Appendix E – Response to Comments

Response to Comments on the Draft Environmental Impact Statement for the MHA Nation's Proposed Clean Fuels Refinery Project

The Bureau of Indian Affairs (BIA) and the Environmental Protection Agency (EPA) jointly published the Draft Environmental Impact Statement (DEIS) for the Mandan, Hidatsa, and Arikara Nation's Proposed Clean Fuels Refinery Project in June 2006. The U.S. Army Corps of Engineers (USACE) is a cooperating agency for this National Environmental Policy Act (NEPA) analysis and the Three Affiliated Tribes (Mandan, Hidatsa and Arikara Nation [MHA Nation]) is a Cooperating Sovereign Nation.

BIA and EPA announced the availability of the DEIS and the start of the public comment period in the Federal Register (Volume 71, Number 125, Pages 37092-37093), in press releases and mailed announcements on June 29, 2006. BIA and EPA held seven public hearings on the DEIS in Twin Buttes, White Shield, Parshall, Mandaree, New Town, and Makoti, North Dakota between July 31 and August 5, 2006. Written comments were received until September 14, 2006. Comments (questions and statements) received orally at the hearings were recorded by a court reporter. Additional written comments were received on comment cards at these hearings and in letters to BIA and/or EPA.

This Response to Comments document is organized by topic categories so that similar comments can be responded to collectively. The overall topics for the comments received are:

- National Environmental Policy Act Process
  (DEIS Information and Public Participation)
- Government Responsibilities
  (EPA, BIA, Tribal Government and Joint Responsibilities)
- Project Definition
  (Project Description and Technologies and Alternatives)
- Environmental Impacts
  (Geology, Ground Water, Surface Water, Solid and Hazardous Wastes, Vegetation, Wildlife, Cultural Resources, Air Quality, Socioeconomics, Environmental Justice, Human Health)
- Emergencies, Spills and Safety
- Closure

During the public review period, BIA and EPA received 31 letters submitted by individuals and organizations; 65 people testified at the seven public hearings on the DEIS and 20 comment cards were submitted during the public hearings. BIA and EPA have reviewed and evaluated every letter, card, and oral statement submitted during the public review period. To effectively and efficiently summarize and respond to the comments, the agencies: (1) organized by topic and subtopic, an outline of issues raised (see Response to Comments Table of Contents); (2) evaluated each issue raised in every written or oral statement; (3) categorized each issue and as appropriate, included issues in corresponding topics and

subtopics; and (4) responded to every categorized comment. Generally, BIA and EPA used the following approach to responding to comments received on the DEIS:

- When a comment requests further information, the response has been written to point out where in the DEIS the requested information can be found; why such information is not relevant, not available, or not needed; or indicate where new information or clarification of existing information has been added in the Final Environmental Impact Statement (FEIS).

- When a comment challenges information on a specific topic, the response was developed to explain why the information presented was correct, or indicate that inaccurate or unclear information in the DEIS information has been corrected in the FEIS.

- When a comment expressed concern about specific topics or issues addressed in the DEIS, if the concern is relevant to the environmental impacts analysis, the response explains how the issue is adequately addressed in the DEIS, how it is adequately addressed in the FEIS by the addition of new information or by clarification of existing information, or why it cannot or should not be addressed.

- The agencies received numerous comments to which no responses are required. Many commenters expressed personal opinions, histories or experiences which are not appropriately addressed as part of the NEPA process. Some comments reflect differences in opinions or preferred outcomes, to which an agency response is not appropriate.

Following this approach, BIA and EPA have considered, evaluated, and as appropriate, responded to all comments received. Most comments have been responded to directly in the Response to Comments. Some responses in this document reflect revisions made in the FEIS and/or technical reports. The public comments received on the DEIS have been included in the FEIS as an appendix on CD-ROM. Individual commenter's names are obscured in the transcripts, comment cards and comment letters due to several requests for anonymity. The names of individuals representing corporations, government entities or organizations remain in the comments. Individuals who would like information on where and how their comments were addressed may contact: Steve Wharton in EPA's Office of Partnerships and Regulatory Assistance at 303-312-6935.

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A. NEPA PROCESS

A.1. ADEQUACY OF INFORMATION AND REQUESTS FOR ADDITIONAL INFORMATION

Comment 1: Comments stated the DEIS is inadequate and/or should be withdrawn so that more adequate analysis, more detailed analysis and more complete disclosure of "actual" impacts could be included. A related comment stated the DEIS frequently discounts impacts or characterizes them as benign and that the DEIS instills a false sense of security. Comments asserted all information on impacts was based on projections and not facts and even when information was provided it was technical and very difficult to interpret. Comments also asserted new circumstances and information provided by commenters are significant enough that the DEIS should be rewritten.

Response 1: BIA and EPA prepared the DEIS analysis of projected environmental impacts associated with the proposed project and alternatives in a manner consistent with the requirements of NEPA. The DEIS Affected Environment chapter provides factual information on the current conditions of various environmental resources and the DEIS Environmental Consequences chapter includes our agencies' analysis of potential impacts from the proposed project and alternatives. This approach provides information on both the existing conditions and the potential environmental impacts from the proposed project and alternatives, consistent with the requirements of NEPA. When commenters identified specific DEIS omissions, inconsistencies and/or confusing information presented in the DEIS, the agencies have addressed those comments in the FEIS to the extent possible with the information available. For example, the FEIS clarifies the analysis and information in the air impacts and environmental justice sections, and the health and safety section includes additional baseline information on human health. While we recognize it is always possible, and from some perspectives also desirable, to expand the information in a NEPA document, there must be some realistic limits on the scope and time allotted for the environmental analysis. The DEIS content and public participation processes provided for meaningful opportunities for public participation and are consistent with the requirements of NEPA.

Comment 2: A comment stated that the DEIS and information provided by the project proponent and consultants are extremely deficient due to the failure to identify air emissions and because they provide no security that these emissions will be limited through permit conditions.

Response 2: Table 4-14 in the DEIS (page 4-105) provides information regarding projected air emissions from the facility. The Air Quality section in Chapter 4 of the FEIS includes additional information on air emissions. Based on the projected emissions, a Clean Air Act Prevention of Significant Deterioration (PSD) (related to construction) permit is not required. The refinery will be subject to New Source Performance Standards (NSPS) under the Clean Air Act that will apply to various units and equipment at the refinery. The NSPS in effect when the DEIS went out for public review did not require the refinery to obtain a Title V (operating) permit. However, since that time, the requirement for a Title V permit (operating) was triggered upon the publication of new source NSPS Subpart GGGa. {FEIS changes in Section 4.13.1.1}

Comment 3: There was a request that more information from the *Air Quality Technical Report* be incorporated in readable form into the EIS so that it is readily available.

Response 3: EPA has summarized relevant portions of the revised *Air Quality Technical Report* (December 2007) and included the summaries in the Air Quality section of Chapter 4 in the FEIS. {FEIS changes in Section 4.13.1.1}

Comment 4: A comment stated that the DEIS did not adequately address previously-made scoping comments, including comments on Environmental Justice, various resources, socioeconomic issues, cumulative effects, etc. There was also a request for new scoping for this project.

Response 4: Scoping is an important part of the EIS process and is conducted to identify significant environmental issues for analysis. NEPA scoping regulations require solicitation of public input but do not prescribe the exact method of public participation. During the scoping phase for this project, BIA provided public notice of the scoping process from November 7, 2003 to December 8, 2003, BIA and EPA provided opportunity for public review and comment on the draft scoping report of the EIS from October 1, 2004 to November 18, 2004, held a public meeting on November 9, 2004, at which representatives from both the BIA and EPA were present, and developed a Final Scoping Report. Therefore, BIA and EPA consider that there has been adequate scoping for this project and decline the request for a new scoping process. The Agencies believe the EIS documents adequately address the issues raised during the scoping process.

Comment 5: A comment noted that BIA was previously asked for a copy of "the feedstock" and had not received a response.

Response 5: Requests were made for copies of the FrontEnd Engineering Design (FEED) study from BIA. The FEED study was conducted for the Tribes by their consultants. The Tribes have not provided, nor are required to provide, the study to either BIA or EPA. Individuals requesting this study were informed that they should request the information from the Tribes. BIA and EPA requested and received information from MHA Nation and their consultants pertinent to various analyses for the NEPA process and technical report completion that may have been part of the FEED study.

Comment 6: A comment requested information on who prepared the DEIS.

Response 6: Persons who prepared the DEIS and their affiliation were listed in Chapter 6.0 of the DEIS.

Comment 7: A comment asked why the process of refinery approval is taking such a long time and how long the Tribes will have to wait for the refinery.

Response 7: The refinery must be evaluated under the NEPA process because it involves major federal actions that may significantly affect the human environment. For this project, BIA's decision on accepting the land into trust status and EPA's issuance of a Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit invoke NEPA and the federal agencies are required to conduct an environmental analysis as part of the decision-making process. The NEPA process has specific requirements that must be met and that take time. The NEPA process also includes public involvement periods that have prescribed minimum timeframes. Generally, the more complex a project the more time required to adequately analyze the environmental impacts for the decision-making process.

A.2. AVAILABILITY OF DEIS INFORMATION

Comment 1: There were requests for copies of the appendices and technical reports and concerns that information from the appendices, and technical reports needed to be reviewed but were not readily available. Several comments expressed concerns regarding the time it took to receive the DEIS and/or the technical reports. It was noted that access to technical information was hindered by lack of computer/internet access by Tribal members.

Response 1: The agencies mailed copies of the DEIS to individuals on the mailing list on the same date that the notice of the availability of the DEIS appeared in the Federal Register. Upon request, technical reports were also mailed to interested parties. The agencies posted the DEIS and technical reports on the Internet for review or download (with the exception of the Environmental Justice (EJ) report as discussed below). Copies of the DEIS were also available for public review in each of the MHA Nation segment offices and at the garage in Makoti, ND. Documents were available for public review at the following 11 locations: Bureau of Indian Affairs (Aberdeen, SD and New Town, ND), EPA Region 8 Library (Denver, CO), Three Affiliated Tribes (Legal Department and Office of the Secretary in New Town, ND), Twin Buttes Segment Office, White Shield Segment Office, Parshall Segment Office, Mandaree Segment Office, Four Bears Segment Office, North Segment Office and Rensch Garage in Makoti, ND. Addresses for these offices were included in the public notice and posted on EPA's web site for this project. Addresses and phone numbers of whom to contact in order to receive (paper) copies of these documents were also provided in the notice and on the web. Requests for further information on the DEIS were directed to those same contacts. These contacts were available to assist the public in accessing available information, and to ensure that all questions related to the DEIS were addressed.

Comment 2: Several comments asked how EPA developed the draft "Three Affiliated Tribes Environmental Justice Analysis". Comments also questioned why EPA and BIA released the DEIS for public comment in June 2006, but EPA did not release the draft Environmental Justice analysis until August 2006. Comments stated that the DEIS erroneously listed June 2006 as the publication date for the Environmental Justice analysis and expressed concern that they did not have adequate time to consider and respond to the Environmental Justice analysis.

Response 2: During the summer of 2006, EPA Region 8 developed guidance on incorporating EJ into the Region's permitting process. In anticipation of the issuance of this guidance, Region 8 commenced preparation of an Environmental Justice Tier 1 analysis related to the possible issuance of a Clean Water Act NPDES permit for the MHA Nation's proposed refinery project. The EJ Tier 1 analysis was prepared using EPA's "Tool Kit for Assessing Potential Allegations of Environmental Justice." On August 1, 2006, Region 8 issued guidance entitled "Incorporating Environmental Justice in the Permitting Process." The guidance calls for EPA to determine the appropriate type of EJ assessment that should be conducted for a particular permit (i.e., screening level, level 1, level 2). The guidance further calls for EPA to evaluate, respond to, and address comments on the EJ assessment or other EJ concerns raised during the permit comment period.

While the EJ analysis included in the DEIS satisfies the legal requirements for analysis pursuant to NEPA and its implementing regulations, EPA determined that because the additional information contained in the draft EJ Tier 1 analysis was relevant to the analysis, it would be helpful to reference this report. The draft EJ Tier 1 analysis was completed in August 2006, rather than in June 2006, as referenced in the DEIS. The erroneous reference has been corrected. EPA released the draft EJ Tier 1 analysis as soon as it was completed in August 2006. A revised EJ Tier 1 analysis has been prepared for the FEIS, *Environmental Justice Tier One Analysis for the Mandan, Hidatsa, and Arikara Nation's*

"Clean Fuels Refinery" Project, December 21, 2007. The analysis is available as a technical report and is available on EPA's web site or upon request.

Comment 3: Comment stated the final Scoping Report was not made publicly available until before the release of the DEIS, preventing the public from providing an adequate review and comment on the DEIS.

Response 3: The final scoping report was completed in April 2005. The scoping report was not required to be distributed for public review. The report is available as part of the public record. In addition as discussed on page 2-2 of the DEIS, a draft of the Scoping Report was available for public comment in fall of 2004 and BIA and EPA held a public hearing on November 9, 2004, to take comments on the draft Scoping Report and gather additional information on the proposed scope of the EIS. The Scoping Report and public comment received on the draft Scoping Report was used by BIA, EPA, and the EIS contractors in preparing the DEIS.

A.3. DEIS PUBLIC PARTICIPATION PROCESS

Comment 1: There were a number of requests for additional time to comment on the Draft EIS, technical reports and/or NPDES permit. These comments stated that the comment period coincided with Tribal cultural, social and spiritual events. Deaths of Tribal members, mourning periods, funerals, pow-wows, sundances, school preparations, and campaigns were given as examples. Comments questioned the timing of the public comment period. Comments also stated that such a large and technical document requires time and concentration to review, that the original 60-day comment period was not sufficient time to review of the documents, and also stated that the 14-day extension granted during the hearing process was insufficient.

Response 1: The length of the public comment period is a balance between maintaining a reasonable schedule to complete the environmental review for the project and seeking public comment on the environmental impacts of the proposed action. The Council on Environmental Quality established regulations requiring a minimum of 45 days for public review and opportunity to comment on a DEIS. Section 40 CFR 1506.10. BIA's policy and procedures call for a minimum of 60 days for comment on a DEIS. BIA's NEPA Handbook, 30 BIAM Supplement 1. The development of this EIS began prior to BIA's revision of the NEPA Handbook, 59 IAM 3-H, in May 2005, which establishes a 45-day comment period.

The timing for the public comment period was dictated by when the DEIS was completed. The agencies worked to complete the DEIS in as expeditious a manner as possible given the complexity of the project.

EPA and BIA recognize that reviewing a DEIS takes time that would otherwise be used differently. However, we believe two months should be sufficient time to accommodate such a review, particularly when an additional two weeks were added to the initial 60 days in order to assist those who had not yet completed their review. In addition, there were question and answer sessions prior to each of the public hearings which were attended by BIA, EPA, as well as representatives from the Tribes and their contractors. This afforded the public time to ask questions about the NEPA process, permitting requirements, and technical aspects of the project. The agencies extended the comment period from August 29, 2006 to September 14, 2006, for a total of 76 days. The agencies consider 76 days to be adequate time to review this DEIS.

Comment 2: Comment requested that EPA withdraw the NPDES permit comment period until the DEIS is re-done or at least extended another 90 days.

Response 2: EPA felt that the public notice of the NPDES permit together with the DEIS and the associated public hearings would provide more information to the public than public noticing the NPDES separately. EPA followed the timeframe of the DEIS and any extensions granted for the DEIS review were also granted for the NPDES permit. After the FEIS wait period, the EPA will issue a record of decision (ROD) regarding issuance of the EPA's NPDES permit. Following issuance of the final decision (ROD), EPA will issue the final permit. The effective date of the permit will be 30 days following issuance.

Comment 3: Comment stated the public participation process was insufficient and suggested that opportunities for public education on NEPA and more systematic efforts to involve communities in NEPA were needed, citing the National Environmental Justice Advisory Council, report of the Environmental Justice Enforcement and Compliance Assurance Roundtable, U.S. EPA, Oct. 1996. Comments stated there was a lack of educational opportunities for the public to learn about the pros and cons of the refinery and a lack of concern for ensuring the public was educated about the refinery resulted in an absence of trust in those associated with the refinery.

Response 3: Recognizing the dispersed population in the project vicinity, BIA and EPA provided additional opportunities for public outreach than are typically offered and more outreach than that prescribed by the NEPA regulations. BIA and EPA conducted public hearings at seven different locations, and copies of the DEIS were provided at 11 different locations (nine of which were local to the project area) as well as on two internet sites. In addition, the comment period on the DEIS was initially 60 days, rather than the prescribed 45 days and the agencies extended the comment deadline by two weeks. BIA and EPA also set up one-hour listening sessions before each of the public hearings to provide the public an opportunity to ask questions about the EIS, the project and the NEPA process.

Comment 4: Comment inquired about whether there are loans/grants available for public outreach and education to assist Tribal members in learning about environmental issues.

Response 4: There are two kinds of grants available: Environmental Justice Small Grants (EJSG) and Community for a Renewed Environment (CARE) Program grants. EJSG are competitive grants designed to provide funding for eligible applicants working on, or planning to work on, a project that addresses a local environmental and/or public health issue within an affected community. The EJSG Program is a multi-statute program designed to help communities understand and address their exposure to multiple environmental harms and risks. The primary purposes of the proposed projects should be to create and/or develop collaborative partnerships, educate the community, develop a comprehensive understanding of environmental and/or public health issues, and identify ways to address these issues at the local level.

The long-term goals of the EJSG Program are to help build the capacity of an affected community and create self-sustaining, community-based partnerships that will continue to improve local environments in the future. An eligible applicant must be either: a 501 (c) (3) non-profit organization as designated by the Internal Revenue Service; or a non-profit organization, recognized by the state, territory, commonwealth, or tribe in which it is located. In addition, an eligible applicant must be able to demonstrate that is it has worked directly with, or provided services to, the affected community.

An "affected community" for the purposes of this program, is a community that is disproportionately impacted by environmental harms and risks and has a local environmental and/or public health issue that is identified in the proposal. The focus of this assistance agreement program is to build the capacity of community-based organizations to address environmental and/or public health issues at the local level. These assistance agreements require that each project must include activities that are related to Federal environmental statutes including the: Clean Water Act, Safe Drinking Water Act, Solid Waste Disposal Act, Clean Air Act, Toxic Substances Control Act, Federal Insecticide,

Fungicide and Rodenticide Act, or Marine Protection, Research and Sanctuaries Act. For more information, please refer to: http://www.epa.gov/compliance/environmentaljustice/grants/index.html.

