Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

March 23, 2006

Todd Everts
Environmental Quality Council
Capitol Complex
Helena, MT 59620

Subject: Draft Environmental Assessment for the BNSF Railway Company Former Tie Treating Plant in Paradise, Montana

Dear Mr. Everts:

Enclosed is a draft Environmental Assessment for the above-referenced facility. If you have any questions, please contact me at 406/444-5824 or the e-mail address listed below.

Sincerely,

Ann Kron

Ann Kron
Environmental Science Specialist
Waste and Underground Tank Management Bureau
Permitting and Compliance Division
e-mail: akron@mt.gov

Enclosure
cc: HW facility file: BNSF – Public Participation #1 (w/o enclosure)
HW facility file: BNSF – Permit Modification (w/o enclosure)

Montana Department of Environmental Quality
Permitting and Compliance Division
Waste and Underground Tank Management Bureau
P.O. Box 200901
Helena, Montana 59620-0901

DRAFT ENVIRONMENTAL ASSESSMENT

Montana Hazardous Waste Permit Number: MTHWP-01-02

Issued to: BNSF Railway Company
For the Former Tie Treating Plant, Paradise, Montana

Legal Description: NW 1/4 Section 20, SE 1/4 Section 18, SW 1/4 Section 17
Township 19 North, Range 25 West
Sanders County, Montana

Issued by: Hazardous Waste Section
Waste and Underground Storage Tank Management Bureau
Permitting and Compliance Division
Montana Department of Environmental Quality

Purpose of the Environmental Assessment

The Montana Department of Environmental Quality (MDEQ) is required under the Montana Environmental Policy Act (MEPA) to conduct an environmental assessment (EA) on the proposed permit action described in this document. An EA details: 1) all reasonable alternatives to MDEQ's action; and 2) outlines the potential impacts to the human environment resulting from MDEQ's permitting action and reasonable alternatives to that action.

Based on the impact analysis and professional judgment, MDEQ makes a decision on the proposed permit action and summarizes the decision in the EA. If the decision significantly impacts the human environment, a more detailed environmental review, called an environmental impact statement, must be conducted by MDEQ.

Public Comment Period

The public including interested citizens, MDEQ, EPA, other governmental agencies, and the applicant are provided forty-five (45) days to review and comment on this draft EA. **The comment period will extend from March 22, 2006 to May 5, 2006.**

All persons wishing to comment on the draft EA should submit comments in writing to:

Ann Kron
Environmental Science Specialist
Waste and Underground Tank Management Bureau
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

All written comments must be received by the MDEQ on or before May 5, 2006 for consideration. Please contact Ann Kron at (406) 444-5824 or at the address listed above for further information.

Montana Hazardous Waste Regulations

Rules administering hazardous waste management in Montana are set forth in the Administrative Rules of Montana (ARM), Title 17, Chapter 53, Sub-Chapters 1 through 12. Federal regulations for hazardous waste management are set forth in the Code of Federal Regulations (CFR), Parts 124 and 260 through 279, and are incorporated by reference in ARM. For ease of reading this document, when federal regulations under Title 40 of the CFR have been incorporated by reference into ARM, only the federal citation is used.

Description of Project

In 1988 MDEQ initially issued a hazardous waste permit (MTHWP-88-03) to BNSF Railway Company for operation of a land treatment unit, waste pile, and closure of a surface impoundment at its former tie treating plant in Paradise, Montana. Hazardous waste permits are effective for ten years. BNSF applied for permit reissuance to continue operations and in October 2001, MDEQ reissued the permit under number MTHWP-01-02. The permit regulates operation of a corrective action management unit (CAMU) which includes creosote product recovery and a land treatment unit (LTU), post-closure care of a Surface Impoundment (SI) and post-closure care of a Waste Pile Unit (WPU), and the implementation of facility-wide corrective action.

BNSF was required in permit MTHWP-01-02 to submit an application for a permit modification to establish the groundwater portion of the SI/WPU corrective action program. BNSF also submitted a Class 3 permit modification request in accordance with 40 CFR 270.42(b) to MDEQ on November 21, 2005 to permit storage tanks T-6 and T-7 and remove permit attachments V.5, V.6, and V.7. The following is a brief description of all BNSF requested permit modifications:

1. Establish an Alternate Concentration Limit (ACL) for groundwater including a groundwater-monitoring network in the uppermost aquifer. Past activities at the site have resulted in polynuclear aromatic hydrocarbon (PAH) concentrations above measured background levels in groundwater. An ACL allows concentration limits of hazardous constituents in groundwater to be above background values, but the limits must not pose a substantial present or potential hazard to human health or the environment;

2. Implementation of Land Use Controls that run with the land for the duration of groundwater corrective actions, to establish further assurance that groundwater use shall be controlled;

3. Permit storage of hazardous waste in tanks T-6 and T-7. Tanks T-6 and T-7 currently store creosote that has been removed from the aquifer. This waste was formerly shipped to an off-site facility for recycling and was exempt from hazardous waste storage time limits. Due to economic reasons, BNSF can no longer ship the waste off-site for recycling; therefore, hazardous waste storage time limits of 270-days apply. BNSF has requested to permit the tanks to allow for more practical storage time limits for the waste; and

4. Removal of attachment V.5 (PAHs Used for LTU Closure Standards), V.6 (Microtox Test Description), and V.7 (Regulated Unit Closure Schedule) because they are no longer applicable.

