UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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STATEMENT OF BASIS

CLASS V INJECTION WELL PERMIT

DRAFT PERMIT RENEWAL
BEARTOOTH ELECTRIC COOPERATIVE, INC.
311 RAPELJE ROAD
COLUMBUS, MONTANA

EPA PERMIT MT50957-0622

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This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

UIC Permits specify the conditions and requirements for construction, operation, monitoring and reporting and plugging of injection wells to prevent the movement of fluids into underground sources of drinking water (USDW). Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date, the Permit Renewal authorizes the operation of an injection well project governed by the conditions specified in the Permit. The Permit Renewal is issued for a period of ten (10) years unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit Renewal is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

Description of Facility and Background information

The Beartooth Electric Cooperative, Inc. has submitted an application for a vehicle wash down facility located at 311 Rapelje Road, Columbus, Montana (Appendix A; Figure 1). The facility is used to house service vehicles and wash down service vehicles (approximately once a week). No maintenance is performed in the facility.

The application proposed the injection of vehicle wash fluids at a maximum volume of 200 gallons per day. The car wash contains four wash bays receiving approximately 50 gallons per day. Commercial grade liquid concentrate vehicle soap will be used, applied through a pressure washer. The wash water enters the floor drains within the wash bays, moves through an oil sand separator, and into a 1000 gallon concrete septic tank approximately 10 feet from the building. The fluids pass through an effluent filter at the outlet of the septic tank prior to entering a gravity drain field through which the waste fluids will infiltrate into the ground. Only fluid from washing vehicles will be flowing into the drain field. The sanitary waste from the facility is directed to a separate septic system on the site. The drain field is located northwest of the facility as shown in the attached location and construction plan diagram. The drain field is comprised of four 4-inch PVC perforated pipes, 85 feet long, spaced 7 feet apart, placed at a depth of 18 to 36 inches deep.

Authorization to inject is issued for ten (10) years from the effective date of the Permit Renewal (40 CFR § 144.36) unless the Permit is terminated (Part III, Section B of the Permit). The Permit will expire upon delegation of primary enforcement responsibility for the UIC Program to the State of Montana. The Permit Renewal may also be terminated for reasonable cause (40 CFR §§144.39, 144.40).

This Statement of Basis presents the derivation of the site-specific permit conditions (Part II of the Final Permit) and reasons for them. The content of the general permit conditions (Part III of the Final Permit) are specified by 40 CFR §§144, 146 and 147 and are not subject to site specific differences. Therefore, the general permit conditions are not included in the discussion.

I. Reason for Permit

The Beartooth Electric Cooperative, Inc. will use best management practices, as defined in Part II(C) (4) of the permit, for the disposal of waste fluid into the drainfield. Waste fluids shall be collected and analyzed semi-annually. If the analyses show that any constituent being analyzed does not meet drinking water standards as established by EPA, then the Beartooth Electric Cooperative, Inc. will be required to notify EPA within 24 hours of the receipt of the analysis. To reduce contamination in the waste water, all accidental spills will be absorbed with an absorbent material and disposed of as a solid waste per the requirements of the Resource Conservation and Recovery Act (RCRA). These "best management practices" will significantly reduce the amount of contaminants migrating into the ground water.

II. Injection Requirements

Any discharge into the drainfield will be required to meet the primary drinking water standards for the constituents in Appendix B prior to injection. Based on existing data, the vehicle wash down water does not exceed any of those standards. However, if future sampling indicates that the injectate exceeds primary drinking water standards for any of the constituents listed in Appendix B, the Permittee will need to treat the water prior to injection.

III. Area Hydrology

Underground Sources of Drinking Water

An Underground Source of Drinking Water (USDW) is defined by the UIC Regulations as an aquifer, or a portion of an aquifer, which 1) supplies any public water system, or 2) contains a sufficient quantity of ground water to supply a public water system, and either currently supplies drinking water for human consumption, or 3) contains less than 10,000 mg/L total dissolved solids.

Surface Features

The drainfield site is located over 1,000 feet west of a small stream called the Keyser Creek. The drainfield trench will be 18 to 36 inches deep with the infiltration pipes lying on top of six inches of gravel. The nearest USDW is a confined aquifer within sandstone layers of the Fort Union Formation. Below the trench lies 9 feet of sandstone gravel followed by a dark shale layer prior to reaching the sandstone aquifer approximately 70 feet below ground surface.

IV. Sampling and Reporting of Results

The permittee is required to collect fluid samples semi-annually from the last settling tank before discharge into the drainfield. Attached is a list of constituents (Appendix B) to be analyzed. The sampling techniques utilized must be adequate to provide a representative sample of waste water constituents and to allow the fluid sample to be analyzed using the EPA methods indicated. These constituents were selected for analysis based on their potential for deteriorating the aquifer quality. The analyzing laboratory will provide a written report of all the results and laboratory documentation of quality control. The samples will be sent to a commercial laboratory that uses approved EPA methods for analyses. The sampling techniques utilized must be adequate to provide a representative sample of the injected fluids and allow the fluid samples to be analyzed using approved EPA methods. The analytical methods must have a low enough detection limit to be able to determine whether or not the concentrations of metals are below the MCLs. Any sample showing concentrations of metals above the respective MCLs will be considered a violation of the Permit. Beartooth Electric Cooperative, Inc. will provide a written report of all the results including the laboratory quality control procedures employed during the handling and analyses of the samples. Whenever the sources of the injectate change, another fluid sample must be collected, analyzed, and the results submitted to the Director within thirty (30) days of any changes. All sampling results shall be reported on a semi-annual basis.

Based on samples already taken, it is unlikely that treatment will be necessary to inject into the drainfield system. In the untreated state, the vehicle wash fluids meet drinking water standards in samples taken by the Permittee.

V. Plugging and Abandonment Plan

At the termination of injection activities, Beartooth Electric Cooperative, Inc. will remove all facility structures associated with the injection process. EPA reserves the right to change the requirements for plugging any shallow injection well if it is deemed that the designated closure method is not protective of USDWs.