Reading file

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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San Francisco, CA 94105-3901

December 14, 2007

Jane Peterson
Project Manager/Energy
Bureau of Land Management
Ely Field Office
HC 33 Box 33500
Ely, Nevada 89301-9408

Subject: Draft Environmental Impact Statement for the Toquop Energy Project, Lincoln County, Nevada [CEQ# 20070421]

Dear Ms. Peterson:

The U.S. Environmental Protection Agency (EPA) has reviewed the Bureau of Land Management's (BLM) Draft Environmental Impact Statement (DEIS) for the Toquop Energy Project. Our review and comments are provided pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

In April 2003, the BLM issued a Record of Decision (ROD) on the Final Environmental Impact Statement (FEIS) for the Toquop Energy Project. The proposed project was to include the construction and operation of a 1,100 megawatt (MW) natural-gas-fired electric power generation plant and associated infrastructure. Since 2003, the price of natural gas has increased and the natural gas market has remained unstable. The proponent, Toquop Energy Company, LLC (Toquop Energy), reconsidered the original proposal and now proposes to construct a 750 MW coal-fired power plant in the same location. The scope of the DEIS is limited to comparing two alternatives, the 1,100 MW natural gas-fired power plant (No-Action Alternative) and the 750 MW coal-fired power plant (Proposed Action Alternative).

EPA recognizes the complexity of the proposed project and supports an energy development approach that assures a long-term, sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health. However, the goals of providing additional energy supplies, aggressive energy conservation, and diversification of energy supply sources should be carefully balanced.

Based on our review of the document, we have rated this DEIS as EC-2, Environmental Concerns – Insufficient Information (See attached "Summary of EPA Rating System"). EPA believes the FEIS should address the following topics in greater detail: the scope of the alternatives analysis, the potential adverse impact to approximately 16 acres of aquatic resources, the uncertainty of groundwater availability, and carbon dioxide emissions.

We recommend the FEIS alternatives analysis include renewable energy resources and, as appropriate, energy conservation. We also recommend the project applicant meet with EPA, U.S. Army Corps of Engineers, and the Bureau of Land Management to discuss the impacts to surface water resources, mitigation, and permitting requirements and that the FEIS discuss in detail measures for groundwater protection. Finally, we recommend the FEIS discuss further issues associated with greenhouse gas emissions and climate change.

We appreciate the opportunity to review this DEIS and are available to discuss our comments. Please send one hard copy of the FEIS and one CD ROM copy to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at (415) 972-3846 or Ann McPherson, the lead reviewer for this project, at (415) 972-3545 or at mcpherson.ann@epa.gov.

Sincerely,

Nova Blazej, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating Definitions
Detailed Comments

Cc: Mike Jewell, U.S. Army Corps of Engineers
Steve Roberts, U.S. Army Corps of Engineers
Leilani Takano, U. S. Fish and Wildlife Service
Colleen Cripps, Nevada Division of Environmental Protection
Michael Elges, Nevada Division of Environmental Protection
Matthew DeBurle, Nevada Bureau of Air Pollution Control
John Bunyak, U.S. National Park Service
Tracy Taylor, State of Nevada Water Resources State Engineer

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

US EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE TOQUOP ENERGY PROJECT, LINCOLN COUNTY, NEVADA, DECEMBER 14, 2007

Supplemental Environmental Impact Statement and Tiering

The Bureau of Land Management (BLM) has chosen to require a new Environmental Impact Statement (EIS) rather than a supplement to the 2003 Final Environmental Impact Statement (FEIS); the current Draft Environmental Impact Statement (DEIS) is tiered to the 2003 FEIS. We note for future reference that the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations indicate that tiering is appropriate when general matters have already been discussed in broader EISs, such as national program or policy statements, or when an EIS has been prepared on a specific action at an early stage. See 40 CFR 1508.28. Generally, where agencies make substantial changes in a proposed action, a Supplemental EIS may be the most appropriate document. See 40 CFR 1502.9 (c).

The U.S. Environmental Protection Agency (EPA) believes that some project components, such as the alternatives analysis, have not been appropriately revisited in light of new information (discussed below under "Alternatives Analysis"). In addition, the EIS incorporates by reference relevant aspects of the earlier analysis, but does not include that analysis for review. The CEQ regulations provide that material incorporated by reference be reasonably available for inspection within the comment period. See 40 CFR 1502.21. The 2003 FEIS and the 2003 Record of Decision (ROD) were not included in the DEIS and were not available online until late in the comment period.

Recommendation:
We recommend the 2003 FEIS and 2003 ROD be made available to the public on-line for the duration of the environmental review process. Also, BLM may want to consider including a compact disk (CD) of these documents in the FEIS.

