal preparation plant (approxima 3.5 miles southwest of Macedonia, Illinois).

Underground mining would be performed using two techniques. Coal would be extracted using room and pillar and continuous mining techniques d a development period, followed by longwall mining and associated planned subsidence. Subsidence would only occur under a portion of the projec Sugar Camp would utilize its existing Mine No. 1 facilities to process and ship extracted coal.

Submitting Comments

The draft EIS is available for public review and comment through May 27, 2020. Any comments received, including names and addresses, will beco part of the administrative record and will be available for public inspection.

Comments may be submitted online, via email to esmith14@tva.gov or by mail to the contact below. To be considered, comments must be submitt postmarked no later than May 27, 2020.

NOTE: Due to current federal requirements for TVA employees working remotely, TVA recommends the public submit comments online or by email ensure timely review and consideration.

Related Documents:

Sugar Camp Energy, LLC Mine No. 1 - Boundary Revision 6 Draft Environmental Impact Statement (DEIS)

Sugar Camp Federal Register Notice of Intent

2019 Supplemental Environmental Assessment – Viking District #2 (PDF, 0.9mb)

2019 Finding of No Significant Impact – Viking District #2 (PDF, 0mb)

Sugar Camp Viking 2 Draft Supplemental Environmental Assessment (EA)

2018 Final Environmental Assessment – Viking District #2 (PDF, 5.6mb)

2018 Finding of No Significant Impact – Viking District #2 (PDF, 0.1mb)

2013 Finding of No Significant Impact (PDF, 0.1mb)

2013 Supplemental Environmental Assessment (PDF, 5.8mb)

2011 Finding of No Significant Impact (PDF, 0.1mb)

2011 Environmental Assessment (PDF, 1.8mb)

2011 Appendices (PDF, 4.7mb)

Contact

More information on this environmental review can be obtained from:

Elizabeth Smith
NEPA Specialist
esmith14@tva.gov
865-632-3053
400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902

Bat Conservation and Compliance

TVA's bat strategy defines how we document and track our actions towards conserving bats. As part of the strategy, TVA completed an Endangered Species Act (ESA) programmatic consultation in 2018. This report describes TVA activities which could potentially impact endangered or threatene bats in the TVA Region (gray bat, Indiana bat, northern long-eared bat and Virginia big-eared bat). The consultation is effective for 20 years and ensu that TVA remains in compliance with the ESA.

Programmatic Biological Assessment for Evaluation of the Impacts of TVA's Routine Actions on Federally Listed Bats

USFWS Concurrence on Activities that are Not Likely to Adversely Affect Federally-listed Bats

USFWS Biological Opinion on TVA's Programmatic Strategy for Routine Actions that May Affect Endangered or Threatened Bats

Amendment to USFWS Biological Opinion

Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, TN 37902
865-632-2101
tvainfo@tva.com

Understanding Global Warming Potentials

Greenhouse gases (GHGs) warm the Earth by absorbing energy and slowing the rate at which the energy escapes to space; they act like a blanket insulating the Earth. Different GHGs can have different effects on the Earth's warming. Two key ways in which these gases differ from each other are their ability to absorb energy (their "radiative efficiency"), and how long they stay in the atmosphere (also known as their "lifetime").

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO_2). The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases.

- CO_2, by definition, has a GWP of 1 regardless of the time period used, because it is the gas being used as the reference. CO_2 remains in the climate system for a very long time: CO_2 emissions cause increases in atmospheric concentrations of CO_2 that will last thousands of years.
- Methane (CH_4) is estimated to have a GWP of 28–36 over 100 years (Learn why EPA's U.S. Inventory of Greenhouse Gas Emissions and Sinks uses a different value.). CH_4 emitted today lasts about a decade on average, which is much less time than CO_2. But CH_4 also absorbs much more energy than CO_2. The net effect of the shorter lifetime and higher energy absorption is reflected in the GWP. The CH_4 GWP also accounts for some indirect effects, such as the fact that CH_4 is a precursor to ozone, and ozone is itself a GHG.
- Nitrous Oxide (N_2O) has a GWP 265–298 times that of CO_2 for a 100-year timescale. N_2O emitted today remains in the atmosphere for more than 100 years, on average.
- Chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur

hexafluoride (SF_6) are sometimes called high-GWP gases because, for a given amount of mass, they trap substantially more heat than CO_2. (The GWPs for these gases can be in the thousands or tens of thousands.)

Frequently Asked Questions

Why do GWPs change over time?

EPA and other organizations will update the GWP values they use occasionally. This change can be due to updated scientific estimates of the energy absorption or lifetime of the gases or to changing atmospheric concentrations of GHGs that result in a change in the energy absorption of 1 additional ton of a gas relative to another.

Why are GWPs presented as ranges?

In the most recent report by the Intergovernmental Panel on Climate Change (IPCC), multiple methods of calculating GWPs were presented based on how to account for the influence of future warming on the carbon cycle. For this Web page, we are presenting the range of the lowest to the highest values listed by the IPCC.

What GWP estimates does EPA use for GHG emissions accounting, such as the *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (Inventory) and the Greenhouse Gas Reporting Program?

The EPA considers the GWP estimates presented in the most recent IPCC scientific assessment to reflect the state of the science. In science communications, the EPA will refer to the most recent GWPs. The GWPs listed above are from the IPCC's Fifth Assessment Report, published in 2014.

The EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (Inventory) complies with international GHG reporting standards under the United Nations Framework Convention on Climate Change (UNFCCC). UNFCCC guidelines now require the use of the GWP values for the IPCC's Fourth Assessment Report (AR4), published in 2007. The Inventory also presents emissions by mass, so that CO_2 equivalents can be calculated using any GWPs, and emission totals using more recent IPCC values are presented in the annexes of the Inventory report for informational purposes.

Data collected by EPA's Greenhouse Gas Reporting Program is used in the Inventory, so the Reporting Program generally uses GWP values from the AR4. The Reporting Program collects data about some industrial gases that do not have GWPs listed in the AR4; for these gases, the Reporting Program uses GWP values from other sources, such as the Fifth Assessment Report.

EPA's CH_4 reduction voluntary programs also use CH_4 GWPs from the AR4 report for calculating CH_4 emissions reductions through energy recovery projects, for consistency with the national emissions presented in the Inventory.

Are there alternatives to the 100-year GWP for comparing GHGs?

The United States primarily uses the 100-year GWP as a measure of the relative impact of different GHGs. However, the scientific community has developed a number of other metrics that could be used for comparing one GHG to another. These metrics may differ based on timeframe, the climate endpoint measured, or the method of calculation.

For example, the 20-year GWP is sometimes used as an alternative to the 100-year GWP. Just like the 100-year GWP is based on the energy absorbed by a gas over 100 years, the 20-year GWP is based on the energy absorbed over 20 years. This 20-year GWP prioritizes gases with shorter lifetimes, because it does not consider impacts that happen more than 20 years after the emissions occur. Because all GWPs are calculated relative to CO_2, GWPs based on a shorter timeframe will be larger for gases with lifetimes shorter than that of CO_2, and smaller for gases with lifetimes longer than CO_2. For example, for CH_4, which has a short lifetime, the 100-year GWP of 28–36 is much less than the 20-year GWP of 84–87. For CF_4, with a lifetime of 50,000 years, the 100-year GWP of 6630–7350 is larger than the 20-year GWP of 4880–4950.

Another alternate metric is the Global Temperature Potential (GTP). While the GWP is a measure of the heat absorbed over a given time period due to emissions of a gas, the GTP is a measure of the temperature change at the end of that time period (again, relative to CO_2).The calculation of the GTP is more complicated than that for the GWP, as it requires modeling how much the climate system responds to increased concentrations of GHGs (the climate sensitivity) and how quickly the system responds (based in part on how the ocean absorbs heat).

LAST UPDATED ON FEBRUARY 14, 2017

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

May 27, 2020

REPLY TO THE ATTENTION OF:
Mail Code RM-19J

Elizabeth Smith
Tennessee Valley Authority
400 West Summit Hill Drive, WT 11B-K
Knoxville, Tennessee 37902

Re: Comments on the Draft Environmental Impact Statement for Sugar Camp Energy LLC Mine Expansion (Revision No. 6), Franklin and Hamilton Counties, Illinois -- CEQ #20200081

Dear Ms. Smith:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (EIS) published by the Tennessee Valley Authority (TVA) for the Sugar Camp Mine Expansion – Revision No. 6 in Franklin and Hamilton Counties, Illinois. This letter provides EPA's review of the Draft EIS and supporting materials, pursuant to our authorities under the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

TVA is considering whether to allow Sugar Camp Mine LLC to mine approximately 12,125 acres of TVA-owned coal reserves, as part of the full Sugar Camp Mine. The full proposed expansion is 36,972 acres and has been approved under the Illinois Department of Natural Resources Underground Coal Mine Permit No. 382, Revision 6. There are two alternatives: the No Action Alternative and the Action Alternative. Because the remainder of the project area is privately held, the No Action Alternative includes mining and environmental impacts beyond the TVA-owned coal reserves that would occur regardless of TVA's decision.

Surface and underground disturbances would occur under both the No Action and Action Alternatives. Surface activities include construction of five (5) bleeder ventilation shafts, a new refuse disposal area, and other associated infrastructure. Underground mining would be performed using both room-and-pillar mining and longwall mining and would include planned subsidence under portions of the project area. The project proponent would use existing coal transfer and processing facilities.

EPA provided comments to TVA on the EIS scoping materials on September 12, 2019. Our comments focused on purpose and need, alternatives, cumulative impacts, and scope, as well as potential impacts to aquatic resources and air quality. Our scoping comments largely remain unaddressed in the Draft EIS, particularly regarding the sufficiency of information provided

under the cumulative impacts analysis. Notably, we had recommended that the cumulative impacts analysis describe the environmental impacts of the historic and current Sugar Camp Mine operations, the impacts of the entire proposed expansion, including mining of coal not controlled by TVA, and any reasonably foreseeable future expansion plans. Our detailed comments are enclosed.

EPA requested to be a Cooperating Agency in our scoping letter. TVA did not ask EPA to review preliminary documentation or provide other substantive input. EPA's status as a Cooperating Agency does not mean we support the project, nor does that status change our independent review and comment authorities under Section 309 of the Clean Air Act.

Thank you in advance for your consideration of our comments to better protect human health and the environment. We are happy to answer any questions or to further discuss our comments -- please contact me or Elizabeth Poole of my staff at poole.elizabeth@epa.gov or 312-353-2087 to arrange a call or meeting.

Sincerely,

KENNETH WESTLAKE Digitally signed by KENNETH WESTLAKE
Date: 2020.05.27 20:23:53 -05'00'

Kenneth A. Westlake
Deputy Director, Tribal and Multi-Media Programs Office
Office of the Regional Administrator

Enclosure (1): Detailed Comments

cc: Keith McMullen, U.S. Army Corps of Engineers, St. Louis District
Tyson Zobrist, U.S. Army Corps of Engineers, St. Louis District
Matt Mangan, U.S. Fish and Wildlife Service
Bradley Hayes, Illinois Department of Natural Resources
Ray Pilapil, Illinois Environmental Protection Agency
Darin LeCrone, Illinois Environmental Protection Agency

EPA's Detailed Comments on the Draft Environmental Impact Statement for the Sugar Camp Mine Expansion (No. 6), Franklin and Hamilton Counties, Illinois CEQ #20200081

Background Documentation

We reviewed the following documents, in addition to the Draft Environmental Impact Statement (EIS), to inform our comments:

- Illinois Department of Natural Resources (Illinois DNR) Underground Mining Permit Number 382 (Revision 6);
- Illinois Environmental Protection Agency (Illinois EPA) Construction Permit 18050018;
- Illinois EPA National Pollution Discharge Elimination System (NPDES) Permit No. IL0078565.

Alternatives Analysis

The Draft EIS states: "*Shifting the shadow area to the north, west, south, while possible, offers no environmental or economical advantage over the current plan*" (page 2-11). This important statement should refer to supporting information.

> **Recommendation:** We recommend the Final EIS provide information to support this statement (for example, a table that identifies the proposed impacts to each resource within a shadow area to the north, west, and south). This could be summarized in the Final EIS and incorporated by reference, assuming the citation is specific and publicly available (i.e., referencing a specific page or section of a document available on a website).

Under the Action Alternative, the coal mined at the site will be processed, stored, and transported at an existing coal preparation plant. While the Draft EIS states that the Action Alternative would not result in any new surface facilities, it is unclear whether physical or operational changes to the plant would be necessary, particularly given the increase in mine output.

> **Recommendations**: TVA should describe any physical or operational changes to the process equipment at the coal preparation plant (including any modifications to existing conveyors or construction of new conveyors). TVA should consult with Illinois EPA to determine if the coal processing plant changes should be evaluated for applicability of Clean Air Act (CAA) permitting requirements, including all federal requirements for New Source Performance Standards – specifically 40 CFR 60, Subpart Y. Any modifications to CAA permitting requirements should be disclosed in the Final EIS.

The Draft EIS states that siting decisions for the bleeder shaft facilities will be made in the future and that site-specific impacts are unknown (page 1-5). It also states that the bleeder shaft facilities will "*continue to be sited to avoid floodplains and Waters of the U.S. to the maximum extent practicable*" (page 3-83) and would likely be located in agricultural lands; but does not identify other circumstances to be considered.

> **Recommendation:** EPA encourages TVA and the applicant to include more detail in the Final EIS about the siting considerations for the bleeder ventilation shafts; this could include a narrowed list of potential locations. We recommend TVA and the applicant commit to site

the bleeder ventilation shafts away from communities, schools, or other potentially sensitive receptors, in addition to avoiding jurisdictional waters, where practicable. The Draft EIS includes information about whether potentially vulnerable receptors, such as schools, hospitals, and/or pockets of low-income populations[1], are located within the project area; such populations may be more susceptible to adverse air quality as a result of emissions from the bleeder shaft.

East Refuse Area

The East Refuse Disposal Area falls under the No Action alternative but would also be used to store refuse from the preparation of TVA-owned coal. The Draft EIS does not include important relevant information regarding the East Refuse Area.

Recommendations: We recommend the Final EIS include the following information regarding the East Refuse Area. This information could be summarized in the Final EIS and incorporated by reference, assuming citation is specific and publicly available (i.e., referencing a specific page or section of a document available on a website):

- The composition of the low permeability liner and explain how leachate in the East Refuse Area and settling ponds will be managed;
- The composition of the waste rock and water being discharged from the East Refuse Area and settling ponds; we recommend water quality monitoring to ensure compliance with water quality standards, both for during operation and post-closure.
- How the mine closure plan will affect this component of the mine complex.

Air Quality

Under the Action Alternative, the Draft EIS indicates that there will be construction and operation of 5 bleeder shaft facilities totaling 27 acres and the East Refuse Disposal Area totaling 525 acres. Any facility that has the potential to emit air pollution may be required to obtain a CAA permit before construction and operation at the site.

Recommendations: We recommend the following be considered and reflected in the Final EIS.

- Prior to beginning actual construction of the five bleeder shaft facilities, the applicant should consult with Illinois EPA to determine whether a CAA permit is required and whether any permit conditions would be required.
- While methane will be vented from the mine through the bleeder shafts, there should be additional consideration given to possible particulate matter and hazardous air pollutant emissions from these facilities.
- The fugitive coal dust emissions control plan may need to be updated.