The Community for a Renewed Environment (CARE) Program is a unique competitive, community-based, community driven, multimedia demonstration program designed to help communities understand and reduce risks due to toxics and environmental pollutants from all sources. The CARE grant program will help communities form collaborative partnerships, develop a comprehensive understanding of the many sources of risk from toxics and environmental pollutants, set priorities, and identify and carry out projects to reduce risks through collaborative action at the local level. CARE's long term goal is to help communities build self-sustaining, community-based partnerships that will continue to improve human health and local environments into the future. EPA awards two types of cooperative agreements under this program: Level I and Level II cooperative agreements. Level I cooperative agreements will support the following types of activities: forming community-based collaborative partnerships; developing a comprehensive understanding of the many sources of risk from toxics and environmental pollutants; and setting community risk reduction priorities. The Level II cooperative agreements will fund activities to identify and demonstrate actual risk reduction projects "on the ground" in their community. Level II agreements are for communities that have already completed the actions typically taken in a Level I agreement. However, receipt of a Level I cooperative agreement is not a prerequisite to receiving a Level II cooperative agreement.

To be selected for funding, a project must consist of activities within the statutory terms of EPA's research and demonstration grant authorities. Most of the statutes authorize financial assistance for the following activities: "research, investigations, experiments, training, demonstrations, surveys and studies."

Local, public non-profit institution/organizations, Federally recognized Indian Tribal government, Native American organizations, Private nonprofit institution/organizations, quasi-public nonprofit institution/organizations both interstate and intrastate, local government, colleges, and universities are all eligible. For more information, please refer to: www.epa.gov/care. For other grants that may be available please check: www.grants.gov

Comment 5: Comment requested that EPA hold additional public hearings on the EIS after the EJ analysis is available.

Response 5: The federal agencies will consult with the Tribes prior to issuance of the FEIS, but will not schedule additional public hearings. EPA and BIA are planning to hold a public meeting or open house after the FEIS is published.

Comment 6: Comment stated there is a silent majority of individuals who would not come to the hearing to speak, so it is much better for the agencies to go out and talk to people. Comments stated concerns of intimidation; fears of retaliation by the Tribal government, including the potential to exacerbate lay-offs that were underway during this time period; general reluctance to participate based on historical suspicions of government motives and oppression. A comment also stated that rebuttals during the public meetings were "attacks" on commenters.

Response 6: The agencies and Tribal representatives have been available throughout the NEPA process via phone or through correspondence. In addition, EPA and BIA conducted a public hearing on the scoping report in 2004. Before the public hearing on the scoping report, a meeting was held with concerned citizens and EPA's Environmental Justice staff on community issues. There were question and answer sessions prior to each of the public hearings for the DEIS which were attended by BIA, EPA, and representatives from the Tribes and their contractors. These sessions afforded the

public time to ask questions about the NEPA process, permitting requirements, and technical aspects of the project.

Judge Elyana Sutin, who presided over the public hearings, encouraged participants to mail, hand carry, or telefax written comments on the DEIS to the EPA and BIA, if speaking publicly was uncomfortable. Specific contact information was provided in a brochure available at the hearings, and comment cards were handed out to participants who that might want to submit written statements. Judge Sutin stated in her opening instructions that rebuttals to someone else's comments were not appropriate. This was reinforced during some testimonies, so that any rebuttals that did occur were cut short.

Comment 7: Comment criticized the absence of BIA and EPA at the early (September 2003) meetings about the project where the commenter claimed Tribal officials and Triad were promoting the project and giving the impression that it was a "done deal", but did not provide information about the project or its impacts or appear receptive to open dialog or expressed concerns.

Response 7: The September 2003 meetings referenced in this comments were informational meetings organized by the Tribal government and were not part of the formal NEPA process, thus federal agency representatives were not present. The meetings occurred prior to the start of the formal scoping process for the EIS which began on November 7, 2003 with the publication of the Notice of Intent to Prepare an EIS in the Federal Register. The meetings provided information about the proposed refinery and NEPA process. Comments received during these meetings were considered by the Tribes and Federal Agencies.

Comment 8: Comment indicated concern about the length of time to speak at the public hearings and questioned why the Tribal Chairman was afforded time to make an opening statement at each of the hearings.

Response 8: Each presenter at the public hearings was afforded at least 5 minutes to make a statement. Most people were provided as much time as they needed; however, in order to provide time for everyone, some were asked to conclude their statements when they had spoken for over 20 minutes. If time was available at the end of the public hearing, speakers were allowed to continue giving testimony. Many speakers spoke at several of the seven public hearings. The Tribal Chairman, as spokesperson for the project and in recognition of the Tribes' status as a Cooperating Sovereign Nation for this DEIS, was offered the opportunity to make an opening statement at each of the public hearings.

Comment 9: Comments expressed concern that EPA's Environmental Justice staff did not respond to requests for assistance during the development of the DEIS.

Response 9: In late 2004, the Fort Berthold Environmental Awareness Committee (the "Committee") requested a meeting with EPA EJ staff to discuss the proposed refinery project. EPA EJ staff met with the Committee in November 2004. EPA EJ staff attempted on numerous occasions to follow up on this initial meeting with the Committee's designated point of contact. EPA also sought assistance in these efforts from the Indigenous Environmental Network. In spite of these early efforts, EPA EJ staff and the Committee did not engage in further substantive discussions until April 2006.

Comment 10: Comment requested further opportunities for questions to be answered.

Response 10: Diane Mann-Klager of BIA can be reached at 605-226-7621 and Steve Wharton of EPA can be reached at 303-312-6935 for further questions regarding the EIS. Bob Brobst of EPA can be reached at 303-312-6129 for questions regarding the NPDES permit.

B. GOVERNMENT ROLES AND RESPONSIBILITIES

B.1. EPA RESPONSIBILITIES

Comment 1: Comments stated EPA should proceed with the NPDES permitting process so the refinery can be built and the federal agencies should remain focused on the issues, such as NPDES permitting and not stray into issues unrelated to the regulatory process.

Response 1: EPA and BIA are required by NEPA to analyze the impacts of major federal actions on the human environment. By statute and policy, the federal agencies are required to look at the full range of impacts on the environment, cultural resources, and socioeconomics regardless of agency regulatory authority. EPA and BIA cannot complete their actions on this project until an adequate NEPA analysis has been completed.

Comment 2: Comment that EPA should provide additional expertise specifically on oil refinery air emissions to reassess the project, including review of the project's lack of a PSD permit far beyond minimal assessment provided by the project proponents and their consultants.

Response 2: EPA staff with oil refinery expertise have evaluated the emissions information for the project and reached the conclusion that a PSD permit (construction permit under the Clean Air Act) is not required for the refinery based on the proposed equipment, emissions projections, and feedstocks.

Comment 3: Comment indicating concern about how well-funded and qualified EPA will be to monitor the refinery.

Response 3: The majority of monitoring requirements under EPA permits are conducted by the permitted facility. However, EPA will occasionally inspect the facility and monitor wastewater discharges. If a RCRA TSD permit is not required for the facility (Alternative 4 and A), it is unlikely that EPA would monitor ground water. Some unit specific monitoring for air quality will be required under the New Source Performance Standards (NSPS). Additionally, the Tribes' Environmental Program plans to install and operate a new "ambient" air quality monitoring station near the refinery. The ambient monitoring station will not specifically monitor air emissions from the refinery. Instead the monitoring station will collect background air quality data near the site for SO_2, NO_2 and $PM_{2.5}$; and meteorological conditions prior to construction and operation of the refinery. Air quality data for the same pollutants will be collected during operation of the refinery and compared to the background data to verify the modeling results of minimal impacts from the refinery to the National Ambient Air Quality Standards (NAAQS).

B.2. BIA RESPONSIBILITIES

Comment 1: There were comments regarding BIA's process for acquiring the land into United States ownership in trust for the Tribes. These comments included questions on acquisition of land into trust status that may become contaminated, burden on taxpayers, and burdens on the BIA Fort Berthold Agency.

Response 1: The Indian Reorganization Act of 1934, 25 USC § 465, is the general source of authority for the Secretary of the Interior to acquire land for Indians. The land acquisition policy for the Secretary of the Interior is provided in 25 CFR Part 151. The authority to acquire land in trust status for this application is considered discretionary by the Secretary as the acquisition is not mandated by legislation. This proposed acquisition is considered to be an on-reservation acquisition as this property lies within the exterior boundaries of the Fort Berthold Reservation. Therefore, the BIA must consider

all of the criteria listed in 25 CFR Part 151-Land Acquisitions, including those requirements listed for on-reservation acquisitions in 25 CFR § 151.10, when reviewing the Tribes' application for acquisition of this land in trust status. These criteria are:

a. the existence of statutory authority for the acquisition and limitations contained in such authority;
b. the need of the individual Indian or the tribe for additional land;
c. the purposes for which the land will be used;
d. if the land is to be acquired for an individual Indian, the amount of trust or restricted land already owned by or for that individual and the degree to which assistance in handling their affairs is needed;
e. if the land is to be acquired in unrestricted fee status, the impact on the State and its political subdivisions resulting from the removal of the land from the tax rolls;
f. jurisdictional problems and potential conflicts of land use which may arise;
g. if the land to be acquired is in fee status, whether the BIA is equipped to discharge the additional responsibilities resulting from the acquisition of land in trust status; and
h. the extent to which the applicant has provided information that allows the Secretary to comply with 516 DM 6, Appendix 4, National Environmental Policy Act Revised Implementing Procedure, and 602 DM 2, Land Acquisitions: Hazardous Substances Determinations.

Originally, the authority to acquire on-reservation land into trust was delegated to the Fort Berthold Superintendent pursuant to authority delegated to the Assistant Secretary-Indian Affairs by 209 DM 8, 230 DM 1, to the Great Plains Regional Director by 3 IAM 4 (Release No. 00-03), and to the Superintendents by Great Plains Regional Addendum 3 IAM 4 (Release No. 0502). In April 2007, the Regional Director, under his authority as delegated from the Secretary, assumed jurisdiction for decision from the Fort Berthold Agency to his office. In April 2008, the Assistant Secretary – Indian Affairs assumed jurisdiction to make a final determination regarding the Tribes' application due to take the land on which the refinery would be constructed into trust.

The Assistant Secretary must consider each of the above criteria in his decision whether or not to acquire the land in trust status. The criteria are not weighted or ranked as to importance. The analysis of the criteria must be included in the Administrative Record of the decision for this application.

The State and its political subdivisions have provided information on the impacts of removal of this land from the tax rolls. The information has been provided to the Tribes for response. This will be considered with the other criteria in the decision on this application.

The Department must analyze whether the BIA is equipped to discharge the additional responsibilities resulting from the acquisition of land in trust status. An analysis of the services required by the acquisition of the property in trust and how the BIA is able to provide the required services will be conducted.

The Departmental Manual on Land Acquisitions: Hazardous Substances Determinations, 602 DM 2, refers to the Department of the Interior's policy on acquiring land with the presence or potential presence of contamination. In accordance with the policy, a pre-acquisition Environmental Site Assessment was completed in November 2004. See Phase I Environmental Site Assessment, Makoti, North Dakota. A second Phase I Environmental Site Assessment was completed in January 2008 to comply with requirements for BIA decisions on the acquisition of land into trust status.

This EIS will provide information to the Assistant Secretary on the environmental impacts of the proposed use of the land that BIA is being requested to acquire in trust status. These impacts will be considered with the other criteria in the decision. All land and activities on the land in trust status must adhere to Federal laws and regulations unless specifically exempted.

The Assistant Secretary's decision will be final for the Department of the Interior. A party wishing to appeal must therefore appeal the decision to the appropriate federal court. If the Assistant Secretary approves the Tribe's application, section 151.12 requires the publication in the *Federal Register* or in a local newspaper a notice of the decision to acquire the land into trust for the Tribes. The notice will state that the final agency determination to take land into trust has been made, and that the Secretary shall acquire title in the name of the United States for the Three Affiliated Tribes, no sooner than 30 days after the notice is published.

Comment 2: There were some comments regarding the process times for BIA's acquisition of land into trust, including a request to expedite this acquisition of land into trust status and a question of why this application was being processed ahead of other applications.

Response 2: The processing time for an acquisition of land into trust status varies with the type of land, location, and purpose. A simple application is one for land that is within the exterior boundaries of the reservation and would continue to be used for the same purpose, such as agricultural land that will remain agricultural land. Depending upon the actions needed to obtain a clear title, the process may take up to two years. More complex applications such as those for gaming purposes or for other economic development, or those outside of the reservation boundary generally take more time because there are additional issues and concerns that must be analyzed. In addition to the time required to obtain a clear title and comply with applicable regulations such as NEPA, the procedures for resolution of any appeals can also extend the total time to acquire land in trust status.

On March 17, 2003, the Three Affiliated Tribes submitted a written request for trust acquisition to BIA's Fort Berthold Agency by Tribal Resolution No. 03-020-RP dated March 14, 2003. The resolution requested that the BIA acquire land into trust for the Three Affiliated Tribes for the future site of the MHA Nation Clean Fuels Refinery. The decision on the Tribes' application for this acquisition of land into trust status will impact the economic condition of the Tribes, and requires careful analysis by the BIA. However, the BIA can and is working on several cases simultaneously for individual applicants or the tribe during their individual phases. The BIA has referred the concerns expressed at the public hearings about the time for processing applications to the Great Plains Regional Director and Fort Berthold Superintendent.

Comment 3: Comment conveying concern about BIA accepting the land into trust and the management issues regarding that land, including whether it would place a burden on the current taxpayers and schools in the area.

Response 3: Please refer to Response 1 in this section. The Department must consider each of the 25 CFR § 151.10 criteria in its decision whether or not to acquire the land in trust status. The impact from the removal of the land to the State and political subdivisions is analyzed under criteria contained in 25 CFR § 151.10 (e).

The proposed project is located on fee land within the exterior boundaries of the Fort Berthold Indian Reservation. If acquired in trust, this property would be treated the same as other trust land within the boundaries of the reservation, and would thus be exempt from State and local taxation. The BIA believes the impact of the removal of the tax assessment would be minimal since the tax levy and other services would be addressed by the BIA and/or Tribe and would not have to be provided by Ward County.

If the land is placed into trust status, jurisdiction would be then be transferred to the BIA Law Enforcement and other services would be provided by the BIA and/or Tribe, which are equipped to assume the additional responsibilities.

Comment 4: Comment requested BIA technical assistance to stop the project.

Response 4: The BIA has provided technical assistance on the acquisition of land into trust status and the NEPA process to any individual or Tribe who has requested it. The BIA is responding to the Tribal government's application for the acquisition of land into trust status for economic development, specifically for construction and operation of a petroleum refinery and to produce buffalo forage. See also response C.1.(a) regarding support or opposition to the refinery.

Comment 5: There were some comments on BIA facilitation in requesting a referendum on the refinery and interactions with the Three Affiliated Tribes Business Council.

Response 5: The Secretary of the Interior must call an election on any proposed amendment to the Tribes' constitution when requested by a two-thirds vote of the Tribal Council, or upon presentation of a petition signed by one-third of the qualified voters pursuant to the Indian Reorganization Act Constitution of the Three Affiliated Tribes Business Council. Unless specifically requested or otherwise provided by regulation, the Secretary of the Interior cannot become engaged in operations of a Tribal government.

Comment 6: There was a comment regarding BIA's responsibility for monitoring to detect contamination of the land or water.

Response 6: BIA is not an enforcement agency for environmental laws. BIA is required to comply with Federal environmental laws that apply to land held in trust status.

Comment 7: Comment asked for the proposed date of the ROD for BIA's decision.

Response 7: The ROD for BIA's decision will be available after the 30 day wait period for the Final EIS in accordance with applicable NEPA regulations.

Comment 8: Comment asked how BIA incorporates or applies the draft and final EIS documents into its decision.

Response 8: Refer to Response 1 under B2. The EIS is one of several criteria that are considered by the Approving Official in acquiring the land into trust status.

Comment 9: There was a comment concerning permits for haying.

Response 9: A permit for haying would be required if the land is under a BIA Agricultural lease as per 25 CFR § 162 or a Grazing permit as per 25 CFR § 166. A permit would not be required if the Tribes manage the land unless there was a comparable Tribal regulation requiring a permit for that activity.

Comment 10: Comment asked whether the business plan would be available to Tribal members.

Response 10: As the economic viability or the financial aspects for the project are not part of the Federal Agency decision making process, a business plan has not been requested by the agencies. The BIA reviews business plans for economic benefits associated with the proposed business purpose for off-Reservation acquisitions or business lease agreements.

According to 25 CFR § 151.3(a)(3), land may be acquired in trust status for a tribe "[w]hen the Secretary determines that the acquisition of the land is necessary to facilitate Tribal self-determination, economic development, or Indian Housing." This clause does not require the Secretary or his designated official to mandate that the Tribe go into great detail regarding their intended use of the

land, but that they specify what it will be used for. As long as Tribes or Individual Indians meet all of the criteria regarding these acquisitions for trust status according to 25 CFR § 151, the Secretary of the Interior or his designated Approving Official may approve the fee to trust transactions. The Approving Official must ensure that all of the required steps regarding these land acquisitions are completed appropriately before approval.

B.3. TRIBAL GOVERNMENT RESPONSIBILITIES

Comment 1: There were a number of comments regarding Tribal Council support of the project without having acquired support of the Tribal membership, distrust of the Tribal government, including the Tribes' handling of revenue from the refinery and accountability. There were also comments stating the refinery will support Tribal sovereignty and the Tribal Council understands the entity that manages the refinery will have to be insulated from Tribal politics and that it will have to be run as a business.

Response 1: As part of the well-established federal policy of respect for Tribal self- government, the BIA defers to tribes and Tribal members to resolve intra-tribal disputes. Therefore, BIA will provide these comments to the Tribes for consideration.

Comment 2: Comments requested that the Tribes hold a referendum on whether or not the refinery should be built.

Response 2: BIA and EPA have referred these comments to the Tribal government for consideration. In addition, please note that the Constitution of the Three Affiliated Tribes has an article on referendums, Article VIII. It states that upon receipt of a petition signed by at least 10 percent of the qualified voters of each community and demanding a referendum on any proposed or enacted ordinance or resolution of the Tribal Business Council, the Council shall call an election and the vote of a majority of the qualified voters voting in such referendum shall be binding upon the Tribal Business Council, provided that at least 30 percent of the eligible voters shall vote in such referendum.

Comment 3: Comments questioned the Tribes' ability to maintain and operate the refinery and questioning the Tribes' training and knowledge about health impacts.