Purpose and Need

EPA believes the discussion in the DEIS regarding the purpose and need for the project could be expanded. According to the 2007 DEIS, the purpose of the action is to provide public land for the development of energy production by allowing for the construction of power plants on public lands managed by the BLM (pg. 1-2). The need for the action is established by BLM's responsibility to respond to applications for rights-of-way (ROW) grants and a request for land disposal (pg. 1-2).

EPA understands the rationale in considering the "federal" purpose and need; however, EPA recommends that the FEIS further characterize the "project" purpose and need. The 2003 FEIS indicates that the proposed project would generate electrical power at competitive costs and contribute to meeting the demand for power in the Western Systems Coordinating Council service area, including Arizona, New Mexico, and southern Nevada power area. The project purpose in that document is energy generation and economic development, rather than

compliance with BLM's multiple-use mission. Especially in light of the changing energy market, as detailed below, we recommend BLM discuss this issue further in the FEIS.

Based on our review of available information, EPA recommends that the FEIS discuss whether the density of new coal-burning plants proposed in Nevada may be in excess of the demonstrated need for energy. If so, this could result in the state or region carrying a burden of power generation, resulting in potentially significant impacts on the environment. Four coal-burning plants have been proposed for Nevada including: the White Pine Energy Station (1,590 MW), Toquop Energy Project (750 MW), Ely Energy Center (1,500 MW), and Newmont Nevada Energy Project (200 MW). The combined power generated from these four proposed power plants in Nevada exceeds 4,000 MW. The DEIS states that the Western Electricity Coordinating Council (WECC) forecasts demands in the Arizona, New Mexico, and southern Nevada subregion will require 6,340 MW of additional power generation sometime between 2005 and 2012 (pg. 1-4). However, the WECC data also indicate that energy generation additions in this sub-region for the same time period (2005-2012) include 5,944 MW of power, excluding the proposed power plants in Nevada. It appears that anticipated demand will be met largely by generation additions, excluding the plants under consideration in Nevada (tables 25, 26; WECC Ten Year Coordinated Plan Summary 2005). EPA acknowledges that there may be need for additional energy; however, the need for additional energy beyond the WECC forecast has not been discussed within the context of the 2007 DEIS.

Recommendation:
We recommend the FEIS discuss the purpose and need for the proposed project in the context of the energy market this project would serve. We also recommend the FEIS address whether the density of new coal-burning plants proposed in Nevada may be in excess of the demonstrated need for energy.

Alternatives Analysis

EPA recommends that the DEIS *Alternatives Analysis* be broadened. The DEIS presents two alternatives and a brief discussion on alternative coal generation technologies (pg. 2-17 to 2-19). The DEIS states that other alternative generation technologies were eliminated from detailed consideration in this EIS—without further explanation (pg. 2-16). The basis of this EIS is an economic reassessment of an alternative previously dismissed from detailed analysis in the 2003 EIS. EPA believes the 2007 EIS should have revisited the other alternatives previously dismissed from detailed analysis in the 2003 EIS, in light of economic and technological changes, and that it would be appropriate to discuss these alternatives in greater detail in the 2007 FEIS.

The DEIS states that there is medium potential for geothermal resources in the Toquop alluvial basin (pg. 3-35; pg. 3-36); however, a geothermal alternative is not analyzed in either the 2003 or 2007 EIS. In 2006, the Geothermal Taskforce of the Western Governor's Association estimated that Nevada could install an additional 1,488 MW of geothermal power economically by 2015, and estimated potential by 2025 as high as 2,895 MW from identified resource areas. In addition, researchers from the U.S. Department of Energy's National Renewable Energy

Laboratory estimate that Nevada has the potential to develop 2,770 MW of potential wind-powered generating capacity and up to 165,823 MW of solar energy resources. However, a wind or solar alternative is not analyzed in the 2007 EIS, nor does the DEIS address energy conservation or energy efficiency as a proposed alternative for the project. Increasing requirements for conservation or energy efficiency is an action that local, state, and the federal government can undertake to address the growing need for energy within the Western United States.

Recommendations:
EPA recommends that the FEIS include an expanded analysis of alternatives, including renewable energy resources (solar, wind, and geothermal) and an energy conservation alternative[1].

EPA also recommends the FEIS apply consistent screening criteria to each alternative analyzed and summarize the reasons for eliminating alternatives from detailed consideration.

The *Alternatives Analysis* does not include a "*No-Build*" alternative. EPA believes that this alternative is important to consider because it provides a benchmark that enables decision makers to compare the magnitude of environmental effects. In this DEIS, the project proponent and BLM have elected to consider the No-Action Alternative as the construction of the 1,100 MW natural-gas-fired power plant; consequently, the DEIS did not evaluate a "*No-Build*" alternative.

Recommendation:
To clearly assess the potential environmental impacts associated with the construction of the proposed project, EPA recommends that the *Alternatives Analysis* include a "*No-Build*" Alternative as a point of comparison.

