



Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

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PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: December 19, 2008

Name of Applicant: Thompson River Power, LLC

Source: 16.5-megawatt (MW) capacity electricity and steam co-generation plant

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 3175-06.

Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Resources Management Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by January 20, 2009. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,

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Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-3490

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VW: JO
Enclosures

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued For: Thompson River Power, LLC
701 E. Lake St., Suite 300
Wayzata, MN 55391

Montana Air Quality Permit Number: 3175-06

Preliminary Determination Issued: December 19, 2008

Department's Decision Issued:

Permit Final:

1. *Legal Description of Site:* The TRC facility is located in Section 13, Township 21 North, Range 29 West, Sanders County, Montana.
2. *Description of Project:* On April 22, 2008, the Board remanded MAQP #3185-04 to the Department to conduct a thorough, top-down supplemental BACT analysis for periods of non-steady state operation. The current permit action is a modification to MAQP #3175-04 pursuant to the Order issued by the Board in the matter of contested case number BER 2006-18 AQ. The modification establishes permit limitations, conditions and reporting requirements in accordance with the results of the startup, shutdown and ash-pulling periods top-down BACT determination submitted by TRP on May 30th with additional information received on July 29th, August 21st, September 3rd, October 2nd, October 21st, and October 29th and November 10th pursuant to the Board order.

Pursuant to this request, TRP requested the following changes to the permit terms/conditions relating to Startup and Shutdown Events and Ash-Pulling Periods. In addition to the requested permit modification, the current permit action also includes revisions to assure compliance during non-steady state operations and ash-pulling periods.

- Incorporation of *Best Management Operational Practices for Startup and Shutdown Events*
- Evaluation of Best Available Control Technology (BACT) specifically for Startup and Shutdown Events;
- Evaluation of BACT specifically for Ash-Pulling Periods;
- Establishment of a federally enforceable boiler heat sulfur limit;
- Establishment of NO_x and SO₂ limits for Startup and Shutdown Events and Ash-Pulling Periods;
- Inclusion of a "monitoring period" to establish NO_x and SO₂ emission limits, and/or to verify existing steady-state limits during Ash-Pulling Periods; and
- Incorporation of *Best Management Operating Procedures for Ash-Pulling Periods*.

A more detailed analysis of the Department's action would be contained in Section I.D of the permit analysis to this permit.

3. *Objectives of Project:* The purpose of the current permit action would be to respond to the Boards permit remand, specifically to allow for proposed changes in applicable emission limits, and facility operations, as demonstrated is appropriate under BACT.

4. *Description of Alternatives:* The Department could deny issuance of the modified air quality permit under the remand, or the “no action” alternative which would be to not act on the remand, neither of which would be appropriate responses to the Board order.
5. *A Listing of Mitigation, Stipulations and Other Controls:* A list of enforceable conditions and a BACT analysis would be contained in Permit #3175-06.
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. 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			X			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

Any impacts resulting from the proposed project to terrestrial and aquatic life and habitats would be minor because all proposed activities would take place within the defined TRP property boundary, an existing industrial site. Further, minor impact to the surrounding area from the air emissions (see Section VI of the permit analysis) would be realized due to dispersion of pollutants.

Terrestrials (such as deer, antelope, rodents, and insects) would use the general area of the facility. The area around the facility would be fenced to limit access to the facility. The fencing would likely not restrict access from all animals that frequent the area, but it may discourage some animals from entering the facility property. Further, because other industrial sources, including the Thompson River Lumber Company (TRL) and a solid waste disposal facility are located directly adjacent to the proposed TRP property boundary, terrestrials that routinely inhabit the area are accustomed to the industrial character of the site. Therefore, any impacts to terrestrial and aquatic life and habits due to the proposed modified operation with respect to startup and shutdown and ash-pulling practices of the TRP facility would have minor and typical impacts.

B. Water Quality, Quantity, and Distribution

Any impacts resulting from the proposed project to water quality, quantity, and distribution would be minor because all proposed activities would take place within the defined TRP property boundary, an existing industrial site. Further, minor impact to the surrounding area from the air emissions (see Section VI of the permit analysis) would be realized due to dispersion of pollutants.