Summary of ACL Determination

In 1992 BNSF conducted a corrective measures study to evaluate remediation technologies to address contamination related to the former surface impoundment. It was concluded that due to the nature of creosote in the subsurface it was technically infeasible to completely remove the creosote pooled at the base of the aquifer. It was also concluded that it was technically infeasible to meet groundwater protection standards in the aquifer beneath the site; therefore, BNSF submitted an ACL petition in 1992. BNSF concluded in the ACL petition that natural attenuation was effectively reducing PAH levels in groundwater to below risk-based values prior to migrating off-site. After review of BNSF's request, MDEQ required a human health risk assessment be conducted as part of the ACL petition. BNSF completed the required risk assessment in 1995. In 1996 BNSF installed a product recovery system at both the surface impoundment and former treatment area as an interim measure to address the source of groundwater contamination at the site. The product recovery system has become part of the final remedy and continues to operate and recover creosote product at the Paradise site. Due to the nature of creosote,

the product recovery system is expected to only remove between 2% and 6% of the creosote product that was released to the subsurface. In 1997 BNSF completed a corrective measures study for facility-wide corrective action at the site, which was overseen by the EPA at the time. EPA determined an ACL was also appropriate for groundwater corrective action at the site, and therefore, the ACL became part of the required facility-wide corrective action at the site as well as the required groundwater corrective action for contamination related to the surface impoundment. In 2000, MDEQ obtained oversight for facility-wide corrective action from EPA. In 2001 MDEQ reissued BNSF's hazardous waste permit for the BNSF site. In the permit, MDEQ required BNSF complete their ACL petition for MDEQ approval. Based on those permit requirements, BNSF submitted a supplemental ACL petition which was finalized in 2004. MDEQ and EPA worked together with BNSF to determine requirements and values for an ACL that would be protective of human health and the environment. The ACL requirements are included in the proposed permit modification that is part of this public comment package. MDEQ is also requiring implementation of land use controls to ensure groundwater use at the site is controlled.

Objectives of Proposed MDEQ Action

MDEQ's objective in issuing a permit modification to BNSF is to comply with 40 CFR 270. BNSF has submitted a Class 3 permit modification request in accordance with 40 CFR 270.42(b) and requirements in the permit. As stated in 40 CFR 270.42(b)(6), the Department must approve the modification request with or without changes, deny the modification, or determine that procedures for a Class 3 modification as set forth in 40 CFR 270.42(c) must be followed. A corrective measures study (CMS) for the surface impoundment was completed by BNSF in 1992. The CMS evaluated four types of alternatives for the removal of creosote contamination from the aquifer. Through these evaluations the proposed action stated in this EA was chosen.

Alternatives Considered

Alternative I – Modification (Proposed Action)

Under this alternative, MDEQ would modify the permit to include the modification requests as submitted by BNSF. The proposed action would include:

- Establishment of an ACL in the permit:
  MDEQ will make language changes to the permit which require monitoring for PAHs at point of compliance (POC) wells annually, and monitoring the point of exposure (POE) wells semi-annually in the spring and fall to coincide with high and low riverflow stages. These wells are

expected to adequately monitor the groundwater on-site. The modified language for the ACL will specify corrective measures that must be taken if levels of PAHs exceed the established action levels in any of the wells.

- Inclusion of Institutional Control Requirements, as specified by MDEQ:
  MDEQ will make language changes to the permit which require more stringent land use controls for regulated units closed using industrial risk-based standards.
- Permitting storage of hazardous waste in tanks T-6 and T-7:
  MDEQ will make language changes to the permit to include requirements for properly storing waste in these tanks based on federal and state regulations.
- Removal of attachment V.5 (PAHs Used for LTU Closure Standards), V.6 (Microtox Test Description), and V.7 (Regulated Unit Closure Schedule) because they are no longer applicable.

Alternative II – Denial

The MDEQ may deny BNSF's permit modification request pursuant to 40 CFR 124.6. BNSF has submitted a complete permit application and the MDEQ can issue a permit modification containing conditions to protect human health and the environment. Therefore, the MDEQ does not have grounds to deny the permit modification request. The denial alternative is not reasonable and is not considered further.

Stipulations and Controls

All conditions of the draft permit are based on requirements in Title 17, Chapter 53 of Administrative Rules of Montana (ARM) for the management of hazardous waste. BNSF must comply with the permit conditions to be in compliance with Montana's hazardous waste laws and regulations.

Analysis of Regulatory Impacts on Private Property Rights

A Private Property Assessment Act Checklist was completed for the draft permit and is on file at the MDEQ. The MDEQ determined that no takings or damaging implications exist requiring a further impact assessment.