Water Resources

Clean Water Act Section 404

EPA is concerned about the potential adverse impact to approximately 16 acres of aquatic resources that would result from the project, as proposed. We understand that the jurisdictional delineation is not complete and has not been verified by U.S. Corps of Army Engineers (Corps). If it is determined that there are Clean Water Act (CWA) jurisdictional waters within the project area, a Section 404 permit will be necessary for any discharges of dredged or fill material into these waters. We are also concerned the extent of jurisdictional waters under consideration may be underestimated. The DEIS states that the portion of the proposed rail line route within the Meadow Valley Wash at Leith Siding was not assessed as part of the jurisdictional delineation,

[1] See Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 40 CFR Parts 1500-1508, Federal Register, Vol. 46, No. 55, March 23, 1981, Questions #2a and #2b.

because the area has been disturbed by flooding and subsequent efforts by the Union Pacific Railroad to repair flood damage to its rail line (pg. 3-53).

If there are jurisdictional waters, any permitted discharge into waters of the United States must be the *Least Environmentally Damaging Practicable Alternative* (LEDPA) available to achieve the project purpose. See Section 404(b)(1) Guidelines (40 CFR 230). All potential jurisdictional waters impacted would be ephemeral washes, with the exception of the perennially flowing Meadow Valley Wash (pg. 4-26). The project proponent bears the burden of clearly demonstrating that the preferred alternative is the LEDPA that achieves the overall project purpose, while not causing or contributing to significant degradation of the aquatic ecosystem. Based on the information currently available in the DEIS, it is unclear whether the project, as proposed, complies with the Section 404(b)(1) Guidelines.

Recommendations:
We recommend the project applicant meet with EPA, the Corps, and BLM to: 1) discuss the extent of jurisdictional waters on the project site and the direct and indirect project impacts; 2) identify opportunities to avoid and minimize impacts to waters of the United States; 3) review the process for identifying the LEDPA; and 4) outline the requirements of a compensatory mitigation plan. We recommend the FEIS discuss the outcome of this meeting.

If the project will result in discharge of dredged or fill material into waters of the United States, we recommend that the information necessary to complete a Section 404 evaluation be included in the FEIS. Specifically, the alternatives analysis should include a range of practicable alternatives that meet the project purpose. We recommend the FEIS discuss the steps taken to avoid and minimize impacts to waters of the United States. This information will facilitate project planning.

We recommend the FEIS include a functional assessment of the waters on the proposed project site and the change to the function of those waters as a result of the proposed project. We specifically recommend the FEIS include information on the functions and locations of ephemeral washes in the project area because of the important hydrologic and biogeochemical role these washes play in direct relationship to higher-order waters downstream.

To the extent any aquatic features that could be affected by the project are determined not to constitute waters of the United States, EPA recommends that the FEIS characterize the functions of such features and discuss mitigation

The extent of jurisdictional waters within the Meadow Valley Wash at Leith Siding must still be determined, regardless of the previous disturbance and subsequent efforts to repair flood damage. We recommend that this information be clarified and updated in the FEIS.

The characterization of permanent and temporary impacts to surface waters is incomplete. The DEIS states that, "potential impacts evaluated under these two categories of

disturbance would only occur if sufficient direct rainfall occurs."(pg. 4-22). This statement implies that impacts to waters would occur only if there were sufficient direct rainfall; however, adverse effect to the physical, biological, and chemical function of waters may also occur as a result of the discharge of dredged or fill material into waters.

Recommendation:
We recommend this paragraph be revised to acknowledge that potential impacts may also occur from the discharge of dredged or fill materials, irrespective of the occurrence of sufficient direct rainfall.

Evaporation Pond

For the gas-fired power plant, the DEIS states that a 5-acre uncovered equalization pond will be constructed onsite to keep the water chemistry balanced for use in the cooling system and a 20-acre evaporation pond would be constructed to handle the wastewater disposal (pg. 2-2). These ponds routinely attract wildlife. Evaporation ponds generally contain highly saline water and ingestion of high concentrations of sodium may result in adverse effects to birds, bats, and terrestrial wildlife (pg. 4-30).

Recommendations:
EPA recommends additional mitigation measures be included to keep birds and other fauna from entering the evaporation pond, such as exclusionary fencing, textured escape ramps, visual and audio scare tactics, and netting. EPA also recommends that the effectiveness of the mitigation techniques be monitored.

EPA recommends installing monitoring wells near or beneath the evaporation ponds and sampling these monitoring wells on a regular basis to ensure protection of the aquifer underlying the project.