Overall, any impacts to water quality, quantity, and distribution from TRPs proposed permit modifications, with respect to startup, shutdown, ash-pulling practices resulting in air emissions and deposition of air emissions, would be minor.

C. Geology and Soil Quality, Stability, and Moisture

Any impacts resulting from the proposed project to geology and soil quality, stability, and moisture would be minor because all proposed activities with respect to limits and practices associated with limiting emissions during startup, shutdown, and ash pulling periods/events would take place within the defined TRP property boundary, an existing industrial site. Further, minor impact to the surrounding area from the air emissions (see Section VI of the permit analysis) would be realized due to dispersion of pollutants.

D. Vegetation Cover, Quantity, and Quality

Any impacts resulting from the proposed project to vegetation cover, quantity, and quality would be minor because all proposed activities with respect to limits and practices associated with limiting emissions during startup, shutdown, and ash pulling periods/events would take place within the defined TRP property boundary, an existing industrial site. Further, minor impact to the surrounding area from the air emissions (see Section VI of the permit analysis) would be realized due to dispersion of pollutants.

E. Aesthetics

Minor impacts to the aesthetic nature of the area would result from the proposed TRP modification because all proposed activities with respect to limits and practices associated with limiting emissions during startup, shutdown, and ash pulling periods/events would take place within the defined TRP property boundary, an existing industrial site. Any changes in operational practices to minimize those emissions may be visible from locations around the TRP site. However, the TRP site is a previously disturbed industrial location with a solid waste transfer station and lumber sawmill in relatively close proximity, any aesthetic impacts would be minor and consistent with current industrial land use of the area.

The facility is visible from MT Highway 200 (approximately $\frac{1}{4}$ mile to the north), a small residential subdivision (approximately $\frac{3}{4}$ mile west/southwest), an individual residence (approximately $\frac{1}{2}$ mile west), and may be visible from the Clark Fork River (approximately $\frac{1}{4}$ mile south and located in the river valley below the proposed site). Overall, any impacts to the aesthetic nature of the project area from TRPs proposed permit modifications, including construction activities and normal operations resulting in air emissions and deposition of air emissions would be minor.

F. Air Quality

The air quality impacts from the current permit action would be minor because Permit #3175-06 would include conditions limiting emissions of air pollution from the source, specifically by minimizing emissions associated with startup, shutdown, and ash pulling periods/events.

In addition, the Department determined, based on the ambient air quality dispersion modeling analysis conducted for MAQP #3175-04, that the operation of the TRP under the conditions associated with MAQP #3175-06 would not cause or contribute to a violation of any ambient air quality standard. The Clean Air Act, which was last amended in 1990, requires the U.S. Environmental Protection Agency (EPA) to set NAAQS for pollutants considered harmful to public health and the environment (Criteria Pollutants: carbon monoxide (CO), NO_x, Ozone (O₃), Lead (Pb), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), and SO₂). In addition, Montana has established equally protective or, in some cases, more stringent standards for these pollutants termed Montana Ambient Air Quality Standards (MAAQS). The Clean Air Act established two types of NAAQS, Primary and Secondary. Primary Standards set limits to protect public health, including, but not limited to, the health of “sensitive” populations such as asthmatics, children, and the elderly. Secondary Standards set limits to protect public welfare, including, but not limited to, protection against decreased visibility, damage to animals, crops, vegetation, and buildings. Primary and Secondary Standards are identical with the exception of SO₂ which has a less stringent Secondary Standard. The air quality classification for the immediate area of proposed TRP operation is considered “Unclassifiable or Better than National Standards” (40 CFR 81.327) for all pollutants. The closest nonattainment area is the Thompson Falls PM₁₀ nonattainment area located approximately 3.7 miles west/northwest of the TRP site location.

Overall, any impacts to the air quality of the project area from TRPs proposed permit modifications, including construction activities, normal operations resulting in air emissions, and deposition of air emissions would be minor and in compliance with all applicable MAAQS and NAAQS.