Response 3: The MHA Nation, as owner and operator, will be required to ensure that the refinery operates in compliance with all applicable federal laws, including federal environmental and health laws and regulations. The MHA Nation states that the Tribes will have a management team in place to handle the day-to-day operations and that this team will be qualified to maintain and operate the refinery. The MHA Nation has also indicated that the Tribes are working with BIA, IHS, and other agencies on health issues

Comment 4: Comment requested information on Tribal environmental laws, rules, regulations and protections that apply to the proposed refinery.

Response 4: For information regarding Tribal laws and regulations, please contact the Tribal Secretary's Office or the Tribal Legal Department at 701-627-4781.

Comment 5: Comment on the potential liability of the Tribes for accidents, explosions, fires, spills, health impacts.

Response 5: The MHA Nation as owner and operator of this facility will be required to ensure that the refinery is constructed and operates in compliance with all applicable federal laws, including federal environmental and health laws and regulations. Failure to do so may result in federal enforcement

actions. In addition, the MHA Nation has stated that it is setting up a fund to cover the costs of mitigating accidents such as spills, fires and explosions. For more information, see the April 19, 2007 letter regarding financial assurance from the Three Affiliated Tribes to Robert E. Roberts EPA Region 8 in Appendix D of FEIS.

Comment 6: Comment that the Tribes should address clean up for the facility.

Response 6: Any clean up actions will need to be performed in compliance with applicable federal laws and regulations. In addition, the MHA Nation has stated that the Tribes' management team for the refinery will establish industry standards and the environmental mandates to ensure clean up for the facility.

Comment 7: Comment on the potential for legal conflicts with the State over taxation, zoning, and jurisdiction that could erode Tribal sovereignty.

Response 7: This comment raised issues that are beyond the scope of this NEPA analysis.

Comment 8: Comments requested that Tribal Council representatives meet with individuals with concerns about the refinery, provide Tribal members with more information, and hold a public hearing.

Response 8: BIA and EPA have provided these comments to the Tribes for consideration.

B.4. JOINT GOVERNMENT RESPONSIBILITIES

Comment 1: Comment that the federal government is pushing this process forward and ignoring the will of the sovereign people.

Response 1: The MHA Nation is the proponent for the project. The Tribes have presented BIA with an application to acquire land into trust status for the proposed refinery. The Tribes have also applied to EPA for a NPDES discharge permit for the proposed refinery. In response to the Tribes' requests, the federal agencies have prepared the EIS so that they may consider the environmental impacts of the proposed project when making their respective decisions about acquiring the land into trust status and issuing the NPDES discharge permit.

Comment 2: Comments expressed concerns about the capability of EPA, BIA and the MHA Nation to ensure that the facility would be consistently operated and maintained in a manner to avoid pollution, and adequately limit/control pollution emissions. Additional comments asked what would happen after the refinery is built and begins operation, if the facility was not designed as proposed, emissions are greater than proposed in the DEIS or some of the pollution prevention measures are not installed or do not perform adequately. Another commenter expressed concerns that standards would be waived by the regulatory agencies or violations would be overlooked.

Other comments were submitted regarding citizen complaints, monitoring and enforcement including: who will respond to and investigate citizen complaints; who will conduct independent review of emissions and other reporting and how often; who will monitor the refinery's records; how often and will that information be made publicly available; who will investigate discrepancies or violations of improper reporting and take enforcement actions; and who will pursue legal actions when administrative penalties have failed to bring continuous compliance?

Response 2: The owner and operator of the refinery, the MHA Nation, is responsible for the proper design, construction, operation and closure of the facility. EPA, as authorized by Congress, directly

implements the federal environmental protection laws and regulations as they may apply to this facility including, but not limited to, the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, Safe Drinking Water Act and Oil Pollution Act.

EPA's NPDES permit contains effluent limits and monitoring requirements with respect to wastewater discharges to surface water. EPA is authorized to take enforcement actions against a facility if conditions of a permit are violated, such as if effluent limits are exceeded, or if there is a failure to monitor. NPDES permit discharge monitoring information is available to the public.

Estimated air pollution emissions from the proposed refinery are below the pollution thresholds for a Clean Air Act "major source" permit under the Prevention of Significant Deterioration (PSD) construction permitting program and under the Title V operating permit program. Currently, there is no federal program for minor sources of air pollution emissions. If air emissions are later found to exceed any of the "major source" permitting thresholds, EPA can take enforcement actions and require the facility to obtain the appropriate "major source" permit(s). The proposed refinery will be subject to several Clean Air Act New Source Performance Standards (NSPS) (40 CFR part 60), which will impose emission limits, fuel gas specifications and design requirements. NSPS requirements include testing, monitoring, record keeping, and reporting of emissions for many of the refinery units. These specific applicable NSPS requirements are discussed in more detail in section D.8 of this Response to Comments document, and in Sections 3.12 and 4.13 in the FEIS.

EPA has also promulgated NSPS, subpart GGGa (November 16, 2007), which triggered the requirement for the refinery to apply for a 40 CFR Part 71 operating permit within 12 months of commencing operation. EPA is also promulgating new regulations to establish a preconstruction air permitting program for "minor" stationary sources throughout Indian country. The rule was proposed in the August 21, 2006 *Federal Register*. The effective date for implementing the new regulations is anticipated to be 60 days after the final regulations are published in the *Federal Register*. These regulations may apply to the proposed facility depending upon when construction on the refinery commences relative to the effective date of these regulations.

Routine ambient air quality monitoring is not currently conducted in this area. In 2007, EPA worked with the Tribes' Environmental Division on revisions to their Annual Network Review, which is a review of the Tribes' current monitoring network to determine if monitoring needs for the Reservation are being met. One of EPA's comments on the Annual Network Review suggested siting an air monitoring station near Makoti and the proposed refinery location prior to construction of the refinery. The Tribes' Environmental Division is currently in the process of locating and commencing operation of a monitoring station near the proposed refinery site to monitor for $SO_{2,}$, NO_2 and $PM_{2.5}$. Currently there are no plans to monitor hazardous air pollutants.

EPA's ability to regulate the management of hazardous wastes at the facility depends on the selected alternative. All alternatives except Alternative 4 and A require a RCRA Treatment Storage and Disposal (TSD) permit under 40 CFR Part 264. Any RCRA TSD permit issued by EPA would include requirements for proper design and operation of hazardous waste management units. A RCRA TSD permit would also contain a number of other specific requirements, including: ground water monitoring, corrective action, financial assurance, training, inspections, emergency response plans, closure, and reporting requirements. No hazardous wastes are planned to be disposed of onsite.

If the proposed refinery qualifies for RCRA "generator-only" status, under Alternative 4 and A, it will not be required to obtain a RCRA TSD permit. The facility would be subject to the RCRA generator requirements of 40 CFR Part 262. As a generator, the proposed refinery would be required to, among other things: 1) notify EPA of the initiation of hazardous waste activities and obtain an EPA identification number; 2) properly store hazardous wastes and appropriately label containers used to

store or transport hazardous wastes; 3) use a manifest to track hazardous waste shipments from the site of generation to their final destination; 4) maintain records and file reports of all hazardous waste activities with EPA; 5) institute waste minimization procedures to reduce the amount of toxicity of hazardous wastes; and 6) prepare, maintain, and implement as needed, required contingency plans. In addition, the proposed facility would be subject to RCRA generator closure performance standards and procedures related to disposal or decontamination of equipment, structures, and contaminated soils.

If the facility were to lose its generator status, EPA could require the facility to obtain a RCRA TSD permit. The facility could lose its generator status in a number of ways. For example, the facility could lose its generator status by: 1) storing hazardous waste onsite for greater than 90-days, 2) disposing, discarding, or abandoning hazardous wastes onsite (this would include failure to clean-close hazardous waste management units), 3) placing listed or characteristic hazardous wastes in non-hazardous waste management units, and 4) allowing or not correcting routine or systematic releases of hazardous wastes or hazardous waste constituents to the environment. If the generator requirements are violated, EPA could take enforcement action as appropriate in lieu of or in addition to requiring a RCRA permit.

There is no federal program protecting ground water in a manner similar to the Clean Water Act, which protects surface water. Ground water would be required to be monitored as part of the RCRA TSD permit for all Alternatives except for Alternative 4 and A. For Alternative 4 and A, the agencies have recommended that the refinery develop a ground water monitoring program. If the wastewater would be disposed into an injection well(s) (Alternative C), the refinery would be required to obtain an Underground Injection Control permit which would include monitoring and construction requirements. The UIC program has both inspection and enforcement authorities.

Comment 3: Comment asked if the public could inspect the refinery with an expert of its choosing.

Response 3: Members of the public and their representatives would not generally be allowed to inspect the refinery, although the refinery might provide tours to members of the public or their representatives if requested. Inspections would be conducted by federal regulatory agencies and Tribal officials.

Comment 4: Comment encouraged the co-leads and cooperating agencies to expeditiously approve the applications and issue the Clean Water Act (CWA) NPDES and 404 permits to allow the project to proceed.

Response 4: EPA has released the NPDES draft permit for public review and comment. EPA will make a decision on issuance of the NPDES permit and BIA will decide whether to acquire the land into trust status after the EIS process is complete. The U.S. Army Corps of Engineers will make a decision on issuance of the CWA 404 permit after receipt of an application, which will incorporate information from this NEPA process.

Comment 5: Comment expressed concerns about the DEIS in conjunction with the Memorandum of Understanding (MOU) among EPA, BIA and the MHA Nation, stating that an amendment to the MOU making EPA a Co-Lead agency on the EIS has not been signed by the MHA Nation. Comment that the public does not know the decision-making processes of federal agencies based on the MOU. Comment asked if the MOU obligated the MHA Nation to implement NEPA.

Response 5: EPA, BIA and the MHA Nation have agreed to and signed the MOU amendment. The MOU and MOU amendment do not affect the required content or status of the EIS, but outline the roles and responsibilities of each agency and the MHA Nation to help the NEPA process run more smoothly. BIA and EPA, and potentially the USACE are responsible for implementing NEPA, as the

federal agencies taking major federal actions associated with the proposed project. The MHA Nation does not have a NEPA obligation.

Comment 6: Comment asked who will be accountable for addressing Tribal members' environmental concerns and providing Tribal members with information concerning the refinery.

Response 6: For environmental concerns which have permitting requirements such as the NPDES permit, information on monitoring and compliance with the permit requirements and NSPS (CAA) reports will be available from EPA. Other environmental information developed by the MHA Nation as the refinery operator would not be available from EPA or BIA.

Comment 7: A comment stated that EPA and BIA should fulfill their trust responsibilities to the Tribes with respect to this project.

Response 7: The federal government has a trust responsibility to federally-recognized Indian tribes that arises from Indian treaties, statutes, executive orders and the historical relations between the United States and Indian tribes. With regard to the proposed project, EPA and BIA have continuously consulted with the Three Affiliated Tribes on a government-to-government basis, and have proceeded and will continue to proceed in a manner consistent with the federal trust responsibility.

C. PROJECT DEFINITION

C.1. PROJECT DESCRIPTION AND TECHNOLOGIES

C.1.(a). Support For and Opposition To the Refinery

Comment 1: Comments received in support of the refinery included statements that the environmental impacts of the refinery would be minimal; that the refinery will bring much-needed jobs, money, and economic benefit to the Tribes; the refinery will make the Tribes leaders in energy production; in support of the biodiesel to be produced at the refinery; urging EPA to approve the NPDES permit; discussing how owning and operating the refinery will enhance the Tribes' sovereignty; that the Tribes do not intend to sell the refinery, but to own it and manage it using a Tribal entity; and that the refinery will be environmentally safe with minimal impacts to the environment.

Comment 2: Comments received in opposition to the refinery include statements: in support of Alternative 2 (land put into trust with no refinery built); in support of Alternative 5 (no action); in support of effluent discharge Alternative D (no action, no NPDES permit); and opposing the refinery because of concerns about impacts to health from potential air, ground water, surface water and soil contamination and potential impacts to wetlands; and concern about the Tribal government profiting from the project.

Responses 1 and 2: The agencies have noted these comments.

C.1.(b). Project Description

Comment 1: Comments stated that the project descriptions were incomplete and requested that the incomplete project descriptions and discrepancies be addressed, including air emissions controls such as compressors to prevent flaring, and other standard controls.

Response 1: The agencies have attempted to ensure the project information in the EIS is complete and correct. However, because the environmental analysis is conducted before the final design, some specific design details are not available. The EIS describes the preliminary design of the proposed

refinery (and alternatives), including the site layout of the refinery and process units. Appendix A of the *Air Quality Technical Report* (May 2006) lists the emission controls for each proposed refinery unit. The *Air Quality Technical Report* (December 2007) has been revised to include applicable NSPS requirements for each regulated refinery unit, which will impose emission limits, fuel gas specifications, or design requirements and require testing, monitoring, record keeping, and reporting. The Air Quality section in Chapter 4 of the FEIS summarizes the emission controls and the applicable NSPS requirements.

Comment 2: Comments stated that the DEIS included inconsistencies in proposed refinery capacity – 10,000 versus 15,000 bpsd (barrels per stream day)(BPSD).

Response 2: As stated on page 2-7 of the DEIS and on page 3-2 of the May 2006 *Air Quality Technical Report*, the proposed refinery would process 10,000 BPSD synthetic crude oil, 3,000 BPSD of field butane, 6 million standard cubic feet per day (MMSCFD) of natural gas, and 300 barrels of biodiesel. Emissions projections in the *Air Quality Technical Report* are based on these feedstocks. Product from the refinery (see page 2-7 of the DEIS) would consist of about 5,750 BPSD of diesel fuel, 6,770 BPSD of gasoline, and 300 BPSD of propane or about 13,000 BPSD of product (not 15,000 BPSD). The FEIS has been revised to account for any discrepancies in the feedstock and product capacities.

Comment 3: Several comments addressed the source of feedstock for the refinery. Comments inquired where the oil will come from and how much will be needed. Comment stated that the refinery should use Williston Crude feedstock. Some comments raised concerns regarding the use of sour crude oil which would contain hydrogen sulfide gas.

Response 3: The preliminary design for the proposed facility utilizes synthetic crude from the Alberta tar sands which is a low sulfur feedstock. The facility has not been designed to accept local crude products which would require additional refining similar to the upgrading that is performed on the bitumen from the Alberta tar sands to form synthetic crude.

Comment 4: Comment asked how much chlorine would be used and stored at the refinery and whether any chlorine would arrive in 90-ton or 180,000 pound railroad tank cars.

Response 4: Refineries frequently use chlorine gas on-site. Typical uses for chlorine at refineries are to treat water to reduce fouling and to disinfect treated wastewater. The preliminary design does not identify any chlorine gas use at the proposed refinery; however there is a possibility as the design is finalized chlorine gas may be used. The facility could also use liquid or solid forms of hypochlorite instead of chlorine gas. If the refinery opts to truck employee wastewater to a municipal wastewater treatment plant, then one of the areas of chlorine use at the facility would be eliminated.

Comment 5: Comment recommended a change in the project purpose – rather than stating the remaining acreage will be used for growing hay for bison, the use of the land parcel should be for "uses determined by the management goals and objectives of the Three Affiliated Tribes."

Response 5: The Tribe must define the proposed use of the land being acquired into trust status as part of the application process, 25 CFR §151.10(c). The proposed use of the land was designated by the Tribe as 190 acres for the refinery and 279 acres for growing hay. If the Tribe decides to change uses of the land after it is acquired into trust status, additional NEPA compliance may be necessary.

Comment 6: Comment asked how impacts would be confined to the project site as indicated in the EIS, when the necessary storage tanks, pipelines, transmission lines would indicate that there would be impacts offsite.

Response 6: Most impacts will occur on or near the project site. However, the utility and pipeline corridors will be constructed outside of the refinery site. Chapter 4 of the EIS describes the impacts for each resource including the areal extent of the impacts for the refinery site and utility corridors.

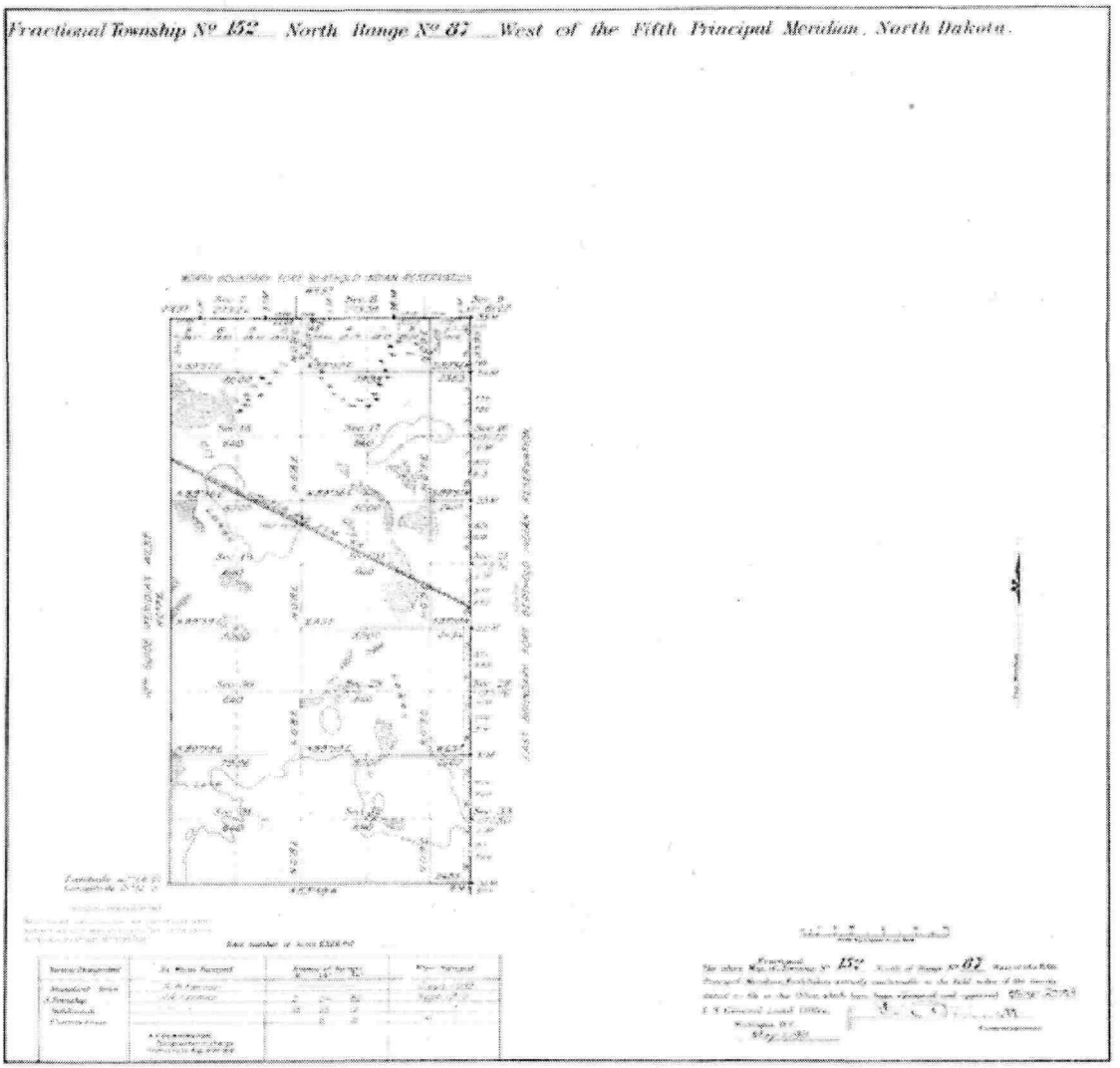
Comment 7: Comment asked how environmental conclusions can be reached when various technologies have not been discussed.