Groundwater Resources

EPA is concerned about the uncertainty described in the EIS of groundwater availability for this project and other projects with the region, as well as the uncertainty regarding potential cumulative impacts on groundwater resources. The Nevada State Engineer approved 2,100 acre-ft/yr of water for the natural-gas power plant; however, the applicant will need up to 7,000 acre-ft/yr for the natural-gas power plant or 2,500 acre-ft/yr for the coal-fired power plant (pg. 2-4; pg 2-15). There are many other competing applicants for scarce groundwater resources in the area (pg. 4-64; pg. 3-49; pg. 3-50). A population boom, as well as the availability of up to 103,500 acres of land for sale in Lincoln County, suggests that the demand for groundwater will increase over the next 5-10 years (pg. 4-64).

Recommendations:
EPA recommends the FEIS clearly demonstrate whether there is sufficient groundwater for the lifetime of this project and other reasonably foreseeable projects in the study area. We also recommend that FEIS address what measures would be taken, and by whom,

should groundwater resources in the basin become overextended due to additional growth, continued drought, and the utilization of existing or pending water rights in the basin(s).

EPA recommends the cumulative impacts analysis for groundwater include a discussion of the potential effect of future climate change on the proposed project and groundwater development. We recommend this discussion provide a short summary of the climate change studies specific to the project area and Colorado River Basin[2], including their findings on potential environmental and water supply effects and their recommendations for managing these effects.

To clarify the regulatory structure for protecting groundwater, we recommend the FEIS describe the water right permitting process and the role of the Nevada State Engineer in protecting beneficial uses, human health, and the environment. This would include, for example, describing whether water right permits include special conditions; measures to mitigate direct, indirect, and cumulative impacts; and provisions for monitoring and adaptive management.

The Lincoln County Water District (LCWD) has proposed a project to pump and transport approximately 23,800 acre-ft/yr from the Tule Desert and Clover Valley. If this project is constructed, it would eliminate the need for a separate water pipeline for the Toquop Energy Project (pg. 2-15). The impacts of groundwater pumping will be addressed in more detail in a DEIS for the Lincoln County Land Act (LCLA) Groundwater Development Project, which is the probable water source for the Toquop Energy Project (pg. 4-22).

Recommendation:
Because of the potential connection between the two projects, EPA recommends that the FEIS summarize the conclusions presented in the LCLA Groundwater Development Project EIS, if this report is available for review prior to the publication of the Toquop Energy Project FEIS.

The 2003 EIS concluded that pumping water from the fractured-rock aquifer in the Tule Desert hydrographic basin would not result in substantial decline of groundwater levels or a significant reduction in groundwater resources (pg. 4-19). The DEIS acknowledges, however, that there is a lack of data in three principle areas: 1) the amount and movement of groundwater in the basin-filled deposits within the Tule Desert and Clover Valley; 2) the amount and movement of groundwater in the fractured-rock aquifer underlying the Tule Desert, Clover Valley, and Virgin River Valley hydrographic areas; and 3) the location and amount of groundwater discharge and recharge from the fractured-rock aquifer underlying the Tule Desert and Clover Valley (pg. 4-19). The 2007 DEIS states that the actual extent of the groundwater level decline in the Tule Desert basin fill deposits is unknown, because of the aquifer's complexity and limited available data (pg. 4-29).

[2] A number of studies specific to the Colorado River Basin indicate the potential for significant environmental impacts as a result of changing temperatures and precipitation (Colorado River Basin Water Management: Evaluating and Adjusting to Hydroclimatic Variability, National Research Council, 2007).

Recommendation:
EPA recommends the FEIS discuss how the determination was made that there will be no substantial decline of groundwater levels if the extent of the groundwater decline in the Tule desert basin fill deposits is unknown. EPA recommends that the FEIS provide additional information on the proposed well field in the Tule Desert and clarify whether the wells will tap into the fractured-rock aquifer or the basin-fill aquifer, since there appears to be significant hydraulic interconnection between the two units.

Although Section 4.10 concludes that no mitigation would be required for groundwater resources, the DEIS states that groundwater withdrawals could lead to significant cumulative decline in groundwater levels and flows (Section 4.18.3.8; pg. 4-64). The DEIS also states that an agreement between the LCWD and the National Park Service stipulates that the LCWD will monitor, manage, and mitigate unanticipated impacts that result from the development of groundwater resources in the Tule Desert area (pg. 4-64). Given the potential for adverse impacts from pumping groundwater, EPA believes it is important that detailed monitoring and mitigation information from the proposed project be provided to the public and decision makers.

Recommendation:
EPA recommends that the groundwater monitoring program be clearly described in the FEIS, and the Toquop Energy Project's role and responsibility be defined. We also recommend BLM revisit whether groundwater mitigation would be necessary for this project in light of the potentially significant cumulative impacts to groundwater resources.

Climate and Air Quality

Appendix D provides well-written and detailed information regarding the air quality impacts of the natural-gas power plant and the coal-fired power plant. A short summary of this information should be presented and included in the body of the EIS as well as in the appendix.