Due to the increased throughput of the Coal Preparation Plant under the Action Alternative, there may be increased use of process equipment (crushers and conveyors), which may require

[1] On page 3-75, the Draft EIS discusses low-income populations; however, there is no map provided, so we are unable to assess the proximity the mine facilities to the identified census tracts. See recommendation regarding an additional map under *Documentation*.

revisions to construction and operating permits for this facility, specifically Construction Permit Number 18050018.

> **Recommendation**: The Final EIS should state the impact that the increased throughput will have on the existing Coal Preparation Plant. The analysis should include whether any existing permit or new permit (construction or operating) would need to be modified or issued. Prior to processing the additional coal at the Coal Preparation Plant, the applicant should consult with Illinois EPA to determine if any permitting actions must be undertaken to address this increased throughput.

The Draft EIS states that between 2014 and 2018, between 53% and 77% of the coal produced by the mine was shipped to power plants located in the United States, including Indiana, Ohio, and Kentucky, and that the rest was likely exported. This information was used to calculate the transportation emissions associated with mining.

> **Recommendation**: The transportation emissions and consumption should be updated and recalculated to reflect current conditions such as changing transportation patterns associated with the changing market for coal, reflecting shutdowns of coal-fired power plants in the United States and a higher percentage of domestic coal production being shipped abroad.

Water Quality

Based on our review of compliance data and the NPDES permit, the Sugar Camp Mine has had effluent exceedances for the past 4 quarters. In 2019, the facility reported discharges at only 5 of the 15 separate outfalls. In the past 4 quarters, it appears that the facility reported exceedances at all 5 of the discharging outfalls.

For all outfalls in 2019, there were 5,696 individual effluent data points. Of those, 3,589 were flagged as “No Discharge.” This is separate from the flag used for systems which are labeled “Not Constructed”. This leaves 682 reported discharge data points in 2019; in other words, discharges are reported during only 12% of the possible reporting times.

In 2019, for Outfall 013 only, there were 448 average and maximum effluent limitations data points. Of those data points, the facility reported 75 discharge data points which were not flagged as “No Discharge.” All of those discharge events occurred in the monitoring periods ending March, June, September, and December 2019. The effluent exceedances occurred during the monitoring periods ending June and September 2019. This means that Outfall 013 only discharged approximately 16% of the time, and that ½ time when discharges occurred, the effluent was out of compliance with the permit limits during the reporting periods in 2019.

> **Recommendation**: The Final EIS should verify that the existing onsite treatment systems are capable of treating the increased volume of wastewater from the expansion, and that monitoring is being conducted on the schedule required by the NPDES permit. Any changes to the treatment system should be detailed in the Final EIS.

Aquatic Resources

This section reiterates unaddressed comments on aquatic resources provided by EPA in the September 12, 2019 scoping letter. The NEPA process is meant to support informed decision making by federal agencies that reduces or eliminates environmental harms, Overall, the sections in the Draft EIS pertaining to aquatic resources do not include enough detail about the location of existing resources, the quality of those resources, the proposed impacts to those resources, and cumulative impacts to the watershed to meet this purpose. Specific comments follow.

Clean Water Act Section 404

The Draft EIS indicates that this project will involve the filling of jurisdictional waters requiring authorization under Section 404 of the Clean Water Act (CWA). Pursuant to the CWA Section 404(b)(1) guidelines[2], only the least environmentally damaging practicable alternative can be permitted. The identification of the environmentally preferred alternative in a NEPA EIS should ideally satisfy the alternatives analysis requirements of Section 404 of the CWA. Mitigation described in an EIS to replace unavoidable losses of aquatic habitat can then form the basis for mitigation requirements of Section 404 permits.

> **Recommendation:** Consistent with comments during scoping, we recommend the Final EIS provide relevant site-specific detailed information on the alternatives analysis and mitigation to facilitate a compliance determination under Section 404 of the CWA.

It is our understanding that there has been no recent coordination or consultation with the US Army Corps of Engineers St. Louis District Regulatory office (St. Louis Corps) regarding the impacts to jurisdictional waters for the proposed project. However, in the past, all CWA Section 404 permits for the Sugar Camp mine were issued by the St. Louis District Regulatory Field Office. Chapter 5 of the Draft EIS lists the US Army Corps of Engineers Louisville District Newburgh Regulatory Field Office as a recipient of the Draft EIS.

> **Recommendation:** We recommend a copy of the Final EIS be provided to the appropriate Corps District for review and comment. We also recommend TVA engage with the St. Louis Corps, to discuss what information could be provided in the Final EIS to meet CWA Section 404 permit requirements.

Aquatic Life

The Draft EIS broadly states that each of the streams and ponds within the project area support aquatic life. It lacks sufficient detail to support evaluating the extent of impact to aquatic life or the biological environment and the extent to which impacts may need to be mitigated. The area has not been assessed; and there is no reference to any local data, studies, or statewide assessments that may include this type of information. The Draft EIS concludes: "*Overall, no significant cumulative effects to biological resources would occur in association with the overall 37,972-acre SBR* [Significant Boundary Revision] *No. 6 mine expansion or the existing 2,420-acre surface effects area due to avoidance, minimization, and mitigation, per IDNR-OMM permit requirements and in compliance with the Endangered Species Act, as applicable"* (page 3-84).

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[2] https://www.epa.gov/cwa-404/cwa-section-404b1-guidelines-40-cfr-230

Recommendations: We recommend the Final EIS include additional information on the presence of aquatic life in impacted watersheds, including but not limited to analysis and reference to existing state and watershed ecological assessments. Onsite physical and biological assessments of resources proposed to be impacted will be required for a CWA Section 404 permit application. Conducting such assessment would also provide information to evaluate impacts to streams, wetlands, and biological resources on the site under NEPA.

Impacts to Aquatic Resources from Subsidence

Cumulative impacts to aquatic resources could occur in the 33,033-acre subsidence area associated with the overall 37,972-acre proposed expansion area. The Draft EIS indicates that planned subsidence of a maximum of five and a half feet would occur over 10,549 acres of land within the Shadow Area once the coal has been removed through longwall mining methods (page 2-9). The Draft EIS states "*Longwall mining results in predictable and uniform subsidence patterns*" (page 2-11). Based on information provided in Draft EIS, Section 3.2.2.1, the project has the potential to minimally impact approximately 390 acres of wetland and 317,749 linear feet of streams by subsidence in the Shadow Area. These surface waters may be subject to regulation under Section 404 of the CWA. The Draft EIS does not contain a detailed map indicating the subsidence area in relation to the location of streams and wetlands within the project footprint. Figure 1-2 shows the "limit of predicted subsidence" but only higher order streams are included on this map. Further, the discussion on how aquatic resources will be assessed and mitigated for, if impacted, lacks detail and spoken about in a general manner.

Recommendations: We recommend the Final EIS include the following, related to impacts aquatic resources from subsidence:

- A map indicating potential subsidence locations that more clearly details anticipated impacts to aquatic resources.
- A discussion on how post-construction impacts to aquatic resources in these areas will be addressed, given the potential quantity of resources impacted (i.e. proposed design requirements).
- A comprehensive summary of aquatic resource impacts within the Shadow Area given the potential impacts proposed. The wetland resources summarized in this section only include National Wetland Inventory data, which is not a comprehensive assessment of wetland resources that may occur within the area. Further, the stream resources summarized in this section are based on the National Hydrography Dataset which doesn't include ephemeral stream or all intermittent streams that may occur within the area. This can only be determined through more detailed desktop review and field assessments.
- Additional detail on the baseline condition and quality of the aquatic resources that would be directly impacted, both in the surface effects area and the shadow/subsidence area, using appropriate assessment methods. Discussion on the severity of impacts to surface waters by subsidence is warranted as well as proposed methods for their restoration.
- A discussion on the potential minimization and mitigation requirements under CWA Section 404 for the areas proposed to be impacted by subsidence. Overall, the Draft EIS mentions that impacts to aquatic resources would be offset through required minimization and mitigation efforts under CWA Section 404 and other state permit authorities; however, the document provides little detail on how minimization (e.g. alternative design configurations, decreased project footprint, etc.) will be achieved and what specific

mitigation efforts would be undertaken (e.g. best management practices, restoring streams and wetlands, enhancements to existing aquatic resources within the watershed, etc.).

Cumulative Impacts

The cumulative impacts section of the Draft EIS lacks sufficient detail to describe the affected environment and determine the environmental consequences of cumulative effects. The Draft EIS concludes that overall, no significant cumulative effects to resources will occur in association with the mine project due to "avoidance, minimization, and mitigation per IDNR-OMM permit requirements." This phrase is repeated several times throughout the Cumulative Impacts Section in reference to different resources. However, specific avoidance, minimization, and mitigation measures are not identified.

Recommendations: The Final EIS should incorporate the referenced IDNR permit requirements that address the deficiencies stated above; this could be accomplished by citing an accessible document (i.e., referencing a specific page or section of a document available on a website). We recommend the cumulative impacts analysis specifically address the following in the Final EIS, with appropriate supporting information:

- The current health of each resource, including past actions/trends, whether public or private, led to this condition and the current trends and projected future health of the resource.
- Any future coal projects that are reasonably foreseeable and the anticipated potential environmental impacts of these projects on each resource (e.g. a resource trends and potential effects analysis). This should include the portion of the proposed Sugar Camp Energy Mine expansion covering non-TVA coal resources.
- Any future non-coal projects and developments, whether public or private, that are reasonably foreseeable and the potential environmental impacts of these projects.
- How the combined effects of past actions, other present actions, reasonably foreseeable future actions, and the proposed project will affect the health of each resource, including supportive documentation or analysis.

The scope and boundary of the cumulative impacts analysis is not well defined. For example, the Draft EIS states "*With respect to the cumulative impact analysis for other resource areas, the geographic area of analysis includes the UCM Permit No. 382 surface effects area, the SBR No. 6 shadow area, and the vicinity, as relevant to the particular resource*" (page 3-83). It is unclear what the "vicinity" boundaries are in relation to the cumulative impacts area. The affected environment has not been adequately assessed (i.e. the quality of the resources in comparison to other resources within the watershed).

Recommendation: 'Vicinity' should be clearly defined. The Final EIS should clarify the boundaries selected and that an explanation is provided for why those boundaries were selected for each the scope of each resources' cumulative impact analysis.

Documentation

EPA sent scoping comments on September 12, 2019. The Draft EIS states that TVA also received scoping comments from the Sierra Club and one private citizen (page 1-7). Consultation

with USFWS and IDNR is summarized (page 1-11). The Draft EIS does not include copies of scoping comment letters or other correspondence from the scoping period. It also does not indicate how specific scoping comments were addressed.

Recommendations: The Final EIS should include correspondence and consultation records from the public and agencies during both the scoping and Draft EIS comment periods. We also recommend TVA identify the specific locations within the document where agency or public comments were addressed or information in the Final EIS was modified from the Draft EIS. If a comment was not addressed, an explanation of why it was not addressed should be provided.

There are a few additional areas where the Final EIS would be strengthened by further information:

Recommendations:

- Figure 1-1 (page 1-3) should show the boundary of the overall 37,972-acre SBR No. 6 expansion area;
- Section 3.12 (Socioeconomics and Environmental Justice) should include a map of mine facilities in relation to low-income populations, which are identified via Table 3-10. This information is necessary as part of assessing proximity and potential susceptibility of these populations.
- Clarify what regulatory requirement the "Floodplains No Practicable Alternatives analysis" (page 2-16) addresses. It is unclear if this is a reference to an analysis under CWA Section 404 or some other state or federal program.

Appendix D – Correspondence / Permits

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR LISA BONNETT, DIRECTOR

May 24, 2016

618/993-7200

Sugar Camp Energy, LLC
211 N. Broadway
Suite 2600
St. Louis, Missouri 63102

Re: Sugar Camp Energy, LLC
Sugar Camp Mine
NPDES Permit No. IL0078565
Final Renewed Permit

Gentlemen:

Attached is the final NPDES Permit for your discharge. The Permit as issued covers discharge limitations, monitoring, and reporting requirements. Failure to meet any portion of the Permit could result in civil and/or criminal penalties. The Illinois Environmental Protection Agency is ready and willing to assist you in interpreting any of the conditions of the Permit as they relate specifically to your discharge.

Pursuant to the Final NPDES Electronic Reporting Rule, all permittees must report DMRs electronically beginning no later than December 21, 2016. The Agency utilizes NetDMR, a web based application, which allows the submittal of electronic Discharge Monitoring Reports instead of paper Discharge Monitoring Reports (DMRs). More information regarding NetDMR can be found on the Agency website, http://epa.state.il.us/water/net-dmr/index.html. If your facility is not registered in the NetDMR program, a supply of preprinted paper DMR Forms will be sent to your facility during the interim period prior to your registration in the NetDMR program. Additional information and instructions will accompany the preprinted DMRs. Please see the attachment regarding the electronic reporting rule.

The attached Permit is effective as of the date indicated on the first page of the Permit. Until the effective date of any re-issued Permit, the limitations and conditions of the previously-issued Permit remain in full effect. You have the right to appeal any condition of the Permit to the Illinois Pollution Control Board within a 35 day period following the issuance date.

Should you have questions concerning the Permit, please contact Iwona Ward at 618/993-7200.

Sincerely,

Alan Keller

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

SAK:IKW:cs/7233c/4-12-16

Enclosure: Final Permit

cc: IDNR/Office of Mines and Minerals/Land Reclamation/with Enclosure
IDNR/Division of Water Resources/with Enclosure
Marion Region/Mine Pollution Control Program/with Enclosure
BOW/DWPC/CAS
BOW/DWPC/Records

NPDES Permit No. IL0078565

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: April 30, 2021

Issue Date: May 24, 2016
Effective Date: May 24, 2016

Name and Address of Permittee:

Sugar Camp Energy, L.L.C.
211 N. Broadway, Suite 2600
St. Louis, MO 63102

Facility Name and Address:

Sugar Camp Energy, L.L.C.
Sugar Camp Mine No. 1
11351 Thompsonville Road
Macedonia, Illinois 62862
8.5 miles northeast of Benton, Illinois
Franklin County

Discharge Number and Classification:		Receiving waters
001, 006, 007, 010	Alkaline Mine Drainage	Unnamed tributary to Middle Fork Big Muddy River
002, 013, 014	Alkaline Mine Drainage	Middle Fork Big Muddy River
003, 004, 008	Alkaline Mine Drainage	Unnamed tributary to Akin Creek
005	Alkaline Mine Drainage	Akin Creek
015, 016	Alkaline Mine Drainage	Unnamed tributary to Sugar Camp Creek
017	Alkaline Mine Drainage	Big Muddy River
A10	Sanitary Wastewater	Pond 010

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.

Alan Keller

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

SAK:IW:cs/7183c/3-9-16

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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, 002, 006, 007 (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) ***	Mn (total) (mg/l) ***	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	1614	500	1.0	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	1614	500	-	Monitor only	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	1614	500	-	Monitor only	Measure When Sampling	-
IV	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1614	500	1.0	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 of 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 4.62 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 during all Discharge Conditions.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13 for the discharges from Outfalls 001, 006, 007 and the unnamed tributary to Middle Fork Big Muddy River receiving such a discharge and the discharges from Outfall No. 002 and Middle Fork Big Muddy River receiving such discharges. Also, discharges from Outfall 001 shall be subject to the limitations, monitoring, and reporting requirements of Special Condition No. 18.