Response 7: The environmental impacts of the project were determined using the preliminary design of the refinery, the capacity of the refinery and types of processes in conjunction with information regarding environmental impacts from other refineries and industrial facilities. As with any analysis based on preliminary data, there may be changes in the assumptions used in the environmental analysis, and there may be some deviations between projected and actual impacts. However the type of impacts from refineries are well documented and there is a substantial amount of environmental information available on impacts from existing refineries.

Comment 8: Comment that this project is not located within the exterior boundaries of the Fort Berthold Reservation

Response 8: The legal description for the project site is described as: N½ of Section 19, and the NW¼, Section 20, both located within Township 152 North, Range 87 West, 5th Principal Meridian, Ward County, North Dakota, containing 468.39 acres more or less after consideration of existing easements. This land is located on fee land within the exterior boundaries of the Fort Berthold Reservation. The following figure indicates the official north-east corner of the Fort Berthold Reservation.

Figure 1 -- Plat designation for North East Boundary for Fort Berthold Reservation 1911



C.1.(c). Design and Technology

Comment 1: Comment stated that there is no hydrogen supply mentioned in treating stabilized naphtha for sulfur removal and asked if the refinery will use a different process. Comment also stated that there is not a source of hydrogen in the area, so another technology would have to be used and this runs up the cost of the process.

Response 1: Stabilized naphtha from the saturated gas plant would, in fact, be mixed with hydrogen, heated, and mixed with a catalyst to remove sulfur. Please refer to the DEIS, page 2-11, Unit B—Naphtha Hydrotreater. According to the DEIS (Page 2-16), a significant amount of hydrogen would be required to operate specific refining processes. Some hydrogen would be produced within the refinery operations, but the supply would not be sufficient for the refinery's operations. The refinery

would use a steam-methane reforming (SMR) plant and a Pressure Swing Adsorption (PSA) plant to produce the additional amount of hydrogen required for operations.

Comment 2: Comments stated the refinery processes to be used at the MHA refinery are not substantially different from those used at other refineries; therefore, the term "clean fuels refinery" is inappropriate; that there is no clean fuels process invented – the feedstock is used motor oil containing metal from the motors of automobiles,

Response 2: The "clean fuels" terminology has several meanings. The use of the term "clean fuels refinery" as the project name comes from the title of the MHA Nation proposal for the refinery. The term is also used in describing the proposed refinery products - special formulations of gasoline to help communities reduce air pollution and comply with the Clean Air Act. The term "clean fuels" is a refinery industry standard referring to the production of low sulfur emission gasoline and diesels containing less than 15 ppm sulfur. The feedstock for the MHA refinery will be synthetic crude oil that has already been refined once in Canada to remove the heavier fractions that are typically part of refining processes at standard petroleum refineries. The term also relates to modern construction technology that would be used at any new refinery or refinery expansion.

Comment 3: Comments discussed the 1992 closure of the Turbo refinery, which used the same technology as the proposed MHA refinery and questioned the use of emissions data from the Turbo refinery as a basis for the air modeling conducted for the MHA refinery.

Response 3: The EIS has been changed to reflect the closure of the Turbo refinery. Emissions data from the Turbo refinery were not used to calculate potential or maximum emissions from the proposed refinery or used in the air quality modeling analysis. Potential emissions from the proposed refinery were calculated using manufacturer's data and EPA's publication Compilation of Air Pollution Emission Factors, Volume I: Stationary Point and Area Sources, (commonly known as "AP-42"). The calculated potential emissions were input into the air model for the air quality analysis.

Comment 4: Comment addressed the design of the proposed MHA refinery and asked if the design is based on 30-year old technology or on new technology and whether the technology would be applicable for the next 30 or 40 years. Comments asked what the "state-of-the-art" technologies are to be used in the refinery and where they are currently being used. Comments asked why no other refineries using this technology have been built within the last 30 years if the technology is so superior to that of other refineries, and stated concerns about importing the oil from Canada, problems with the technology, and projections that the refinery will eventually shut down.

Response 4: The design of the proposed refinery will be comparable to other refineries that have been retrofitted in the last decade to refine the synthetic crude or other refineries that have added on units to refine the synthetic crude.

Comment 5: Comments questioning the safety and potential increased emissions from the use of used equipment and tanks with "light rust." The comments state that although the proposed MHA refinery is billed as "new" construction, it appears that many of the tanks are used and it is unclear if other equipment will also be used.

Response 5: The phrase "light rust" appears in the *Calculations* section - Appendix C of the *Air Quality Technical Report* for the DEIS. Specifically, "light rust" is listed as an internal shell condition paint characteristic for each of the floating roof storage tanks listed in the output files for the *TANKS 4.0 Emissions Reports*. Volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from working and breathing losses for each proposed refinery storage tank were calculated using the *TANKS* program. *TANKS* is a computer software program that is used to estimate VOC and

HAP emissions from fixed- and floating-roof storage tanks. *TANKS* is based on the emission estimation procedures from Chapter 7 of EPA's *Compilation of Air Pollutant Emission Factors* (AP-42) and is designed for use by local, tribal, state, and federal agencies, environmental consultants, and others who need to calculate air pollutant emissions from organic liquid storage tanks. The *TANKS* program requires information about the construction and physical characteristics of a storage tank in order to calculate a tank's air emissions. One of the tank physical characteristics needed as an input to the *TANKS* program is the "Internal Shell Condition" for floating roof tanks. Inputs for the "Internal Shell Condition" are limited to three choices, which are "Light Rust," "Dense Rust," and "Gunite Lining." Gunite is a concrete mixture sprayed under pressure. The *TANKS* program recommends that if the internal condition of the tank shell is unknown, then "Light Rust" should be used as the default condition. The MHA Nation's refinery proposal did not include lining the refinery storage tanks with gunite, so the default of "Light Rust" was used for conservatively estimating VOC and HAP storage tank emissions. This does not mean that the proposed refinery will use rusted storage tanks. Tanks and equipment storing or processing flammable and/or oily materials will have to meet rigorous safety specifications under OSHA rules.

Comment 6: Comment expressed concern that the extreme temperatures in this part of North Dakota would require considerably more engineering to keep finished products moving and flowing when in storage.

Response 6: There are refineries operating in the region near Bismarck, ND and near Edmonton, Alberta, Canada. The engineers hired by the Tribes to conduct the Front End Engineering Design study are familiar with refineries in northern climates as well as other areas of the world.

Comment 7: Comment asked whether a plant configuration engineering plan has been filed with the State.

Response 7: The engineering plan has not been filed with the State. As the proposed facility is located within the Fort Berthold Indian Reservation, there are no plans to submit information to the State except for information needed for emergency response coordination.

C.1.(d). Cost and Employment

Comment 1: Comment stated information is lacking on the costs associated with refinery construction and operations and concerns about taxpayer money been misspent.

Response 1: General cost estimates for the refinery have been mentioned in several meetings. Several very preliminary estimates have been made by the Tribes for construction of a refinery. However, the cost estimates have not been available in writing and are not detailed enough to evaluate the difference in costs between different refinery alternatives. Environmental review documents usually do not include cost estimates, unless the federal government will be paying for part of the project or if costs will be used as a decision factor by the federal agencies (e.g., demonstrating that one alternative is unfeasible due to cost). For proponent driven environmental reviews such as the proposed refinery, construction costs are rarely included. There are no plans to use federal funds for construction of the refinery. However, BIA, Department of Energy, and EPA did fund some of the work to prepare the EIS and preliminary engineering. The project also received additional funding from the Economic Development Administration for project feasibility and preliminary engineering studies.

The source of construction money is not part of the decision making process for the federal agencies as the project has been proposed by the Tribes. However, should the Tribes decide to enter into a

business lease with a third party, the regulations as specified under 25 CFR § 162 for the BIA would be applicable.

Comment 2: Comments asked who will build the refinery and whether Tribal members will be employed.

Response 2: Please refer to the DEIS, page 4-111, Economy and Employment. According to the Tribes' (Page 4-111), the majority of the construction and operation workforce would be local hires. The labor pool is anticipated to be hired through the MHA Nation and through private contractors. The MHA Nation has a set hiring practice in accordance with Tribal Employment Rights Office (TERO). Therefore, qualified Tribal members will have a hiring preference.

The Fort Berthold Community College currently offers a 2-year program for construction trades. In addition, the College had an energy technologies program that graduated 17 students in 2006. However, due to funding limitations the course was suspended.

C.1.(e). Future Expansion

Comment 1: Comments expressed concern about the undefined future expansion of the refinery, pressure to expand, stated that the project description does not provide actual refinery maximum capacity and omits description of plans to further expand and further increase air emissions.

Response 1: The only known plan regarding expansion of the proposed refinery is to add a unit to produce soybean oil. The refinery will initially truck in soybean oil to add to various products. In the future, the refinery could add a process for making soybean oil on-site. The EIS already includes the impact analysis for this expansion. Based on discussions with the Tribes, the agencies have concluded there are no current plans for expansion beyond the soybean processing unit in the foreseeable future.

C.2. PROJECT ALTERNATIVES

C.2.(a). Alternate Economic Development

Comment 1: There were several comments that requested BIA consider different alternatives for economic development, including: transitioning away from fossil fuels and toward renewable energy; including a biofuels plant alongside the traditional fossil fuel refinery; considering wind power, biodiesel, ethanol, solar power and other alternate land uses.

Response 1: The BIA is acting on the Tribes' request to acquire the land into trust status for the purposes of constructing and operating a clean fuels refinery and for producing buffalo forage. The alternatives available to BIA are to acquire the land into trust status for the proposed use, acquire the land into trust for the present use as an agricultural property with the Tribes' consent, or not acquire the land into trust status. BIA cannot speculate on other alternate uses for the land other than those proposed by the applicant. As part of the regulations for acquisition of land in trust status, the applicant must identify the purpose for which the land will be used.

C.2.(b). Alternate Site Location

Comment 1: Comment addressed the location of the proposed MHA refinery and stated that it was too close to Makoti, ND.

Response 1: The location of the proposed refinery with respect to the nearby communities and the potential impacts to these communities were evaluated during development of the Proposed Project

Action. The final site selection process was conducted by the Tribes prior to purchasing the property. The potential for effects to communities was evaluated based upon proximity to an adequate population base to supply the work force and distance from a community such that impacts from prevailing winds, air quality, noise levels, and traffic hazards are minimized. Because of the other factors involved with the site selection, namely, proximity to highway, railroad, and pipelines, all of the sites were within 5 miles of a community. The sites greater than 2 miles from a community were considered to have less impact than those closer to a community. The site selection process was conducted prior to the Federal agencies' involvement and is not part of the NEPA analysis. Impacts to the surrounding communities are part of the NEPA analysis and have been addressed in Chapter 4 of the EIS, especially in the air and human health sections.

Comment 2: Comment asked whether the refinery could be located closer to Mandaree because it is close to a large oil reservoir.

Response 2: The refinery will not be using Williston Basin crude oil. Two of the main factors in selecting the proposed refinery site were proximity to the synthetic crude oil pipeline which is located several miles north of the selected site and proximity to the railroad spur which bisects the site.

D. ENVIRONMENTAL IMPACTS ANALYSIS

D.1. GEOLOGY

Comment 1: Comment that the DEIS states that events such as landslides, mudslides, etc., would be unlikely, however, the DEIS also states that landslide incidents are moderate in the vicinity and the DEIS should consider future projects in this area and the cumulative impacts this could have on landslides.

Response 1: The references in Chapter 3 and 4 regarding landslide potential refer to the soils and geology in the area. The third component of landslide potential is topography. As discussed on page 4-1 of the DEIS the landslide potential is not a factor at the refinery site because of the relatively flat topography with rolling hills/ridges. Landslide prone areas tend to be on or next to steep slopes with at least a moderate difference in elevation from top to bottom, or loss of soil from the toe of the slope. For example, landslides tend to occur along river bluffs or steep highway embankments.

D.2. GROUND WATER

D.2.(a). Ground Water Resources, Impacts and Contamination

Comment 1: Contamination of Shallow Ground Water: Several comments expressed concern regarding possible contamination of the ground water, including shallow aquifers beneath the refinery, movement of the contamination to wells in the shallow aquifers in the surrounding area, susceptibility of ground water to contamination by land use practices, and ground water contamination in general.

Response 1: Ground water quality could be affected by septic discharge, effluent discharges, and spills or leaks from the refinery. Discharges to ground water are not expected to affect nearby offsite wells due to the low permeability and slow ground water flow velocity of the shallow deposits (0.4 to 2.4 feet per year) (DEIS pages 4-6 and 4-8). There are six shallow ground water wells on the refinery site; five constructed for the proposed project to monitor ground water and one existing well for the farmhouse. Over the life of the refinery, some of the shallow wells will be affected by the proposed

refinery. In 50 years, the shallow ground water is projected to move approximately 20 to 120 feet. The closest refinery component to the edge of property line is the transfer station on the north side of the property with a distance of 300 feet from proposed location to the edge of property line.

Spills and leaks have been identified as the most likely contributor to ground water pollution. Although spills and leaks will need to be cleaned up promptly, some of the material may enter the soil and the ground water. The spill analysis section of the DEIS (pages 4-25 to 4-45) indicates that certain large spills could impact the shallow ground water in the proximity of the refinery, although the low permeability and associated low ground water flow velocities of the till (see above flow rates) will retard the movement of contamination. Another factor affecting movement of pollutants in ground water is the depth to ground water beneath the refinery which is about 10 to 15 feet. The time required for contaminated spills to migrate vertically to the water table would be dependant on the magnitude and duration of the spill or leak. Depending on the nature of the leak or spill, the contaminated water will either move vertically downward to the water table in the till deposits, or in a less common scenario, will move as interflow (saturated shallow ground water flow following the surface topography) towards the nearest surface depression. Ground water in the till flows towards the southwest at a velocity estimated to be between 0.4 and 2.4 feet per year.

Effluent discharges to the wetlands are not expected to have any impact on shallow ground water quality in the area because the effluent will be treated prior to discharge and the resulting water quality will exceed that of the aquifer (DEIS page 4-7).

For information regarding potential impacts to shallow ground water wells from refinery operations, please refer to the DEIS pages 4-4 through 4-11. Also see the draft NPDES permit (Appendix C) for the proposed effluent water quality criteria.

Comment 2 - Probability of Ground Water Contamination: Comment stated the use of the word "probably" with respect to ground water contamination was not accurate and the EIS should state if there are any impacts to ground water.

Response 2: Based on environmental conditions at historic and existing refineries, EPA believes that the shallow ground water in the till immediately underneath the refinery will eventually become contaminated by leaks and spills. Other ground water resources are not expected to be affected by contamination. See page 4-7 of the DEIS, Water Quality Impacts to Ground Water Resources, Accidental Spills and Leaks which states: "Normal refinery operations during the life of the refinery would result in some contamination of ground water and soils beneath the refinery. Ground water contamination could extend off-site if leaks and spills are not properly addressed or if a catastrophic spill occurred. Modern refinery design, construction and operation practices would be more protective of ground water then "historic practices."

The Tribe proposes to implement ground water monitoring that will detect leaks prior to migration from the refinery site. In an April 26, 2007, letter to the MHA Nation, EPA outlined a recommended ground water monitoring program for the proposed refinery. The letter and attachments are available in Appendix D of the FEIS.

Comment 3 - Existing Contamination: Comments stated that the aquifers in the area are already contaminated from activities, including chemicals from farming, and expressed concern about adding additional contaminants to already polluted ground water.

Response 3: The Tribes have evaluated ground water quality at the proposed refinery site by installing a series of monitoring wells and analyzing samples from these wells for water quality. The

data from the report shows no indication that ground water in the vicinity of the refinery is contaminated by agricultural chemicals.

Comment 4 - White Shield Aquifers: Comment expressed concern regarding contamination of aquifers in the White Shield area and asked where the refinery was going to dump its waste.

Response 4: As discussed above in comments 1, 2, and 3, the aquifers near White Shield will not be impacted by the proposed refinery. Please also refer to the DEIS at pages 2-19 and 2-20 for a discussion of the types of wastewater that would be generated at the refinery. The locations where treated wastewater may be discharge are discussed on page 2-45, 2-58 through 2-60, and 2-68 through 2-70. Disposal of other wastes generated at the refinery is discussed on pages 2-52 through 2-57.

Comment 5: Comment stated that the aquifer extends from here to Texas and that if the ground water becomes contaminated, the water will purify itself as it moves through the subsurface.

Response 5: Potential impacts from the refinery to ground water would be very localized. In 50 years, the shallow ground water is projected to move approximately 20 to 120 feet.

D.2.(b). Underground Injection Control

Comment 1: Comment stated lack of concern about wastewater from the refinery being injected into ground water because the wastewater will be injected well below the zones that people are using for water supply and that the regulators will monitor the wastewater injection. Comment stated generally that injection will not have an impact on drinking water aquifers.

Response 1: For wastewater discharge Alternative C, refinery wastewater would be injected well below aquifers used for public drinking water supply (this means that the wastewater would be injected below the Fox Hills aquifer). Prior to injecting any wastewater, the owner of the refinery would need to obtain an Underground Injection Control (UIC) permit from EPA.

Comment 2: Comments expressed concern regarding injecting pollutants into the ground water and that injection of treated refinery wastewater into ground water will contaminate the Fox Hills-Hell Creek aquifer that underlies the reservation. Comment stated the DEIS should evaluate the actual depth of the injection zone rather than merely stating the injection zone will be located below the "lowest potential underground sources of drinking water."

