

**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
Environmental Assessment

**PERMITTING AND COMPLIANCE DIVISION**  
Water Protection Bureau

**Name of Project:** Western Energy Company, Rosebud Mine

**Location of Project:** Rosebud Mine located adjacent to the City of Colstrip, MT;  
**Outfall Locations:** See Statement of Basis for latitude/longitude locations of the 151 individual outfalls

**County:** Rosebud County

**Description of Project:** This is a reissuance of MPDES permit MT0023965 for Western Energy Company which discharges treated mine drainage from an approximately 25,000 acre sub-bituminous coal mine. Of these 25,000 acres, approximately 13,900 acres are in various phases of reclamation. Receiving waters at the facility include East Fork Armells Creek, West Fork Armells Creek, Stocker Creek, Black Hank Creek and Donley Creek (all tributary to East Fork Armells Creek, which is tributary to the Yellowstone River); and Lee Coulee, Spring Creek, Cow Creek and Pony Creek (all tributary to Rosebud Creek, which is tributary to the Yellowstone River). All nine receiving waters that receive direct discharges from permitted outfalls are ephemeral streams. Influent flows to settling ponds consist of mine drainage and drainage from coal storage areas; influent is treated using a series of settling ponds. Treatment for discharges from reclaimed drainages not associated with sediment ponds consists of an approved Sediment Control Plan.

Of the 151 individual outfalls, 62 discharge to East Fork Armells Creek, 16 discharge to West Fork Armells Creek, 22 discharge to Stocker Creek, 13 discharge to Spring Creek, 9 discharge to Pony Creek, 7 discharge to Lee Coulee, 20 discharge to Cow Creek, 1 discharges to Black Hank Creek and 1 discharges to Donley Creek. A total of 126 discharge events were reported for the period of record of December 1999 through June 2011. Most discharges (37) were to Stocker Creek, 31 were to West Fork Armells Creek, 29 were to East Fork Armells Creek, 13 were to Pony Creek, 9 were to Cow Creek, 6 were to Spring Creek, and 1 was to Black Hank Creek.

**Agency Action and Applicable Regulations:** The proposed action of the Department is to reissue the MPDES permit for another five-year cycle.

Applicable rules and statute:

Administrative Rules of Montana (ARM) Title 17, Chapter 30 – Water Quality

Subchapter 2 - Water Quality Permit and Authorization Fees

Subchapter 5 - Mixing Zones in Surface and Ground Water

Subchapter 6 - Surface Water Quality Standards and Procedures

Subchapter 7 - Nondegradation of Water Quality

Subchapters 12 & 13 - Montana Pollutant Discharge Elimination System (MPDES) Standards

Montana Code Annotated (MCA), Title 75-5-101 et. seq., “Montana Water Quality Act”

**Summary of Issues:** The reissued permit authorizes 151 outfalls as discussed above. Due to progression of mining operations since the previous permit was renewed in 1999, 12 outfalls were added. Effluent

limits on total suspended solids (TSS), pH, total dissolved solids (TDS), sulfate and boron during non-precipitation-related discharges remain the same as in the previous permit. Further, the settleable solids and pH effluent limits during precipitation-related events remain the same. Effluent limits on TDS, sulfate and boron remain the same. The effluent limits oil and grease are more stringent in the reissued permit. In addition to the above, new water quality-based effluent limits are included in the reissued permit for the pollutants dissolved aluminum, total copper, total iron, and total selenium; these limitations are applicable only to the twelve outfalls not previously permitted. The reissued permit also establishes effluent limitations for electrical conductivity and sodium adsorption ratio for outfalls discharging to Rosebud Creek tributaries (Spring, Pony and Cow Creeks; and Lee Coulee).

Self-monitoring requirements have been increased in the reissued permit in order to (1) assure compliance with effluent limits, including new pollutants, (2) monitor other pollutants of concern, and (3) better characterize the effluent. Additional requirements have been included in the reissued permit for acute Whole Effluent Toxicity (WET) testing annually at each outfall. WET testing will assess any negative effects caused by aggregate toxic effects of pollutants in the discharge(s).