** 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

NPDES Permit No. IL0078565

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*: 003, 004, 005, 008 (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) ***	Mn (total) (mg/l) ***	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	2217	500	1.0	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	2217	500	-	Monitor only	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	2217	500	-	Monitor only	Measure When Sampling	-
IV	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	2217	500	1.0	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 of 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 4.62 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 during all Discharge Conditions.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13 for the discharges from Outfalls 003, 004, 008 and the unnamed tributary to Akin Creek receiving such a discharges, and the discharges from Outfall No. 005 and Akin Creek receiving such discharges. Also, discharges from Outfalls 003 and 008 shall be subject to the limitations, monitoring, and reporting requirements of Special Condition No. 18.

** 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

NPDES Permit No. IL0078565

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*: 010 (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) ***	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	1614	500	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	1614	500	Monitor only	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	1614	500	Monitor only	Measure When Sampling	-
IV	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1614	500	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 of 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 4.62 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 during all Discharge Conditions.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13 for the discharges from Outfall 010 and unnamed tributary to Middle Fork Big Muddy River 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.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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*: 013 (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) ***	Mn (total) (mg/l) ***		Hardness ***	Flow (MGD)	Settleable Solids (ml/l)
	30 day average	daily maximum	30 day average	daily maximum					30 day average	daily maximum			
I	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1614	500	2.0	4.0	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	2000	See Special Condition No. 14	-	-	Monitor only	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	2000	See Special Condition No. 14	-	-	Monitor only	Measure When Sampling	-
IV	35	70	3.0	6.0	6.0-9.0	Alk.>Acid	2000	See Special Condition No. 14	2.0	4.0	Monitor only	Measure When Sampling	-

I Dry weather discharge (base flow or mine pumpage) from the outfall at times of "low flow" or "no flow" conditions in the receiving stream as defined in Special Condition No. 14.

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 of 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 4.62 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. At such time that receiving stream flow subsides, monitoring requirements and permit limitations shall revert to Discharge Condition 1.

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.

Discharges from the above referenced outfall that are subject to the requirements of Discharge Conditions II, III and/or IV must meet the water quality standards for sulfate and chloride in the receiving stream during all Discharge Conditions as determined in accordance with Special Condition No. 14.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 14 for the discharges from Outfall 013 and Middle Fork Big Muddy River receiving such discharges. Also, discharges from Outfall 013 shall be subject to the limitations, monitoring, and reporting requirements of Special Condition No. 18.

** 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

NPDES Permit No. IL0078565

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*: 014 (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) ***	Mn (total) (mg/l) ***		Hardness ***	Flow (MGD)	Settleable Solids (ml/l)
	30 day average	daily maximum	30 day average	daily maximum					30 day average	daily maximum			
I	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1614	500	2.0	4.0	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	1614	500	-	-	Monitor only	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	1614	500	-	-	Monitor only	Measure When Sampling	-
IV	35	70	3.0	6.0	6.0-9.0	Alk.>Acid	1614	500	2.0	4.0	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 of 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 4.62 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 during all Discharge Conditions.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13 for the discharges from Outfall 014 and Middle Fork Big Muddy River 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.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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*: 015, 016 (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) ***	Mn (total) (mg/l) ***		Hardness ***	Flow (MGD)	Settleable Solids (ml/l)
	30 day average	daily maximum	30 day average	daily maximum					30 day average	daily maximum			
I	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1668	500	2.0	4.0	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	1668	500	-	-	Monitor only	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	1668	500	-	-	Monitor only	Measure When Sampling	-
IV	35	70	3.0	6.0	6.0-9.0	Alk.>Acid	1668	500	2.0	4.0	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 of 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 4.62 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 during all Discharge Conditions.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13 for the discharges from Outfalls 015, 016 and unnamed tributary to Sugar Camp 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.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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*: 017* (Alkaline Mine Drainage)

Parameters											
Total Suspended Solids (mg/l)		Iron (total) (mg/l)		pH** (S.U.)	Alkalinity/ Acidity	Sulfate (mg/l)	Chloride (mg/l)	Mn (total) (mg/l)		Hardness	Flow (MGD)
30 day average	daily maximum	30 day average	daily maximum					30 day average	daily maximum		
35	70	3.0	6.0	6.5-9.0	Alk.>Acid	2000	See Special Condition No. 16	2.0	4.0	Monitor only	Measure When Sampling

All sampling shall be performed utilizing the grab sampling method.

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* Operation and management of pumpage to Outfall 017 is subject to the requirements of Special Condition No. 16. Also, discharges from Outfall 017 shall be subject to the limitations, monitoring, and reporting requirements of Special Condition No. 18.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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*: A10 (Sanitary Wastewater)

Parameters										
Total Suspended Solids **				BOD_5 **				pH (S.U.) **	Fecal Coliform **	Flow (MGD)
Load Limits (lbs/day)		Concentration Limits (mg/l)		Load Limits (lbs/day)		Concentration Limits (mg/l)				
30 day average	daily maximum	30 day average	daily maximum	30 day average	daily maximum	30 day average	daily maximum		daily maximum	
0.37	0.75	30	60	0.37	0.75	30	60	6.0-9.0	≤400/100 ml	Measure When Sampling

* Sample only when Outfall A10 is discharging.

** A minimum of three (3) samples per month 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 Outfall A10. No more than one (1) sample shall be collected during any individual monitoring event.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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, 002, 006, 007, 010, 013, 014 (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	1614	500	Monitor only	Measure When Sampling	0.5
II	6.0-9.0	1614	500	Monitor only	Measure When Sampling	0.5
III	6.0-9.0	1614	500	Monitor only	Measure When Sampling	-
IV	6.5-9.0	1614	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 of equivalent volume) shall comply with the indicated limitations. The 10-year, 24-hour precipitation event for this area is considered to be 4.62 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.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13, 14 and 15 for the discharges from Outfalls 001, 006, 007, 010 and the unnamed tributary to Middle Fork Big Muddy River receiving such discharges, and discharges from Outfalls 002, 013 and 014 and Middle Fork Big Muddy River 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.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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*: 003, 004, 005, 008 (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	2217	500	Monitor only	Measure When Sampling	0.5
II	6.0-9.0	2217	500	Monitor only	Measure When Sampling	0.5
III	6.0-9.0	2217	500	Monitor only	Measure When Sampling	-
IV	6.5-9.0	2217	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 of equivalent volume) shall comply with the indicated limitations. The 10-year, 24-hour precipitation event for this area is considered to be 4.62 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.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13 for the discharges from Outfalls 003, 004, 008 and unnamed tributary to Akin Creek receiving such a discharges and discharges from Outfall 005 and Akin 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.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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*: 015, 016 (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	1668	500	Monitor only	Measure When Sampling	0.5
II	6.0-9.0	1668	500	Monitor only	Measure When Sampling	0.5
III	6.0-9.0	1668	500	Monitor only	Measure When Sampling	-
IV	6.5-9.0	1668	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 of equivalent volume) shall comply with the indicated limitations. The 10-year, 24-hour precipitation event for this area is considered to be 4.62 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.

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* The Permittee is subject to the limitations, monitoring, and reporting requirements of Special Condition No. 13 for the discharges from Outfalls 015, 016 and unnamed tributary to Sugar Camp 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.

NPDES Coal Mine Permit

NPDES Permit No. IL0078565

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, 002, 003, 004, 005, 006, 007, 008, 010, 013, 014, 015, 016, (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 with second quarter Discharge Monitoring Reports.

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 updated 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.

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.

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* 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.

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

An underground mine containing a total of 2664.31 acres, as described and depicted in IEPA Log No 5212-13, located in Sections 1, 2, 3, 4, 5, 9, 10, 11, 12, 26, 27 and 35, Township 6 South, Range 4 East, and Sections 25, 26, 27, 28, 29, 33, 34 and 35, Township 5 South, Range 4 East, Franklin County; Sections 5, 6, 7 and 8, Township 6 South, Range 5 East, Sections 30 and 31, Township 5 South, Range 5 East, and Sections 1 and 6, Township 6 South, Range 4 East, Hamilton County, Illinois. This total area is comprised of the following parcels:

Main Site
The surface facilities at the main site of this underground mine (OMM Permit No. 382) contains 1264.0 acres, included in the above cited total Permit acreage, as described and depicted in IEPA Log No. 1357-07, located in Sections 2, 3, 4, 9 and 10, Township 6 South, Range 4 East, Franklin County, Illinois. The surface facilities at this site contain an incline slope to reach the coal seam, two vertical shafts, coal preparation plant, reclaim tunnels, rail loading loop, rail loadout, parking lots, access roads, drainage control structures, office buildings, change rooms, assembly rooms, warehousing facilities, administration building, storage facilities, elevator facilities, ventilation facilities, refuse disposal areas, overland conveyors, screens, crusher, power distribution facilities, power lines, water lines, parking lots, topsoil and subsoil stockpile areas and Reverse Osmosis (RO) Water Treatment System.

Surface drainage control for the main mine site is provided by eight (8) sedimentation ponds with discharges designated as Outfalls 001, 002, 003, 004, 005, 006, 007 and 008 as discussed further below.

The following operational projects are incorporated into this permit:
As proposed and depicted in IEPA Log No. 0380-08 the freshwater lake originally design as separate impoundments identified as freshwater Pond 001 and 001A will be constructed as one large cell rather than two. The discharge structure identified as Outfall 001 will remain at the same location as previously approved.

As proposed and depicted in IEPA Log No. 0506-08 Sedimentation Basin 008 will be modified by increasing the embankment length and height to increase the normal pool elevation by approximately 11.0 feet to an elevation of 442.0 msl.

A sanitary wastewater treatment system will be constructed as described in IEPA Log No. 8562-10. The system consists of 3-1000 gallon septic tanks in series with the first two tanks equipped with effluent filters. Final treatment is provided by a buried sand filter 30'x50' in size. The treatment system was approved by the Bi-County Health Department, Marion Illinois.

As proposed in EPA Log No. 7250-11 the mining operations plan is revised to include the installation of two boreholes into the underground mining operations. First borehole will be located north of the silo within the supply yard and the second borehole located north and west of the silo also within the supply yard. These boreholes will be used to supply materials to the underground mine.

As proposed and depicted in IEPA Log. 5225-13 Underground Injection Control (UIC) deep wells will be constructed. Utilization and operation of this well shall be subject to the permitting and operations requirements of the Agency approval from the Bureau of Land for the UIC Well.

As previously approved under Subtitle D Permit No. 2014-MA-4185 two Reverse Osmosis (RO) Plants were constructed at Sugar Camp Mine main site area. As described in IEPA Log Nos 4185-14, 4185-14-A and 4470-14, a 2,400 to 3,000 GPM permanent RO Water Treatment System will be utilized to treat the high-chloride water being pumped from the underground mine workings, existing refuse disposal area and/or surface ponds. This system consists of two (2) buildings each designated to treat approximately 1,200 to 1,500 GPM of water per system. The permanent RO system was installed as proposed and depicted on the Plot Plan Layout, System P&ID (Piping & Instrumentation diagram) and Sugar Camp Flow Diagram contained in IEPA Log No. 4185-14. Prior to the high chloride water entering the RO system, such water may go through any or all of the following partial list of filtration and/or treatment facilities or processes:

1. Feed water may initially be pumped into a 10,000 gallon contact tank at which point 12.5% Sodium Hypochlorite is added.

2. A pH control and coagulant may be added to the water exiting the contact tank prior to being directed to six (6) 12-foot diameter multi-media filters following which the filtered water will be stored in a 10,000 gallon Filtered Water Tank.

3. Water pumped from the Filtered Water Tank will be treated with an Antiscalant and Sodium Bisulfate prior to entry into the RO No. 1 system. Reject from the RO No. 1 system will be stored in a 10,000 gallon Intermediate Storage Tank.

4. The initial reject water from the Intermediate Storage Tank will be pumped to the second side, or stage, of the RO No. 1 system with the concentrate from this second (2^{nd}) stage, as well as any excess backwash water, being pumped to the refuse disposal area (RDA).

5. The RO No. 2 system will be operated in a manner similar to that described above for the RO No. 1 system.

6. Permeate (clean water) from both RO No. 1 and RO No. 2 may be directed to Sedimentation Basin 001 with the water in this basin used as make-up water for the preparation plant.

North Refuse Disposal Area
As previously approved under Subtitle D Permit No. 2015-MA-3259, North Refuse Disposal Area was constructed north from Sugar Camp Mine Site. As described and depicted in IEPA Log No. 3259-15 topsoil removal, grading, foundation preparation and installation of four (4) foot compacted clay liner was developed. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

Sugar Camp Mine – North Refuse Facility for an underground coal mine, located immediately north of the main site, also identified as OMM Permit No. 434 area, contains of a total of 1,159.42 acres, as described and depicted in IEPA Log Nos. 4544-14, 4544-14-C and 3350-15. The area, which is included in the above cited total permit acreage is located in Sections 28, 29 and 33, Township 5 South, Range 4 East and Sections 4 and 5, Range 6 South, Township 4 East, Franklin County, Illinois. The surface facilities at this refuse disposal area contains haulroads/transportation facilities, conveyor belt, drainage control structures, sedimentation ponds, fine and coarse coal refuse disposal area, topsoil and subsoil stockpile areas. Construction of this disposal area as proposed is subject to Condition No. 12.

Surface drainage control for the new North Refuse Disposal Area will be provided by four sedimentation ponds with discharges designated as Outfalls 013, 014, 015 and 016 as discussed further below.

NW Portal
A satellite surface facilities permit area identified as Sugar Camp Mine NW Portal, (OMM Permit No. 382), previously approved under NPDES Permit No. IL0079472 is hereby incorporated into this NPDES Permit.

Surface facilities in support of an underground mine containing a total of 19.8 acres, included in the above cited total Permit acreage, as described and depicted in IEPA Log Nos. 8389-10 and 8389-10-A, located in Sections 28, Township 5 South, Range 4 East, Franklin County, Illinois. These surface facilities, in support of the underground mine, contains the intake shaft with man elevator, parking lots, access roads, drainage control structures, bath house, change rooms, topsoil and subsoil stockpile areas, shaft excavation stockpile, shaft construction drill pit, sediment pond and wastewater treatment system. As described and depicted in the IEPA Log No. 5150-13 additional structures supporting underground mine are proposed for this facility. This facility is not approved for coal stockpiling or coal refuse disposal.

Surface drainage control for this area is provided by one (1) sedimentation pond with discharge designated as Outfall 010, classified as alkaline mine drainage as discussed further below.

Discharge from the sanitary wastewater treatment system, identified as Outfall A10, will be tributary to Pond 010 via Ditch 010-B.

Mixing Zone (Big Muddy River)
Excess water will be transported from the Sugar Camp Complex to Outfall 017 on the Big Muddy River through a high-density polyethylene (HDPE) pipeline. Water will be pumped from the water holding cell by pumps through approximately 13.8 miles of pipe to the diffuser located at the mixing zone location. The pipeline ROW will be approximately 50 feet in width with a total permitted area of approximately 84 acres.

During the operations of the pipeline, continuous flow monitors will be installed to provide protection against leakage. Flow will be monitored near the pump discharge while the pipeline is within the sediment control structures of Sugar Camp Complex. Flow will also be monitored at the mixing zone location. This instrumentation will be connected to an alarm system and flow data will be transmitted to a central location for tracking and assessing system operations. The flow monitoring system operation and maintenance is subject to the requirements of Condition No. 16.

Drainage control at the Sugar Camp Mine
Surface drainage control is provided by fourteen (14) sedimentation ponds and one (1) sanitary wastewater discharge with discharges designated as Outfalls 001, 002, 003, 004, 005, 006, 007, 008, 010, A10, 013, 014, 015, 016 and 017 all classified as alkaline mine drainage.