Response 2: The underground injection well would be a Class I, non-hazardous underground injection well that would be used to dispose of treated wastewater. The well would be completed into an isolated formation or formations beneath and hydrologically isolated from the lowermost existing or potential future underground source of drinking water (USDW). At a minimum, the injection well would inject into a formation below and hydrologically isolated from the Fox Hills aquifer. The UIC regulations under which a permit would be issued require injection wells to be sited, constructed, operated, and plugged and abandoned in a manner that is protective of USDWs. Therefore, there would be very little chance that any potential drinking water aquifers could be adversely affected. The quality of the fluids injected, and the design and maintenance of the well, would be regulated by EPA under its UIC regulations (DEIS, page 2-70).

D.2.(c). Uses of the Ground Water and Water Supply

Comment 1 - Agricultural Use: Comment expressed concern about impacts to farmers and ranchers if their ground water wells could no longer be used for watering cattle and asked who would provide clean water to the users and at what cost.

Response 1: The refinery could affect ground water wells in two ways: by dropping the water level in the aquifer and by contaminating the ground water. Ground water contamination is discussed above. It is unlikely that pumping the water supply wells for the refinery will impact water levels in ground water wells near the refinery, as the refinery water supply will be extracted from wells in the Fox Hills aquifer which is a separate, much deeper aquifer than the wells in the area which are used for agriculture. The Fox Hills is also an extensive aquifer with a substantial amount of water (DEIS page 4-4). The closest wells in the Fox Hills aquifer are four to five miles from the refinery. If Alternatives 1, 3 or 4 is selected and the refinery operator chooses not to recycle water; wells in the Fox Hills may experience some additional drawdown of water levels. Shallow wells in the till deposits which are generally used by farmers in the area (less than 150 feet deep) and the buried valley aquifers would not be affected by pumping in the Fox Hills aquifer because the shallow aquifers are isolated from the Fox Hills.

Comment 2: Several comments stated that the area is in its tenth year of drought and there are cities in North Dakota and Minnesota seeking to obtain water from Lake Sakakawea, expressing concern about the increasing demands on water on the Fort Berthold Reservation.

Response 2: As discussed in the DEIS at page 4-4, the proposed refinery plans to use a combination of ground water from the Fox Hills aquifer and runoff collected from the site. The estimated yearly water use at the proposed facility, without recycling wastewater, would be 64.5 acre-feet per year (page 4-4 of the DEIS) while Garrison Dam (Lake Sakakawea) has a storage capacity of 23.8 million acre-feet. The refinery will be a relatively minor water consumer compared to cities and more water intensive industries.

Comment 3: Comments requested information regarding the water supply, where the water for the refinery will come from, and whether it will deplete Tribal resources.

Response 3: The water supply for the refinery will be supplied by four wells completed into the Fox Hills-Hell Creek aquifer and/or recycled water. Please see Response 1 above and page 4-4 "Water Supply for the Project" of the DEIS for more details.

Comment 4: Comment stated that people on the Reservation currently cannot drink ground water and they do not have the money to provide quality drinking water. The commenter also requested information regarding how the developers of the refinery propose to maintain the quality of Reservation aquifers.

Response 4: The development of the refinery is not likely to change the current situation for individual well users. As discussed in the ground water contamination section, D.2.(a) above, only the shallow wells in the immediate vicinity of the refinery may be affected by contamination from leaks and spills.

Comment 5: Comment expressed concern that the ground water to be used for the potable water supply is of poor aesthetic quality and may require treatment to ensure compliance with the Safe Drinking Water Act (SDWA). The commenter recommended evaluation of an alternative source of drinking water, such as an existing public water system.

Response 5: The proposed refinery will include treatment of ground water prior to use in the potable water system, see page 2-19 of the DEIS. The water quality of the Fox Hills aquifer proposed for water supply is discussed on page 3-23 and 3-24 of the DEIS. The Fox Hills aquifer is relatively salty, therefore treatment will be needed prior to use in the boilers and the potable water system. In the future, the refinery could be a potential customer of the regional drinking water system being

developed in this area of North Dakota. Currently the regional drinking water system does not serve this area.

Comment 6: Comment stated that the proposed refinery will qualify as a non-transient, non-community public water system under the SDWA. The comment stated that because the water supply for the refinery will come from wells in the Fox Hills-Hell Creek bedrock aquifer, the DEIS should be revised to reflect the fact that the ground water supply would be classified as "not under the direct influence of surface water." In addition, the comment requested that a discussion concerning monitoring and reporting requirements under SDWA be included in the FEIS.

Response 6: Information has been added to the FEIS (page 2-19) to clearly document the absence of interconnection between the proposed potable water system and the process water system.

Comment 7: Comment stated that the projected sources of water for the facility are ground water wells, but the facility anticipates using recycled water and stormwater runoff during operations after facility startup. The commenter recommended that the FEIS include a statement that there will be no interconnection between the proposed potable water system and the process water portion of the facility. This will ensure that the potable water supply would not be classified as surface water and subject to additional and stricter monitoring requirements under SDWA.

Response 7: Information has been added to the FEIS on page 2-19 to clearly document the absence of interconnection between the proposed potable water system and the process water system.

D.2.(d). Ground Water Monitoring

Comment 1: Several comments expressed concerns about ground water monitoring and the measures that would be taken to protect ground water resources and stated the DEIS should be revised to include a requirement for ground water monitoring and protection measures.

Response 1: A ground water monitoring plan has been recommended as mitigation by BIA and EPA for the proposed refinery. The monitoring program would be designed to detect any changes in ground water quality before it leaves the property and trigger cleanup activities when needed. The Tribes, as the refinery owner, could agree to develop a ground water monitoring program for the refinery. The Tribes also have the option of developing a Reservation-wide ground water protection program. In a May 14, 2007 letter, the Tribes have agreed to development and implement a ground water protection program for the proposed refinery and the Reservation.

All alternatives except 4 and A would require a RCRA TSD permit which requires a ground water monitoring plan as part of the permit. Without a RCRA TSD permit, there would not be a federal requirement for the refinery to develop and implement a ground water monitoring plan. Under a RCRA TSD permit, EPA can require an owner or operator of any facility that has a release of hazardous wastes to clean up the release [42 U.S.C. sec. 6924(u)]. Therefore, under alternatives requiring a TSD permit, it is likely that the refinery would be responsible for either cleaning up the contamination in the ground water or providing an alternative water supply to the residents with contaminated wells. For Alternative 4 and A, there would be limited cleanup actions that could be required under RCRA.

D.2.(e). Ground Water Mitigation

Comment 1: Comments expressed concern regarding the proposed mitigation for refinery construction and operation impacts, including ground water monitoring and reporting requirements

may not be required, the list of best management practices (BMP) for ground water protection may not be complete, and the DEIS does not define "effective irrigation farm management plan."

Response 1: Recommendations for ground water monitoring and reporting have been conveyed to the Tribes. If an construction alternative other than Alternatives 4 and A is selected, additional ground water monitoring requirements will be developed as part of the RCRA TSD permit for the refinery. The list of potential ground water protection BMPs that could apply to the refinery site is very large; it is typical to provide a list of only the BMPs most likely to be used at the site. If these do not prove to be effective, other BMPs would be evaluated and implemented. The irrigation farm management plan would be developed to identify waste water application rates and practices for the crops being grown, and to meet the requirements for solid waste disposal. [Under the RCRA regulations, land applied, treated wastewater would be considered a "solid waste".]

D.3. SURFACE WATER RESOURCES

D.3.(a). Surface Water Impacts

Comment 1: Several comments expressed concern about discharges from the refinery to Shell Creek and Lake Sakakawea and whether the treated water will be safe.

Response 1: The proposed location for discharges from the proposed refinery will be to the wetland swale located in the NW1/4 of Section 19, Township 152N, Range 87W. The wetland is tributary to the East Fork of Shell Creek. The East Fork of Shell Creek flows generally in a westerly direction towards Lake Sakakawea before entering the Van Hook Arm of the Lake at Parshall Bay, near Parshall, ND. EPA evaluated both the acute and chronic effects of the proposed discharges from the refinery. In general the acute effects are associated with the near time effects where as the chronic effects are associate with long term effects. EPA evaluated inorganic, organic, and other (e.g. pH) potential pollutants to minimize effects on the waters impacted by the potential discharge. EPA reviewed standards and criteria for these waters including EPA criteria, Tribal criteria as well as the criteria of the State of North Dakota. EPA has placed in the permit for discharge the most appropriate effluent limits. For additional details, please see Appendix C of the EIS, which describes, in much greater detail, the NPDES permit that will control the quality of surface water discharges leaving the refinery.

Comment 2: A comment stated that the DEIS minimizes the severity of the cumulative impacts to surface water by offering seemingly simple guidelines, which in reality are not that simple at all.

Response 2: There are no additional construction activities proposed in the foreseeable future that would contribute to cumulative impacts on the surface water. Therefore, the impacts from the refinery were the only ones analyzed in the EIS.

Comment 3 - Mercury: The existing mercury in the water is coming from the fishing boats (oils) and from tourism dollars, not from the industrial plant.

Response 3: Mercury pollution in lakes typically comes from atmospheric deposition. Petroleum refineries including the proposed facility have not been identified as significant sources of mercury. For more information about mercury in the environment, please see EPA's web page at: http://www.epa.gov/mercury/.

Comment 4: Comments expressed concern about the cumulative effects of the Red River Valley Water Project and the Northwest Area Water Supply project.

Response 4: The proposed Red River Valley Water project (RRVWP) and the Northwest Area Water Supply (NAWSP) project both would divert water from the Missouri River Basin to the Red River Basin via pumps placed in Lake Sakakawea. The proposed refinery would obtain water from ground water aquifers and the refinery discharge would be to the Missouri River basin. While the volumes being considered for all three projects are very small [RRVWP = 122 cfs (average), NAWSP =.40 cfs (average), proposed refinery = 0.25 cfs (maximum)] when compared to the Missouri River flows [20,000 cfs (average)], the RRVWP and NAWSP would result in minor depletion to the Missouri River and the proposed refinery would result in a minor addition to the Missouri River Basin.

D.3.(b). NPDES Permit

Comment 1: Some comments were related to the time table for final issuance of the NPDES permit. In addition to inquiries about the existing timetable, a comment was made suggesting that a new timeline for a new draft NPDES permit should be established.

Response 1: The FEIS, including the response to comments on the DEIS, and draft NPDES permit will be issued for a 30 day review or "wait" period. Following the FEIS wait period, EPA will make its decision on the NPDES permit. EPA will prepare a Record of Decision (ROD) explaining its NPDES decision and publish the ROD after the wait period has ended. EPA will also notify the NPDES applicant (the Tribes) and each person who has submitted written comments or requested notice of the final permit decision. Following that notification, if an NPDES permit is to be issued, EPA would issue the NPDES permit with an effective date 30 days after issuance. The EPA regulations at 40 C.F.R. 124.19 provide that within 30 days after the final decision on the NPDES permit is noticed to the public, any person who filed comments on the draft permit or participated in the public hearings may petition the Environmental Appeals Board to review a condition of the permit decision which was raised during the public comment period. Any person who failed to file comments or failed to participate in the public hearings on the draft permit may petition for administrative review only to the extent of the changes from the draft to the final permit decision.

Comment 2: Some comments raised concerns regarding the environmental effects of the NPDES discharges and the science supporting the effluent limitations in the NPDES permit. One comment questioned whether the NPDES permit would adequately regulate a hazardous discharge into the environment and the long-term impacts of the discharges from the facility, which is expected to discharge up to 5 million gallons per year.

Response 2: The environmental analysis of discharges under the NPDES discharge permit are described on page 4-18 of the DEIS, which discloses that there will be some minor changes in water quality from the existing conditions. Water quality will change from agricultural runoff to a combination of treated wastewater from the refinery and uncontaminated runoff. The environmental impacts that are typically analyzed for projects that affect water quality have already been analyzed in the development of the NPDES permit. Please see the "Statement of Basis" for the permit discharge limits included as Appendix C of the EIS. For example, the wastewater discharged under the NPDES permit will be required to meet water quality standards which are protective of aquatic life, wildlife, and drinking water use.

Water quality scientists have been studying the environmental and human health effects of aquatic pollutants for many years. For each parameter in the NPDES permit, a series of research efforts and experiments were conducted to evaluate the effects of the pollutant on the environment. The process to establish or change EPA's water quality criteria is a rigorous process, requiring public and scientific input from many sources. Information on water quality criteria can be found on EPA's web page at: http://www.epa.gov/ebtpages /water.html.

The discharge limitations and monitoring requirements in the NPDES permit have been developed to be protective of both human health and aquatic life (e.g., fish, insects). The permit limits are based on the water quality criteria and standards and are consistent with EPA regulations, policy and guidance.

The permit application anticipated an average discharge of 10 gpm for Alternatives 1 and A, 3 and A, and 20 gpm for Alternative 4 and A, some or all of which may be recycled at any given time. The process wastewater from the refinery, the potentially contaminated stormwater, and the sanitary waste will only be discharged following treatment to assure compliance with the NPDES permit limits. See the NPDES Permit Fact Sheet for more information about the discharges, Appendix C of the EIS.

There are four sources of wastewater associated with the operation of the proposed refinery, all of which are covered by the NPDES discharge permit:

- **Process wastewater** from refinery operations, following treatment in the wastewater treatment facility, can either be recycled into the process water system or discharged through outfall 002.
- **Potentially contaminated (oily) stormwater** will be collected in segregated drains. This wastewater will be tested and if further treatment is required it will be routed to the wastewater treatment facility. Depending on the alternative selected this flow may be discharged through outfalls 002 or 002a, or recycled.
- **Uncontaminated (non-oily) stormwater** will be collected from areas outside the process operations of the refinery. The site configuration is designed so that uncontaminated (non-oily) stormwater flow by gravity to be collected for the large holding pond or discharge. The uncontaminated (non-oily) stormwater can be used as make-up water for the firewater system, recycled, or discharged through outfall 001 as necessary.
- **Sanitary wastewater** (potential). If any the sanitary wastewater is collected it would be treated in a package wastewater treatment plant and discharged through outfall 003, if necessary.

Comment 3 - Ground Water and NPDES A few comments expressed concern that the DEIS states that treated discharge from outfalls will have to meet the effluent discharge criteria and therefore would likely be of higher quality than the ground water, thus implying that as a result it will not affect the water quality. The comments noted that simply because the water will meet NPDES standards does not mean that the water will be clean, and that adding contaminated water to an already contaminated water source increases the contamination.

Response 3: As described on pages 4-6 and 4-7 of the DEIS, surface water discharges from the facility are unlikely to increase water levels in the shallow aquifers due to the relatively small rate of discharge and the low hydraulic conductivity of the shallow material. Wastewater discharges from the facility will tend to stay at the surface, flowing slowly towards the East Fork of Shell Creek instead of entering the ground water. Ground water in the area tends to be salty; the discharge from the refinery will tend to be less salty because the water source will be from either runoff or from ground water that has been treated to remove salinity.

Comment 4: Outfall Locations: One comment expressed uncertainty about the location of the discharge and expressed concern that EPA could not evaluate the impacts without knowing the location.

Response 4: As explained in the DEIS, the exact location of the discharge pipe or outfall has not been designed at this time. The location of the outfalls will be in the northwest corner of the site in or near the wetland complex. The range of potential outfall locations is relatively small; all outfalls will discharge into the wetland that flows north under Highway 23 through a culvert as a tributary of the

East Fork of Shell Creek. The environmental analysis in the wetlands and surface water sections (Chapter 4) of the DEIS also discusses these potential impacts. For mitigation, the refinery will be encouraged to recycle as much water as possible, particularly during dry months of the year. For example the refinery could construct a wetland pond on site to ameliorate flow rates when the refinery is unable to recycle water.

D.3.(c). Water Quality Standards

Comment 1: Several comments expressed concern and sought clarification about why federal water quality standards were being used rather than the more stringent water quality standards adopted by the Tribes.

Response 1: EPA's Office of Science and Technology publishes water quality criteria recommendations (CWA 304(a) Criteria) as guidance for use by States and/or Tribes in adopting numeric criteria protective of designated uses. EPA's 304(a) Criteria are updated periodically with the latest major revision published in November 2002, National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047. Revisions to the aquatic life criteria for cadmium, mercury, and ammonia; and human health criteria for benzene and mercury were included in the 2002 revisions. In addition, the calculations of some of the hardness-dependant metals criteria were updated. EPA also published a CWA 304(a) criteria update in December 2003, EPA-822-F-03-012, for 15 human health water quality criteria including ethylbenzene and toluene. The MHA Nation adopted WQS for surface waters within the external boundaries of the Fort Berthold Indian Reservation on May 11, 2000. The Tribally-adopted WQS did not include some or part of the 2002 and 2003 updates as Tribally-adopted WQS were developed prior to publication. Tribes regularly review and modify their WQS, and it is anticipated that the Tribes will adopt the new CWA 304(a) criteria during their next update. Normally, a review is every three years. Where the EPA's updated criteria are different than the Tribally-adopted WQS, the EPA criteria have been designated as the applicable values. EPA criteria are appropriately designated as the applicable values, because the EPA criteria are updated as needed to reflect new information and data.

Comment 2: One comment expressed the concern that the Tribal dissolved oxygen (DO) criterion was not consistent with the State criterion.

Response 2: The DO criteria, in milligrams per liter (mg/L), as proposed in the Permit are:

April 1 – Sept 30	Oct 1 – March 31
8.0 (1-day min.)	4.0 (1-day min.)
9.5 (7-day mean)	5.0 (7-day mean)
6.5 (30-day mean)	6.5 (30-day mean)

The State criterion is 5.0 mg/L as a minimum. Since surface water discharges for the proposed project could flow through both Tribal and State waters, permit limits must remain protective of both Tribal and State waters. EPA believes that using the Tribal WQS meets the intent of the States standards. During the summer months, the Tribal criteria are more stringent (i.e., the required DO is higher than the 5.0 mg/L minimum). During the colder months, all but the one-day minimums were greater than or equal to the 5.0 mg/L minimum criterion.

Comment 3: A few commenters were concerned that the benzene criteria in the Tribally-adopted water quality standards (WQS) and EPA's *National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047* differed.

Response 3: The Tribes' Water Quality Standards (WQS) for benzene and other pollutants were based on EPA's water quality criteria at the time the standards were adopted. The MHA Nation adopted water quality standards for surface waters within the external boundaries of the Fort Berthold Indian Reservation on May 11, 2000. The Tribally-adopted WQS predate, and did not include, a recently published updated criterion for benzene. The latest major revision was published in November 2002, National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047. Revisions to the human health criteria for benzene were included in the 2002 revisions. In addition, the equations for some of the hardness-dependant metals criteria were updated. EPA also updated its criteria in December 2003, EPA-822-F-03-012, for 15 human health water quality criteria including ethylbenzene and toluene.