**Affected Environment & Impacts of the Proposed Project:**

The Proposed Project consists solely of reissuance of an MPDES permit as discussed above and the scope of consideration of potential impacts on the physical and human environment is confined to only those impacts associated with reissuance of the MPDES permit. Potential impacts associated with mining, reclamation and other activities have been addressed previously associated with issuance of state mining permits and amendments.

Y = Impacts may occur (explain under Potential Impacts). *Include frequency, duration (long or short term), magnitude, and context for any significant impacts identified. Reference other permit analyses when appropriate (ex: statement of basis). Address significant impacts related to substantive issues and concerns. Identify reasonable feasible mitigation measures (before and after) where significant impacts cannot be avoided and note any irreversible or irretrievable impacts. Include background information on affected environment if necessary to discussion.*

N = Not present or No Impact will likely occur. *Use negative declarations where appropriate (wetlands, T&E, Cultural Resources).*

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] No impacts anticipated from reissuance of MPDES permit.

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[N] All direct receiving waters are ephemeral streams that flow only as a result of precipitation. Discharges to the receiving waters, although authorized by permit, are rare and typically occur as a result of runoff that exceeds the 10-yr, 24-hr precipitation event. All effluent limitations on the proposed reissued permit are either equal to or more stringent than those in the previous permit (see summary of issues above). Self-monitoring requirements of discharges have been increased substantially to assure compliance with permit conditions and to track levels of pollutants of concern (see summary of issues above). Discharge water quality will be improved with reissuance of the MPDES permit, given the more stringent effluent limitations and increased monitoring requirements.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] No impacts anticipated from reissuance of MPDES permit.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] No impacts anticipated from reissuance of MPDES permit.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] No impacts anticipated from reissuance of MPDES permit.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N] Several wetlands within Rosebud Mine boundaries. No known federally listed threatened or endangered species or species of special concern present. No impacts anticipated from reissuance of MPDES permit.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] Cultural sites exist within Rosebud Mine boundaries. No impacts anticipated from reissuance of MPDES permit.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[N] No impacts anticipated from reissuance of MPDES permit.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed?	[N] No impacts anticipated from reissuance of MPDES permit.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] No impacts anticipated from reissuance of MPDES permit.

<b>IMPACTS ON THE HUMAN ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] No impacts anticipated from reissuance of MPDES permit.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] No impacts anticipated from reissuance of MPDES permit.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] No impacts anticipated from reissuance of MPDES permit.

<b>IMPACTS ON THE HUMAN ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] No impacts anticipated from reissuance of MPDES permit.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] No impacts anticipated from reissuance of MPDES permit.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] No impacts anticipated from reissuance of MPDES permit.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] No impacts anticipated from reissuance of MPDES permit.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] No impacts anticipated from reissuance of MPDES permit.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No impacts anticipated from reissuance of MPDES permit.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No impacts anticipated from reissuance of MPDES permit.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] No impacts anticipated from reissuance of MPDES permit.
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N] No impacts anticipated from reissuance of MPDES permit.
22(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[N] No impacts anticipated from reissuance of MPDES permit.
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[ ]

- 23. Description of and Impacts of other Alternatives Considered: None
- 24. Summary of Magnitude and Significance of Potential Impact: None
- 25. Cumulative Effects: None
- 26. Preferred Action Alternative and Rationale: The preferred action is to reissue the MPDES permit. This action is preferred because the permit program provides the regulatory mechanism for protecting water quality by enforcing the terms of the MPDES permit.

**Recommendation for Further Environmental Analysis:**

EIS                                       More Detailed EA       No Further Analysis

**Rationale for Recommendation:**

- 27. Public Involvement: A 30-day public comment period will be held.
- 28. Persons and agencies consulted in the preparation of this analysis: None

**EA Checklist Prepared By:** Melissa Sjolund

**Date:** March 20, 2012

**Approved by:**

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Jenny Chambers, Chief  
Water Protection Bureau

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Date