Discharge from the sanitary wastewater treatment system, identified as Outfall A10, will be tributary to Pond 010 via Ditch 010-B.

Location and receiving stream of the Outfalls at this facility is as follows:

Outfall Number	Latitude			Longitude			Receiving Waters
	DEG	MIN	SEC	DEG	MIN	SEC	
001	38°	01'	55"	88°	46'	00"	Unnamed tributary to Middle Fork Big Muddy River
002	38°	01'	52"	88°	46'	43"	Middle Fork Big Muddy River
003	38°	01'	32"	88°	46'	44"	Unnamed tributary to Akin Creek
004	38°	01'	32"	88°	45'	36"	Unnamed tributary to Akin Creek
005	38°	01'	07"	88°	45'	29"	Akin Creek
006	38°	02'	10"	88°	45	36"	Unnamed tributary to Middle Fork Big Muddy River
007	38°	02'	09"	88°	45'	38"	Unnamed tributary to Middle Fork Big Muddy River
008	38°	01'	29"	88°	45'	18"	Unnamed tributary to Akin Creek
010	37°	41'	17"	89°	58'	58"	Unnamed tributary to Middle Fork Big Muddy River
A10	37°	41'	19"	89°	58'	55"	Pond 010
013	38°	02'	17"	88°	46'	13"	Middle Fork, Big Muddy River
014	38°	03'	07"	88°	45'	39"	Middle Fork, Big Muddy River
015	38°	03'	09"	88°	46'	37"	Unnamed tributary to Sugar Camp Creek
016	38°	03'	11"	88°	46'	52"	Unnamed tributary to Sugar Camp Creek
017	38°	01'	8.85"	88°	57'	56.79"	The Big Muddy River

Compacted clay liners as described below for the refuse disposal area shall also be constructed for Sedimentation Basins 001, 003, 004, 013, 014, 015 and 016 which receive pumpage and/or runoff from coal stockpiles and/or coal refuse disposal activities. Construction of the four (4) foot compacted clay liners for the sedimentation basins shall also be subject to and in accordance with the specifications and testing requirements of Condition No. 12.

Refuse disposal:
Coarse and fine coal refuse disposal shall be performed at Sugar Camp Mine facilities as proposed and described in IEPA Log Nos. 1357-07 and 1357-07-B. Foundation preparation for the coarse refuse disposal areas and the fine coal refuse areas (RDA No. 1) shall consist of the construction of a four (4) foot compacted clay liner subject to and in accordance with Condition No. 12. Construction, development and utilization of Slurry Cell No. 1 is subject to Condition No. 14.

As proposed and described in IEPA Log Nos. 7245-11 (Revision No. 1 to OMM Permit No. 382), the coarse refuse embankment originally proposed as non-impounding structure will be enclosed to develop an impounding structure for slurry disposal. A four foot clay liner will be constructed, which eliminates the need for the keyway, which has been eliminated from the design under IEPA Log No. 7245-11-B. The coarse refuse embankment will be constructed in three phases. Phases 1, 2 and 3 will be constructed with top elevations of approximately 445 feet, 470 feet and 480 feet above msl, respectively

As proposed and depicted in IEPA Log Nos. 4112-14, 4112-14-A and 4112-14-B, the top elevation of the embankment of refuse disposal area No. 1 will be raised to a total height of approximately 86 feet to a final crest elevation of 496.0 feet (phase V).

As previously approved under Subtitle D Permit No. 2014-MW-4357, a non-impounding coarse refuse disposal area was developed and operated at Sugar Camp Mine main site area. As described in IEPA Log Nos 4357-14 and 4357-14-B an expansion to the northwest of the existing Refuse Disposal Area (RDA) No. 1 embankment was developed. Development of this area for the refuse disposal included construction of a low permeability liner consisting of four (4) foot compacted clay with a hydraulic conductivity of $1x10^{-7}$ cm/sec., or less. Compacted clay liner shall also be subject to and in accordance with the specifications and testing requirements of Condition No. 12.

IBR Areas and pump installation:
As proposed and depicted in IEPA Log No. 7165-11, an additional area of 0.6 acres located in Section 1, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of access road, installation of borehole to transport concrete into the underground mine and soil storage areas. This area was later modified under IEPA Log No. 7550-11 (see discussion below) to enlarge the area by 0.4 acres and to install turbine Pump No. 3. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 7550-11, an additional area of 8.72 acres located in Sections 1, 10, 11 and 12 Township 6 South, Range 4 East, Franklin County and Section 6, Township 6 South, Range 5 East, Hamilton County is incorporated into the NPDES Permit. This area includes 0.52 acres identified as turbine pump site 1, an additional 0.04 acres added to turbine pump site 3 (Log No. 7165-11, see discussion above), and a water pipeline corridor consisting of 7.54 acres to connect turbine pump site Nos. 1, 2, 3 and 4 with the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 5037-13, an additional area of 1.4 acres located in Section 1, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of access roads work area and two-16" boreholes. A pump will be set in each of the boreholes with pumpage being directed to the main pipeline which conveys underground mine pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 5064-13, an additional area of 0.7 acres located in Section 1, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of a single 16" borehole. A pump will be set in this borehole with pumpage being directed to the main pipeline which conveys underground mine pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 5222-13, an additional area of 5.2 acres located in Sections 30 and 31, Township 5 South, Range 5 East, Hamilton County is incorporated into the NPDES Permit for construction of a buried 12" waterline from the number two bleeder shaft to the main pipeline which conveys underground mine pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 5479-13, an additional area of 3.2 acres located in Sections 1 and 12, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for installation of two boreholes. A pump will be set in each borehole with pumpage being directed to the main pipeline which conveys underground mine pumpage to the main mine site. Activity within this area will include improving an existing access road. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log Nos. 4015-14 and 4015-14-A, an additional area of 7.1 acres located in Sections 26, 27 and 35, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of six boreholes, improvement of access roads, installation of ventilation fan and small structure to enclose air-compressor. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4129-14, an additional area of 2.0 acres located in Section 11, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of four boreholes and access roads. Pumps will be installed in two of the boreholes with pumpage directed to the pipeline which conveys underground pumpage to the main mine site. The remaining two boreholes will be utilized to provide electrical service and aggregate/concrete to the underground mining operations. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4130-14, an additional area of 3.4 acres located in Section 12, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of three boreholes and access roads. A pump will be installed in one of the boreholes with pumpage directed to the pipeline which conveys underground pumpage to the main mine site. The remaining two boreholes will be utilized to provide compressed air and aggregate/concrete to the underground mining operations. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4147-14, an additional area of 10.2 acres located in Sections 27 and 34, Township 5 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for installation of a buried waterline to convey underground pumpage from the Viking Portal (NW Portal) to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4236-14, an additional area of 0.5 acres located in Section 10, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of four boreholes and two concrete pads. Two service boreholes will provide essential power and compress air to the underground operations. A pump will be installed in one of the boreholes with pumpage directed to the pipeline which conveys underground pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4285-14, an additional area of 5.0 acres located in Section 30, Township 5 South, Range 5 East, Hamilton County is incorporated into the NPDES Permit for installation of turbine pump borehole to maintain underground safety conditions. A buried waterline convey underground pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4320-14, an additional area of 14.28 acres located in Section 4, Township 6 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for the new topsoil stockpile storage area. Runoff from the area approved herein will be controlled by diversion ditches 002-A, 002-B and 002-C reporting to basin 002.

As proposed and depicted in IEPA Log No. 4340-14, an additional area of 6.3 acres located in Sections 25 and 26, Township 5 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for installation of vertical turbine pump and installation of a combination compressed air/electrical power supply. A buried waterline will be installed to convey underground pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4488-14, an additional area of 0.9 acres located in Section 7, Township 6 South, Range 5 East, Hamilton County is incorporated into the NPDES Permit for installation of vertical turbine pump to pump water from the underground workings. A buried waterline convey underground pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 4510-14, an additional area of 3.0 acres located in Section 7, Township 6 South, Range 5 East, Hamilton County is incorporated into the NPDES Permit for construction of an access road, installation of vertical turbine pumps to pump water from the underground workings to maintain required underground mine ventilation and safety conditions. A buried waterline convey underground pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log Nos. 3140-15 and 3140-15-A, an additional area of 3.9 acres located in Section 35, Township 5 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of a belt air fan/borehole to add capacity of fresh air to underground workings area. Combination of power and communication borehole to add utilities for underground workings will be also constructed. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As proposed and depicted in IEPA Log No. 2031-16, an additional area of 4.7 acres located in Section 36, Township 5 South, Range 4 East, Franklin County is incorporated into the NPDES Permit for construction of two boreholes for installation of a vertical turbine pumps to pump water from the underground workings to maintain required underground mine ventilation and safety conditions. A buried waterline convey underground pumpage to the main mine site. Runoff from the area approved herein will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

As previously approved under Subtitle D Permits, an additional 55.91 acres of permit area is incorporated into this permit and described as follows:

Main site

A non-contiguous area as described in IEPA Log No. 6166-12 (OMM Permit No. 382) consisting of 1.9 acres, located in Section 6, Township 6 South, Range 4 East, Hamilton County, to be used for construction of the vertical turbine pump in a mine service borehole, a small laydown area and an access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 4199-14 (OMM Permit No. 382) consisting of 1.5 acres, located in Section 25, Township 5 South, Range 4 East, Franklin County, to be utilized for the construction of a borehole to provide compressed air to underground working area. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 3343-15 (OMM Permit No. 382) consisting of 6.3 acres, located in Section 8, Township 6 South, Range 5 East, Hamilton County, to be utilized for the construction of a bleeder shaft for additional fresh air to the underground ventilation passages. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 7321-11 (OMM Permit No. 382) consisting of 0.71 acres, located in Section 2, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of the emergency concrete borehole to transport concrete into the mine and access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 7551-11 (OMM Permit No. 382) consisting of 1.4 acres, located in Section 1, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of the compressed air borehole facility to supply high pressure air to run under ground water pumps for underground water management control. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6085-12 (OMM Permit No. 382) consisting of 0.1 acres, located in Section 1, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of buried waterline. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6137-12 (OMM Permit No. 382) consisting of 0.9 acres, located in Section 5, Township 6 South, Range 5 East, Hamilton County, to be utilized for the construction of the two vertical turbine pumps in two mine service boreholes, a rock dust bin, pad and borehole, a small laydown area and an access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6236-12 (OMM Permit No. 382) consisting of 1.5 acres, located in Section 5, Township 6 South, Range 5 East, Hamilton County, to be utilized for the construction of the Pumpable Concrete Crib Borehole Facility, which consists of two mine service boreholes (concrete and compressed air), a surface structure, a rock dust borehole, bin and concrete pad, a laydown area and a road entrance. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 4148-14 (OMM Permit No. 382) consisting of 0.5 acres, located in Section 30, Township 5 South, Range 5 East, Hamilton County, to be utilized for the construction of concrete mine service boreholes. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6157-12 (OMM Permit No. 382) consisting of 0.8 acres, located in Section 6, Township 6 South, Range 5 East, Hamilton County, to be utilized for the construction of the two vertical turbine pumps in two mine service boreholes, a small laydown area and an access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6300-12 (OMM Permit No. 382) consisting of 2.7 acres, located in Section 6, Township 6 South, Range 5 East, Hamilton County, to be utilized for the construction of two boreholes, install two vertical turbine pumps, construct a small open work yard and bury a waterline. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6428-12 (OMM Permit No. 382) consisting of 16.5 acres, located in Sections 30 and 31, Township 5 South, Range 5 East, Hamilton County, to be utilized for the construction of the air-shaft, topsoil and subsoil storage areas and access road. Boring activities and air-shaft construction will require the excavation and development of a non-discharging cuttings pond as depicted in the referenced project. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6469-12 (OMM Permit No. 382) consisting of 3.7 acres, located in Section 1, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of two mine service boreholes, two vertical pumps, two water lines and an access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 6606-12 (OMM Permit No. 382) consisting of 1.7 acres, located in Section 33, Township 5 South, Range 4 East, Franklin County, to be utilized for the construction of a concrete borehole structure to protect the air compressor, improve an existing road entrance and construct an access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 5024-13 (OMM Permit No. 382) consisting of 1.6 acres, located in Section 1, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of concrete mine service borehole and access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 5126-13 (OMM Permit No. 382) consisting of 0.8 acres, located in Section 10, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of the two mine service boreholes to deliver compressed air and concrete to the underground works, access road and open work area. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 5131-13 (OMM Permit No. 382) consisting of 1.4 acres, located in Section 10, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of a mine ventilation drill hole and access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 5295-13 (OMM Permit No. 382) consisting of 0.4 acres, located in Section 11, Township 6 South, Range 4 East, Franklin County, to be utilized for the construction of concrete mine service boreholes and access road. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

A non-contiguous area as described in IEPA Log No. 2030-16 (OMM Permit No. 382) consisting of 1.2 acres, located in Section 33, Township 5 South, Range 4 East, Franklin County, to be utilized for the construction of a borehole to provide compressed air to underground working area. Alternate drainage control will be provided by the use of silt fence, straw bale dikes, graveled areas and re-vegetation. Runoff from the corridor areas will be monitored in accordance with stormwater monitoring requirements.

Groundwater monitoring for the main facility will consist of Monitoring Well Nos. GW-1 through GW-12, as depicted in IEPA Log No. 1357-07-B. Well Nos. GW-9, GW-10, GW-11 and GW-12 will monitor effects of the initial refuse disposal area. Groundwater monitoring requirements are outlined in Condition No. 15.

Groundwater monitoring for the North Refuse Disposal facility will consist of nine (9) new Monitoring Wells Nos. MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38 and MW-38R will monitor effects of the initial refuse disposal area. Groundwater monitoring requirements are outlined in Condition No. 15.

This Construction Authorization replaces Construction Authorization Nos. 1357-07 and 8389-10.

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 35 Ill. Adm. Code Parts 302 or 303, all water remaining upon abandonment must meet the requirements of 35 Ill. Adm. Code 406.106.

NPDES Permit No. IL 0078565

Construction Authorization No.5212-13

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 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 Agency and a supplemental permit issued.

5. The permit holder shall notify the 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 or applicable water quality standards, 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 discharging to the basin should be reclassified in a manner consistent with the applicable provisions of 35 Ill. Adm. Code Part 406. The application should discuss the treatment method and demonstrate how the discharge will meet the applicable standards.

9. A permittee has the obligation to add a settling aid if necessary to meet the suspended solids or settleable solids effluent standards. The selection of a settling aid and the application practice shall be in accordance with a. or b. below

   a. Alum ($Al_2(SO_4)_3$), hydrated lime ($Ca(OH)_2$), soda ash (Na_2CO_3), alkaline pit pumpage, acetylene production by-product (tested for impurities), and ground limestone are acceptable settling aids and are hereby permitted for alkaline mine drainage sedimentation ponds.

   b. Any other settling aids such as commercial flocculents and coagulants are permitted only on prior approval from the Agency. To obtain approval a permittee must demonstrate in writing to the Agency that such use will not cause a violation of the toxic substances standard of 35 Ill. Adm. Code 302.210 or of the appropriate effluent and water quality standards of 35 Ill. Adm. Code parts 302, 304, and 406.

10. A general plan for the nature and disposition of all liquids used to drill boreholes shall be filed with this Agency prior to any such operation. This plan should be filed at such time that the operator becomes aware of the need to drill unless the plan of operation was contained in a previously approved application.

