DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
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JUN 13 2006
LEGISLATIVE ENVIRONMENTAL POLICY OFFICE

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued For: CHS Inc.
Laurel Refinery
P.O. Box 909
Laurel, MT 59044-0909

Permit Number: 1821-14

Preliminary Determination on Permit Issued: 06/12/06
Department Decision Issued:
Permit Final:

1. Legal Description of Site: South ½, Section 16, Township 2 South, Range 24 East in Yellowstone County.

2. Description of Project: On May 4, 2006, the Department received a complete application from CHS to incorporate the final design capacity of three emission sources associated with the new 15,000-barrel per day (BPD) delayed coker unit project permitted under #1821-13. The final design capacities have increased for the new NHT Charge Heater, Coke Charge Heater and Boiler Number 11. The application also includes a request to reduce the refinery-wide fuel oil burning SO_2 emission limitation. This reduction allows CHS to stay below the significance threshold for the applicability of the New Source Review-Prevention of Significant Deterioration (PSD) program.

3. Objectives of Project: To appropriately permit the final design capacities of the NHT Charge Heater, the Coker Charge Heater, and Boiler #11 and the associated emissions.

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

5. A listing of mitigation, stipulations and other controls: A list of enforceable permit conditions and a complete permit analysis, including a BACT determination, would be contained in Permit #1821-14.

6. Regulatory effects on private property: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. 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
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:

This permitting action would result in increased NO_x, SO_2, CO, and particulate emissions. However, the emissions are within the facility-wide emissions caps established in Permit #1821-05 in 2000, and are well below the applicable State Implementation Plan SO_2 emissions caps. Impacts to terrestrial life and habitats may occur as a result of these increased emissions. Habitat impacts could result in a change of diversity or abundance of terrestrial or aquatic life. However, this area does not appear to contain any critical or unique wildlife habitat or aquatic life and the project would occur in an already disturbed area.

B. Water Quality, Quantity, and Distribution:

While deposition of pollutants would occur, the Department determined that any impacts from deposition of pollutants would be minor. Furthermore, this action would not result in a change in the quality or quantity of ground water. Therefore, minor impacts to water quality, quantity, and/or distribution are anticipated.

C. Geology and Soil Quality, Stability, and Moisture:

No additional disturbance would be created from this action. The area for the new heaters has been determined and the increase in final design capacity will not effect their location on-site. While deposition of pollutants would occur, the Department determined that any impacts from deposition of pollutants would be minor. This project would not change the soil stability or geologic substructure or result in any increased disruption, displacement, erosion, compaction, or moisture loss, which would reduce productivity or fertility at or near the site. No unique geologic or physical features would be disturbed. Therefore, minor impacts to geology and soil quality, stability, and moisture are anticipated. The issuance of the permit would not result in construction of any structures outside the area already disturbed; therefore, there would be only minor impact on the soil quantity, stability, moisture, or geology.

D. Vegetation Cover, Quantity, and Quality:

This project would be constructed on land already used for industrial activities. The vegetative cover, quantity, and quality would not be disturbed inside the facility boundaries. However, possible increases in actual emissions of NO_x, CO, SO_2, and particulate from historical emission levels may result in minor impacts to the diversity, productivity, or abundance of plant species in the surrounding areas. Issuance of this permit would cause minor if any changes in vegetation cover, quantity, or quality.

E. Aesthetics:

The new heaters and Boiler No. 11 would create additional noise in the area. However, the proposed equipment would be constructed in the area that has previously been disturbed and already has noise associated with its operation. The controls applied and the permit conditions that support the heaters and the boiler should minimize any disturbance from these emissions. Therefore, any additional impacts on aesthetics would be minimal.

F. Air Quality:

The project would include increases in NO_x, SO_2, CO, and particulate emissions above recent historical levels. However, the emissions are within the facility-wide emissions caps established in Permit #1821-05 in 2000, and are well below the applicable State Implementation Plan SO_2 emissions caps. However, previously modeled levels of pollutants (at allowable levels) show compliance with the National Ambient Air Quality Standards (NAAQS) and the Montana Ambient Air Quality Standards (MAAQS). The overall impact on air quality would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources:

This permitting action may result in minor impacts to unique endangered, fragile, or limited environmental resources. However, the Department is not aware of any unique, rare, threatened, or endangered species in the area surrounding the facility. Further, as described in Section 7.F. of this EA, pollutant emissions generated from the facility would have minimal impacts on air quality in the immediate and surrounding area because of the relatively small amount of pollution emitted. There would not be any additional impact to these resources because the project would occur at an already disturbed site.

H. Demands on Environmental Resource of Water, Air, and Energy:

This project would not consume any significant additional energy or water resources. However, minor upgrades of utilities may be required during the construction process. Further, as described in Section 7.F. of this EA, pollutant emissions generated from the increase in the heaters and the boiler would have minimal impacts on air quality in the immediate and surrounding area because of the relatively small amount of pollution emitted. This action did not include an increase in allowable levels. Previous modeling efforts, using allowable levels, showed compliance with the NAAQS and the MAAQS. This project would result in a minor effect on the air resource, but resulting emissions will still comply with ambient air quality standards.

