

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Permitting and Compliance Division  
Air Resources Management Bureau  
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FINAL ENVIRONMENTAL ASSESSMENT (EA)

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LEGISLATIVE ENVIRONMENTAL  
POLICY OFFICE

*Issued To:* Continental Energy Services, Inc.  
Silver Bow Generation Plant  
1120 NW Couch St, Suite 650  
Portland, OR 97209

*Air Quality Permit Number:* 3165-02

*Preliminary Determination Issued:* January 12, 2006

*Department Decision Issued:* February 14, 2006

*Permit Final:*

1. *Legal Description of Site:* The nominal 500-MW electrical power generation facility would locate approximately 6 miles west of Butte, Montana. The legal description of the proposed site location is Section 35, Township 3 North, Range 9 West, in Silver Bow County, Montana.
2. *Description of Project:* CES proposed to construct and operate a nominal 500-MW electrical power generation facility that would produce electrical power for delivery to the existing power grid. The facility would consist of two nominal 175-MW natural gas powered combined cycle turbines and a 150-MW steam turbine.
3. *Objectives of Project:* The proposed project would provide additional infrastructure and electricity to meet the increased demand for power within the Western United States, specifically those states within the Western System Coordinating Council (WSCC). The facility would sell power into the wholesale market within the interconnected electricity grid of the WSCC. The WSCC has 5 subregions: California; Arizona-New Mexico (includes southern Nevada); Rocky Mountains; Northwestern U.S.; and the Canadian Provinces of Alberta and British Columbia.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because CES demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #3165-02.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. *Silver Bow Generation Project Environmental Impact Statement:* The Department of Environmental Quality prepared an Environmental Impact Statement (EIS) for the original permit action (Permit #3165-00) for the Silver Bow Generation Plant. The EIS evaluated the potential impacts from the Silver Bow Generation Plant, as well as NorthWestern Energy Corporation's (previously Montana Power, LLC), proposal to upgrade two natural gas compressor stations, construct a new compressor station, and add three twenty inch loops to their natural gas pipeline in order to accommodate CES's project. In addition to the proposals, the EIS also evaluated the potential impact from two alternatives: the no action alternative; and the proposed action with mitigation measures alternative. The Draft EIS was issued December 21, 2001, the Final EIS was issued February 21, 2002, and the Record of Decision was issued March 14, 2002. The Draft EIS, the Final EIS, and the Record of Decision can be obtained from the Department's web site at <http://www.deq.mt.gov/eis.asp>.

As a result of the EIS, CES agreed to implement several mitigation measures, as described in the Record of Decision. The measures would be imposed at the project sponsors' request pursuant to §75-1-201(5)(b), MCA. The applicant accepted conditions were included in Section II.E of Permit #3165-00. The mitigation measures are enforceable conditions of the permit and are required to remain in the permit for the lifetime of the facility. Therefore, the mitigation measures would be included in Permit #3165-02.

On October 8, 2003, CES submitted a NSR – PSD application requesting that the Department modify Permit #3165-00 to extend the 18-month commencement construction requirement. CES submitted the application, including a BACT analysis, to demonstrate a "satisfactory showing" that an extension is justified. CES requested that the emission limits for the facility remain the same as were permitted in Permit #3165-00. However, CO and VOC emissions would be reduced because an oxidation catalyst would be required for BACT. Therefore, the emissions from the facility would be equal to, or less than the emission levels that were analyzed as part of the EIS.

On September 23, 2005, CES submitted an NSR – PSD application (complete on December 6, 2005) requesting that the Department modify Permit #3165-01 to extend the 18-month commencement construction requirement. CES submitted the application, including a BACT analysis, in order to be issued a new PSD permit. CES requested that the NO<sub>x</sub> and CO emission limits for each gas turbine operating, without the duct burners operating, to be reduced and all other emission limits remain the same as were permitted in Permit #3165-01. Therefore, the emissions from the facility would be equal to, or less than the emission levels that were analyzed as part of the EIS.

Because the emission levels from the facility would be equal to, or less than the emission levels that were analyzed in the EIS, the Department did not re-analyze the impacts from the proposed project. However, the Department did include the ambient air quality analysis that was performed as part of the current permit action (Section 8.F of this EA).

8. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats				X		Yes
B	Water Quality, Quantity, and Distribution				X		Yes
C	Geology and Soil Quality, Stability and Moisture				X		Yes
D	Vegetation Cover, Quantity, and Quality				X		Yes
E	Aesthetics				X		Yes
F	Air Quality						Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources				X		Yes
H	Demands on Environmental Resource of Water, Air and Energy				X		Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts				X		Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

- A. Terrestrial and Aquatic life and Habitats
- B. Water Quality, Quantity and Distribution
- C. Geology and Soil Quality, Stability and Moisture
- D. Vegetation Cover, Quantity, and Quality
- E. Aesthetics

The impacts on terrestrial and aquatic life and habitats; water quality, quantity, and distribution; geology and soil quality, stability, and moisture; vegetation cover, quantity, and quality; and aesthetics from the proposed project would be equal to, or less than those analyzed in the EIS. Therefore, no impacts beyond the EIS would be expected. Please refer to Section 7 of this EA and the EIS.

F. Air Quality

CES did not submit additional modeling as part of Permit Application #3165-02. CES received updated emissions profiles from SPG. SPG now offers a reduced-emissions gas turbine that is otherwise similar to the turbine originally selected for the project and represented in the initial and subsequent extension applications. The new model is capable of limiting NO<sub>x</sub> emissions – prior to reduction by SCR – to as low as 9 ppmvd. Vendor data for the previous model indicated NO<sub>x</sub> concentrations in the gas turbine exhaust of 25 ppmvd. According to the SPG data sheet, NO<sub>x</sub> concentration of 9 ppmvd at site-specific, worst-case operating conditions and in an unfired condition is equivalent to 60 lb/hour. The comparable NO<sub>x</sub> emission rate from the 25 ppmvd configuration, again in an unfired condition, is 166 lb/hr. CES proposed revised NO<sub>x</sub> and CO emission limits for each turbine when the duct burners are not operating; therefore, the air quality analyses completed for Permit #3165-00 still demonstrate that the CES facility will not cause or contribute to a violation of any air quality standard.

- G. Unique Endangered, Fragile, or Limited Environmental Resources
- H. Demands on Environmental Resource of Water, Air and Energy
- I. Historical and Archaeological Sites
- J. Cumulative and Secondary Impacts

The impacts on unique endangered, fragile, or limited environmental resources; the demands on environmental resource of water, air and energy; historical sites; and any cumulative and secondary impacts from the proposed project would be equal to, or less than those analyzed in the EIS. Please refer to Section 7 of this EA and the EIS.

9. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue				X		Yes
D	Agricultural or Industrial Production				X		Yes
E	Human Health				X		Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services				X		Yes
J	Industrial and Commercial Activity				X		Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts				X		Yes

SUMMARY OF COMMENTS ON POTENTIAL ECENOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

- A. Social Structures and Mores
- B. Cultural Uniqueness and Diversity
- C. Local and State Tax Base and Tax Revenue
- D. Agricultural or Industrial Production
- E. Human Health
- F. Access to and Quality of Recreational and Wilderness Activities
- G. Quantity and Distribution of Employment
- H. Distribution of Population
- I. Demands for Government Services
- J. Industrial and Commercial Activity
- K. Locally Adopted Environmental Plans and Goals
- L. Cumulative and Secondary Impacts

The impacts on social structures and mores; cultural uniqueness and diversity; local state tax base and tax revenue; agricultural or industrial production; human health; access to and quality of recreational wilderness activities; quantity and distribution of employment; distribution of

population; demands for government services; industrial and commercial activity; locally adopted environmental plans and goals; and any cumulative and secondary impacts from the proposed project would be equal to, or less than those analyzed in the EIS. Therefore, no impacts beyond the EIS would be expected. Please refer to Section 7 of this EA and the EIS.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The EIS conducted for Permit #3165-00 is applicable to the proposed project because emissions from the proposed project would be equal to, or less than those analyzed in the EIS. The EA incorporates the previously conducted EIS; therefore, an additional EIS is not required.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Eric Thunstrom  
Date: December 27, 2005