EPA anticipates that the Tribes will adopt the updated EPA Criteria, including benzene, as well as other parameters, within the term of the permit. The human health-based criterion for benzene was changed to a maximum value of 2.2 micrograms per liter (µg/L) for water consumption and 51 µg/L for water plus fish consumption. Therefore, EPA's permit will continue to use the human health-based criterion of 2.2 µg/L for the average daily concentration in the NPDES permit.

D.3.(d). Surface Water Quantity

Comment 1: One comment raised concerns about the range of flows from the facility. Another commenter observed that the volume of water projected to be discharged from the refinery is 20 gpm, which is roughly the equivalent of two garden hoses.

Response 1: Flows will vary from the facility, depending on rainfall, snow melt, and the amount of water recycling. Natural conditions in the area also generate a wide variety of flows. In this region of North Dakota it is quite common to have large spring flows and little to no flows during droughts and dry parts of the year. There will be some hydraulic adjustments in the wetlands and the unnamed tributary in the immediate area of the refinery, due to higher peak flows from precipitation events and a more continuous discharge throughout the year depending upon the selected alternative. Plants and riparian life populations will shift towards species that prefer more continuous water flow, such as those currently found in the lower portion of the East Fork of Shell Creek. Most prairie pothole wetlands do not naturally receive water on a continuous basis. They normally have significant dry periods throughout the year.

Comment 2: One comment raised concerns about discharge during the winter or under ice and the potential for discharges to form ice dams. The comment noted that typically the State of North Dakota requires 180 days of storage to avoid discharge during the winter months.

Response 2: The discharge of treated wastewater during the winter months would be allowed and storage would not be required. One way to minimize formation of ice dams is to increase storage and recycling of wastewater during the colder winter months. EPA is unable regulate the quantity of water discharged directly or the timing of the discharge. The 180 day storage requirement is a State of North Dakota requirement and is for domestic wastewater treatment plants that use a lagoon for treatment, not for storage. North Dakota has many facilities that discharge year around. The North Dakota lagoon regulations would not apply to this facility because the facility is industrial, will utilize mechanical wastewater treatment, and is sited within the boundaries of the Reservation.

Comment 3: A comment expressed concerns about the potential for ponding of water in a field downstream of the proposed refinery. (Additional discussions with the commenter identified concerns about the potential for ponding of a field near the wetland under FWS easement approximately a mile downstream of the proposed refinery.)

Response 3: The hydraulics of the channel discharging north from the refinery site will change as a result of the proposed refinery. The flow will be more continuous throughout the year, especially for Alternative 4 and A. Peak runoff flows from the site will also increase due to the gravel and impermeable surfaces at the proposed refinery. Water from the site will flow north, under Highway 23, across a small field and under a railroad eventually reaching the East Fork of Shell Creek. After discharges from the refinery begin, it is likely there will be a wider band of wetland type vegetation, increased runoff flows from storm events will cause the channel to adjust (widen, deepen) to accommodate higher flows and, depending on the topography and the inlet elevation of the culvert under the railroad, there may be additional ponding upstream of the railroad culvert.

The refinery site is about 2% of the overall drainage for an unnamed tributary. This unnamed tributary is approximately 11% of the drainage at the location approximately one mile downstream. It is unlikely that there would be any discernable impacts to this area from the refinery. A review of area topography, indicates that there is a natural constriction in this area. This was confirmed by FWS in that there are no man-made impounding features on the easement.

D.3.(e). Surface Water Monitoring

Comment 1: A few comments addressed the water effluent monitoring that would be conducted by the refinery staff to ensure that the permit water quality limits were met. Water quality would also be monitored further downstream and a contingency plan would be prepared and corrective action taken if downstream water quality was impaired by the refinery.

Response 1: Comment noted. Thank you for participating in the NEPA process.

Comment 2: One comment on tribal sovereignty stated that Tribal monitoring is similar to that of the State and Federal governments.

Response 2: The Tribe as a sovereign entity has the authority to promulgate regulations on monitoring similar to State and Federal governments. Under certain conditions and Federal regulations, the Tribe may assume responsibility for monitoring and permitting under certain Federal environmental laws.

Comment 3: The North Dakota Department of Health requested to be involved with the monitoring of the East Fork of Shell Creek.

Response 3: Water quality of the tributary to East Fork of Shell Creek would be monitored as explained in the NPDES permit found in Appendix C to the EIS. This monitoring data would be available to the North Dakota Department of Health on request.

D.3.(f). Surface Water Mitigation

Comment 1: Several comments pertained to mitigation related to erosion and sediment control during refinery construction and operation. The issues raised were as follows:

- "Effective irrigation farm management plan" under Erosion and Sediment Control is not defined in the DEIS.
- How can a best management practice be improved as discussed in the last bullet under Erosion and Sediment Control in the DEIS.
- Under Streams and Ponds, the DEIS states that "all reasonable precautions" will be taken to minimize turbidity; this is too vague.

- Under Roads, the DEIS states that the length and grade of roadbeds will be restricted, but does not say how, and that the roads will be surfaced with durable material, but does not state what that is.

Response 1: As stated in the DEIS (page 4-15, 4-24, section 4.17 in FEIS), mitigation measures will be defined in the Stormwater Pollution Prevention Plans (SWPPPs) prepared as part of the NPDES construction and industrial stormwater permits. These mitigation measures are all defined as "best management practices" or BMPs. The term BMP does not imply that any one specific activity, such as installation of silt fence at a construction site to reduce sediment and turbidity of stormwater leaving the site, is the *best* management practice for all sites. The goal of a BMP is to reduce erosion, improve revegetation, and/or improve stormwater runoff quality. Sometimes a BMP that worked at one site does not work as well at another site. The NPDES permit requires the permit holder to assess the adequacy of all the BMPs at the site and replace any BMPs that are not adequately controlling erosion or improving the stormwater quality discharging to the receiving water body. The details related to the soil erosion BMPs for roads would be defined in the SWPPP once the NPDES permit is issued and before refinery construction begins. Details related to the irrigation farm management plan would also be developed for the SWPPP. The NPDES permit for the refinery (Appendix C of the EIS) does not have a specific effluent limit for turbidity; therefore, "all reasonable precautions" to minimize turbidity would comply with the proposed permit. The permit does, however, establish a limit for total suspended solids.

D.4. HAZARDOUS WASTE AND RCRA

Comment 1: There were numerous comments expressing concerns that potential releases of hazardous or toxic substances from the proposed refinery will harm the surrounding environment and communities.

Response 1: The majority of potential environmental impacts associated with the refinery are expected from spills and leaks that are not contained or cleaned up promptly. Spills and leaks are inherent risks in operating a refinery, and could impact the ground water and soils beneath and immediately surrounding the proposed refinery. Areas used for transporting, handling, and storing, of chemicals and hazardous materials will be engineered to maximize containment, thereby minimizing impacts. As discussed in the EIS, numerous regulatory programs, including emergency response planning, oil spill response planning and containment measures, NPDES permits, and RCRA and OSHA requirements, would be implemented at the proposed facility to prevent or control potential releases. With proper construction and operation of the refinery, potential impacts to the health of the general public are anticipated to be negligible. Pollutants or materials which would be of concern to public health would be contained within the refinery, treated to nontoxic levels, or disposed of at approved hazardous waste facilities.

Comment 2: Comment expressed concern about the amount of hazardous waste generated each year.

Response 2: As discussed in Section 2, Page 2-70 and 2-71 of the DEIS, under all other alternatives except Alternative 4 and A, the refinery would be designed as a RCRA Treatment, Storage, and Disposal (TSD) facility requiring the refinery to obtain a RCRA TSD permit. A TSD permit would significantly increase the regulatory requirements for the proposed refinery project as outlined in 40 CFR Part 264. A RCRA TSD permit would also contain a number of specific requirements, including: ground water monitoring, corrective action, financial assurance, training, inspections, emergency response plans, closure, and reporting requirements. No hazardous wastes are planned to be disposed onsite. The permitting process would also place additional construction (e.g., double liners for surface impoundments) and management (e.g., treatment, storage, and disposal requirements; limits for wastes stored in storage areas) requirements on hazardous wastes treated, and stored at the proposed refinery,

which will minimize the potential for human receptors to contact the waste or for release of hazardous chemicals to the environment.

Under Alternative 4 and A, no RCRA TSD permit would be required, as the facility would be classified as a RCRA generator under 40 CFR Part 262. As a generator, there would be much less regulatory oversight. For example, there would be no requirements for ground water monitoring, corrective action, or financial assurance for closure. As a generator under RCRA, the refinery would be required to prepare and implement contingency plans for releases from hazardous waste management units. However, as stated above, generators are not subject to full corrective action requirements. That could impede or preclude adequate cleanup at the facility if significant releases to soils and ground water occur. If the facility does not comply with the RCRA generator requirements, EPA has enforcement authority to require the facility to correct violations and complete clean closure for hazardous waste management units. If the hazardous waste management units are not clean closed, the facility becomes a subject to subject to RCRA TSD permitting requirements.

The amount of hazardous waste expected to be generated at the proposed refinery annually (approximately 20,000 pounds) is significant and must be properly managed onsite to prevent releases. All hazardous waste must also be properly transported and disposed offsite at an approved disposal facility.

Comment 3: Comment stated if the facility is located on trust land, then it would not be subject to RCRA.

Response 3: This comment is incorrect. The facility would still be subject to RCRA if it is sited on land held in trust status by the U.S. Government for the Tribes or individual Indians.

Comment 4: The comment states the DEIS incorrectly explains that spills are not expected refinery events.

Response 4: Please see the section on spills in Chapter 4 starting on page 4-25 of the DEIS which discusses different kinds of spills, the magnitude of potential spills and the relative probability of the spills occurring.

D.5. VEGETATION

D.5.(a). Agricultural Impacts

Comment 1: Comments expressed concerns that the proposed forage producing area would be irrigated with contaminated water and/or that chemical fallout will be absorbed by those forage plants that will ultimately be fed to Reservation buffalo.

Response 1: Under Alternatives 1 and 3, the MHA nation proposes to use 279 acres of the project site to grow forage for the 650 head of buffalo that they raise elsewhere on the Reservation. Currently, bales of forage must be purchased from outside sources to sufficiently feed the herd during the winter months. The acreage would initially be seeded with oats and crested wheatgrass, and then changed to alfalfa and a mixture of grasses. Crops would be swathed, baled, and hauled to lands where the Tribal herd is managed. Buffalo would not be grazing within the proposed refinery property. Under Alternative 2, no refinery would be constructed, so the entire 469-acre project site would continue to be used for the agricultural uses that have historically been present there—intensive dry land farming (e.g., cereal row crops like barley and wheat). Under this same alternative, the MHA Nation could decide to use this entire project site for growing buffalo forage crops.

Only effluent discharge Alternative B allows surplus treated wastewater to be disposed of through both NPDES permitted outfalls and irrigation. The irrigation management plan would establish treated wastewater application rates thereby limiting the volume applied. As stated in Section 4.8.3.1 of the FEIS, a risk assessment should be performed to establish treatment levels for any wastewaters used to irrigate forage or other crops that may be potentially consumed by livestock or wildlife. Such a risk assessment would also consider potential risks from human consumption of livestock or wildlife that have eaten forage crops irrigated with treated wastewater. See also page 4-60 of the DEIS (Section 4.17 FEIS), which lists standard mitigation measures to reduce the potential adverse effects of effluents on soil and vegetation resources.

EPA evaluated other exposure pathways in addition to direct inhalation of emissions. EPA has added text to Chapter 4 of the FEIS, which provides a qualitative comparison of modeled emitted concentrations of contaminants from the proposed refinery with actual emitted concentrations of similar contaminants from existing refineries that are processing synthetic crude or the precursor material to synthetic crude, bitumen, or a combination of these feedstocks. These refineries include: Petro-Canada, Scotford, Heartland, and North West refineries located in Alberta, Canada. Canadian environmental studies conducted for these refineries included an evaluation of the effects of air emissions on the surrounding environment. Bioaccumulative effects of the potentially emitted HAPs, as well as other contaminants that may adversely effect the environment, such as benzene, PAHs, and formaldehyde, were considered to be insignificant for each of the refineries, which are many times larger than the proposed refinery. Finally, EPA conducted a quantitative analysis of emissions for the proposed refinery, which included an evaluation of toxic air emissions potentially entering the food chain through various pathways including plants, wildlife, and bison. The results of this analysis indicate that there would be no adverse impacts to humans consuming the foods grown or raised in proximity to the refinery. This information is available in Section 4.16 of the FEIS and the technical report - *Qualitative and Quantitative Human Health Risk Assessment: TAT Refinery EIS*, December 2007.

Comment 2: Comment expressing concern for impacts to soils and specifically, the impact the proposed refinery will have on crops grown in the area. Comment concerned about the impacts the wastewater discharge could have on locally-grown crops.

Response 2: See response to Comment 1 above.

Comment 3: Comment that the DEIS presents the impacts of possible greater amounts of vegetation in an overly optimistic light, providing as an example, the DEIS statement that "there may be a perception of greater lushness." Comment uses this example to indicate a concern about the neutrality and reliability of the DEIS analysis.

Response 3: The level and type of environmental analysis varies depending on the resource, the type(s) of impacts, and the degree of impact. Each NEPA analysis should focus on the important issues and resources for that project. The same type of project may have very different environmental analysis depending upon the specific resources that are affected. The impact analysis regarding more continuous flow to the wetlands which concluded there would be "a perception of greater lushness" is consistent with the type of impacts anticipated from more year-round flow. Currently, the wetland system dries out or reduces in size during the dry season. With more continuous flows, the vegetation would stay greener and is less likely to go dormant during dry periods, hence the term "greater lushness."

D.5.(b). Wetlands

Comment 1: A comment requested that a complete analysis regarding threat to the many wetlands found within North Dakota be performed.

Response 1: The DEIS presents a complete inventory (types, distribution and areal extent) of the wetlands on the project site (pages 3-56 and 3-57). Analysis of the environmental consequences by each of the alternatives to the site's wetland and riparian areas is discussed in Chapter 4 of the DEIS, pages 4-64 to 4-71, including a brief narrative on cumulative impacts. A complete analysis of threats to many of North Dakota's wetlands is beyond the scope of this EIS. The technical reports to the FEIS also include a summary of the water quality sampling of wetland PEMF-2 conducted in April 2006.

Comment 2: A comment stated that the "Waterfowl" narrative on page 4-76 and 4-77 of the DEIS minimizes the effects of destruction of wetlands to waterfowl habitat by stating that the amount of wetlands that will be lost is "relatively small compared with the areal extent of these habitats that would not be affected." A related comment disagreed that holding ponds would compensate for those losses.

Response 2: Depending on the alternative selected, the range of potential loss of wetlands would be 0.8 acres (Alts. 1, 3) to 0.4 acres (Alt. 4). This is a relatively small amount compared to the areal extent of wetland habitat available in the area. The wetlands have historically been impacted by agricultural activities thereby affording limited habitat value to waterfowl. While the various utility line impacts remain constant for Alternatives 1, 3 and 4, those impacts will be transient and reduced further through avoidance and minimization practices during construction. The FEIS also discusses the wetland mitigation to compensate for the loss of wetlands. {FEIS changes in Section 4.17.}

The comment on the holding ponds compensating for losses is correct. The use of the holding ponds by bird species would be discouraged by using cobbles as stated in the species of concern section.

Comment 3: Comments expressed concern that the proposed refinery's run-off will alter the historic flows to wetlands and that it will likely contain contaminants which could be harmful to wetlands.

Response 3: The operation of the proposed refinery would change the hydrology of the watershed, increasing flow rates and changing the system to a more continuous flow regime. Over time, it is expected that the wetlands and tributaries would adapt to these changes in hydrologic conditions. All wastewater discharges would be treated to meet the limits in the NPDES permit. Because all discharges will be treated and the peak discharge is designed to be low (about 0.25cfs), the downstream changes should be slow and minimal.

Comment 4: A comment stated that land application of contaminated wastewater should take into account vulnerability of wetlands.

Response 4: If Alternative B is selected, an irrigation management plan would be developed to identify application rates and wastewater treatment levels, in accordance with Land Disposal regulations under RCRA. Application rates would be set such that runoff and erosion potential is minimized.

Comment 5: A comment stated that changes in the flow of water from wetlands could disrupt the recharge of the shallow aquifer, which is accessed by area residents.

Response 5: The operation of the proposed refinery would change the hydrology of the watershed, increasing flow rates to wetland PEMF#2 and then downstream. The increase in permanent water

level should be exhibited as an increase in the area inundated by water in wetland PEMF#2. The water released to the local surface drainage, will provide little to no recharge of the shallow aquifers, because of the low permeability of the till, presence of the clay layer underlying the site, and the low average flow of the refinery discharge of about 10 gallons per minute (gpm) for Alternatives 1 and A and 3 and A with recycling, and 20 gpm for Alternative 4 and A.

Comment 6: A comment expressed concerned that a nearby slough, which does not have very good drainage, would get bigger due to the runoff going into the slough.

Response 6: The average discharge for the refinery is estimated to be 10 gpm, for Alternative 1 and A and 3 and A with recycling, and 20 gpm for Alternative 4 and A (about 30 acre feet per year). Wetland PEMF #2 is about 11.7 acres in size. PEMF#2 will become a more consistently wet, wetland, but its outer margin should not increase significantly. Because the peak discharges are designed to be low (about 0.25cfs), the downstream changes should be slow and minimal.

Comment 7: A comment expressed concern that in Alternatives 1, 3 and 4, a jurisdictional wetland would be impacted. The comment noted that wetlands provide habitat for many species of plants and animals and provide recharge to the shallow aquifers, which are accessed by area residents. Changes in flow of water could disrupt the recharge of the shallow aquifer.

Response 7: The comment is correct. All of the construction alternatives will impact a jurisdictional wetland, PEMF#2. Alternatives 1 and 3 have the greatest impact of 0.5 acres through fill and redirection of the drainage swale. Alternative 4 reduces the direct impacts to the jurisdictional wetland on the project area to less than 0.1 acres for culverted crossings over the drainage swale associated with wetland, PEMF#2. The alterations in flow have been discussed previously under Comment 6.