Since the Toquop Energy Station is located in an attainment area and the potential to emit is expected to exceed the Prevention of Significant Deterioration (PSD) threshold of 100 tons/ per year (tons/yr), a PSD permit is required for construction of the project. EPA has not received a copy of the draft air permit but will review it when it has been proposed by the Nevada Division of Environmental Protection (NDEP) and is released for public comment.

Recommendations:
EPA recommends that the information presented in Appendix D be summarized and incorporated in the *Air Quality Impacts* section of the FEIS (Section 4.7).

While we recognize that this will be addressed in the PSD permit, we recommend the FEIS address the range of emission control technologies that were evaluated for use at the facility to achieve *Best Available Control Technology* (BACT), and discuss the factors

and process that are being used to select the appropriate technology.

EPA recommends that to the extent possible the FEIS quantify emissions for mercury, lead, and carbon dioxide for all alternatives. These emissions could be summarized in table D-29 and discussed in conjunction with the criteria pollutant emissions.

As part of the cumulative impacts analysis, EPA recommends the FEIS include a comparative table of emissions values for the four proposed plants in Nevada, including lead, mercury, and carbon dioxide, as the information is available. Information for the proposed White Pine Energy Station, for example, is presented in the White Pine Energy Station DEIS in table 4.6-4 and table 4.6-31.

The DEIS states that the permit application proposed a controlled nitrogen oxides (NOx) emission rate for the main boiler of 0.06 pounds per million British Thermal Units, 24-hour average (lb/MMBTU) (pg. D-43), which is what EPA proposed in the air permit for the Desert Rock Energy Facility, a project proposed for development on Navajo Nation tribal land in New Mexico. During the public comment period for the Desert Rock permit, commenters supplied information indicating that lower NOx emission rates may have been achieved at another facility. Specifically, four coal fired boilers at the WA Parish facility in Texas have operated at levels lower than 0.06 lb/MMBtu since being retrofitted with selective catalytic reduction (SCR) in 2003 and 2004. Emissions data for these boilers are available from EPA's Clean Air Markets database.

Recommendations:
EPA recommends Toquop Energy consider whether similar emission rates could be achieved for the Toquop Energy Project.

For clarity, EPA recommends the FEIS discuss the status of air permits that were applied for on the 2003 natural-gas-fired power plant and the proposed coal-fired power plant.

Mercury Emissions

EPA believes the FEIS should include a more in-depth discussion of the project's mercury emissions and potential impacts to biological resources, given that coal-fired power plants are the largest remaining source of anthropogenic mercury emissions in the United States (http://www.epa.gov/air/mercuryrule/basic.htm). The 2007 DEIS references the Biological Opinion issued by the U.S. Fish and Wildlife Service on July 23, 2003 in conjunction with the 2003 FEIS (pg. 4-32); however, the Biological Opinion was based on emissions from the natural-gas power plant. Given that a coal-fired power plant will emit greater concentrations of mercury than a natural-gas power plant, we recommend the FEIS discuss this topic in greater detail, including the status of consultation with the U.S. Fish and Wildlife Service on this topic.

Recommendation:
Because of the potential impacts to the desert tortoise, we recommend BLM consult with the U.S. Fish and Wildlife Service and include the outcome of this consultation in the

FEIS. We also recommend that the FEIS discuss additional monitoring and mitigation, as appropriate.

In May 18, 2005, EPA promulgated the first national standards (Clean Air Mercury Rule - CAMR) for mercury emissions from coal-fired electric power plants. Nevada's mercury budget is 570 pounds per year (lbs/yr) from 2010 to 2017. From 2018 on, Nevada's budget is 224 lbs/yr. Mercury emissions from the proposed coal-fired power plant are estimated at 0.098 tons/yr, or 196 lbs/yr (pg. 4-12). This figure was calculated based on the assumption that 80 percent control of mercury would be achieved by the proposed project (pg. 4-12). The DEIS states that Toquop Energy may comply with the final mercury new source performance standards without the addition of a specific mercury control device (pg. D-14).

Recommendation:
EPA recommends the FEIS describe the potential impacts of the CAMR allowance allocations process[3] on the project, considering all existing and new coal-fired power plants would receive allowances from the limited mercury budget. We note that the proposed project emissions of 196 lbs/yr would represent almost 90% of the total Statewide mercury budget in 2018. In addition, we recommend the FEIS describe more fully how additional emission controls could reduce mercury emissions.

Greenhouse Gas Emissions

EPA believes the greenhouse gases and climate change sections in the FEIS could be expanded, keeping in mind that there are currently no EPA regulatory standards directly limiting greenhouse gas emissions.[4] Listed below are EPA's recommendations for more fully disclosing potential impacts related to greenhouse gas emissions.