Summary of Impacts

The checklist below was only completed for Alternative I. As noted above, Alternative II was not considered because the MDEQ determined the alternative was not reasonable.

Tables 1 and 2 rate potential human environment impacts from modifying MTHWP-01-02 according to Alternative I. The human environment includes those attributes, such as biological, physical, social, economic, cultural, and aesthetic factors, that interrelate to form the environment. Impacts may be adverse, beneficial, or both. The following criteria are used to rate the impacts:

- The severity, duration, geographic extent, and frequency of occurrence;
- The probability the impact will occur if the proposed action occurs;
- Growth-inducing or growth-inhibiting aspects of the impact;
- The quantity and quality of each environmental resource or value effected;
- The importance to the State and society of each environmental resource or value effected;
- Any precedent set as a result of an impact from the proposed action that would commit MDEQ to future actions with significant impacts or a decision in principle about such future actions; and
- Potential conflict with local, state, or federal laws, requirements, or formal plans.

The following are definitions for major, moderate, minor, none, and unknown impacts on the human environment:

Major: A significant change from the present conditions of the human environment. Major impacts are serious enough to warrant preparing an environmental impact statement (EIS).

Moderate: Not a major or minor change from the present condition of the human environment. A single moderate impact may not warrant preparing an EIS; however, when considered with other impacts, an EIS may be required.

Minor: A slight change from the present condition of the human environment. Minor impacts are not serious enough to warrant preparing an EIS.

None: No change from the present conditions of the human environment.

Unknown: An EIS must be conducted to determine the effects on the human environment if impacts are unknown.

Table 1. Potential Impacts on Physical and Biological Environment

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

Table I Discussion

B. Water Quality, Quantity, and Distribution:

Dissolved PAHs have been detected in groundwater beneath the former tie treating plant and surface impoundment. The source of the dissolved PAHs is creosote released to the subsurface during plant operations. Remedial actions including soil excavation, land treatment, and creosote recovery have been conducted, and creosote recovery is on-going at the present time. There has been no evidence, through either extensive groundwater monitoring or groundwater modeling, to indicate that dissolved PAHs at concentrations above risk-based groundwater protection standards have migrated beyond the property line of the site. Monitoring data and several studies have shown that natural attenuation/degradation

mechanisms and the product recovery system have resulted in a relatively stable distribution of dissolved PAHs.

By establishing the ACL groundwater monitoring program, groundwater will be closely monitored to ensure groundwater is not further degraded on-site and ensure groundwater migrating past the facility boundary will not contain hazardous constituents above acceptable risk-based groundwater protection standards.

Monitoring and natural attenuation is the proposed corrective action due to the technical infeasibility of contaminant removal beyond the creosote recovery currently being operated at the site. Therefore, a minor impact to water quality is present because more aggressive clean-up of current contamination will not be conducted.

Table 2. Potential Impacts on Social, Economic, and Cultural Environment

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

Table 2 Discussion

C. Local and State Tax Base and Tax Revenue

Impacts on local and state tax base and tax revenue will not increase from those generated by the current permit. This site is expected to be required to conduct creosote removal and groundwater monitoring indefinitely, which will prevent the space from being available for sale as other uses. Permit-required land use controls, including deed restrictions, survey plat notations, and restrictive covenants would

restrict land use to industrial purposes only. This in turn may have a negative effect on local and state tax base and revenue.

I. Demands for Governmental Services

The modified permit will require BNSF to submit groundwater monitoring reports, and annual hazardous waste generator reports. These submittals will be reviewed by MDEQ. Therefore, a minor impact to government services is anticipated.

J. Industrial and Commercial Activity

Impacts on industrial and commercial activity will not increase from those generated by the current permit. BNSF will hire environmental consulting firms to complete sampling, evaluations, and tank inspections and evaluations. Samples for analytical evaluation will be sent to an external analytical laboratory for analysis. Creosote product stored in tanks T-6 and T-7 will be shipped off-site to a hazardous waste treatment facility.

L. Cumulative and Secondary Impacts

Permit-required land use controls, including deed restrictions, survey plat notations, and restrictive covenants would restrict land use to industrial purposes only. Deed restrictions would be required to "run with the land" to ensure any restrictions are forever binding against the owner and successors in interest. Land use controls required by the permit would provide additional long-term protection to that provided by the local zoning authority. Long-term restrictions on land use for industrial purposes required by the permit would have minor positive cumulative and secondary impacts.

Individuals or Groups Contributing to EA

Montana Department of Environmental Quality

Draft EA Prepared

Ann Kron

March 21, 2006

Recommendation

Based on the EA analysis, MDEQ recommends Alternative I (the proposed action). BNSF has submitted a complete permit modification request. The permit will include conditions that are protective of human health and the environment. The final permit will take into account all comments received during the public comment period.

The EA is an adequate level of environmental review; an EIS is not required. The EA analysis demonstrates that this State action will not be major action significantly effecting the quality of the human environment.