

FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

APPROVAL OF ILLINOIS COAL LEASE MINE PLAN – SUGAR CAMP MINE NO. 1, HAMILTON AND FRANKLIN COUNTIES, ILLINOIS

In May 2011, the Tennessee Valley Authority (TVA) prepared an environmental assessment and issued a finding of no significant impact (FONSI) for a proposal to approve the mining of TVA-owned coal reserves in Hamilton County, Illinois under a mining plan proposed by Sugar Camp Energy LLC. Sugar Camp holds Mine Permit 382 from the State of Illinois to conduct coal mining operations within Franklin and Hamilton counties, Illinois. Sugar Camp now proposes to extend its current underground mining operations to include TVA-owned coal reserves underlying an additional 880.3-acre area in Hamilton County. Under the conditions of the 2002 coal lease agreement, Sugar Camp may not conduct mining of TVA-owned coal until TVA has conducted appropriate environmental review required for compliance with all applicable laws and regulations. Therefore, TVA is considering allowing Sugar Camp to extract TVA-owned coal reserves within the 880.3-acre area according to the proposed mining plan. Approval by TVA would allow Sugar Camp to mine additional coal reserves, and TVA would receive additional royalty payments from Sugar Camp if these reserves were recovered.

The proposed action is the subject of a supplemental environmental assessment (SEA) prepared by TVA. The SEA is incorporated by reference. The SEA tiers from the 2011 EA and incorporates by reference information from related TVA environmental reviews listed therein.

Two alternatives were considered in the SEA. Under the No Action Alternative, TVA would not approve the proposed 880.3-acre mine expansion submitted as Significant Permit Revision to Sugar Camp's existing Mine Permit 382. Although the mining company has secured permits from the State of Illinois, the additional proposed mining requires approval from TVA. Thus, in the absence of TVA approval, Sugar Camp Energy would not be able to expand its underground mining operations into the 880.3-acre area. However, underground mining by Sugar Camp would continue within currently permitted areas in Franklin and Hamilton counties.

Under the Action Alternative, TVA would allow Sugar Camp to mine and remove TVA-owned coal as proposed in the revision to the Mine Permit 382. This revision, along with TVA's approval, would allow Sugar Camp to expand its current operational area by 880.3 acres. Additionally, Sugar Camp would install a 16-foot diameter ventilation shaft (known as a bleeder shaft) within the subject 880.3-acre expansion area.

Sugar Camp would extract the coal from its existing permitted area and from the adjacent 880.3-acre mine expansion area using longwall underground mining, which involves mechanically removing the coal seam in approximately 1,400-foot wide by 20,000-foot long rectangular blocks known as panels. Sugar Camp proposes to initiate a series of five additional longwall panels in the northern half of its currently permitted area. The easternmost portions of these additional panels would extend into adjacent coal reserves owned by TVA. Within the entire mine area, the coal seam to be removed is approximately 6 to 6.5 feet thick and is located approximately 730 to 1,000 feet

beneath the surface. Within the expansion area, the coal seam is approximately 850 feet beneath the surface. Coal removal within the expanded area would continue for approximately 5 years. Following coal recovery, as required by its mining permit, Sugar Camp would restore original drainage conditions and correct damage from subsidence.

Subsidence following the removal of the underground coal seam is expected to cause changes in the elevation of the surface by 3 to 4.5 feet and result in minor topographic changes. Subsidence has the potential to affect local surface drainage patterns, thereby potentially affecting floodplains, groundwater, wetlands, and aquatic life. However, these effects are expected to be minor, and Sugar Camp is required to return drainage patterns to their approximate pre-subsidence conditions and to compensate for any such adverse effects as a condition of its mining permit. Compensatory mitigation for subsidence-related damage to public utilities and roads is also required under Mine Permit 382. Subsidence within the 880.3-acre expansion area is not expected to affect local wildlife and vegetation or managed areas. There are no residential water wells within the expansion area. Underground mining activities would produce no noticeable noise on the surface. However, noise generated by fans at the bleeder site is not expected to present local objectionable noise levels because of the lack of nearby receptors.

Subsidence within the expansion area could affect local roads and a railway spur that crosses the expansion area. Although effects are expected to be minor, any damages would be corrected in accordance with the requirements of Sugar Camp's mining permit. Thus, effects to local transportation would be minor and insignificant.