Section 4.7, *Climate and Air Quality,* presents a brief discussion on the potential air quality impacts associated with the natural-gas power plant and the coal-fired power plant. This section, however, does not include information on greenhouse gas emissions. In Appendix D, the DEIS states that carbon dioxide emissions due to coal combustion at the proposed plant are estimated to be 7.08 million tons/year (pg. D-32). EPA believes that, as a point of comparison, the DEIS should also estimate the greenhouse gas emissions associated with all alternatives, including the natural-gas power plant.

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[3] On December 3, 2007, Wayne Nastri, Regional Administrator of USEPA Region 9, signed a Federal Register notice proposing disapproval of Nevada's CAMR State Plan. If EPA finalizes the disapproval, Nevada would be covered under the CAMR Federal Plan under a separate action. The CAMR Federal Plan is a cap and trade program and the allowance allocation methodology is described at 40 CFR 62.15942.

[4] Since the issuance of the April 2, 2007 Supreme Court opinion in Massachusetts, et al. v. EPA, 549 U.S. (2007), EPA has begun to develop regulations to address greenhouse gas emissions from motor vehicles and fuels under the direction of the President's May 14, 2007 Executive Order and relevant Clean Air Act authorities. The Agency continues to evaluate the potential effects of the Court's decision with respect to addressing emissions of greenhouse gases under other provisions of the Clean Air Act. Thus, neither this comment letter nor the EIS for an individual project reflects, and should not be construed as reflecting, the type of judgment that might form the basis for a positive or negative finding under any provision of the Clean Air Act.

The 2003 FEIS indicates that the proposed project would contribute to meeting the demand for power in the Western Systems Coordinating Council service area, including Arizona, New Mexico, and southern Nevada power area. In February 2007, New Mexico and Arizona joined with California, Oregon, and Washington to create the Western Regional Climate Action Initiative, a joint strategy to fight global warming, including development of a design for a regional market-based multi-sector mechanism, such as a load-based cap and trade program, to achieve regional greenhouse gas reduction goals. Nevada is an official observer to this Western Regional Climate Action Initiative. Therefore, EPA believes that it would be useful for decision makers in Nevada to more clearly understand the greenhouse gas contribution of the proposed project within the context of other contributors at the state and regional level.

On January 25, 2007, as part of a wider rulemaking on greenhouse gas policies (R.06-04-009), the California Public Utilities Commission (CPUC) adopted an interim *Greenhouse Gas Emissions Performance Standard* to help mitigate climate change. The standard mandates that new plants produce gas emissions no higher than those from a combined cycle natural gas turbine and calls for an "emissions performance level" of 1,100 pounds of carbon dioxide per megawatt hour. The standard is aimed at coal-fired power stations operating outside California and exporting electricity to the state of California. California utilities are barred from buying electricity from most coal-fired power plants unless specific standards are met, effective February 1, 2007.

Recommendations:
EPA recommends that to the extent possible the FEIS quantify and disclose the amount of carbon dioxide emissions associated with all alternatives, including the natural-gas power plant. As a point of comparison, EPA recommends that the FEIS evaluate the emissions performance level for all alternatives, in terms of pounds of carbon dioxide per megawatt hour; and, if the project will sell energy to California, compare emissions from all alternatives to the "emissions performance level" of 1,100 pounds of carbon dioxide per megawatt hour.

We recommend that the FEIS consider utilizing a greenhouse gas equivalencies calculator[5] to translate greenhouse gas emissions into terms that are easier to conceptualize. For example, annual emissions from the proposed coal-fired plant are estimated at 7.08 million tons of carbon dioxide, which is equivalent to 1,390,000 passenger cars not driven for one year.

There are a number of voluntary measures available to reduce and offset greenhouse gas emissions[6]. These include improving plant efficiency, carbon capture and sequestration[7], and the

[5] For example, see the U.S. Climate Technology Corporation Gateway website, which is sponsored by the EPA and the U.S. Agency for International Development. See http://www.usctcgateway.gov/tool/.
[6] For example, see the discussion of potential mitigation measures at Climate Vision: http://www.climatevision.gov/.
[7] See Underground Injection Control Program Guidance (UICPG # 83), *Using the Class V Experimental Technology Well Classification for Pilot Geologic Sequestration Projects,* March 1, 2007. See http://www.epa.gov/safewater/uic/pdfs/guide_uic_carbonsequestration_final-03-07.pdf.

purchase of offsets. Additionally, on November 20, 2007, Toquop Energy and the State of Nevada signed a Memorandum of Understanding (MOU) regarding carbon dioxide emissions. The MOU was designed to create a process for evaluating and implementing carbon capture and sequestration in the absence of state or federal regulations. Item #6[8] of the MOU, however, appears to limit the requirement for reviewing carbon dioxide capture and sequestration within the scope of the EIS review process.