Comment 8: A comment stated that the suggested measures for minimizing impacts on wetlands are unclear because the DEIS does not define the terms "necessary" and "non-essential" equipment and does not identify who decides what is "necessary" and "non-essential" equipment.

Response 8: Only a minimal amount of disturbance to aquatic resources may occur under the CWA 404 programs. The necessary and essential equipment is that needed to accomplish the permitted tasks with minimal impact. For example, the construction process will avoid the use of large equipment which is necessary at one site but may be oversized at another site. The wetlands mitigation measure has been changed in the FEIS (Section 4.17) to "All equipment should use upland access roads to the maximum extent practicable.

Comment 9: A comment expressed a general concern over the numerous wetlands in the vicinity of the proposed refinery.

Response 9: As described in the DEIS, the Missouri Coteau is characterized as a rolling, hilly area with numerous prairie potholes and lakes. The Tribes initial review for the selection of sites for this proposed facility considered impacts to wetlands, as described in Appendix B of the DEIS. In Alternatives 1 and 3, there will be a loss of 0.5 acres of jurisdictional wetlands and 0.3 acres of isolated wetlands. In Alternative 4, there would be a loss of 0.1 acres of jurisdictional wetland, and a loss of 0.3 acres of isolated wetland. A site-specific wetlands mitigation plan would need to be developed and approved by the USACE for any wetlands impacts as specified in a CWA 404 permit. The mitigation plan would include the specific location, acres of wetlands and uplands that would mitigate wetland impacts.

Comment 10: A comment expressed concern that routes of the proposed pipeline "have not been surveyed for wetlands..." DEIS at 4-64, and that instead of analyzing the effects based on the actual

wetland acreage, the DEIS uses an estimate to determine the impacts. The comment further stated that this approach is inadequate and that additional information must be included in the analysis. Simply concluding that numerous wetlands may potentially be impacted is not a satisfactory analysis.

Response 10: Potential wetland impacts of several approaches were considered for the linear infrastructure (transmission lines and pipelines) needed to support the project. While selection of the final pipeline route will be determined when the refinery selects its supply carrier, the wetland impacts presented in the DEIS were estimated using the standard width of the construction corridor through the wetlands without any consideration for minimization. Through route selection, final design criteria and avoidance of all possible impacts during construction, the final impacts should be much less than those presented in the FEIS in accordance with an applicable CWA 404 permit.

D.6. WILDLIFE

Comment 1: Comments asked how the discharged wastewater will affect the buffalo that will consume the forage grown at the site and on fish species, including the pallid sturgeon.

Response 1: Only effluent discharge Alternative B allows surplus treated wastewater to be disposed of through both NPDES permitted outfalls and irrigation. The irrigation management plan would establish treated wastewater application rates and practices for the crops being grown, and to meet the requirements for solid waste disposal. [Under the RCRA regulations, land applied, treated wastewater would be considered a "solid waste".] As stated in Section 4.8.3.1 of the FEIS, a risk assessment should be performed to establish treatment levels for any wastewaters used to irrigate forage or other crops that may be potentially consumed by livestock or wildlife. Such a risk assessment would also consider potential risks from human consumption of livestock or wildlife that have eaten forage crops irrigated with treated wastewater. Page 4-60 of the DEIS (Section 4.17 FEIS) recommends standard mitigation measures to reduce the potential adverse effects of effluents on vegetation and soil resources.

For wastewater discharges to the wetland complex and the tributary to the East Fork of Shell Creek, discharge limitations in the NPDES permit will require that wastewater discharges be protective of aquatic life, drinking water, agriculture, and wildlife uses. Please see the "Statement of Basis" for the proposed discharge limits, which is in Appendix C of the DEIS and FEIS. For example, the wastewater discharged under the NPDES permit will be required to meet water quality standards which are protective of aquatic life, wildlife and drinking water use. The proposed refinery site is more than 20 miles from the Missouri River; neither the discharge quality nor quantity is anticipated to be discernable by the time the discharge reaches the Missouri River. Therefore, no impacts are anticipated on pallid sturgeon that may reside in the Missouri River.

Comment 2: Comment stated that with regard to the effect that stream flows and water temperatures have on aquatic life, the DEIS compares changes in stream flows to flood and drought periods, which is an invalid comparison because flood and drought are seasonal and somewhat cyclic, whereas a change in flows as a result of discharge is not cyclic.

Response 2: The potential impacts from changes in flow are discussed on pages 4-68, 4-69 and 4-79 in the DEIS. The analysis includes impacts to fish in the East Fork of Shell Creek which under existing conditions experience both drought and flood. Existing fish species can survive some fluctuating flow conditions, and dry and wet conditions in the riparian zone. With extensive recycling of water under Alternatives 1 and A and 3 and A, the seasonal fluctuations will be largely unchanged by the proposed refinery. For Alternative 4 and A, and 1 and A, and 3 and A without recycling, more continuous flow conditions would cause a shift in fish and macro-invertebrates species to those species

that prefer continuous flow. Discharge Alternatives B and C would further reduce average discharge flows.

Comment 3: Comment stated that while the DEIS mentions that artificial increase to the stream flow could have both positive and negative effects on aquatic life, the DEIS only discussed one positive effect and no negative effects are mentioned.

Response 3: In the DEIS (page 4-80), most of the impacts caused by changes in flow conditions are a mix of adverse and beneficial impacts with the exception of changes in the wetlands system downstream of the refinery. The alternatives and operational options (discussed in the above comment) with continuous discharge or nearly continuous discharge would change the downstream wetlands from a prairie pothole type habitat to a more permanently ponded wetland.

Comment 4: Comment stated that the last sentence of the "Species Diversity" narrative on page 4-81 of the DEIS should say. . . "therefore, have the greatest adverse impact on aquatic ecosystems" to be factually more clear in its meaning.

Response 4: The language on Page 4-81 of the DEIS (FEIS Section 4.8.1.3) has been revised to "Potential changes in species diversity would be the greatest under Alternative 4 because this alternative would have the most continuous flow of all the Alternatives."

Comment 5: Comment stated that the "Aquatic Species" narrative on pages 4-78 to 4-80 should include a real water quality analysis so that the effect of wastewater discharges on aquatic organisms can be more accurately depicted.

Response 5: The refinery is in preliminary design, so it is not possible to have water quality data from this refinery. However, EPA has analyzed effluent quality from many existing refineries and that information was used in developing the NPDES permit. The discharge limits in the proposed NPDES permit have been developed to be protective of aquatic life. The permit also includes monitoring and reporting to ensure that aquatic life, wildlife, birds, agriculture and drinking water are protected. These limits are presented on page 4-19 of the DEIS. Appendix C to the EIS provides additional information.

Comment 6: Comment stated that the DEIS fails to consider the cumulative impacts of an overall loss in available land for the whooping crane to use during migration.

Response 6: The loss of 190 acres of agricultural land will not have an impact on whooping cranes. The collision risk with transmission lines were identified as potential impacts to whooping cranes and the conservation measures to minimize this risk are documented on page 4-84 of the DEIS (FEIS Section 4).

Comment 7: Comment stated that the bald eagle would be threatened by this proposal to build the refinery and that the DEIS fails to consider the cumulative effects of altering forage areas for bald eagles within the project site.

Response 7: Based on its unique habitat needs and affinity for fish as a primary food source, the occurrence of a bald eagle in proximity to the project area would be a rare and random incident. No suitable roosting/nesting habitat or concentrated prey/carrion foraging sources are present on the proposed project site. The use of low voltage power lines, designed to avoid electrocution of raptors, would also be installed during construction of the refinery. The proposed NPDES-permitted discharge of effluent from the refinery would result in tributary and mainstream water quality that would have no effect on any bald eagle that might ingest the water, or on prey species residing in the discharged

water. In addition, the location of this discharge is not within the general habitat of the bald eagle. There would be no effect to this species or its habitat from the construction or operation of the proposed refinery, or from the implementation of any of the discharge alternatives.

Comment 8: Comment stated that an analysis to assess impacts of failing to net oily ponds and maintaining them should be conducted.

Response 8: Netting of contaminated water ponds is a mitigation measure that has been well-proven to effectively decrease wildlife use of bodies of water. Maintenance requirements are not typically significant for these barriers. The potential health impacts to an animal coming in contact with oily contaminants floating on water is already understood, particularly in the context of petroleum industry oil spills and oily pits or oil-covered surface impoundments.

Comment 9: Comment stated the DEIS minimizes the true effect of habitat loss for birds by saying birds are highly mobile and it is important to analyze habitat alternatives before making this claim. The document does not analyze the cumulative effects of habitat loss with respect to waterfowl habitat and loss of wetlands. Comment stated the DEIS lists and analyzes birds individually which minimizes the true synergistic relationship the effects have with one another and the impacts caused by these effects as a whole.

Response 9: The refinery is proposed to be sited on agricultural land which presently provides limited wildlife habitat value, and the reduction in wetland habitat is considered inconsequential relative to abundant similar habitat in the area surrounding the proposed refinery location. It is beyond the scope of this project to analyze overall waterfowl habitat loss in North Dakota. This area has not had substantial development and there are no other large construction projects proposed in the vicinity of the project in the reasonably foreseeable future.

Comment 10: Comment stated there is only one specific measure for reducing the number of raptor collisions with power lines, which is to avoid areas of high avian use and according to the DEIS, these measures will only be implemented where feasible and there is no way of enforcing them.

Response 10: There are no known areas of high raptor use where transmission lines are proposed nor are there ravines were raptors would use thermals. The electrocution of raptors is an impact that can be minimized through the use of perching devices on transmission lines and other measures described in the FEIS.

Comment 11: Comment stated that with respect to the effects of vehicle collisions on birds, the DEIS mentions the use of speed limits as a mitigation measure on project roads but there is nothing regarding the enforcement of such limits so this measure may be ineffective.

Response 11: As discussed on page 4-74 of the DEIS, the majority of bird/vehicle collisions will be on highways and non-project roads. Therefore, lowering the highway speed limit in the area of the refinery to reduce impacts to birds was <u>not</u> suggested to mitigate impacts to birds. Also the vehicle traffic increase of 30% will not have a significant increase in bird-vehicle collisions.

Comment 12: Comment stated that the use of the term "big game mammals" is insufficiently specific and overly broad and that species should be analyzed individually.

Response 12: The term "big game mammals" is described in the Wildlife section of Chapter 3 of the FEIS. The overall impact to these species is predicted to be minor resulting from displacement of common species occurring on agricultural land. As these species encounter disturbances from agricultural activities presently occurring on the property, additional impacts are not predicted to be

more than minor. The analysis of individual species is unnecessary for the decision making process due to the minor impacts predicted and the similarity of anticipated impacts.

Comment 13: Comment stated the DEIS fails to consider how the project will contribute to the continuous destruction of the gray wolf's habitat and make it harder for the gray wolf population to return to safe numbers.

Response 13: The Wildlife section of Chapter 4 discusses the lack of anticipated impacts to the gray wolf and its prey relative to the proposed project. It is beyond the scope of this FEIS to analyze overall habitat loss for gray wolves.

D.7. CULTURAL RESOURCES

Comment 1: Comments stated concern about the cultural change that comes with relying on industry for their well-being and that life is based on protection of resources. Polluting the environment, as the refinery will do, is inconsistent with traditional Tribal values.

Response 1: The MHA Nation replied that tribal cultures have adapted from time immemorial to changes without impairing their cultural values. The evidence to support this statement is the current language, practices and legends that are passed on to new generations. Tribal traditions continue through the Tribe's medicine, burial, naming and other traditional ceremonies.

Comment 2: Comment questioned the adequacy of analysis of impacts to areas of Tribal cultural and spiritual significance.

Response 2: The proposed refinery will be located on land that has been farmed and worked since 1910. As explained in the Cultural Resources section 4.9 of the EIS, the Three Affiliated Tribes Cultural Preservation Office (CPO) and the North Dakota State Historic Preservation Officer (SHPO) were consulted regarding potential cultural impacts from the proposed refinery. The CPO made a "No Historic Properties Effected" determination for the proposed refinery site. The CPO further indicated that no sites or previously-identified cultural resources were located during the course of its evaluation. The SHPO reported that there were no recorded historic or cultural sites. While the SHPO noted that there has not been a cultural resource inventory of the proposed refinery site, the SHPO indicated that the location appeared to have a low probability for cultural resources. The SHPO concluded that it would recommend a no historic properties affected determination for the refinery site. The Agencies also consulted directly with Tribal leadership regarding whether the refinery site had any known cultural or spiritual significance to Tribal members. The Tribes represented that the refinery site held no cultural or historical significance for Tribal members.

D.8. AIR QUALITY

D.8.(a). Air Quality Impacts

Comment 1: Several comments stated that the DEIS did not explain the statement that there would be negligible environmental impacts from the proposed refinery. Comments also requested review of toxic air pollutants.

Response 1 - NAAQS: Existing ambient air monitoring data was used to establish current levels of exposure to "criteria pollutants" for which there are a national ambient air quality standard or NAAQS. [NAAQS are the federal health based standards for: nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter (dust, soot) ($PM_{2.5}$ and PM_{10}) and sulfur dioxide (SO_2).] These standards were

developed to protect public health and welfare with an adequate margin of safety. The NAAQS pollutants are measured based on various time frames in order to address impacts from short-term and long-term exposures: NO_2 is measured annually; CO is measured over 1 hour and 8 hour periods; $PM_{2.5}$ is measured at 24 hours and annually; PM_{10} is measured at 24 hours; SO_2 is measured at 3 hours, 24 hours and annually. The monitoring location where existing ambient monitoring data was gathered would include any emissions that may have drifted from power plant sources.

The criteria pollutant emissions from the proposed refinery were modeled together with the monitored current background levels to estimate total pollutant exposures for Tribal members and the public. (Air Quality Technical Reports, May 2006 and December 2007). The modeled results are detailed in the DEIS (Table 4-15) and show that the potential emissions of criteria pollutants from the proposed refinery, together with existing background levels of the pollutants, which include emissions that may have drifted from power plant sources, are below all NAAQS. The term "negligible" was used in the DEIS to disclose that the proposed air emissions from the refinery would not cause exceedances of the NAAQS. The FEIS and *Air Quality Technical Report* have been revised to clarify this. {FEIS changes in Section 4.13}

HAPS: The DEIS describes hazardous air pollutant (HAP) ambient concentrations in the project area for 1 hour, 24 hour and annual periods (DEIS in Table 4-16). The document also describes the site-specific hazardous emissions modeling for the proposed refinery to determine human health impacts for the following HAP parameters: benzene, cyclohexane, formaldehyde, hexane, polycyclic aromatic hydrocarbons, toluene, and xylene (DEIS on page 4-132). The hazardous emissions are correlated to chronic health effects (i.e., long-term exposure). The analysis is related to lifetime exposure to a hazardous emission; thus, assessing a one-year average concentration against the criteria is a conservative estimate of exposure over a lifetime. The DEIS describes that the estimated ambient impacts from the proposed refinery are below the federal risk based concentrations and that the proposed refinery would not have measurable adverse effects on the human health of the local area communities (DEIS pages 4-125 through 4-135 and in the FEIS in section 4.16.1.3).

While power plants are large emitters of many criteria pollutants and mercury, HAPS concentrations from these facilities at the project area would be expected to be very low given the amount of dilution that would occur in the distance between these facilities and the MHA Nation.

Comment 2: There were several comments stating that the proposed site for the refinery is only two miles upwind from the Town of Makoti and that the impacts to Makoti were not fully analyzed.

Response 2: The modeling analysis used four full years of hourly surface meteorology data from Minot, North Dakota observed during 1984, 1985, 1987, and 1988. Minot, located about 30 miles northeast of the project site, is the nearest location with multiple years of processed meteorological data suitable for modeling. The data is considered representative of the project site given the relatively flat terrain in the area. The model calculates concentrations for a network of locations (receptors), including Makoti, in the area around the refinery for each of the 35,000 hours of meteorology data. The model then reports the highest concentrations predicted anywhere on the array of receptors. This methodology assures that the impacts associated with the prevailing northwest winds and impacts in Makoti were fully considered in the modeling analysis.

Comment 3: Comments requested information on air emissions dispersion distance for worse case emergency scenarios.

Response 3: The safe setback distance in any emergency scenario depends on the nature and quantity of emissions and the meteorological conditions at the time of the emergency. These conditions cannot be predicted in advance of such an event. However, emergency response personnel are trained to

consider these factors in establishing safe setback distances. For more information, see Section E. - Emergencies, Spills and Safety, of the Response to Comments.

Comment 4: Several comments stated the DEIS analysis of air impacts was not clear or easily understood by the public at large.

Response 4: This RTC and the FEIS includes clarification of DEIS air impacts analysis. In addition, EPA has summarized relevant portions of the revised *Air Quality Technical Report* (December 2007) and included the summary in the Air Quality section of Chapter 4 in the FEIS. {FEIS changes in Section 4.13}

D.8.(b). Cumulative Air Impacts

Comment 1: Several comments stated concerns that the DEIS failed to address cumulative impacts to air quality and disregarded potential new sources of air pollution, including an ethanol plant and a new power plant. Comment stated that there is a conflict between stating that no other projects are planned in the area yet the refinery will stimulate local development.

Response 1: The analysis in the DEIS considered the cumulative impacts of the project. The most recent available ambient air quality monitoring data was used to establish baseline conditions in the Class II project area. This data reflects the impacts from existing regional sources such as power plants and mobile sources as well as transported pollutants from neighboring States. The modeled incremental impact from the proposed project was added to these monitored values to estimate total cumulative air quality impacts in the project area, for comparison with the NAAQS. Use of these monitored data to establish existing baseline conditions in the project area may, in fact overestimate future concentrations because several of the largest power plants in the region are subject to EPA regulations that will require them to install Best Available Retrofit Technology (BART) over the next five years. These mitigations are projected to reduce SO_2 and NO_2 emissions from the affected facilities by up to 95 percent. Cumulative impacts for the types of emissions from power plants will decrease in the area over time even with the new proposed power plant.

The cumulative impact analysis did not specifically include the proposed ethanol plant, because emissions from the ethanol plant combined with the refinery and other sources are not expected to be significant in the airshed surrounding the proposed site. Volatile organic compounds (VOCs) are the main air emissions of concern from ethanol plants.

Potential air emissions from future, local developments in the area are very minor. Increases in vehicle and rail traffic and new commercial/residential air emissions induced by the proposed refinery are too minor to cumulatively affect air quality.

Comment 2: Comments raised concern about lack of analysis of long-term air impacts on Regional air quality, as the refinery ages.