Fugitive dust and particulate air emissions would be generated during construction of the bleeder shaft, but these emissions would not cause exceedances of air quality standards. Construction of the proposed bleeder shaft would affect 15.8 acres of prime farmlands. No other prime farmlands within the expansion are expected to be adversely affected. Because the 16.5-acre site would be cleared, local resident wildlife would be displaced for the life of the facility. Sugar Camp is required to implement appropriate best management practices during construction of the bleeder shaft to prevent adverse effects to water quality from site runoff. The bleeder site would be returned to its former condition following the planned 6-year operational life of the facility; thus, effects to prime farmlands, wildlife, and vegetation would be temporary and minor. A minor increase in traffic on County Route 1000 North could occur during construction and operation of the bleeder site.

Methane, a greenhouse gas, released during underground longwall mining of the proposed expansion area is estimated to generate an average equivalent of approximately 28,000 metric tons of carbon dioxide per year over the four-year period that the expansion area would be mined. This is approximately 0.02 percent of the total annual Illinois greenhouse gas emissions and is considered a minor contribution to statewide greenhouse gas emissions. Greenhouse gas emissions from Sugar Camp's mining of its entire permitted mine area also constitute a minor contribution to statewide emissions.

Subsidence within the mine expansion area is not expected to adversely affect the marsh rice rat or the barn owl, which are both state-listed threatened species. Likewise, the proposed underground mining and subsequent subsidence is not expected to affect any sensitive habitat for the Indiana bat, which is federally listed as endangered. A site

survey of the bleeder site indicated that no suitable or potential Indiana bat habit exists on the site. Adoption of the Action Alternative would not affect Indiana bats or any designated critical habitat for this species. No federally listed plant or aquatic species are known to occur within the proposed mine expansion area. Thus, implementation of the Action Alternative, including underground mining activities and the construction and operation of the proposed bleeder shaft would not affect any federally listed plant or aquatic species or their designated critical habitats.

The TVA-owned coal reserves within the expansion area constitute about 10 percent of the total amount of coal to be mined under Sugar Camp's mine plan, and mining would continue for approximately 5 years. Thus, no significant economic benefits to the local economy are likely to accrue from mining the TVA-owned coal reserves in the expansion area. No disproportionate effects to minority or low-income populations are anticipated under the Action Alternative. Thus, the action is consistent with Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations).

Construction and operation of the proposed bleeder shaft would not affect any historic resources. Subsidence is not expected to affect archaeological resources within the mine expansion area due to the relatively uniform settling of the surface. Thus, TVA has determined that no historic properties would be affected by the proposed undertaking.

Section 1.3 of the 2011 EA describes the public involvement undertaken by state and federal regulatory agencies concerning the proposed mining activities. Announcements appeared in local newspapers regarding the proposed 880.3-acre mine expansion area and the proposed bleeder shaft and access road.

As stated in the 2011 EA, TVA consulted informally with the U.S. Fish and Wildlife Service concerning potential effects to the Indiana bat. In accordance with Section 106 of the National Historic Preservation Act, TVA consulted with the Illinois State Historic Preservation Officer during the preparation of the 2011 EA regarding potential effects to historic resources. Consequently, a memorandum of agreement (MOA) between TVA and the Illinois State Historic Preservation Officer was signed in 2011 to establish guidelines for the treatment of two historic structures. Appropriate Native American Tribes were also contacted concerning the undertaking.

Mitigation

As stated in Section 4.10 of the 2011 EA and in the 2011 FONSI, the State of Illinois requires Sugar Camp to implement best management practices and certain mitigation measures to compensate for potential adverse effects as conditions of Mine Permit 382. These conditions would remain in effect. The 2011 EA also stipulated that as conditions of approval of the mining, TVA would require Sugar Camp to adhere to the requirements of the MOA on treatment of historic properties and to include TVA-owned coal lease property in Sugar Camp's Indiana Bat Protection and Enhancement Plan activities, including mist net surveys, tree removal restrictions, and tree species replacement guidelines. These measures remain in effect. Thus, the Indiana Bat Protection and Enhancement Plan activities apply to the proposed 880.3-acre expansion area. These measures are listed in Section 2.3 of the SEA.

Conclusion and Findings

Based on the findings listed above and the analyses in the SEA, we conclude that the proposed action of allowing Sugar Camp to extract TVA-owned coal reserves according to the proposed mining plan would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required. This finding of no significant impact is contingent upon adherence to the conditions and mitigation measures described above



May 31, 2013

Charles P. Nicholson, Principal Program
Manager
NEPA Interface
Environmental Permits and Compliance
Tennessee Valley Authority

Date Signed