11. Any of the following shall be a violation of the provisions required under 35 Ill. Adm. Code 406.202:

    a. It is demonstrated that an adverse effect on the environment in and around the receiving stream has occurred or is likely to occur.

    b. It is demonstrated that the discharge has adversely affected or is likely to adversely affect any public water supply.

    c. The Agency determines that the permittee is not utilizing Good Mining Practices in accordance with 35 Ill. Adm. Code 406.204 which are fully described in detail in Sections 406.205, 406.206, 406.207 and 406.208 in order to minimize the discharge of total dissolved solids, chloride, sulfate, iron and manganese. To the extent practical, such Good Mining Practices shall be implemented to:

        i. Stop or minimize water from coming into contact with disturbed areas through the use of diversions and/or runoff controls (Section 406.205).

        ii. Retention and control within the site of waters exposed to disturbed materials utilizing erosion controls, sedimentation controls, water reuse or recirculation, minimization of exposure to disturbed materials, etc. (Section 406.206).

        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).

    d. The Agency determines that the permittee is not utilizing Best Management Practices associated with coal refuse disposal activities in order to minimize the discharge of total dissolved solids, chloride, sulfate, iron and manganese. As stated in IEPA Log No. 1357-07-G, the Best Management Practices to be implemented are:

        Coarse Refuse Disposal:

        i. Maximization of the distribution of un-oxidized coarse refuse so as to minimize the exposure to oxidation and weathering.

        ii. Concurrent compaction of coarse refuse; placement of material lifts, grading and compaction of disposed materials including side slopes.

        iii. Minimization of long term end dumped storage of loose coarse refuse.

        iv. Alkaline amendment of coarse refuse as, or if, necessary for permitted water quality standard compliance, including the use of agricultural lime or other similarly alkaline materials so as to achieve a NNP in excess of 10 tons per 1000 tons of material.

        v. Oxidation management as part of the final reclamation process to enhance coarse refuse alkalinity.

        Fine Refuse (Slurry) Disposal:

        i. Maintenance of adequate water depth over fine refuse to maximize retention time and differential separation of slurried material.

        ii. Sequential movement of slurry input point to assure better distribution of material.

        iii. As part of the final reclamation process, incremental limestone amendment over the appropriate time period to evaluate soil cover alternatives, if necessary.

12. The four (4) foot compacted clay liner to be constructed beneath the coarse refuse disposal area, fine coal refuse area (Slurry Cell No. 1 and North Refuse Disposal Area), and Sedimentation Basins 001, 003, 004, and 013 shall be subject to the following specifications and procedures as detailed in IEPA Log Nos. 1357-07-B and 4544-14.

Construction Specifications

a. All soils to be used for compacted clay liner shall be free of grass, vines, vegetation, and rock or stones greater than 4 inches in diameter.

b. Each location at which a compacted clay liner is to be constructed shall be excavated to the proposed base elevation and then over-excavated an additional three (3) feet. One (1) foot of the resulting base material shall be scarified and re-compacted to achieve the minimum permeability requirements cited below.

c. Each successive soil lift shall be placed to a 6 to 8 inch loose thickness; however, in no instance shall the loose lift thickness exceed the length of the pads or feet on the compactor or roller.

d. Each soil lift shall be compacted to the minimum Standard Proctor (ASTM D698) density identified in Item no. 12(q) below, at a moisture content of 0% to 5% above the optimum moisture content of the soil.

e. Inter-lift surfaces shall be adequately scarified to ensure inter-lift bonding.

f. Liner construction shall be performed to ensure consistent achievement of density, moisture content, and hydraulic conductivity for each successive lift.

g. The placement of frozen material or the placement of material on frozen ground shall be prohibited.

h. Contemporaneous placement or protective covering shall be provided to prevent drying, desiccation and/or freezing where necessary.

i. Liner construction shall be completed in a manner which reduces void spaces within the soil and liner.

j. All construction stakes shall be removed during construction, and all test holes (Shelby tube samples) are to be backfilled with bentonite.

k. The compacted clay liner shall be constructed in a manner to achieve a uniform barrier with a hydraulic conductivity of $1X10^{-7}$ cm/sec.

l. In the event that acceptable compaction results are not achieved, the soil lift shall be re-processed or removed and replaced. If moisture content is less than optimum, or greater than 5% above optimum, the failing material shall be wetted or dried to a moisture content within specification and re-compacted. If the dry density is below specification, the failing material shall be re-compacted until a passing test is achieved.

m. In the event of a failing conductivity test, the soil may be removed or re-compacted and retested until a passing result is obtained; or the soil immediately above and below the test specimen from the same Shelby tube may be tested. If both tests pass, the original test shall be nullified. If either test fails, that portion of the liner shall be rejected and shall be reconstructed and retested until passing results are obtained. The limits of necessary reconstruction shall be determined by additional sampling and testing within the failed region, thereby isolating the failing area of work.

Testing Specifications

n. Prior to initiating soil liner construction, borrow soils shall be identified, qualified, and verified. At a minimum, a representative sample of each soil type identified within the borrow area is to be collected and analyzed for gradation, compaction, and hydraulic conductivity characteristics.

o. Samples collected from the borrow area shall be evaluated in accordance with ASTM D422, D4318 and D2487 to ensure classification criteria are met.

p. Samples collected from the borrow area shall be tested in accordance with ASTM D698 to determine maximum dry density and optimum moisture content of the soil.

q. Samples collected from the borrow area shall be compacted to 90% and 95% standard Proctor density at or near optimum moisture content. The hydraulic conductivity of the re-compacted samples shall be determined in accordance with ASTM D5084 procedures. The results of this testing shall be used to establish the minimum dry density for soil liner compaction necessary to achieve a hydraulic conductivity of $1X10^{-7}$ cm/sec or less.

r. Moisture and density testing by nuclear methods (ASTM D2922 and D3017) shall be conducted at a rate of at least one test per 1,000 cubic yards placed. Testing locations shall be random, and shall not be known to the earthwork contractor prior to lift placement.

s. To ensure the accuracy and reproducibility of the nuclear testing, all nuclear density gauges shall be certified to calibration. Soil compaction tests shall be double-checked with independent test methods. A drive cylinder test and laboratory moisture content determination shall be conducted and compared to gauge readings. These independent checks shall be made at the outset of construction and on a bi-weekly basis (e.g., every ten working days) thereafter.

t. Samples for hydraulic conductivity verification shall be retrieved from the compacted soil liner and tested in accordance with ASTM D5084 procedures. Samples shall be retrieved using three-inch Shelby tubes. Samples shall be completed at a frequency of one sample/test per 20,000 cubic yards placed. The vertical location of the recovered samples shall be varied so that representative portions or lifts of the constructed liner are tested. Testing locations shall be random, and shall not be known to the earthwork contractor prior to soil liner construction.

u. Survey checks shall be conducted at a maximum spacing of 100 ft. centers, and at 100 ft. intervals along each line where a break in slope occurs, to verify liner thickness. To verify liner thickness, the survey checks shall be taken before and after liner construction.

13. Synthetic (geo-membrane) liners proposed to be installed beneath any future facility at this mine site shall be subject to the following specifications and procedures:

Site preparation

a. Subgrade material below geo-membrane liner shall consist of structural fill and/or in-situ soils.

b. The subgrade shall be inspected and cleared of any potentially deleterious materials.

c. Subgrade material will consist of relatively homogeneous, fine-grained soils and be free of debris, vegetation, frozen materials, foreign objects and organics. The subgrade surface shall be solid, uniform and smooth.

Liner material and placement

d. The synthetic liner will consist of a High Density Polyethylene (HDPE) Geo-membrane and will be installed directly above the subgrade soils.

e. The HDPE Geo-membrane shall be installed in accordance with manufacturer's requirements.

f. A 12-ounce per square yard non-woven geotextile cushion will be placed above the HDPE liner to prevent puncture during protective cover placement.

Protective cover

g. A protective cover component will be placed directly above the liner system and will consist of a minimum thickness of 12 inches of homogeneous fine grained soils (clays and silts) and coarse grained sands. This cover material shall be free of debris, vegetation, frozen materials, foreign objects and organics.

14. RDA No. 1 shall be constructed as proposed in IEPA Log Nos. 1357-07, 1357-07-B, 7245-11, 7245-11-B, 4112-14, 4112-14A, 4112-14-B and 4164-14. The fine coal refuse (slurry) disposal area located within the coarse refuse embankment of Refuse Disposal Area (RDA) No. 1 and North Refuse Disposal Area shall be operated as a closed circuit system in conjunction with the preparation plant and RO system.

15. Groundwater monitoring requirements for the OMM Permit No. 382 area as approved under IEPA Log Nos. 1357-07 and 1357-07-B and groundwater monitoring requirements for the OMM Permit No. 434 as approved under IEPA Log Nos. 4544-14 and 4544-14-D are as follows:

a. Groundwater monitoring shall consist of Well Nos. GW-1 through GW-12 and Well Nos. MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38 and MW-38R.

b. 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	

c. Following the ambient monitoring as required under Condition No. 15(b) above, routine monitoring shall continue on a quarterly basis as follows:

i. Monitoring Well Nos. GW-9, GW-10, GW-11, GW-12, MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38 and MW-38R associated with refuse disposal shall continue to be monitored quarterly for the contaminates identified in 15(b) above.

ii. Monitoring Well Nos. GW-1, GW-2, GW-3, GW-4, GW-5, GW-6, GW-7 and GW-8 shall be monitored quarterly as required by IDNR/OMM for the following list of constituents:

Iron (dissolved)	Hardness
Iron (total)	Acidity
Manganese (dissolved)	Alkalinity
Manganese (total)	pH
Sulfate	Water Elevation
Total Dissolved Solids	

d. Following completion of active mining and reclamation, post-mining monitoring of all 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. 15(b) above.

e. Groundwater monitoring reports shall be submitted to the Agency in accordance with Special Condition Nos. 3 and 5 of this NPDES permit.

Should electronic filing of groundwater monitoring data through IDNR/OMM be elected, electronic notification shall be provided to the Agency upon submittal of groundwater data to IDNR/OMM.

f. A statistically valid representation of background and/or post mining water quality required under Condition No. 15(b) and 15(d) 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.

The following 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 $\left(\overline{X}_b\right)$ 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.

$$\overline{X}_b = \frac{X_1 + X_2 + \ldots X_n}{n}$$

Where:

$\overline{X}_b$ = 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:

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

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

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

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

Where:

CL = upper confidence limit prediction
(upper and lower limits should be calculated for pH)
t = one-tailed t value at the required significance
level and at n-1 degrees of freedom from Table 1
(a two-tailed t value should be used for pH)

iv. If the values of any routine parameter for any monitoring well exceed the upper confidence limit for that parameter, the permittee shall conclude that a statistically significant change has occurred at that well.

v. When some of the background and/or post mining values are less than the Method Detection Limit (MDL), a value of one-half (1/2) the MDL shall be substituted for each value that is reported as less than the MDL. All other computations shall be calculated as given above.

If all the background and/or post mining values are less than the MDL for a given parameter, the Practical Quantitation Limit (PQL), as given in 35 Ill. Adm. Code Part 724 Appendix I shall be used to evaluate data from monitoring wells. If the analytical results from any monitoring well exceed two (2) times the PQL for any single parameter, or if they exceed the PQLs for two or more parameters, the permittee shall conclude that a statistically significant change has occurred.

Table 1
Standard t-Tables Level of Significance

Degrees of freedom	t-values (one-tail)		t-values (two-tail)*	
	99%	95%	99%	95%
4	3.747	2.132	4.604	2.776
5	3.365	2.015	4.032	2.571
6	3.143	1.943	3.707	2.447
7	2.998	1.895	3.499	2.365
8	2.896	1.860	3.355	2.306
9	2.821	1.833	3.250	2.262
10	2.764	1.812	3.169	2.228
11	2.718	1.796	3.106	2.201
12	2.681	1.782	3.055	2.179
13	2.650	1.771	3.012	2.160
14	2.624	1.761	2.977	2.145
15	2.602	1.753	2.947	2.131
16	2.583	1.746	2.921	2.120
17	2.567	1.740	2.898	2.110
18	2.552	1.734	2.878	2.101
19	2.539	1.729	2.861	2.093
20	2.528	1.725	2.845	2.086
21	2.518	1.721	2.831	2.080
22	2.508	1.717	2.819	2.074
23	2.500	1.714	2.807	2.069
24	2.492	1.711	2.797	2.064
25	2.485	1.708	2.787	2.060
30	2.457	1.697	2.750	2.042
40	2.423	1.684	2.704	2.021

Adopted from Table III of "Statistical Tables for Biological Agricultural and Medical Research" (1947, R.A. Fisher and F. Yates).

* For pH only when required.

16. System performance and operation will be continuously monitored with instrumentation designed to provide warning of potential problems. The entire system is to be inspected weekly when operating. Any items of concern noted from system inspections are to be addressed immediately and, if necessary, pumping operations are to be suspended until the issue is resolved.

17. The following additional sediment and erosion control measures shall be implemented at this facility:

    a. Establish and maintain vegetative cover in areas currently cropland.
    b. Soil stockpiles will be seeded with grasses and/or legumes to minimize exposure to excessive water and wind erosion.
    c. Organic mulch or chemical binders will be used as required by IDNR on the side slopes of the stockpiles.
    d. Seeding with small grain or grass cover and applying straw mulch will be used where practicable and the installation of sediment basin will be used as a means of controlling suspended solids from exposed areas where topsoil has been removed.
    e. Final vegetation will be established on all disturbed areas.
    f. Disturbed areas will be seeded and mulched to provide a vegetative cover to prevent erosion.
    g. During construction, sediment control measures such as silt fences, straw bale dikes, riprap check dams and mulching will be used to minimize erosion and prevent sediment from leaving the permit area.
    h. All construction areas will be stabilized with permanent vegetative species, graded stone and/or paving material.

NPDES Permit No. IL0078565

Special Conditions

Special Condition No. 1: No effluent from any mine related facility area under this permit shall, alone or in combination with other sources, cause a violation of any applicable water quality standard as set out in the Illinois Pollution Control Board Rules and Regulations, Subtitle C: Water Pollution.

Special Condition No. 2: Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

Special Condition No. 3: All periodic monitoring and reporting forms, including Discharge Monitoring Report (DMR) forms, shall be submitted to the Agency according to the schedule outlined in Special Condition No. 4 or 5 below with one (1) copy forwarded to each of the following addresses:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Ave., East
P.O. Box 19276
Springfield, IL 62794-9276

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

Attn: Compliance Assurance Section

The Permittee will be required to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA beginning December 21, 2016. More 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.

Special Condition No. 4: Completed Discharge Monitoring Report (DMR) forms and 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.

Period	Received by IEPA
January, February, March	April 15
April, May, June	July 15
July, August, September	October 15
October, November, December	January 15

The Permittee shall record discharge monitoring results on Discharge Monitoring Report (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.

Any and all monitoring results, other than NPDES outfall discharge results reported through NetDMR, shall be submitted to the Agency at the addresses indicated in Special Condition No. 3 above.

Special Condition No. 5: Completed periodic monitoring and reporting, other than DMR's and stream monitoring (i.e., groundwater monitoring, coal combustion waste analysis reports, etc.), shall be retained by the Permittee for a period of three (3) months and shall be mailed and received by the IEPA at the addresses indicated in Special Condition No. 3 above in accordance with the following schedule, unless otherwise specified by the permitting authority.

Period	Received by IEPA
January, February, March	May 1
April, May, June	August 1
July, August, September	November 1
October, November, December	February 1

Special Condition No. 6: The Agency may revise or modify the permit consistent with applicable laws, regulations or judicial orders.

