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

PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: August 18, 2010

Name of Applicant: Montana Refining Company

Source: Great Falls Refinery

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 2161-24.

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 September 2, 2010. 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,

Vickie Walsh

Vickie Walsh
Air Permitting Program Supervisor
Air Resources Management Bureau
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Jenny O'Mara

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VW: JO
Enclosures

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
1520 East Sixth Avenue
P.O. Box 200901
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(406) 444-3490

# DRAFT ENVIRONMENTAL ASSESSMENT (EA)

*Issued For*: Montana Refining Company
1900 10th Street North East
Great Falls, MT 59404

*Montana Air Quality Permit Number*: #2161-24

*Preliminary Determination Issued*: August 20, 2010
*Department Decision Issued:*
*Permit Final:*

1. *Legal Description of Site*: MRC is located at 1900 10th Street N.E. in Great Falls, MT. The legal description of the site is the NE¼ of Section 1, Township 20 North, Range 3 East, Cascade County, Montana.

2. *Description of Project*: On January 15, 2008, the Department received a request from MRC to allow the installation of a second hydrogen plant with a heat input of 80 MMBtu/hr. The Department approved this de minimis request on February 8, 2008. Pursuant to the Consent Decree and the approval of the de minimis request, MRC was required to conduct an initial performance test on the unit with the results reported based upon the average of three, one hour testing periods. The Consent Decree also required MRC to submit an application to the Department and to propose a $NO_x$ permit limit for the heater. MRC submitted a permit application on December 29, 2009 and the Department deemed this application incomplete on January 15, 2010. On July 12, 2010, MRC submitted additional information as requested by the Department.

3. *Objectives of Project*: To include approved $NO_x$ emission limits for MRC's operation of Hydrogen Plant #2.

4. *Additional Project Site Information*: This refinery has operated at this site since the 1920's. The refinery currently employs 90 people, and is located along the Missouri River in Great Falls, Montana.

5. *Alternatives Considered*: In addition to the proposed action, the Department considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because MRC demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

6. *A Listing of Mitigation, Stipulations, and Other Controls*: A listing of the enforceable permit conditions and a permit analysis would be contained in Permit #2161-24.

7. *Regulatory Effects on Private Property Rights*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined

the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would not unduly restrict private property rights.

8. *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 Resource | | | | 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

Impacts on terrestrial and aquatic life would be minimal. MRC is an existing facility that is currently permitted to use Hydrogen Plant #2. This permit action is to add $NO_x$ emission limits to the Hydrogen Plant pursuant to the MRC Consent Decree with EPA. Because the plant has been approved and is currently in operation, the addition of $NO_x$ emission limits would not cause any additional impacts to terrestrial or aquatic life and habitats. Therefore, the area would not change as a result of the proposed project and any associated impacts would be minor.

B. Water Quality, Quantity, and Distribution

Any impacts on water quality, quantity or distribution, if any, would be minor because this permit modification would not require water. There is the potential for impacts to groundwater or stormwater due to spills and leaks, but these risks should be addressed in the facility's SPCC plan. Therefore, the overall characteristics of the area would not change as a result of the proposed project and any associated impacts would be minor.

C. Geology and Soil Quality, Stability, and Moisture

The proposed permit modification would have minor impacts on geology and soil quality, stability and moisture because deposition of air pollutants on soils would be minor (see Section 8.F of this EA). Only minor amounts of additional pollution (less than 9 TPY of $NO_x$) would be generated. Pollutants would be widely dispersed before settling upon vegetation and

surrounding soils (see Section 8.D of this EA). The permit modification would not result in any disturburance of soils. Therefore, any additional effects upon geology and soil quality, stability, and moisture at this site would be minor and short-term.

D. Vegetation Cover, Quantity, and Quality

Minor or no impacts would occur on vegetative cover, quality, and quantity because the operation of Hydrogen Plant #2 would remain the same. The permit modification was required pursuant to the Consent Decree. Only minor additional pollutants would result from this permit action and the pollutants would be greatly dispersed. Any corresponding deposition on vegetation from the proposed project would be minor (see Section 8.F of this EA). Therefore, the associated impacts upon vegetation would be minimal.

E. Aesthetics

The existing operation would be visible and could create additional noise while operating; however, impacts to aesthetics associated with adding emission limits to this permit would result in no change to aesthetics. MAQP #2161-24 would include conditions to control emissions, including visible emissions, from the plant. Therefore, impacts to area aesthetics as a result of the proposed permit modification would be minor.

F. Air Quality

Air quality impacts from the proposed project would be minor. MAQP #2161-24 includes emission limits for Hydrogen Plant #2 and additional pollutant deposition from the proposed project would be minimal, if any, because the pollutants emitted are mainly gaseous, and would be widely dispersed (from factors such as wind speed and wind direction) and would have minimal deposition on the surrounding area (due to site topography of the area and minimal vegetative cover in the area). Therefore, air quality impacts in this area would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

Since a refinery has operated at this site since the 1920's, and the permit modification would not result in any ground disturbance, the Department determined that it would be unlikely that the proposed project would impact any species of concern.