G. Unique Endangered, Fragile, or Limited Environmental Resources

Under the initial TRP Permit Action #3175-00, the Department contacted the Montana Natural Heritage Program (MNHP) in an effort to identify any species of special concern associated with the proposed site location. Search results concluded there are 5 such environmental resources in the area. Area in this case is defined by the township and range of the proposed site, with an additional one-mile buffer. The species of special concern identified by MNHP include the *oncorhynchus clarki lewisi* (Westslope Cutthroat Trout), *salvelinus confluentus* (Bull Trout), *felis lynx* (Lynx), *ursus arctos horribilis* (Grizzly Bear), and *clarkia rhomboidia* (Common Clarkia). While the previously cited species of special concern have been identified within the defined area, the MNHP search did not indicate any species of special concern located directly on the TRP site.

The TRP site has historically been used for industrial purposes. Any changes in operation associated with minimizing emissions associated with startup, shutdown, and ash-pulling periods/events would take place within the 6-acre plot of land leased by TRP and located within the existing 165-acre TRL mill property boundary. Because industrial operations have been ongoing within the existing TRL property boundary for an extended period of time (exceeding 50 years) and potential permitted emissions from TRP show compliance with all applicable air quality standards, it is unlikely that any of these species of special concern would be affected by the proposed project. Overall, any impacts to any unique endangered, fragile, or limited environmental resources would be minor.

H. Demands on Environmental Resource of Water, Air, and Energy

Demands on environmental resources of water, air, and energy would be minor. As previously discussed, the proposed permit modification would increase allowable air emissions of NO_x and SO₂; however, air dispersion modeling demonstrated compliance with the MAAQS/NAAQS.

Therefore, any impacts to air resources in the area would be minor and would be in compliance with applicable standards. Any impacts to the local air resource would be minor as demonstrated through the ambient air quality impact analysis conducted for the proposed permit modification.

Regarding impacts to the environmental resource of water, this permit action does not include any increase in the demand for water. Therefore, any impacts to the demand for water resources in the affected area associated with TRP operations has already been analyzed under previous permit actions and determined to be minor.

With respect to energy, TRP would produce approximately 16.5 MW of power with a majority being sold and sent directly to the power grid and the remaining power purchased and used by TRL and TRP facility operations. This permit action would not change, in general, the overall amount of power used or produced.

Overall, any impacts to the demands on the environmental resources of water, air, and energy from TRPs proposed permit modifications would be minor.

I. Historical and Archaeological Sites

Under the initial Permit Action #3175-00, conducted in 2001, in an effort to identify any historical and archaeological sites near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO, the absence of recorded cultural/historical properties in the search locale may be due to a lack of previous inventory. Due to the potential for minor additional ground disturbance from the proposed project and the low topography of the area, the potential for the presence of historical/cultural sites that could be impacted by the project does exist. Therefore, SHPO recommended that a cultural resource inventory be conducted prior to project initiation. However, neither the Department nor SHPO has the authority to require TRP to conduct a cultural resource inventory. The Department determined that due to the previous industrial disturbance in the area (the area is an active industrial site with multiple occasions for industrial disturbance) and the small amount of land disturbance that may be required for the proposed permit modification, it is unlikely that any undisturbed existing historical or cultural resource exists in the area and if these resources did exist, any impacts would be minor due to previous industrial disturbance in the area.

J. Cumulative and Secondary Impacts

Overall, any cumulative and secondary impacts from the proposed permit modification on the physical and biological resources of the human environment in the immediate area would be minor due to the fact that the predominant use of the surrounding area would not change as a result of the proposed project. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #3175-06.

8. 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 ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

- A. Social Structures and Mores
 B. Cultural Uniqueness and Diversity

The proposed permit modification would not cause a disruption to any native or traditional lifestyles or communities (social structures or mores) or impact the cultural uniqueness and diversity of the area because the current permit action would not change the current industrial nature of the TRP operation or the overall industrial nature of the area of operation. The predominant use of the surrounding area would not change as a result of the current permit action. In addition, the overall industrial nature of the surrounding area, as a whole, would not be altered by the proposed TRP permit modification, as the area currently facilitates other industrial sources including the TRL operation and a solid waste transfer station both of which are located directly adjacent to the TRP site, as well as an existing gravel pit in the greater surrounding area.