Special Condition No. 7: If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

Special Conditions

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 Regulations.

Special Condition No. 9: Plans must be submitted to and approved by this Agency prior to construction of any future sedimentation ponds. 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 tributary 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 (Outfalls 001, 002, 003, 004, 005, 006, 007, 008, 010, 014, 015 and 016).

a. At times of stormwater discharge, in addition to the alternate effluent monitoring requirements, discharges from Outfalls 001, 002, 003, 004, 005, 006, 007, 008, 010, 014, 015 and 016 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 Middle Fork Big Muddy River which receives discharges from Outfalls 002 and 014, the unnamed tributaries to Middle Fork Big Muddy River receiving the discharges from Outfalls 001, 006, 007 and 010, Akin Creek which receives discharges from Outfall 005, the unnamed tributaries to Akin Creek receiving the discharge from Outfalls 003, 004 and 008 and unnamed tributaries to Sugar Camp Creek which receives discharges from Outfalls 015 and 016.

    i. All sampling and monitoring required in accordance with 13(b)(ii) and (iii) below shall be performed during a discharge and monitoring event from the associated outfall.

    ii. The Middle Fork Big Muddy River, Akin Creek and Sugar Camp Creek as well as the unnamed tributaries to these receiving streams shall be monitored and reported quarterly for Discharge Rate, Chloride, Sulfate and Hardness downstream of the associated outfalls, if applicable. This downstream monitoring shall be performed a sufficient distance downstream of the associated outfall to ensure that complete mixing has occurred. At such time that sufficient information has been collected regarding receiving stream flow characteristics and in-stream contaminant concentrations, the permittee may request a re-evaluation of the monitoring frequency required herein for possible reduction or elimination. For the purpose of re-evaluating the downstream monitoring frequency of the receiving stream, "sufficient information" is defined as a minimum of ten (10) quarterly sampling events.

    In the event that downstream monitoring of the receiving waters is eliminated during the term of this permit based on an evaluation of the quarterly data, a minimum of three (3) additional samples analyzed for the parameters identified above must be submitted with the permit renewal application a minimum of 180 days prior to expiration of this permit.

iii. The Middle Fork Big Muddy River, Akin Creek and Sugar Camp Creek as well as the unnamed tributaries to these receiving streams shall be monitored and reported annually for Discharge Rate, Chloride, Sulfate and Hardness upstream of the associated outfall.

Special Condition No. 14: Sediment Pond Operation and Maintenance (Outfall 013):

a. No discharge is allowed from Outfall No. 013 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.

Pursuant to 35 Ill. Adm. Code Part 302.102, discharges from the referenced outfalls that otherwise would not meet the water quality standards of 35 Ill. Adm. Code Part 302 may be permitted if sufficient flow exists in the receiving stream to ensure that applicable water quality standards are met. That is, discharges not meeting the water quality standards of 35 Ill. Adm. Code Part 302 may only be discharged in combination with stormwater discharges from the basin, and only at such times that sufficient flow exists in the receiving stream to ensure that water quality standards in the receiving stream beyond the area of allowed mixing will not be exceeded.

The permittee shall determine the effluent limitation for chloride and/or the maximum effluent flow rate allowable to maintain water quality in the receiving stream. The following equations shall be used to make such determinations:

$$C_{DS} = [C_E Q_E + 0.25 C_{US} Q_{US}]/ (0.25 Q_{US} + Q_E)$$

Where:

C_E = Effluent concentration (mg/L)

Q_E = Effluent flow rate (cfs) for Outfall 013

Q_{US} = Upstream flow rate (cfs)

C_{US} = Upstream concentration (mg/L)

C_{DS} = Downstream concentration

The "calculated" downstream concentration shall be less than 500 mg/L for chloride and reported on the discharge monitoring reports (DMRs).

The permittee shall install a gauging station and TDS monitor upstream of the discharge to determine an upstream flow (Q_{US}) and a chloride concentration (C_{US}) correlated to the TDS value. In addition, the permittee shall install a continuous TDS monitor downstream to ensure that the chloride concentration (correlated to the TDS value) stays within the chloride water quality standard.

b. The following sampling and monitoring requirements are applicable to flow in Middle Fork Big Muddy River which receives the discharges from Outfall 013.

i. All sampling and monitoring required under 14(b)(ii) and (iii) below shall be performed during a discharge and monitoring event from the associated outfall.

ii. Middle Fork Big Muddy River shall be monitored and reported quarterly for Discharge Rate, Sulfate, Chloride 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 stream flow characteristics and in-stream contaminant concentrations, the permittee may request a re-evaluation of the monitoring frequency required herein for possible reduction or elimination. For the purpose of re-evaluating the downstream monitoring frequency of the receiving stream, "sufficient information" is defined as a minimum of ten (10) quarterly sampling events.

In the event that downstream monitoring of the receiving waters is eliminated during the term of this permit based on an evaluation of the quarterly data, a minimum of three (3) additional samples analyzed for the parameters identified above must be submitted with the permit renewal application a minimum of 180 days prior to expiration of this permit.

iii. Middle Fork Big Muddy River shall be monitored and reported annually for Discharge Rate, Sulfate, Chloride and Hardness upstream of the associated outfall.

Special Conditions

Special Condition No. 15: Sediment Pond Operation and Maintenance (Outfall 013 – Reclamation Area Discharge Classification):

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 013 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 Middle Fork Big Muddy River which receive discharges from Outfall 013.

   i. All sampling and monitoring required under 15(b)(ii) and (iii) below shall be performed during a discharge and monitoring event from the associated outfall.

   ii. Middle Fork Big Muddy River shall be monitored and reported quarterly for Discharge Rate, Chloride, Sulfate and Hardness downstream of the associated outfall. This downstream monitoring shall be performed a sufficient distance downstream of the associated outfall to ensure that complete mixing has occurred. At such time that sufficient information has been collected regarding receiving stream flow characteristics and in-stream contaminant concentrations the permittee may request a re-evaluation of the monitoring frequency required herein for possible reduction or elimination. For the purpose of re-evaluating the downstream monitoring frequency of the receiving stream, "sufficient information" is defined as a minimum of ten (10) quarterly sampling events.

   In the event that downstream monitoring of the receiving waters is eliminated during the term of this permit based on an evaluation of the quarterly data, a minimum of three (3) additional samples analyzed for the parameters identified above must be submitted with the permit renewal application a minimum of 180 days prior to expiration of this permit.

   iii. Middle Fork Big Muddy River shall be monitored and reported annually for Discharge Rate, Chloride, Sulfate and Hardness upstream of the associated outfall.

Special Condition No. 16: Sediment Pond Operation and Maintenance (Outfall 017):

a. No discharge is allowed from Outfall No. 017 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.

   Pursuant to 35 Ill. Adm. Code Part 302.102, discharges from the referenced outfalls that otherwise would not meet the water quality standards of 35 Ill. Adm. Code Part 302 may be permitted if sufficient flow exists in the receiving stream to ensure that applicable water quality standards are met. That is, discharges not meeting the water quality standards of 35 Ill. Adm. Code Part 302 may only be discharged in combination with stormwater discharges from the basin, and only at such times that sufficient flow exists in the receiving stream to ensure that water quality standards in the receiving stream beyond the area of allowed mixing will not be exceeded.

   The permittee shall determine the effluent limitation for chloride and/or the maximum effluent flow rate allowable to maintain water quality in the receiving stream. The following equations shall be used to make such determinations:

   $$C_{DS} = [C_E Q_E + 0.25 C_{US} Q_{US}]/ (0.25 Q_{US} + Q_E)$$

   Where:

   C_E = Effluent concentration (mg/L)

   Q_E = Effluent flow rate (cfs) for Outfall 017

   Q_{US} = Upstream flow rate (cfs)

   C_{US} = Upstream concentration (mg/L)

   C_{DS} = Downstream concentration

The "calculated" downstream concentration shall be less than 500 mg/L for chloride and reported on the discharge monitoring reports (DMRs).

Chloride is limited in the NPDES permit at the limits described below. The maximum flow from Outfall 017 is 8,482 gpm and the maximum chloride concentration is 12,000 mg/L.

Special Conditions

The permit only allows a discharge when the Big Muddy River is flowing above 30 cfs. The maximum dispersion required for all water quality parameters is 25.5:1. Model predictions have been made for a maximum effluent total flow rate of 18.9 cfs. At the maximum chloride concentration of 12,000 mg/L, this maximum discharge requires a river flow of 1,893 cfs to meet a dispersion of 25.5 mg/L in less than 25 % of the river volume. The maximum distance to meet the water quality standard for all scenarios is 221.5 feet downstream with a plume width of 13.1 feet.

The upstream flow (Q_{US}) should be based on the US Army Corps of Engineers (USACE) dam at Rend Lake and the chloride concentration can be based on the 90^{th} percentile of the existing data of 30.1 mg/L.

b. The following sampling and monitoring requirements are applicable to flow in Big Muddy River which receives the discharges from Outfall 017.

   i. All sampling and monitoring required under 16(b)(ii) and (iii) below shall be performed during a discharge and monitoring event from the associated outfall.

   ii. The Big Muddy River shall be monitored and reported quarterly for Discharge Rate, Sulfate, Chloride 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 stream flow characteristics and in-stream contaminant concentrations, the permittee may request a re-evaluation of the monitoring frequency required herein for possible reduction or elimination. For the purpose of re-evaluating the downstream monitoring frequency of the receiving stream, "sufficient information" is defined as a minimum of ten (10) quarterly sampling events.

   In the event that downstream monitoring of the receiving waters is eliminated during the term of this permit based on an evaluation of the quarterly data, a minimum of three (3) additional samples analyzed for the parameters identified above must be submitted with the permit renewal application a minimum of 180 days prior to expiration of this permit.

   iii. The Big Muddy River shall be monitored and reported annually for Discharge Rate, Sulfate, Chloride and Hardness upstream of the associated outfall.

Special Condition No. 17: Data collected in accordance with Special Condition Nos. 13, 14, 15 and 16 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. 18: Discharges from Outfall Nos. 001, 003, 008, 013 and 017 shall be monitored twice annually with such monitoring spaced at approximately 6-month intervals during the entire 5-year term of this NPDES. Sampling of the discharges shall be performed utilizing the grab sampling method and analyzed for total (unfiltered) concentrations. The results of the sampling required under this Special Condition shall be submitted twice annually to the Agency in January and July of each calendar year to the addresses indicated in the Special Condition No. 3 above. The parameters to be sampled and the detection limits (minimum reporting levels) are as follows:

Parameter	Detection Limit
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

Attachment H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

(2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:
  (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
  (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records.**
  (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
  (c) Records of monitoring information shall include:
    (1) The date, exact place, and time of sampling or measurements;
    (2) The individual(s) who performed the sampling or measurements;
    (3) The date(s) analyses were performed;
    (4) The individual(s) who performed the analyses;
    (5) The analytical techniques or methods used; and
    (6) The results of such analyses.
  (d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.
  (a) **Application.** All permit applications shall be signed as follows:
    (1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation:
    (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
    (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
  (b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    (1) The authorization is made in writing by a person described in paragraph (a); and
    (2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
    (3) The written authorization is submitted to the Agency.
  (c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
  (d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

  I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(12) **Reporting requirements.**
  (a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.
  Notice is required when:
    (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or
    (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
    (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
  (b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
  (c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.
  (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
  (e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.
    (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(f) **Twenty-four hour reporting**. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(2) Any upset which exceeds any effluent limitation in the permit.

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

(g) **Other noncompliance**. The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).

(h) **Other information**. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Bypass**.

(a) Definitions.

(1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).

(c) Notice.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).

(d) Prohibition of bypass.

(1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:

(i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(iii) The permittee submitted notices as required under paragraph (13)(c).

(2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).

(14) **Upset**.

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).

(4) The permittee complied with any remedial measures required under paragraph (4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(15) **Transfer of permits**. Permits may be transferred by modification or automatic transfer as described below:

(a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

(b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:
(1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
(2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
(3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
(1) One hundred micrograms per liter (100 ug/l);
(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
(4) The level established by the Agency in this permit.
(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
(a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
(a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
(b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
(c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.
Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).

(23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

(24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.

(28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

United States Environmental Protection Agency | Office of Enforcement and Compliance Assurance | September 2015

Final NPDES Electronic Reporting Rule

On 24 September 2015, Administrator Gina McCarthy signed the final National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule for publication in the Federal Register. The publication of this rule is the latest step in an extensive multi-year outreach effort with EPA's state, tribal and territorial partners. This rule will replace most paper-based Clean Water Act (CWA) NPDES permitting and compliance monitoring reporting requirements with electronic reporting.

Purpose of the Final Rule

This final rule is designed to save authorized state, tribe, or territorial NPDES programs considerable resources, make reporting easier for NPDES-regulated entities, streamline permit renewals, ensure full exchange of basic NPDES permit data between states and EPA, improve environmental decision-making, and better protect human health and the environment.

This final rule requires that NPDES regulated entities electronically submit the following permit and compliance monitoring information instead of using paper reports:

- Discharge Monitoring Reports (DMRs);
- Notices of Intent to discharge in compliance with a general permit; and
- Program reports.

Authorized NPDES programs will also electronically submit NPDES program data to EPA to ensure that there is consistent and complete reporting nationwide, and to expedite the collection and processing of the data, thereby making it more accurate and timely. Importantly, while the rule changes the method by which information is provided (i.e., electronic rather than paper-based), it does not increase the amount of information required from NPDES regulated entities facilities under existing regulations.

Overview of Benefits

EPA anticipates that the final rule will save significant resources for states, tribes, and territories as well as EPA and NPDES permittees, while resulting in a more complete, accurate, and nationally-consistent set of data about the NPDES program. With full implementation (5 years after the effective date), the anticipated savings are:

- Authorized State NPDES programs: $22.6 million annually,
- NPDES regulated entities: $0.5 million annually, and
- EPA: $1.2 million annually.

the authorized NPDES biosolids program); and all other remaining NPDES program reports. These program reports include:

- Sewage Sludge/Biosolids Annual Program Reports [40 CFR 503] (for the 8 states that implement the Federal Biosolids Program)
- Concentrated Animal Feeding Operation (CAFO) Annual Program Reports [40 CFR 122.42(e)(4)]
- Municipal Separate Storm Sewer System (MS4) Program Reports [40 CFR 122.34(g)(3) and 122.42(c)]
- Pretreatment Program Reports [40 CFR 403.12(i)]
- Significant Industrial User Compliance Reports in Municipalities Without Approved Pretreatment Programs [40 CFR 403.12(e) and (h)]
- Sewer Overflow/Bypass Event Reports [40 CFR 122.41(l)(4), (l)(6) and (7), (m)(3)]
- CWA Section 316(b) Annual Reports [40 CFR 125 Subpart J]

How the final rule addresses comments

In response to concerns about implementation raised during the comment periods, the final rule provides authorized NPDES programs more flexibility to implement the final rule by providing them up to three additional years to electronically collect, manage, and share their data. Authorized NDPES Programs will also have more flexibility in how they can grant electronic reporting waivers.

Further Information

For additional information, please contact Messrs. John Dombrowski, Director, Enforcement Targeting and Data Division (202-566-0742) or Carey A. Johnston (202-566-1014), Office of Compliance (mail code 2222A), Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC, 20460; e-mail addresses: dombrowkski.john@epa.gov or johnston.carey@epa.gov.