Recommendations:
EPA recommends that the FEIS discuss: 1) carbon capture and sequestration and other means of capture and storage of carbon dioxide; 2) the costs associated with implementing these measures; 3) design modifications necessary to allow physical space for future carbon dioxide capture; and 4) the feasibility of implementing these measures.

EPA recommends the FEIS discuss what steps have been, and can be, taken to improve boiler efficiency to reduce carbon dioxide emissions, as well as what opportunities may exist to purchase carbon dioxide offsets.

EPA recommends the FEIS discuss the MOU and what effect this document may have on the proposed project.

Although the Toquop DEIS includes a brief discussion on *Global Air Quality Impacts* in Section 4.18.3.6, the cumulative impacts analysis does not evaluate greenhouse gas emissions, nor does the cumulative impact analysis address the impact that greenhouse gas emissions may have on climate change[9].

Recommendations:
As part of the cumulative impacts analysis, EPA recommends the FEIS compare annual greenhouse gas emissions from the proposed project to annual emissions from other existing and reasonably foreseeable future projects, including the other proposed power plants in the State of Nevada[10]. Comparing the magnitude of annual emissions from other sources, including other proposed power plants in Nevada, will enable the decision makers to better understand the magnitude of the greenhouse gases associated with the proposed project and the extent to which their decision making on the proposed project may affect regional greenhouse gas emissions. In addition, we recommend that the FEIS compare the annual greenhouse gas emissions from the proposed project to estimated annual greenhouse gas emissions at a regional, national, and global scale. Emissions of greenhouse gases in the United States have been quantified by the U.S. Department of

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[8] "*The Parties agree that nothing in this MOU should be read to require the EIS for the Facility to consider CC&S (carbon dioxide capture technology and sequestration) in the course of the review of potential impacts of the proposed Facility.*"

[9] We note here the recent decision of the United States Court of Appeals for the Ninth Circuit, *Center for Biological Diversity v. National Highway Traffic Safety Administration*, No. 06-71891 (9th Cir. November 15, 2007).

[10] Nevada Senate Bill 422 was signed into law on June 14, 2007 and establishes a statewide registry of greenhouse gases emitted in Nevada and requires the State to issue a statewide inventory of greenhouse gas emissions by the end of 2008 and at least every four years thereafter.

Energy[11] and EPA[12] in publications released in 2007. Additional information on carbon emissions from the burning of fossil fuel and other sources at a regional, national, and global scale has been assimilated by the Carbon Dioxide Information Analysis Center (CDIAC)[13].

As part of the cumulative impacts analysis, EPA recommends the FEIS present a general, qualitative discussion of the anticipated effects of climate change, including potential effects at a regional scale.

Construction Emissions Mitigation

EPA recommends an evaluation of the following measures to reduce construction emissions of criteria air pollutants and hazardous air pollutants (air toxics). EPA recommends that the FEIS include a *Construction Emissions Mitigation Plan* to reduce construction emissions and commit to the use of these measures during construction, as appropriate.

- Reduce emissions of diesel particulate matter (DPM) and other air pollutants by using particle traps and other technological or operational methods. Control technologies such as traps control approximately 80 percent of DPM. Specialized catalytic converters (oxidation catalysts) control approximately 20 percent of DPM, 40 percent of carbon monoxide emissions, and 50 percent of hydrocarbon emissions.
- Ensure that diesel-powered construction equipment is properly tuned and maintained, and shut off when not in direct use.
- Prohibit engine tampering to increase horsepower.
- Locate diesel engines, motors, and equipment as far as possible from residential areas and sensitive receptors (schools, daycare centers, and hospitals).
- Require low sulfur diesel fuel (<15 parts per million), if available.
- Reduce construction-related trips of workers and equipment, including trucks.
- Lease or buy newer, cleaner equipment (1996 or newer model), using a minimum of 75 percent of the equipment's total horsepower.
- Use engine types such as electric, liquefied gas, hydrogen fuel cells, and/or alternative diesel formulations.
- Work with the local air pollution control district(s) to implement the strongest mitigation for reducing construction emissions.

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[11] For example, see the *Emissions of Greenhouse Gases in the United States 2006*, DOE/EIA-0573(2006), November 2007, available at: ftp://ftp.eia.doe.gov/pub/oiaf/1605/cdrom/pdf/ggrpt/057306.pdf.

[12] For example, see the *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2005*, April 17, 2007, available at: http://www.epa.gov/climatechange/emissions/downloads06/07CR.pdf.

[13] The CDIAC is the primary climate change data and information analysis center of the U.S. Department of Energy. Information can be found at http://cdiac.ornl.gov/ndps/ndp030.html.