I. Historical and Archaeological Sites:

This project would not disturb a greater land surface than has already been occupied by the refinery. This project would occur within the boundaries of the area already disturbed. Therefore, no impacts to any historical and archaeological sites would be anticipated.

J. Cumulative and Secondary Impacts:

Increases in actual pollutant emissions above historical levels may result in minor cumulative and secondary impacts to terrestrial and aquatic habitats, water quality, and air quality. However, as previously mentioned, the emissions are within the facility-wide emissions caps established in Permit #1821-05 in 2000, and are well below the applicable State Implementation Plan SO_2 emissions caps. Minor cumulative or secondary impacts are expected to result from this project.

8. 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	Unknown	Comments
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 facility would not cause a disruption to any native or traditional lifestyles or communities (social structures or mores) in the area because the project would be constructed at a previously disturbed, industrial site. The proposed project would not change the nature of the site.

B. Cultural Uniqueness and Diversity:

The proposed project would not cause a change in the cultural uniqueness and diversity of the area because the land is currently used as a petroleum refinery; therefore, the land use would not be changing.

C. Local and State Tax Base and Tax Revenue:

This project would have a minor effect on the local and state tax base and tax revenue because the proposed increase in the NHT Charge Heater, the Coker Charge Heater, and Boiler #11 is intended to increase production of products more profitable than asphalt (specifically gasoline and diesel). Therefore, tax revenue from the facility might increase slightly.

D. Agricultural or Industrial Production:

The proposed project would not result in a reduction of available acreage or productivity of any agricultural land; therefore, agricultural production would not be affected. Industrial production would change slightly because the asphalt production would be reduced to produce other, higher value products, specifically gasoline and diesel.

E. Human Health:

As described in Section 7.F of the EA, the impacts from this facility on human health would be minor. The project would include increases in NO_x, SO_2, CO, and particulate emissions from recent emissions levels. However, the emissions are within the facility-wide emissions caps established in Permit #1821-05 in 2000, and are well below the applicable State Implementation Plan SO_2 emissions caps. The air quality permit for this facility incorporates conditions to ensure that the facility would be operated in compliance with all applicable rules and standards. These rules and standards are designed to be protective of human health.

F. Access to and Quality of Recreational and Wilderness Activities:

This project would not have an impact on recreational or wilderness activities because the construction site is far removed from recreational and wilderness areas or access routes. This project would not result in any changes in access to and quality of recreational and wilderness activities.

G. Quantity and Distribution of Employment:

This project would result in minor impacts to the quantity and distribution of employment at the facility because temporary construction-related positions could result from this project but any impacts to the quantity and distribution of employment would be minor.

H. Distribution of Population:

This project does not involve any significant physical or operational change that would affect the location, distribution, density, or growth rate of the human population. The distribution of population would not change as a result of this project.

I. Demands of Government Services:

The demands on government services would experience a minor impact. The primary demand on government services would be the acquisition of the appropriate permits by the facility (including local building permits, as necessary, and a state air quality permit) and compliance verification with those permits.

J. Industrial and Commercial Activity:

Overall industrial production at the CHS refinery would not change as a result of the project, as the refinery's overall capacity would not change. The heater and the boiler were previously proposed and approved for construction and installation. This permit action slightly increases the final design capacity of this equipment. Therefore, a minor impact on industrial activity at CHS would be expected. Industrial and commercial activity in the neighboring area is not anticipated to be affected by issuing Permit #1821-14.

K. Locally Adopted Environmental Plans and Goals:

This project would not affect any locally adopted environmental plans or goals, CHS must continue to comply with the State Implementation Plan (SIP) and associated stipulations for the Billings/Laurel area. The Department is not aware of any locally adopted environmental plans and goals that would be impacted by this project.

L. Cumulative and Secondary Impacts:

Increases in actual pollutant emissions of NO_x, SO_2, CO, and particulate emissions above recent historical levels may result in minor cumulative and secondary impacts to the human environment. However, the emissions are within the facility-wide emissions caps established in Permit #1821-05 in 2000, and are well below the applicable State Implementation Plan SO_2 emissions caps. Therefore, the cumulative and secondary impacts from the proposed project would be minor.

Recommendation: An 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 would be minor; therefore, an EIS is not required. In addition, the source would be applying BACT and the analysis indicates compliance with all applicable air quality rules and regulations.

Other groups or agencies contacted or which may have overlapping jurisdiction: None.

Individuals or groups contributing to this EA: Department of Environmental Quality, Permitting and Compliance Division - Air Resources Management Bureau.

EA Prepared By: Vickie Walsh
Date: June 6, 2006