

Montana Department of Environmental Quality – Air Resources
Management Bureau

Thompson River Co-Gen, LLC. Montana Air Quality Permit #3175-00 and Requested Permit Modifications

General Citizen Concerns: Questions and Answers

Question 1: Thompson Falls is a particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀) nonattainment area. Will the TRC plant contribute to this problem and does the Department monitor the PM₁₀ nonattainment situation?

Department Response: The Department carefully assesses projects locating in or within 10 km of certain PM₁₀ nonattainment areas, including Thompson Falls. The Department requires sources locating in these areas to conduct air dispersion modeling to predict impacts to the nonattainment areas. TRC conducted PM₁₀ air dispersion modeling during the Montana air quality permitting process for TRC's air quality permit #3175-00. Through this process, TRC demonstrated, and the Department concurred, that PM₁₀ emissions from the TRC plant will not contribute to the PM₁₀ nonattainment status of the Thompson Falls area.

Question 2: Explanation of permitted best available control technology (BACT) controls, including the process used to establish these controls, and an explanation of proposed BACT modifications.

Department Response: Under Montana law, TRC is required to install and operate BACT for all new or modified pollutant emitting units at the plant. BACT is defined under the Administrative Rules of Montana (ARM) 17.8.740 as “an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed major stationary source or major modification which the Department, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant...”

The application for air quality permit #3175-00 contained a BACT analysis for the primary pollutants of concern from TRC operations including PM₁₀, oxides of nitrogen (NO_x), carbon monoxide (CO), and oxides of sulfur (SO_x). The Department reviewed the BACT analysis provided in the application for permit #3175-00 and determined that the proposed and permitted control requirements constitute BACT for TRC operations.

Under the current request for permit modification, TRC is requesting a relaxation of several coal/material handling BACT requirements contained in permit #3175-00. For

example, TRC has requested to remove the permitted requirement to use as baghouse for coal storage in an enclosed coal silo and replace this requirement with uncontrolled outside storage of coal. To date, TRC has not provided justification for relaxing these BACT requirements. Absent appropriate justification for these requested BACT changes, the Department intends to deny the request.

Question 3: Explanation of allowable fuels used to fire boiler?

Department Response: In TRC's air quality permit application #3175-00 (Section 2.1, Project Summary) TRC proposed boiler operation combusting 100% coal with the potential to combust wood-waste. For permit #3175-00, TRC conducted the analyses using the worst-case emissions scenario of burning 100% coal. The Department reviewed this worst-case emissions scenario analysis for the purpose of determining whether the resulting emissions from 100% coal combustion would maintain compliance with all applicable standards and rules. The Department determined that the resulting emissions from 100% coal combustion would comply with the applicable standards and rules as permitted.

Question 4: Mercury emissions. How will the Department regulate these emissions and ensure that the public will not be harmed by mercury.

Department Response: Currently, there is no ambient air quality standard for mercury emissions and potential controlled hazardous air pollutant (HAP) emissions, including mercury emissions, from the facility are not considered major. Therefore, the source is not subject to the requirements of 40 CFR 63, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories. Because the permitted TRC operation does not meet or exceed HAP major source thresholds, TRC is not subject to direct HAP regulation, including mercury regulation, under NESHAP. However, mercury and other HAP emissions are also controlled as a "co-benefit" when controlling other regulated pollutants, specifically SO_x and PM₁₀ using a dry-lime scrubber and fabric-filter baghouse, respectively.

Question 5: Will the Department or TRC be required to establish baseline concentrations of pollutants in the Thompson Falls area prior to TRC operation and to evaluate these concentrations after TRC operations commence? Will the Department install and operate ambient monitors for the TRC facility?

Department Response: The Department may monitor, or require monitoring, for those pollutants for which an ambient air quality standard has been established. However, the Department does not typically conduct ambient monitoring or baseline pollutant concentration analyses for sources for which the Department believes there is a low likelihood of adverse air impacts. The pollutants analyzed through the modeling process for the TRC project included PM₁₀, NO_x, CO, and SO_x. The ambient air dispersion modeling conducted for TRC's permit #3175-00 indicates that the operation is not likely

to cause an exceedance of any applicable ambient air quality standard. Therefore, the Department determined that ambient air quality monitoring is unjustified in this case.

The Department does have the authority to require that a permitted source of air pollution conduct ambient monitoring for pollutants which have an established air quality standard. The Department uses certain criteria to establish when ambient monitoring should be required of a pollution source and applies this criteria universally for all industry types, not just electrical generation. These criteria include, but are not limited to, 1) the degree of confidence the Department has in the sources ability to comply with their permit conditions; 2) whether or not a violation of permit conditions is readily detectable; and 3) the degree of risk that a permit exceedance might result in an exceedance of an ambient air quality standard. The Department has a relatively high level of confidence that TRC will be able to maintain compliance with permitted emission limits due to the type of controls required by permit. Further, the Department believes that permit violations at TRC would be readily detected due to the monitoring requirements contained in the permit. Finally, because modeled impacts demonstrate that TRC emissions are less than 25% of applicable ambient air quality standards, the Department determined that the risk of an ambient air quality standard exceedance is low. Based on this information, the Department determined that ambient air monitoring in the Thompson Falls area due to TRC operations is unjustified at this time.

