

TGP Dixie Development Company, LLC

Coyote Canyon South Geothermal Exploration

Finding of No Significant Impact

DOI-BLM-NV-C010-2012-0051-EA

December 2012



BACKGROUND

In 2011, Terra-Gen Power Dixie Development Company (TGP) submitted to the (US) Department of Interior, Bureau of Land Management (BLM) Stillwater Field Office, an operations plan to drill and test up to 15 explorations wells at the Project Area and to extract gravel from three gravel pits to facilitate access road and well pad construction. TGP proposes to expand a previously approved geothermal exploration area, originally called “Coyote Canyon”. This new proposal is to explore the geothermal resource potential of lands directly to the south of Coyote Canyon in three additional federal geothermal leases, referred to here as the Coyote Canyon South (CCS) lease area (Lease Area). The Lease Area is located in Churchill County, Nevada on federal lands managed by the US Department of the Interior, BLM in Dixie Valley.

The BLM prepared Environmental Assessment (EA) DOI-BLM-NV-C010-2012-0051-EA *Coyote Canyon South Geothermal Exploration* to analyze potential impacts on the human and natural environment that may result from geothermal exploration activities within CCS Lease Area, construction of a temporary personnel camp and from the extraction of gravel from three gravel pits.

The Lease Area consists of approximately 7,588 acres in Churchill County, Nevada. TGP proposes to conduct geothermal exploration in a portion of the Lease Area called the Project Area. The main Project Area consists of 3,530 acres. TGP is proposing exploration activities at up to 15 potential well locations. Specific well locations, potentially including up to three wells at a single drill pad, would be determined during field activities based on observations during drilling. In addition to drilling and testing geothermal exploration wells, the Proposed Action involves the construction of access roads and drilling pads. Supporting facilities would also be constructed to support well drilling and testing. Well installation and road construction would disturb approximately 68 acres. These facilities are described in Sections 2.1.3, Site Access and Road Improvements, and 2.1.5, Site Preparation Activities of the EA.

The exploration wells and access roads would be located wholly on land administered by the BLM and leased for exploration activities to TGP. Highway 121 passes through the Lease Area, therefore no new access roads outside the Lease Area would be needed.

Exploration activities in the area, just north of the proposed project were previously evaluated in the Coyote Canyon and Dixie Meadows Geothermal Exploration EA (EA #DOI-BLM-NV-C010-2011-0001-EA). A Finding of No Significant Impact and Decision Record were signed on March 7, 2011. Geothermal exploration activities authorized by BLM are current and ongoing in the Project Area. Through these exploration activities, TGP has acquired new information about the geothermal resource and is currently seeking authorization for four new exploration wells

The purpose of the geothermal exploration is to confirm that sufficient reservoir capacity is available to allow long-term production. The EA analyzed potential impacts from the proposed exploration and testing activities, extraction of gravel from nearby gravel pits and associated access roads.

Individual geothermal drilling permits would be issued separately from this document.

FINDING OF NO SIGNIFICANT IMPACT DETERMINATION

This finding and conclusion is based on the consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 Code of Federal Regulations 1508.27), both with regard to the context and the intensity of impacts described in the EA.

Based on the analysis of the Coyote Canyon South Geothermal Exploration Project, EA# DOI-BLM-NV-C010-2012-0051-EA, I have determined that the Proposed Action will not have a significant effect on the human environment and an Environmental Impact Statement will not be prepared. This finding is based on the context and intensity of the project as described:

CONTEXT:

The Project Area is located in the western portion of Dixie Valley and is approximately 27 air miles northeast of Fallon, Nevada. The western edge of Dixie Valley is defined by the Stillwater Range and the eastern edge is defined by the Clan Alpine Mountains. The Project Area is located at elevations ranging from approximately 3,400 feet to 3,600 feet in the northern part of Dixie Valley. The Proposed Action area is located in a sparsely populated rural area with minimal industrial sources or potential impacts to the air shed.

The original lease area at Coyote Canyon that was analyzed for the previously approved exploration and utilization activities covered 7,637 acres (EA DOI-BLM-NV-C010-2010-0010-EA). These lands are located directly to the north of the proposed CCS project area (Project Area). The Project Area is defined by the area that has been surveyed under a Class III cultural resources survey in support of the CCS project for gravel extraction distributed across three gravel pits. The Lease Area is composed of the following three leases purchased by TGP:

- N-86889, which covers 5,045 acres;
- N-88416, which covers 1,263 acres; and
- N-89605, which covers 1,280 acres.

In total, the Lease Area covers 7,588 acres. When combined, the current Lease Area and the original Coyote Canyon lease area to the north cover 15,225 acres. In 2011, the BLM approved the new Coyote Canyon Unit, which includes all 15,225 acres, including all 7,588 acres of the Lease Area and, subsequently, all 3,530 acres of the Project Area (the 45 acres of gravel pits are outside of the Lease Area). The Project Area is shown within the context of the Coyote Canyon Unit and the original Coyote Canyon project area on Figure 2 within the EA document.

On October 23, 2009, as part of the original Coyote Canyon project, TGP submitted applications for rights-of-way (ROWs) to develop roads between TGP's separate geothermal leases. This off lease action would provide connectivity to the Lease Area from the original Coyote Canyon lease area. No new ROWs are required for on-lease access roads.