Useful Final Rule Link:

Email sign up for outreach events
https://public.govdelivery.com/accounts/USAEPAOECA/subscriber/new?

Alliance Consulting, Inc.
Engineers · Constructors · Scientists

February 4, 2019

Project No.: B19-003-1413

Mr. James Plumley
FORESIGHT ENERGY, LLC
16824 Liberty School Road
Marion, IL 62959

Wetland and Stream Inventory Report
East Refuse Disposal Area
Franklin County, Illinois
Sugar Camp Energy, LLC
Macedonia, Illinois

Dear Mr. Plumley:

This letter has been prepared to transmit a Wetland and Stream Inventory Report of the project area in association with the proposed East Refuse Disposal Area in Franklin County, Illinois.

The area for this proposed project falls under a previously permitted area (Permit No. 382, Sugar Camp Mine No. 1) that has already been submitted and approved. Several impacts from the refuse area have already been mitigated in the original permit as well. Alliance Consulting, Inc. (Alliance) is pleased to submit the following Wetland and Stream Inventory Report on behalf of our client, Sugar Camp Energy, LLC (Sugar Camp), as a portion of the Joint Application for Section 404/401 CWA Permit and Nationwide Permit 27.

The stream and wetland determinations on the western portion of the proposed project area were conducted in 2005-2007. The stream determination work on the western area was completed in 2007 by Alliance at Sugar Camp's request to be utilized during the permitting process. The initial wetland determinations were conducted in 2005-2007 by HDR/Cochran and Wilken, Inc. (HDR/CWI) of Springfield, Illinois at Sugar Camp's request to be utilized in the permitting process as well. The original Request for Jurisdictional Determination completed by Alliance can be found in Appendix A of this document. A detailed report on the initial wetland determination work can be found in Appendix B of this document. Alliance and HDR/CWI prepared their respective reports in general accordance with the Corps of Engineers Guidance for Stream and Wetland Delineations. A second stream and wetland determination was conducted in 2011/2012 on the eastern portion of the proposed project area. The second Jurisdictional Determination was completed in 2012 by EcoSource, Inc. of Georgetown, Kentucky at Sugar Camp's request to be used during the permitting process. A detailed report on the stream and wetland determination work can be found in Appendix C of this Joint Application. EcoSource prepared this report in general accordance with the Corps of Engineers Guidance for Stream and Wetland Delineations.

The original Request for Jurisdictional Determination (Appendix A), Wetlands Assessment Report (Appendix B) and the second Jurisdictional Determination (Appendix C) are enclosed in this document. The other portions of this report have been updated to only contain the pertinent information for the proposed area (Appendices D-F). The scope of this project is only for a portion of the original permit area and, therefore, attention should be focused on the proposed area for the purposes of this application. The project, as proposed, would impact two of the wetland areas that were delineated by HDR/CWI in the original report (Areas 1 & 2). The project, as proposed, would also impact several of the wetland areas that were delineated by EcoSource in the second report (Areas A-1, A-2, B, C, D, and OWA). It should be noted that Wetland Area 2 from the original report and Wetland Areas B, C, D, and OWA from the second report are in the same location and could be considered the same area. The project, as proposed, would impact several of the stream channels that were delineated by Alliance in the original report (Stream channels: E, G, G4A, G9A, G9B, and G4-G12). The project, as proposed, would also impact several of the channels that were delineated by EcoSource in the second report (Stream Channels: SR1-SR6 and SR15). This proposed area includes approximately 523.70 acres, which, if approved, will have a coal refuse disposal area constructed on it for the purpose of refuse storage.

If you have any questions or require clarification, please do not hesitate to call.

Respectfully submitted,

ALLIANCE CONSULTING, INC.

Daniel E. Brady
Staff Scientist

Braden A. Hoffman
Project Manager

APPENDIX A

REQUEST FOR JURISDICTIONAL DETERMINATION LETTER REPORT (ALLIANCE, 2008)

REQUEST FOR JURISDICTIONAL DETERMINATION
CORPS REGULATORY BRANCH FILE NO. MVS-2008-18

SUGAR CAMP MINE NO. 1
NEAR MACEDONIA, FRANKLIN COUNTY ILLINOIS

PREPARED FOR

SUGAR CAMP ENERGY, LLC
JOHNSTON CITY, ILLINOIS

ALLIANCE PROJECT NO. B07-021-1413
MARCH 2008

APPENDIX B

WETLANDS ASSESSMENT REPORT
(HDR/CWI, 2007)

Sugar Camp Mine #1 – Wetlands Delineation Report

Figures

Tables

Appendices

APPENDIX C

JURISDICTIONAL STREAMS AND WETLANDS DETERMINATIONS (ECOSOURCE, 2012)

Sugar Camp Energy LLC
DNR No. 382, Revision 4
Sugar Camp Mine No. 1

Jurisdictional Streams and Wetland Determinations

Submitted to

CBC Engineers & Associates Ltd.
Lexington, Kentucky

February 2012

APPENDIX F

NRCS WEB SOIL SURVEY REPORT
(GENERATED 2019)

United States Department of Agriculture

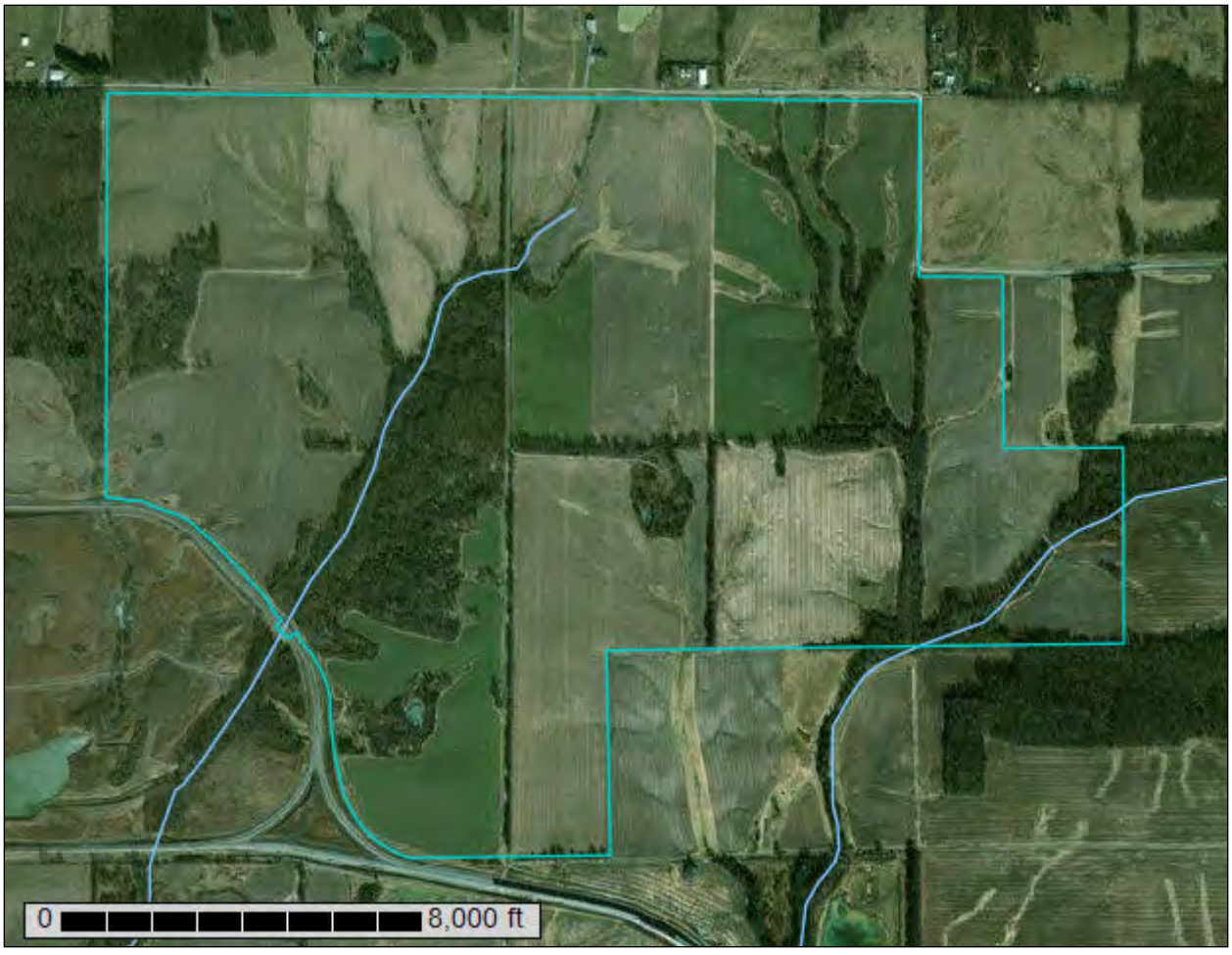
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Franklin County, Illinois

East Refuse Area



January 25, 2019

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959

FWS/SISO

August 4, 2017

Mr. Scott K. Fowler
Illinois Department of Natural Resources
Office of Mines and Minerals
Land Reclamation Division
One Natural Resources Way
Springfield, Illinois 62702-1271

Dear Mr. Fowler:

Thank you for your letter dated April 12, 2017, requesting review of significant revision No. 6 to permit 382 by Sugar Camp Energy, LLC (No. 1 Mine), for surface coal mining and reclamation operations in Hamilton and Franklin Counties, Illinois. The revision will add 37,971.9 acres of shadow area to existing permit No. 382. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*); the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq.*) and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 et seq.).

Threatened and Endangered Species

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, that have ranges which include the project area. As the State of Illinois has been delegated the responsibility of issuing mining permits by the Office of Surface Mining, we are providing the following list of threatened and endangered species to assist in your evaluation of the proposed permit. The list for the proposed permit area includes the endangered Indiana bat (*Myotis sodalis*), endangered piping plover (*Charadrius melodus*), and threatened northern long-eared bat (*Myotis septentrionalis*). There is no designated critical habitat in the project area at this time.

Information provided in the permit application indicates that there is no surface disturbance proposed in this revision and therefore no impacts to listed species are anticipated. Based on the information provided in the permit application, the Service concurs that the proposed permit actions are not likely to adversely affect any federally listed species. Although no surface

disturbance is proposed in this revision, post-subsidence mitigation may be necessary to restore pre-existing drainage patterns which could result in impacts to forested riparian areas.

- The Service recommends that any tree clearing be minimized or avoided if possible to reduce impacts to potential habitat for the Indiana bat and northern long-eared bat. If tree clearing is necessary, it should not occur during the April 1 thru October 14 time frame. Also, any forested areas impacted by post-subsidence mitigation should be restored.

Fish and Wildlife Resources

Although no surface disturbance is proposed in this revision, post-subsidence mitigation may be necessary to restore pre-existing drainage patterns which could result in impacts to streams and wetlands. Activities in the project area that would alter these streams or wetlands may require a Section 404 permit from the US Army Corps of Engineers.

- The Service recommends that impacts to streams and wetlands be avoided or impacts minimized to the greatest extent possible. If a permit is required than an appropriate mitigation plan should be developed and coordinated with the Service.

Migratory Birds

Although the bald eagle has been removed from the threatened and endangered species list, it continues to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The Service developed the National Bald Eagle Management Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute "disturbance," which is prohibited by the BGEPA. A copy of the guidelines is available at:

http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf

- The Service is unaware of any bald eagle nests in the permit area; however, if a bald eagle nest is found in the permit area or vicinity of the permit area then our office should be contacted and the guidelines implemented.

Thank you for the opportunity to comment on the proposed surface mining permit and provide information concerning threatened and endangered species. If you have any questions, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist

Alliance Consulting, Inc.
Engineers · Constructors · Scientists

February 26, 2015

Project No. B12-603-1413

Mr. Matthew Mangan
U.S. FISH AND WILDLIFE SERVICE
Marion Field Office
8588 Route 148
Marion, IL 62959

Comprehensive Bat Survey Demonstration
Sugar Camp Mine No.1 and North Refuse Disposal Facility,
Franklin and Hamilton Counties, Illinois
Sugar Camp Energy, LLC
Macedonia, Illinois

Dear Mr. Mangan:

On behalf of our client, Sugar Camp Energy, LLC (Sugar Camp), this letter has been prepared to present the results of five years of endangered bat species surveys and monitoring within the Sugar Camp Mine No. 1 project area, one year of endangered bat species surveys and monitoring within the North Refuse Disposal Facility, and one year of acoustic survey within the North Refuse Disposal Facility. The various surveys were conducted in association with the proposed construction of each project or with monitoring plans established for the project. Alliance Consulting, Inc. (Alliance) conducted the surveys and presented the results each year accordingly. This document has been prepared as a comprehensive summary of Indiana bats, captured or detected, for all of the surveys conducted for Sugar Camp Energy, LLC, from 2010-2014.

1.0 PURPOSE

The purpose of these surveys was to determine the presence/absence of endangered bat species within and adjacent to the proposed Sugar Camp Mine No. 1 Shadow Area and the North Refuse Disposal Facility and annual monitoring of the identified colony as required by your office, based upon the 2010 protection and enhancement plan approved by your office, mist net surveys and telemetry tracking were required. This document also represents Alliance's findings during a voluntary acoustic and mist net survey within the North Refuse Disposal Facility project area, which was conducted at twice the minimal level of recommended effort. This survey was conducted to determine the usage of the North Refuse Area by Indiana bats since it is within known habitat (2.5 miles of maternity roost).