Hazardous Materials and Hazardous Waste

Coal Combustion Products (CCPs)

Coal combustion products (CCPs) are the byproducts generated from burning coal in coal-fired power plants. These byproducts include fly ash, bottom ash, boiler slag, and flue gas desulfurization (FGD) gypsum. EPA promotes the beneficial reuse of CCPs through its Coal Combustion Products Partnership (C2P2), a voluntary program to reuse CCPs in commercial applications to divert waste and save natural resources. Additional information about C2P2 can be found at http://www.epa.gov/epaoswer/osw/conserve/c2p2/index.htm. CCP reuse can mitigate potential negative effects of placing all CCPs in landfills and/or mines, while simultaneously encouraging economic benefits. Specifically, we recommend the following items for inclusion in the FEIS:

Recommendations:
EPA recommends the FEIS incorporate a sampling plan to test CCPs according to standard ASTM and EPA methods once generation has begun.

EPA recommends that Toquop Energy conduct a marketing and research plan designed to identify potential end-users of the CCPs, including an exploration of potential transportation options.

EPA encourages participation in C2P2 program. For more information on CCP reuse and partnership opportunities, please contact Lynda Deschambault (415-947-4183) in the EPA Region 9 Waste Management Division.

Environmental Management System (EMS)

EMS is a management framework that provides a routine annual process for assessing environmental impacts and implementing continuous improvement measures to its environmental policy. Commitment to implement an EMS serves as effective mitigation for impacts resulting from project development and a vehicle for documenting ongoing monitoring of resources.

Recommendation:
EPA recommends that BLM/Toquop Energy implement an EMS at the proposed site.

For more information on the EMS program and partnership opportunities, please contact Larry Woods (415-972-3857) in the EPA Region 9 Communities and Ecosystems Division, Environmental Stewardship Team.

Factual Inconsistencies

Listed below are factual inconsistencies EPA identified in our review of the DEIS. We recommend that all of these inconsistencies be corrected in the FEIS.

a. Population Growth and Pollution

In Section 1.4, the DEIS discusses the rapid increase in population in the Western United States and Nevada, in particular. The DEIS states that a consequence of this growth is the rapidly rising demand for electricity in the region and that a new state-of-the-art coal-fired plant would limit pollution and respond to that need.

A new state-of-the-art coal-fired plant would respond to the need for increased demand for electricity; however, it would not necessarily limit pollution. Regardless of how "clean" the new coal plant is, it will still contribute emissions. The construction of a new coal plant would only limit pollution if other more-severely polluting coal plants are taken out of service as a result of this new source of power.

b. Emissions from Coal- versus Gas-fired Power Generation

The DEIS states that the plant capacity would be reduced from the originally proposed 1,100 MW, as described in the original project, to 750 MW in this project to partially reduce emissions that would occur with coal-versus gas-fired power generation.

Emissions from 750 MW coal-fired power plant are greater than emissions from the 1,100 MW natural gas-fired power plant for all criteria pollutants (NOx, carbon monoxide (CO), sulfur dioxide (SO_2), volatile organic compounds (VOC), and particulate matter equal or less than 10 microns in diameter (PM_{10})), as well as carbon dioxide, lead, and mercury. Although reducing the size of the coal-fired plant will result in fewer emissions, the magnitude of emissions from the 750 MW coal-fired plant still exceeds the emissions from the 1,100 MW natural gas-fired plant.

c. Maps

On page 3-14, the DEIS states that an analysis was conducted to assess where viewers would be located in order to see the 730 foot tall power plant stack (refer to Map 3-5).

The reference should refer the reader to Map 3-4, rather than Map 3-5.

d. Deposition Analysis Threshold

In Section 4.5.1.3 of Appendix D, the DEIS states that modeling results indicate that the Proposed Action Alternative would have impacts below the deposition analysis threshold (DAT) for sulfur and nitrogen deposition at all Class I areas, except for sulfur deposition at Zion, where the impact is only slightly above the DAT.

Table D-27 indicates that the maximum modeled deposition rate of sulfur at Zion National Park ranges from 0.0044 to 0.0045 kilograms per hectare year (kg/ha/yr) and the National Park System Class I DAT is 0.005 kg/ha/yr. The impact would appear to be only slightly below the DAT, rather than above the DAT.

e. NOx Emissions

In Appendix D, the DEIS states that the Proposed Alternative would result in higher emissions of SO_2, PM_{10}, CO, and lead during plant operations. However, NOx emission would be higher under the No-Action Alternative (pg. D-46).

Table D-29 indicates that NOx emissions from the No-Action Alternative are 356 tons per year and NOx emissions from the Proposed Action Alternative are 1,614 tons/year, indicating that NOx emissions are higher for the Proposed Action Alternative.

f. Conflicting Information on Website

The website for the Toquop Energy contains conflicting information that does not agree with what is presented in the DEIS and this may confuse the public and decision makers. See the following websites: http://www.toquopenergyproject.com/carbon_facts.htm http://www.toquopenergyproject.com/mercury.htm

EPA recommends that Toquop Energy verify that the information presented on the website agrees with the information presented in the DEIS and FEIS.