INTENSITY:

The CEQ regulations include the following ten considerations for evaluating intensity:

1) *Impacts that may be both beneficial and adverse.*

None of the environmental effects discussed in detail in the EA (refer to Chapter 3 Affected Environment and Environmental Consequences) are considered significant, nor do the effects exceed any known threshold of significance, either beneficial or adverse. The Proposed Action is a geothermal resource exploration project that proposes construction of up to 15 well pads and associated slim wells or exploration wells in the Project Area. The Proposed Action also includes construction of new access roads and upgrading existing roads as well as a temporary personnel camp and extraction of gravel from three gravel pits; as described in the EA (refer to Chapter 2, Section 2.1 Proposed Action).

Impacts that would result from implementation of the Proposed Action would include mostly short-term impacts (vehicle emissions, visibility of equipment, etc...). Solid waste would be generated as a result of the Proposed Action, resulting in residual impacts. The waste would be disposed in approved, permitted disposal facilities. Impacts to vegetation and soils would be mitigated by interim and final reclamation process. Impacts to wildlife, including migratory birds and sensitive species, would be temporary. The potential introduction of invasive, non-native species as a result of the Proposed Action would be minimized through the use of Best Management Practices (BMPs) but some potential for the spread of nonnative species could remain once all reclamation procedures have been completed.

Implementation of BMPs and mitigation measures in combination with proposed reclamation activities of all disturbances, as described in the EA, would reduce adverse impacts to the human environment.

2) *The degree to which the proposed action affects public health or safety.*

The Proposed Action is to drill into and develop the geothermal resources in the project area analyzed in the EA. A crew of up to 36 workers would be working at the site if there are three wells being drilled at once, however it is likely that only one well would be drilled at a time, requiring a crew of up to 12 workers. Measures are in place to ensure their health and safety during operations. It is reasonable to expect further resource exploration and development which could affect public health or safety; however those types of activities would be subject to further environmental analysis when proposed. These types of issues could be addressed through conditions of approval for further exploration and development actions as determined by federal and state agencies.

3) *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

The BLM have considered the Area of Potential Effects (APE) relative to cultural resources and historic properties, providing oversight for a full inventory of the areas that include construction

of the proposed well pads, access roads, and pipelines and their associated activity. For this current project area, a 3,386-acre Class III cultural resources inventory was conducted in April 2011 (Lennon 2011). The results of the survey have been analyzed in conjunction with the previous inventories.

Based on the cultural inventory, it was determined that historic properties are present in the APE and TGP's proposed activities would avoid these sites (Refer to Section 2.1.10 and 3.15.1 of the EA). There are no park lands, prime farm lands, wild and scenic rivers or ecologically critical areas in or near the proposed project activities.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The EA was sent out on September 24, 2012 for a 30-day public comment period. The BLM received 6 individual comment submissions. These comments were submitted by different federal and state agencies. The agencies that commented were the U.S. Environmental Protection Agency, Nevada Division of Environmental Protection – Bureau of Water Pollution Control; the Nevada Department of Wildlife, the Nevada Department of Transportation, the Nevada Division of State Lands and the State Land Use Planning Agency, and the Nevada State Historic Preservation Office. No additional comments from the public were received. There were minor changes made to the text of the EA. These comments and BLM responses to comments are found in Appendix D “Response to Comments” of the EA.

The effects of the Proposed Action on the human or natural environment were determined to be negligible. Drilling for geothermal resources and its potential effects on the subsurface in this project area have been thoroughly analyzed in this EA (refer to Chapters 3 and 4).

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The Proposed Action is not unique or unusual. The action described in Chapter 2 of the EA is drilling for geothermal resources. There are no predicted effects on the human environment that are considered highly uncertain or involve unique or unknown risks. Public comment has been minimal.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

As exploration advances and additional development of energy generation facilities is proposed on a geothermal lease, an environmental analysis may be warranted to assess impacts resulting from these types of projects. The progression of the project from leasing to exploration to development is customary and expected. This action will not establish a precedent for future actions within the area, and all future proposed actions within the project area will be analyzed under a site-specific environmental analysis and analyzed on its own merits.

7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

Resource values, as identified in this EA, were evaluated for cumulative impacts (Refer to Chapter 4 of the EA) and determined that cumulative impacts would be negligible for the proposed project. Subsequent actions for geothermal resource exploration and/or development would be evaluated for cumulative impacts in associated environmental analysis that maybe warranted and would be addressed through mitigation of the proposed future action and conditions of approval.

8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP) or may cause loss or destruction of significant scientific, cultural, or historical resources.*

As described in the EA (refer to Chapter 3 and 4 of the document), the project will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historical resources. TGP's proposed activities would avoid any cultural sites (Refer to Section 2.1.10 and 3.15.1 of the EA).

9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

As described in the EA (Refer to Chapter 3, Section 3.14.2.1), no known threatened or endangered species or critical habitat has been identified in the project area considered in the EA. Any future exploration and development actions would be evaluated in a separate, site-specific environmental analysis on its own merits.

10) *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

As described in the EA, the Proposed Action does not violate any known Federal, State, or local law or requirement imposed for protection of the environment.


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12-18-12
Date