Question 6: How will the Department monitor compliance with permitted requirements and, if violations occur, how will the public know that TRC is being held accountable? How will the public know if TRC has paid fines for violations?

Department Response: Permit #3175-00 includes source testing, monitoring recordkeeping, and reporting requirements for the purpose of evaluating compliance with permitted requirements. Further, Department staff will conduct periodic on-site inspections of the facility to monitor compliance with permitted requirements. If violations are documented, the Department will investigate such violations, which may lead to fines or other regulatory penalties. All such information will be included in the public record and will be available for public review.

Question 7: Why was TRC allowed to lower the boiler stack height and will this result in increased pollution to the Thompson Falls area? Did the Federal Aviation Administration (FAA) require the lowered stack?

Department Response: Since TRC requested to lower the boiler main stack, TRC was required to provide an ambient air dispersion modeling demonstration of compliance with the applicable ambient air quality standards at the lowered stack height. While the modeling information submitted remains incomplete, based on a preliminary modeling analysis, the Department believes that the lowered stack height should not result in any exceedance of the ambient air quality standards. The Department is unaware of any FAA requirement to lower the stack height.

Question 8: How many jobs will be created by the TRC project?

Department Response: The application for permit #3175-00 indicated that approximately 15-20 full-time positions for normal operations at the TRC plant would be required for normal operations.

Question 9: What is the process used to grant an air quality permit to a plant of this type and what agency grants this type of permit?

Department Response: TRC received an air quality permit from the Department in accordance with the provisions of the Montana Air Quality Permit program under ARM 17.8, Subchapter 7, Permit, Construction and operation of Air Contaminant Sources; and ARM 17.8, Subchapter 12, Operating Permit Program. ARM 17.8, Subchapter 7 and Subchapter 12 require an application process for issuance of Montana Air Quality Permits and Title V Operating Permits, respectively. TRC was required to demonstrate compliance with all applicable requirements for permit issuance prior to issuance of Montana Air Quality Permit #3175-00 and Title V Operating Permit #OP3175-00.

Question 10: What is the permit appeal process for the citizens?

Department Response: Any person jointly or severally adversely affected by the final action may request a hearing before the Board of Environmental Review. Any appeal must be filed within 15 days of issuance of the Department decision of a Montana Air Quality Permit (before the final date of a 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. Requests for a hearing must be sent in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, Montana 59620. For additional information on the permit appeal process you can access the Department's internet website at www.deq.state.mt.us. After accessing the Department's website, click on the link titled "Board of Environmental Review" then click on the link titled "Frequently Asked Questions". This should provide you with the necessary information regarding the permit appeal process.

Question 11: Is there any outside regulatory oversight regarding the Department's permit content?

Department Response: The United States Environmental Protection Agency (EPA) provides regulatory oversight to the Montana Air Quality Permitting programs. The Department operates an EPA approved permitting program. The program is approved as a State Implementation Plan (SIP).

Question 12: Statements have been made that indicate TRC operations will make the Thompson Falls area air cleaner than it's current status. Can these statements be substantiated and explained.

Department Response: The TRC proposal includes supplying steam and power to the Thompson River Lumber Company (TRL). Currently, the boilers at the TRL facility are used to produce steam for TRL operations. The TRL boilers, due to their date of construction and operation, are not held to the same stringent standards as the TRC boiler operations. Therefore, since the TRC boiler may now provide steam and power to TRL, the TRL boilers may not operate as often as they currently operate. Subsequently, for some of the regulated pollutants, the Thompson Falls area may realize a reduction in actual pollutants in the air.

Question 13: How will the TRC plant impact property value in the area? Will there be recourse if property values drop?

Department Response: The Department does not have authority under the Clean Air Act to deny a permit based on impacts to property value.

Question 14: Can the DEQ deny a permit based on the aesthetic character of a given area?

Department Response: The Department does not have authority under the Clean Air Act to deny a permit based on aesthetic value of a given area.

Question 15: If the TRC operation is legal, how can the citizens change the law so it is not legal?

Department Response: Current Montana law does not make construction and operation of a source of air contaminants illegal as long as the source of pollution can demonstrate that operations are capable of maintaining compliance with all applicable Federal, state, and local standards, rules, and statutes. This issue would need to be addressed by the Montana state legislature or potentially through the development and implementation of local zoning laws to protect areas from certain types of industrial development, such as that proposed by TRC.

Question 16: What are the circumstances necessary to revoke a permit?