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

There will be no additional demands on water resources due to this permit modification. There will be minimal impacts to air resources because the source is an existing industrial source of emissions. Air pollutants generated due to this modification would be limited and widely dispersed (see Section 8.F of this EA). There would be a negligible change in energy requirements, if any, because the plant is already in operation. Overall, any impacts of the proposed project to water, air, and energy resources would be minor.

I. Historical and Archaeological Sites

The project would occur within the boundaries of the MRC facility, a previously disturbed industrial site. The Montana State Historic Preservation Office previously informed the Department that there is low likelihood of adverse disturbance to any known archaeological or historic site, given previous industrial disturbance within a given area. Because there would be no additional ground disturbance, there would be no known effect on any historic or archaeological site.

J. Cumulative and Secondary Impacts

Additional emissions generated from the proposed project would, at most, result in only minor impacts to the area of operations because the proposed equipment is located within the existing refinery facility, which has other sources of emissions that are much larger. This modification would be minor in comparison and the overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would be minor.

9. *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 | Unknow n | 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

The proposed project would cause no disruption to the social structures and mores in the area because the modification would occur within an existing industrial source. Further, the facility would be required to operate according to the conditions that would be placed in MAQP #2161-24. No native or traditional communities would be affected by the proposed project operations and no impacts upon social structures or mores would result.

B. Cultural Uniqueness and Diversity

The predominant use of the area is an existing refinery. Because the predominant use of this area has historically been refinery operations, and the fact that this operation would not change as a result of adding $NO_x$ emission limits to Hydrogen Plant #2, there would be minor impacts resulting from this permit modification. Therefore, the cultural uniqueness and diversity of the area would not be impacted by this permit action.

C. Local and State Tax Base and Tax Revenue

The proposed project would have little, if any, impact on the local and state tax base and tax revenue because the proposed project would be at an existing industrial source. The proposed project would not require any additional employees. Thus, only minor impacts to the local and state tax base and revenue would be expected.

D. Agricultural or Industrial Production

The permit modification would occur within an existing refinery that is located in an industrial/commercial area. The project would not result in any additional ground disturbance and therefore would not impact any existing agricultural land. There are no expected effects on agricultural production, and minor effects on industrial production.

E. Human Health

MAQP #2161-24 would incorporate conditions to ensure that the proposed permit modification would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. The additional emissions from this permit modification would be minimal. As described in Section 8.F of this EA, any additional emissions that would result would be minimized by conditions in MAQP #2161-24. Therefore, only minor impacts would be expected on human health from the proposed project.

F. Access to and Quality of Recreational and Wilderness Activities

This project would not have an impact on recreational or wilderness activities because this is an existing operation and the permit modification would not require new ground disturbance. The project would not result in any changes in access to and quality of recreational and wilderness activities.

G. Quantity and Distribution of Employment

No new employees are expected. No individuals would be expected to permanently relocate to this area of operation as a result of the proposed project. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. Distribution of Population

No individuals would be expected to permanently relocate to this area of operation as a result of the proposed project. Therefore, the proposed project would not impact the normal population distribution in the area of operation.

I. Demands of Government Services

Minor government services would be required for acquiring the appropriate permits for the proposed project and verifying compliance with the permits that would be issued. Therefore, the Department believes that the demands for government services would be minor.

J. Industrial and Commercial Activity

Hydrogen Plant #2 was previously permitted. This permit modification adds $NO_x$ limits to the permit. Because the project does not require construction of any sort, the permit modification would not result in any industrial or commercial activity.

K. Locally Adopted Environmental Plans and Goals

MAQP #2161-24 would contain limits for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards, which should be consistent with any locally adopted environmental plan or goal for operating at this proposed site.

L. Cumulative and Secondary Impacts

The proposed project would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source is an existing operation. Further, no other industrial operations are expected to result from the permitting of this facility. The permit modification would not result in any increases in traffic in the immediate area. No economic impacts to the local economy would be expected due to this permit modification. Thus, only minor and temporary cumulative and secondary effects would result.

*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*: All potential effects resulting from construction and operation of the proposed facility are negligible or minor; therefore, an EIS is not required.

*Other groups or agencies contacted or which may have overlapping jurisdiction*: Montana Department of Environmental Quality - Permitting and Compliance Division (Industrial and Energy Minerals Bureau); Montana Natural Heritage Program; and the State Historic Preservation Office (Montana Historical Society).

*Individuals or groups contributing to this EA*: Montana Department of Environmental Quality (Air Resources Management Bureau), Montana State Historic Preservation Office (Montana Historical Society).

*EA prepared by*: Jenny O'Mara
*Date*: August 11, 2010