- C. Local and State Tax Base and Tax Revenue

Any impacts to the local and state tax base and tax revenue would be minor because TRP would remain responsible for all appropriate state and county taxes imposed upon the business operation. In addition, TRP employees would continue to add to the overall income base of the area.

- D. Agricultural or Industrial Production

The current permit action would not displace or otherwise affect any agricultural land or practices. TRP would continue to provide power and steam for normal operations at TRL.

E. Human Health

There would be minor potential effects on human health due to minimized air emissions from startup, shutdown, and ash pulling episodes/events. In addition, Permit #3175-06 would include conditions to ensure that the facility would be operated in compliance with all applicable rules and standards. These rules and standards are designed to be protective of human health.

As detailed in Section 7.F of this EA, the Clean Air Act established two types of NAAQS, Primary and Secondary. Primary Standards set limits to protect public health, including, but not limited to, the health of “sensitive” populations such as asthmatics, children, and the elderly. Under MAQP #3175-04, TRP conducted an ambient air quality impact analysis demonstrating that TRP operations, as proposed under the permit modification, would comply with all applicable ambient air quality standards thereby protecting human health. Overall, the Department determined, based on the ambient air impact analysis for previous actions in comparison to the current permit action, that any impact to public health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed permit modifications and overall TRP operations would not affect access to any recreational or wilderness activities in the area. Following the current permit action, the TRP operation would continue to be located within the 165-acre plot that was previously used for TRL’s lumber mill operations. The area is comprised of private property with no public access and would continue in this state after modification of the permit.

G. Quantity and Distribution of Employment

H. Distribution of Population

The current permit action would result in no impacts to the quantity and distribution of employment in the area and/or the distribution of population in the area because the project would not require any additional employees.

I. Demands on Government Services

Demands on government services from the proposed permit modification would be minor because TRP would be required to procure the appropriate permits (including a state air quality permit) and any permits for the associated activities of the project. Further, compliance verification with those permits would also require minor services from the government.

As the TRP site is within an existing industrial location, employee water and sewage disposal facilities would continue to be connected to existing water and sewer sources. Further, all process water needs for the facility operations would remain unchanged as a result of the current permit action. All spent water (waste-water) would continue to be discharged to an evaporation pond to be located on site and would therefore not require the use of any county or state services, including permitting. Overall, any demands on government services resulting from the proposed permit modification would be minor.

J. Industrial and Commercial Activity

The current permit action would change various aspects of the previously permitted TRP operations, specifically related to minimizing emissions associated with startup, shutdown, and ash pulling period/events, but would not result in an overall change in facility purpose; therefore, the proposed permit modification would not impact any industrial or commercial activity in the area beyond those impacts already realized through the initial Permit Action #3175-00.

K. Locally Adopted Environmental Plans and Goals

The City of Thompson Falls is a PM₁₀ nonattainment area. The PM₁₀ nonattainment area boundary is located approximately 3.7 miles west/northwest of the TRP facility. However, the current permit action does not propose any change in allowable PM₁₀ emissions. Therefore, the current permit action would not contribute to the nonattainment status of the area. Because the current permit action would not allow any additional PM₁₀ emissions, the Department determined that the proposed permit modification would not adversely impact the local Thompson Falls PM₁₀ nonattainment area.

The Department is unaware of any other locally adopted Environmental plans or goals. The state air quality standards would protect air quality at the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from the proposed permit modification on the economic and social resources of the human environment in the immediate area would be minor due to the fact that the predominant use of the surrounding area would not change as a result of the proposed project. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #3175-06.

Recommendation: An Environmental Impact Statement (EIS) is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permit action is for the modification of an existing and permitted electrical-steam co-generation plant. Permit #3175-06 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

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, Montana Department of Natural Resources and Conservation, Montana Department of Environmental Quality – Water Protection Bureau.

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program, Montana Department of Natural Resources and Conservation, Montana Department of Environmental Quality – Water Protection Bureau.

EA Prepared By: Jenny O'Mara.

Date: November 21, 2008