2.0 INTRODUCTION

Alliance Consulting, Inc.
Engineers • Constructors • Scientists

A SUMMER SURVEY FOR THE FEDERALLY ENDANGERED INDIANA BAT (*MYOTIS SODALIS*) AND THE THREATENED NORTHERN LONG-EARED BAT (*MYOTIS SEPTENTRIONALIS*)

VIKING SHADOW AREA 1
PERMIT NO. 382/NPDES IEPA LOG NO. 1357-07
NEAR MACEDONIA,
FRANKLIN AND HAMILTON COUNTIES, ILLINOIS

Prepared for:

SUGAR CAMP ENERGY, LLC
JOHNSTON CITY, ILLINOIS

ALLIANCE PROJECT NO. B17-112-1413
SEPTEMBER 2017

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Raleigh County Airport Industrial Park
124 Philpott Lane
Beaver, WV 25813-9502
Telephone: (304) 255-0491
Fax: (304) 255-4232

Canonsburg, PA

3 Four Coins Drive, Ste. 100
Canonsburg, PA 15317
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Fax: (724) 745-3631

Alliance Consulting, Inc.
Engineers • Constructors • Scientists

A SUMMER SURVEY FOR THE FEDERALLY ENDANGERED INDIANA BAT (*MYOTIS SODALIS*) AND THE THREATENED NORTHERN LONG-EARED BAT (*MYOTIS SEPTENTRIONALIS*)

VIKING SHADOW AREA 2
PERMIT NO. 382/NPDES IEPA LOG NO. 1357-07
NEAR MACEDONIA,
FRANKLIN AND HAMILTON COUNTIES, ILLINOIS

Prepared for:

SUGAR CAMP ENERGY, LLC
JOHNSTON CITY, ILLINOIS

ALLIANCE PROJECT NO. B17-112-1413
JULY 2017

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Alliance Consulting, Inc.
Engineers • Constructors • Scientists

A SUMMER SURVEY FOR THE FEDERALLY ENDANGERED INDIANA BAT (*MYOTIS SODALIS*) AND THE THREATENED NORTHERN LONG-EARED BAT (*MYOTIS SEPTENTRIONALIS*)

SUGAR CAMP SHADOW AREA 3
PERMIT NO. 382
FRANKLIN AND HAMILTON COUNTIES, ILLINOIS

Prepared for:
SUGAR CAMP ENERGY, LLC
JOHNSTON CITY, ILLINOIS

ALLIANCE PROJECT NO. B17-111-1413
JULY 2017

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Alliance Consulting, Inc.
Engineers • Constructors • Scientists

A SUMMER SURVEY FOR THE FEDERALLY ENDANGERED INDIANA BAT (*MYOTIS SODALIS*) AND THE THREATENED NORTHERN LONG-EARED BAT (*MYOTIS SEPTENTRIONALIS*)

SUGAR CAMP SHADOW AREA 4
PERMIT NO. 382/NPDES IEPA LOG NO. 1357-07
NEAR MACEDONIA,
FRANKLIN AND HAMILTON COUNTIES, ILLINOIS

Prepared for:
SUGAR CAMP ENERGY, LLC
JOHNSTON CITY, ILLINOIS

ALLIANCE PROJECT NO. B17-111-1413
SEPTEMBER 2017

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Alliance Consulting, Inc.
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A SUMMER SURVEY FOR THE FEDERALLY ENDANGERED INDIANA BAT (*MYOTIS SODALIS*) AND THE THREATENED NORTHERN LONG-EARED BAT (*MYOTIS SEPTENTRIONALIS*)

SUGAR CAMP EAST REFUSE DISPOSAL AREA
PERMIT NO. 382
NEAR MACEDONIA, FRANKLIN COUNTY, ILLINOIS

Prepared for:
SUGAR CAMP ENERGY, LLC
JOHNSTON CITY, ILLINOIS

ALLIANCE PROJECT NO. B19-003-1413
OCTOBER 2019

Charleston, WV	Beckley, WV	Canonsburg, PA
928 Cross Lanes Drive, Suite 300 Charleston, WV 25313 Telephone: (681) 217-2090 Fax: (681) 217-2092	Raleigh County Airport Industrial Park 124 Philpott Lane Beaver, WV 25813-9502 Telephone: (304) 255-0491 Fax: (304) 255-4232	3 Four Coins Drive, Ste. 100 Canonsburg, PA 15317 Telephone: (724) 745-3630 Fax: (724) 745-3631

Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902

Ms. Rachel Leibowitz
Deputy State Historic Preservation Officer
Preservation Services Division
Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, Illinois 62701-1507

Dear Ms. Leibowitz:

TENNESSEE VALLEY AUTHORITY (TVA), INITATION OF CONSULTATION, SUGAR CAMP MINE NO.1 EXPANSION PROJECT (IDNR PERMIT NO. 382 REVISION 6)

Sugar Camp Energy, LLC (Sugar Camp) proposes to expand mining operations of its Mine No. 1 in Franklin and Hamilton Counties in southern Illinois. The proposed expansion (approximately 37,972 acres) includes approximately 12,125 acres of TVA-owned coal (Figure 1). Planned subsidence is included in Sugar Camp's proposed mining plan. Subsidence would only occur under a portion of the project area (Figure 1:Permit No 382 Revision 6 Shadow Area). Surface activities to support the underground mining of TVA-owned coal would include construction of approximately five bleeder shafts and installation of associated utilities needed to operate the bleeder shafts. The exact location and nature of these surface activities is unknown at this time but they would occur within the project area shown in purple in Figure 1. . TVA has determined the area of potential effects (APE) as the footprint of the project area (12,125) as well as the five bleeder shafts and installation of associated utilities needed to operate the bleeder shafts where physical effects could occur, as well as areas within a half-mile radius of the project within which the project would be visible, where visual effects on above-ground resources could occur.

Per the *Programmatic Agreement between the Illinois Historic Preservation Agency and the Illinois Department of Natural Resources*, "shadow areas in which there will be no surface disturbance" are a class of exempt activities which are "considered to have no effect on historic properties" (Enclosed).TVA agrees with the Programmatic Agreement finding that no archaeological resources will be affected within the shadow area where no surface disturbance is propose, although TVA will take into account any potential effects to architectural historic properties that may be effected by the subsidence.

By this letter, TVA is initiating consultation regarding the proposed undertaking. Due to the size and scope of the project TVA proposes to proceed under phases as provided under 36 CFR § 800.4(b)(2) and § 800.5(c)(1). Once the locations of the bleeder shafts and associated infrastructure are identified, TVA will conduct a Phase I Cultural Resources survey of the APE and provide to your office for consultation.

Pursuant to 36 C.F.R. Part 800.3(f)(2), TVA is consulting with federally recognized Indian tribes regarding historic properties within the proposed project's APE that may be of religious and cultural significance and are eligible for the National Register of Historic Places.

Please contact Michaelyn Harle by telephone (865) 632-2248 or by email, mharle@tva.gov with your comments.

Sincerely,

Clinton E. Jones
Manager
Cultural Compliance

INTERNAL COPIES NOT TO BE INCLUDED WITH OUTGOING LETTER:

Michael C. Easley, BR 2C-C
Patricia B. Ezzell, WT 7C-K
Travis A. Giles, BR 2C-C
Michaelyn S. Harle, WT 11C-K
Susan R. Jacks, WT 11C-K
Paul J. Pearman, BR 2C-C
M. Susan Smelley, BR 2C-C
Elizabeth Smith, WT 11C-K
Rebecca C. Tolene, WT 7B-K
ECM, WT CA-K

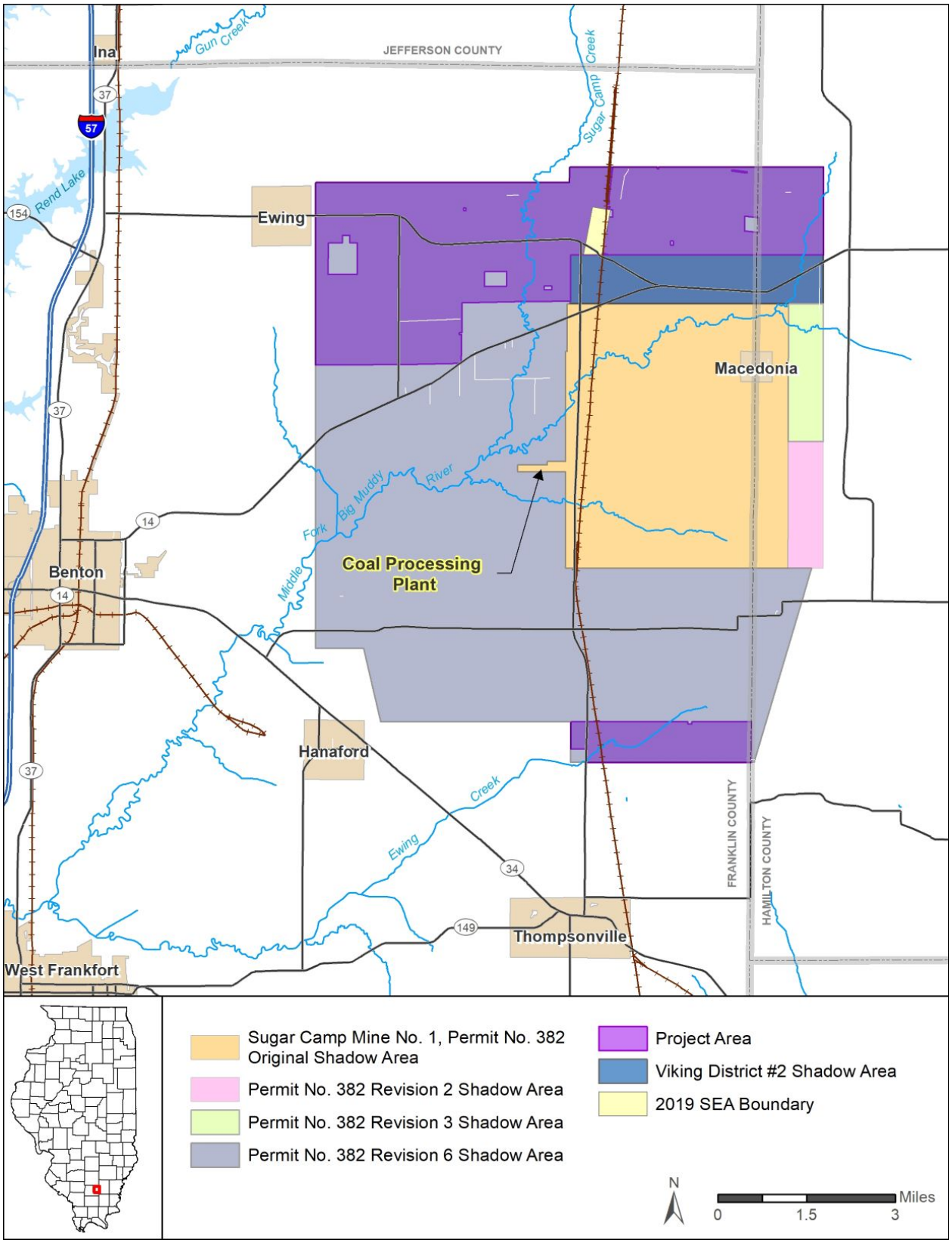

Figure 1. Location of the proposed project area and shadow area.

From:	Smith, Elizabeth
To:	RichardsonSeacat, Harriet
Subject:	FW: Sugar Camp P382 REV 6
Date:	Wednesday, August 19, 2020 3:44:26 PM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png image007.png image008.png

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See responses below for SHPO Consultation for Sugar Camp…

Due to COVID-19 safety precautions enacted by TVA, I am currently teleworking.

Should you need to speak with me directly, my mobile phone # is listed below.

Elizabeth R. Smith
NEPA Specialist

NEPA Programs
Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, TN 37902

865-632-3053 (w)
865-250-9138 (m)
esmith14@tva.gov

From: Harle, Michaelyn S <mharle@tva.gov>
Sent: Monday, June 29, 2020 12:57:43 PM
To: Smith, Elizabeth <esmith14@tva.gov>
Subject: FW: Sugar Camp P382 REV 6

We didn't get a response they forwarded it on to IDNR, we got this response.

Due to COVID-19 safety precautions enacted by TVA, I am currently teleworking.

My mobile phone is listed below and you can call or txt until further notice.

Michaelyn Harle, Ph.D
Archaeologist
Cultural Compliance

400 W. Summit Hill Drive
WT 11A-K
Knoxville, TN 37902

865-632-2248 (w)

717-756-3196 (m)
mharle@tva.gov

From: Cobb, Dawn <Dawn.Cobb@illinois.gov>
Sent: Monday, December 09, 2019 4:45 PM
To: Harle, Michaelyn S <mharle@tva.gov>
Subject: Sugar Camp P382 REV 6

TVA External Message. Please use caution when opening.

Michaelyn,
I am the archaeologist for the Illinois Department of Natural Resources and replaced Hal Hassen a few years ago as Cultural Resources Manager. The IL SHPO archaeologist recently shared with me the November 7, 2019, TVA consultation letter regarding Sugar Camp No. 1 Mine Revision 6 in Hamilton and Franklin Counties. Would you please copy me on the final determination for this project as I review all mine-related projects for the IDNR? The Office of Mines & Minerals (OMM) staff submit bleeder shafts, etc. and other Incidental Boundary Revisions and new permits to my office for review. I then coordinate with the SHPO on survey results. It appears in this instance that the TVA will conduct Phase I surveys of the APE and consult directly with the IL SHPO, per the 11-7-2019 letter. Once I receive the results of your consultation with SHPO I will notify OMM. Thank you in advance-

Dawn E. Cobb
Archaeologist
Office of Realty & Capital Planning
Illinois Department of Natural Resources
217/785-4992

Miami Tribe of Oklahoma

3410 P St. NW, Miami, OK 74354 ● P.O. Box 1326, Miami, OK 74355
Ph: (918) 541-1300 ● Fax: (918) 542-7260
www.miamination.com

Via email: mmshuler@tva.gov

December 13, 2019

Marianne Shuler
Senior Specialist, Archaeologist and Tribal Liaison
Cultural Compliance
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, TN 37902

Re: Sugar Camp Mine No. 1 Expansion Project – Comments of the Miami Tribe of Oklahoma

Dear Ms. Shuler:

Aya, kikwehsitoole – I show you respect. My name is Diane Hunter, and I am the Tribal Historic Preservation Officer for the Federally Recognized Miami Tribe of Oklahoma. In this capacity, I am the Miami Tribe's point of contact for all Section 106 issues.

The Miami Tribe offers no objection to the above-mentioned project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, as this project is within the aboriginal homelands of the Miami Tribe, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966 or by email at dhunter@miamination.com to initiate consultation.

The Miami Tribe accepts the invitation to serve as a consulting party to the proposed project. In my capacity as Tribal Historic Preservation Officer I am the point of contact for consultation.

Respectfully,

Diane Hunter

Diane Hunter
Tribal Historic Preservation Officer

Osage Nation Historic Preservation Office

Date: **January 11, 2020** **File: 1920-2160IL-11**

RE: **Tennessee Valley Authority (TVA), Sugar Camp Mine No. 1 Expansion Project, Franklin and Hamilton Counties, Illinois**

Tennessee Valley Authority
Marianne Shuler
400 West Summit Hill Drive
Knoxville, TN 37902

Dear Ms. Shuler,

The Osage Nation has received notification and accompanying information for the proposed project listed as Tennessee Valley Authority (TVA), Sugar Camp Mine No. 1 Expansion Project, Franklin and Hamilton Counties, Illinois. **The Osage Nation Historic Preservation Office requests a copy of the cultural resource survey report for review and comment.**

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Osage Nation has a vital interest in protecting its historic and ancestral cultural resources. **The Osage Nation anticipates reviewing and commenting on the survey report for the proposed Tennessee Valley Authority (TVA), Sugar Camp Mine No. 1 Expansion Project, Franklin and Hamilton Counties, Illinois.**

Should you have any questions or need any additional information please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Bobi Deere
Archaeologist

Contract Publication Series 07-001

A CULTURAL RESOURCE SURVEY FOR THE PROPOSED REFUSE DISPOSAL AREA FOR THE SUGARCAMP NO. 1 COAL MINE OPERATION, FRANKLIN COUNTY, ILLINOIS

By Brian G. DelCastello, M.A.

With contributions by Jennifer M. Faberson, Lori O'Connor, MSLS, and Trent Spurlock

Cultural Resource Analysts, Inc.

Contract Publication Series 07-001

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With contributions by Jennifer M. Faberson, Lori O'Connor, MSLS, and Trent Spurlock

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CRAI Project No.: K06S019

Charles M. Niquette, RPA
Co-Principal Investigator

Richard L. Herndon, RPA
Co-Principal Investigator

December 20, 2007

Lead Agency: Illinois Department of Natural Resources, Division of Mine Permits

Contract Publication Series 05-162

AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED SUGAR CAMP NO. 1 COAL MINE OPERATION BETWEEN AKIN CREEK AND THE MIDDLE FORK OF THE BIG MUDDY RIVER, FRANKLIN COUNTY, ILLINOIS (PERMIT APPLICATION NO. 382)

by

Brian G. DelCastello, M.A.

With contributions by Rebecca Miller Gillespie, Pamela J. Richardson, M.A., and Trent Spurlock

Prepared for

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Charles M. Niquette, RPA
Co-Principal Investigator

Richard L. Herndon, RPA
Co-Principal Investigator

April 4, 2006

Lead Agency: Illinois Department of Natural Resources, Division of Mine Permits
Permit Application Number 382

tva.com