Department Response: The Department may revoke a Montana Air Quality Permit, or any portion of a permit, upon request of the permittee. Further, a permit may be revoked for violation of any requirement of the Clean Air Act of Montana, rules adopted under that the Clean Air Act of Montana, the Federal Clean Air Act (FCAA) and rules promulgated under the FCAA, or any applicable requirement contained in the Montana SIP. These considerations are evaluated on a case-by-case basis.

Question 17: Can the Department ensure no environmental impact from TRC operations? Is TRC allowed to pollute? If so, why is one company allowed to pollute at the expense of the citizens?

Department Response: Under current Montana law, a company is allowed to pollute as long as the pollution and facility comply with all applicable standards, rules, and statutes. Therefore, construction and operation of the TRC plant will result in environmental impacts. However, air quality permit #3175-00 includes requirements limiting the level of allowable impact resulting from TRC operations, such that the facility is expected to comply with all applicable rules, standards, and regulations.

Question 18: Public Notice. Can the Department or local legislators increase public notice for permits of this type?

Department Response: Montana law currently requires that public notice be served for proposed projects or project modifications such as the TRC operation. ARM 17.8, Subchapter 7, currently requires that the applicant publish legal notice one time in a newspaper of general circulation in the area affected by the application for a Montana air quality permit. ARM 17.8, Subchapter 12, currently requires that the Department publish legal notice one time in a newspaper of general circulation in the area affected by the application for a Title V air quality operating permit. However, if there is significant public interest on a permit, the Department or the applicant is not prohibited from publishing additional public notices.

Question 19: If TRC is subject to a case-by-case MACT determination for boiler HCl emissions or if TRC opts to accept a federally enforceable permit limit to keep potential HCl emissions below the MACT threshold, will TRC's existing permit be open for public comment. Is the existing permit valid without a case-by-case MACT determination or an HCl emission limit?

Department Response: If TRC opts to submit an application for a case-by-case MACT determination, this process would include public review and participation for the elements of the case-by-case MACT determination, not the permit as a whole. If TRC requests a federally enforceable HCl emission limit in lieu of the case-by-case MACT determination, this would be accomplished in accordance with ARM 17.8.745 and would not be open for public review and participation. The current permit already contains a federally enforceable control requirement that will ensure that HCl emissions are less than the major source HAP thresholds.

The Department believes that the sulfur dioxide and particulate matter controls (dry-lime scrubber and fabric filter baghouse, respectively) required in permit #3175-00 will result in a high control efficiency for HCl emissions and that these controls limit HCl emissions to a level that will not exceed the major source HAP thresholds. Further, the Department believes that a specific HCl emission limit in the permit will supplement the existing requirement to install, operate, and maintain the dry-lime scrubber and fabric-filter baghouse. The existing permit condition requiring these controls is important because it is enforceable as a practical matter (i.e. compliance with the condition is easily determined).

Question 20: Explanation of process, including data sets, used to predict ambient air quality impacts resulting from TRC operations and an explanation of the purpose and basis of ambient air quality standards. Was the data used to model impacts the most representative of the Thompson Falls area, why not use MET station located at Thompson Falls Airport? Have regular Thompson Falls air inversions been considered? What are the modeled impact boundaries?

TRC submitted a dispersion model analysis with their permit application to assess the impacts of the air pollutants regulated in the permit on the surrounding area. The analysis was conducted according to criteria specified by the Department and followed all applicable state and federal guidance. The modeling system used was the Industrial Source Complex (ISC) model. ISC is a conventional plume model that assumes a gaussian concentration distribution through a plume cross-section. Receptors (model points at which ground level concentrations are calculated) were placed around the plant boundary and up into the nearby terrain. The model calculated pollutant concentrations at each receptor point for every hour of meteorological data, and then calculated resultant 3-hour, 8 hour, 24 hour and annual pollutant concentrations. The physical terrain characteristics input into the model were based on the actual plant area but the hourly meteorological inputs for wind speed, wind direction, temperature, stability, and mixing heights were obtained from existing data sets from Kalispell and Missoula. Five years of met data from each were used in the model to determine the maximum expected concentrations. This data was used because the minimum one year of acceptable met data was not available for the Thompson Falls area. This methodology was used by TRC in accord with an agreement on the modeling protocol reached with the Department prior to the permit application submittal.

The modeling analysis predicted pollutant concentrations that were generally less than 10% of the applicable ambient air quality standards. The National Ambient Air Quality Standards (NAAQS) and Montana Ambient Air Quality standards (MAAQS) are health-based standards designed to protect public health from harmful levels of air pollutants.

The meteorological data used was not from Thompson Falls but the Department is confident that the model prediction used resulted in higher model predictions than would have been the case if one year of local data had been used. The met station at the Thompson Falls airport was not designed to provide data for input into a dispersion model and did not collect all of the parameters necessary to produce an acceptable model input file.

The Kalispell and Missoula data sets challenged the modeling systems with limited dispersion conditions; low mixing heights, strong inversions and low wind speeds. The modeling domain included all areas within 5 KM (3 miles) of the plant site. Predicted concentrations at the farthest distance were below significance values.