Response 2: The analysis of potential air quality impacts were based on conservative estimates (maximum potential) of the proposed refinery's emissions. Emissions are not expected to increase as the project ages. Any significant increase in the proposed refinery's emissions due to modifications made at the refinery would trigger additional permitting reviews of both the additional impacts to air quality due to the modification and a technical review of emission control equipment (to minimize emissions) applicable to the modification.

Comment 3: Comment questioned why 1990-1994 meteorology data was used in the modeling analysis and not more recent data.

Response 3: The 1990-1994 meteorology data were used because they were the most complete data sets available at the time of EPA's PSD increment analyses. The 1990-1994 data is sufficiently long and contains enough observations that it is still considered representative of conditions in the project area and is acceptable for use in regulatory modeling analyses.

Comment 4: Several comments expressed concern that the current controversy between EPA and North Dakota over SO_2 increment levels, which are established in the Prevention of Significant Deterioration (PSD) permitting program, in Class I areas in North Dakota has not been resolved. Comments stated that the EIS should assess cumulative impacts from the proposed refinery in conjunction with existing emissions from North Dakota power plants on the Class I airsheds. Comment also indicated concern that the DEIS did not provide the same impact data for both the Theodore Roosevelt National Park (TRNP) and Lostwood Wilderness (LW) Class I areas.

Response 4: The DEIS includes an air quality analysis of impacts from the proposed project at two Class I areas: Theodore Roosevelt National Park (TRNP) and Lostwood Wilderness (LW). It is not necessary to address or resolve issues regarding EPA and North Dakota modeling protocols in the EIS, because the modeling demonstrated that the refinery would have a minimal impact on the Class I SO_2, NO_2 and PM_{10} increments for the Class I areas. As described on page 4-107 of the DEIS, the Class I SO_2 increment consumption analysis was evaluated using the same methods as were used in the EPA Region 8 North Dakota increment modeling analysis (U.S. EPA 2003).

The DEIS shows in Table 4-18 the potential impacts from the proposed refinery project on the SO_2 increment at TRNP are minimal, as demonstrated by the 3-hour project impact of 0.0000 to 0.0060 µg/m3; 24-hour impact of .0000 to .0050 µg/m3; and annual impact of 0.0005 to 0.0024 µg/m3. In addition, the DEIS presents in Table 4-19 the maximum estimated increment consumption from the project's emissions and concludes that the project would consume a minimal amount of the NO_2 (0.10% to 0.14%) and PM_{10} 24-Hour (0.21% to 0.47%) increments. The estimated maximum visual range extinctions resulting from the project emissions are below the 5% threshold that EPA's BART guideline establishes as a threshold for defining a "contribution" to visibility impairment. The maximum estimated visual range extinctions are also well below the 10% or 1.0 deciview general level of concern for Federal Land Managers.

The impact of the proposed project emissions on the increment consumption in the TRNP and LW is minimal for two primary reasons. First, the refinery SO_2 and NO_2 emissions are small as compared to existing sources in the Class I airshed. For example, the refinery is projected to emit 51.2 tons per year of sulfur dioxide, as compared to the existing power plant 2004 SO_2 emissions of 148,726 tons per year. The refinery is projected to emit 35.7 tons per year of NO_2, as compared to the existing power plant 2004 NO_2 emissions of 77,589 tons per year. Second, the proposed facility is located 73 miles from the TRNP and 55 miles from LW. The DEIS modeling shows the air emissions from the proposed plant would disperse to minimal amounts by the time they reach the Class I airsheds. Consequently, the relatively low emissions of SO_2, NO_2 and PM_{10} from the proposed project, combined with the dispersion of those emissions, would result in minimal impacts from this project on the Class I airsheds. The proposed project's contribution to cumulative air impacts at the Class I areas would likewise be minimal.

Comment 5: Comment requested that information be added on the criteria used to decide that refinery impacts on the Class I SO_2 increment for Teddy Roosevelt National Park (TRNP), suggested that significant impact levels (SILs) defined in the ND State Implementation Plan (SIP) be used as criteria, and concluded that impacts would be minimal if this were done. Comment questioned the dates of the data used and noted that comparable information is not provided on TRNP and Lostwood Wilderness (LW), making the DEIS incomplete

Response 5: Information has been added to the FEIS to further explain and support the conclusion that impacts on TRNP SO_2 levels would be minimal. {FEIS changes in Section 4.13.1.4}

Comment 6: Comment stated that in 2004, over 140,000 tons of SO_2, 75 tons of NO_x, and over 2,200 tons of mercury were emitted by the 7 power plants in North Dakota and that the October 2004 Dakota Resource Council publication, Dakota Council, stated that the North Dakota power plants emitted over 3 tons of arsenic and 3 tons of lead and over 4 million pounds of chromium were released on or near Fort Berthold.

Response 6: The emissions data referenced for North Dakota power plants are not consistent with EPA data. EPA's acid rain database shows 2004 North Dakota power plant emissions of 148,726 tons of sulfur dioxide and 77,589 tons of nitrogen dioxide. Similarly, our records also show that air emissions of mercury and chromium from ND power plants were 1.24 tons and 3.00 tons, respectively, in 1999.

Comment 7: Comment stated concern that Table 3-21 in the DEIS shows an increase in the Standard Visual Range (SRV) for years 2001-2004 for the Lostwood Wilderness and Teddy Roosevelt National Park, but does not show the impacts that the refinery emissions would have on these two Class I areas when the refinery is operating for its twenty year lifetime at 10,000 or 15,000 barrels per day.

Response 7: The estimated change in Class I visibility from the operation of the refinery was modeled using five years of historical meteorology data. The highest impacts occurred at the Lostwood Wilderness area with visual range reductions of between 1.59 percent and 4.14 percent depending on the weather data used in the modeling. Similar impacts on visibility would be expected over the 20 year lifetime of the facility while operating at its 10,000 barrel per day capacity. These impacts are below the 5 percent threshold (0.5 deciview) considered to be perceptible and well below the 10% or 1.0 deciview general that is the general level of concern for Federal Land Managers. Potential impacts to visibility were not analyzed at higher operating capacities in the DEIS, because the refinery that was proposed by the MHA Nation would process 10,000 barrels per stream day (BPSD) of synthetic crude oil, not 15,000 BPSD or more.

Comment 8: Comment stated that the EIS does not address broad environmental impacts of the refinery, specifically climate change concerns.

Response 8: Climate change sections have been added to Chapters 3 and 4 of the FEIS describing the environmental consequences of climate change and estimating greenhouse gas emissions from the proposed refinery.

D.8.(c). Permitting and Emissions

Comment 1: There were several comments raising a concern about the lack of federally enforceable Clean Air Act (CAA) permits for the proposed oil refinery and stating that lack of any air permit would allow unlimited and unmonitored air emissions. Comments questioned why there are no CAA permits, stated the facility is a major source requiring permits and Best Available Control Technology (BACT) and requested that EPA initiate the PSD process, set detailed and enforceable BACT limits and monitoring requirement for all refinery sources.

Response 1: In an April 2005 letter to the MHA Nation, EPA made a non-applicability determination for federal air permits for the proposed refinery. Based on the proposed equipment, emissions projections, and feedstocks, EPA determined that the proposed refinery was not subject to the permitting requirements of a pre-construction Prevention of Significant Deterioration (PSD) permit or a Title V (40 CFR part 71) operating permit. The "potential to emit" or potential maximum emissions

estimated for the refinery were based on the refinery operating 24 hours per day, 365 days a year. Since the estimated "potential to emit" is below 100 tons per year (TPY) of any regulated pollutant and below 10 TPY of any one hazardous air pollutant or 25 TPY of a combination of hazardous pollutants, the proposed refinery would not be considered a major stationary source as defined in the PSD regulations at 40 CFR 52.21(b)(1)(i) and in the Title V operating permit regulations at 40 CFR 71.2. The proposed refinery is not a major source subject to the PSD permitting requirements, so the facility is also not subject to Best Available Control Technology (BACT), which is a requirement under the PSD regulations.

EPA is promulgating new regulations to establish a preconstruction air permitting program for minor stationary sources throughout Indian country. The rule was proposed in the August 21, 2006 *Federal Register*. The effective date for implementing the new regulations is anticipated to be at least 60 days after the final regulations are published. These regulations may apply to the refinery depending upon when construction on the refinery commences relative to the effective date of these regulations.

The proposed refinery will be subject to several Clean Air Act New Source Performance Standards (NSPS) (40 CFR part 60), which will impose emission limits, fuel gas specifications, or design requirements and require testing, monitoring, recording keeping, and reporting of emissions for many units. However, not all emissions will be monitored under these regulations. Applicable NSPS requirements are explained in more detail in Response 5 in this section.

On November 7, 2006, EPA proposed new regulations under a New Source Performance Standard for equipment leaks of VOC in petroleum refineries and promulgated the proposal on November 16, 2007. These revised standards are codified at 40 CFR, part 60, subpart GGGa and were effective on the date of promulgation. NSPS subpart GGGa is applicable to the proposed refinery since construction of the regulated refinery units will commence after November 7, 2006 [see 72 FR 64896, November 16, 2007] Finalization of NSPS, subpart GGGa triggered the requirement for the refinery to apply for a 40 CFR Part 71 operating permit within 12 months of commencing operation.

On May 14, 2007, EPA proposed New Source Performance Standards for new, modified, or reconstructed process units at petroleum refineries. Once finalized, these standards will be codified at 40 CFR part 60, subpart Ja and will be effective as of the date of proposal. [See 72 FR 27177, May 14, 2007.] These proposed standards include emissions limits and associated testing, monitoring, recordkeeping, and reporting for the process heaters, other fuel gas combustion devices, and the sulfur recovery unit, which the proposed refinery is not currently subject to under the existing applicable New Source Performance Standard (40 CFR part 60, subpart J). Finalization of NSPS, subpart J will also trigger the requirement for the refinery to apply for a 40 CFR part 71 operating permit within 12 months of commencing operation.

EPA has authority under Clean Air Act sections 301(a) and 301(d)(4) to promulgate "Federal Implementation Plans" (FIPs) as necessary or appropriate to protect air quality (40 CFR 49.11). EPA may develop a FIP for the refinery which could include additional monitoring, testing, recordkeeping, and reporting for the refinery units as needed to ensure protection of air quality.

Comment 2: Comment stated that without enforceable air permit limits; the project proponent could use highly sulfurous crude inputs, which would greatly increase SO_2 emissions.

Response 2: EPA's initial determination that the proposed refinery will not need a PSD or Title V operating permit is based on the refinery feedstock being a synthetic crude oil from Canada that is low in sulfur. The commenter is correct that if the refinery were to process highly sulfurous crude, then the SO_2 emissions would greatly increase. However, if the project proponent decides to use a feedstock different than the low sulfur synthetic Canadian crude oil, then EPA's determination that the refinery

is not a "major source" would need to be revisited. EPA would have to reevaluate refinery emissions information based on the new feedstock. The use of highly sulfurous crude as a refinery feedstock would most likely trigger PSD permitting requirements for at least SO_2 emissions. As noted in Response 1 above, promulgation of NSPS subpart GGGa triggered the requirement for the refinery to apply for a federal operating permit within 12 months of commencing operation.

Comment 3: Comment questioned whether a statement on page 1-2 of the DEIS meant that EPA had incomplete information on the proposed refinery, because the statement was prefaced by saying "However, at this time EPA has determined that the facility does not require a CAA PSD permit for construction of a new major source . . ."

Response 3: The emissions information provided to EPA was not incomplete. EPA's determination that the proposed refinery does not need a Prevention of Significant Deterioration (PSD) construction permit was based on the most recent emissions information and projections submitted by the project proponent. The phrase "[H]owever, at this time" indicates that if potential emissions estimates increase or if actual emissions exceed the current emissions, EPA will, at that time, reevaluate the need for a PSD construction permit.

Comment 4: Comments expressed concern about possible emissions from the new refinery.

Response 4: DEIS Chapter 4, Human Health - Air Analysis Conclusions (pages 4-133 and 4-134) contains a discussion of potential air impacts from the proposed refinery and Mitigation of Impacts, beginning on page 4-135 in the DEIS and Section 4.16 in the FEIS. See also responses to comments in the Air and Human Health sections of this document.

Comment 5: Comment that there are no air permit conditions limiting emissions from heaters, boilers, flares, and devised the flares are purported to control (such as the wastewater system, loading operations, pressure relief devices, storage tanks, or some fugitive sources), nor for the Sulfur Recovery Unit, Emergency Generator, Fire Pumps, Storage Tanks, or Soybean Oil extrusion or refinery processes. Consequently, the emissions and controls above are effectively allowed to be unlimited. Additional comments regarding no permit conditions include: ensuring tank seals have no gaps, that there would be no tears or holes in seal fabric, that floating roof tanks rest on liquid surfaces, that approved emission control systems be gas tight or meet a specific control efficiency, that fittings and sampling or gauging wells have tight, engineered fittings, that pressure-vacuum valves be kept leak tight and inspected, that vapor pressure of materials in tanks be tested or that any conditions at all are set. Comment that without a permit, there are no limitations for the project such as those required in the San Francisco, California area for sulfur recovery plants, sour water strippers and other activities generating SO_x emissions, including requirements for measuring sulfur content in crude inputs, requirements for ground level monitors of deadly H_2S gas generated by such processes, limits on sulfur content in particular gas streams, etc.

Response 5: The proposed refinery will be subject to several Clean Air Act NSPS (40 CFR part 60) requirements, which will impose emission limits, fuel gas specifications, or design requirements and require testing, monitoring, recording keeping, and reporting for many units. Therefore, not all emissions will be unmonitored. Appendix A in the *Air Quality Technical Report* (May 2006) for the DEIS does list the refinery units that are subject to a NSPS requirement. This list has been updated in Appendix A (Table A-1) of the revised *Air Quality Technical Report* (December 2007) for the FEIS and Table A-2 has been added to listing the specific NSPS requirement for each applicable refinery unit.

Storage tanks with fixed roofs in combination with an internal floating roof will have to meet specific design requirements, such as primary and secondary seals, vents equipped with gaskets, openings

equipped with covers, etc. under NSPS, subpart Kb. Storage tanks with fixed roofs will be equipped with a closed vent system for capturing VOCs, with no detectable emissions greater than 500 ppm above background. The VOC emissions will be vented back to the processes and sometimes sent to the flare. Tanks will have to be inspected; and seals, gaskets, etc. repaired as needed.

To reduce fugitive VOC emissions, leakless valves will be used for valves in gas, light liquid, and heavy liquid service, double seals will be used for the pump seals, open ended valves will be plugged, the compressed seals will be recycled to the process units, and the sample connections will be enclosed. NSPS subpart GGGa, requires a leak detection and repair program for valves, flanges, pump seals, etc. for the refinery. Subpart GGGa defines a leak as 500 ppm or more for valves in gas/vapor service or light liquid service and as 2,000 ppm or more for pumps in light liquid service. Promulgation of NSPS subpart GGGa on November 16, 2007 triggered the requirement for the refinery to apply for a 40 CFR part 71 operating permit within 12 months of commencing operations.

NSPS, subpart QQQ also requires that the closed vent system and flare be operated at all times when emissions may be vented to units. The closed vent system is also subject to the leak detection and repair program. A leak is indicated by an instrument reading greater than 500 ppm above background. The flare must be designed and operated with no visible emissions.

Subpart Ja would require that the sulfur recovery unit meet a 99% sulfur removal efficiency, a hydrogen sulfide (H_2S) limit of less than 10 ppm determined on a 12-hour rolling average, and continuously monitor for compliance. Process heaters with a capacity greater than 20,000,000 Btu/hr would have to meet a NOx limit of 80 ppm on a 24-hour rolling average and continuously monitor for compliance. All process heaters and fuel gas combustion devices would have to comply with an SO_2 limit of 20 ppm on a 3-hour rolling average, an SO_2 limit of 8 ppm determined daily on a 365 successive day rolling average, and monitor continuously. The refinery combustion units will all have "Low NOx" burners. Finalization of NSPS subpart Ja will also trigger the requirement for the refinery to apply for a 40 CFR part 71 federal operating permit within 12 months of commencing operation.

The comment references San Francisco area regulations for sulfur recovery plants, etc. BAAQMD is the acronym for the Bay Area Air Quality Management District in California. EPA has approved various air quality regulations for the majority of state and/or local governments throughout the country. The state and local air quality regulations EPA has approved apply to the sources located in each respective state or local district. The BAAQMD regulations would not apply to the proposed refinery. Since the refinery is in Indian country, it is subject to federal air regulations, not state regulations.

Comment 6: Comment that the proposed refinery is not being required to meet regulatory limits that old refineries are meeting, let alone meeting BACT limits required for new sources.

Response 6: The proposed refinery will be required to meet limits for many units under the NSPS regulations as stated in Response 1 in this section, which will be much more stringent than "old refineries" are meeting. As stated in Response 2 in this section, the proposed refinery is not subject to BACT requirements because it is not subject to PSD permitting requirements.

Comment 7: Comment that without CAA permits requiring BACT and proper equipment maintenance, there is nothing within project requirements stopping refinery proponents from purchasing old equipment phased out from use at other refineries which could be old and rusted.

Response 7: For more information about project equipment see Comment 5 in section C.1.(c). Many of the refinery units will be required to meet NSPS requirements. Old and rusted equipment would not be able to meet these requirements, as the requirements are technology based or design requirements

(i.e. seal requirements for fixed or floating roof tanks). In addition, EPA's determination that the refinery will not need a PSD permit is based on the equipment proposed for the refining process. If different equipment is used than what was proposed (i.e. old heaters without low NO_x burners), then EPA's determination that no PSD air permit is required would be revisited. Refinery emissions would have to be reevaluated to determine if the potential emissions would exceed major source thresholds and thus trigger PSD permitting requirements.

Comment 8: Comments requested that the DEIS provide a more in depth, accurate analysis of the refinery emission projections, and list the technologies that the projections are based upon. Comments claimed that the DEIS underestimated all emissions from the proposed refinery and requested that all the potential polluting emission sources posed by the proposed refinery be reevaluated. Comments also stated there are inconsistencies in whether the refinery would include a fluidized catalytic cracking unit.

Response 8: The control equipment by unit is listed in Appendix A of the *Air Quality Technical Report* (May 2006). EPA has included in the Air Quality section of Chapter 4 in the FEIS a summary of the technologies proposed for the refinery to limit emissions and references to tables in the revised *Air Quality Technical Report* (December 2007) that show the air pollutant emissions from each refinery unit. {FEIS changes in Section 4.13.1.1}

The only emissions that were underestimated for the proposed refinery were VOC emissions due to equipment leaks. Fugitive VOC emissions have been calculated and are included in the revised *Air Quality Technical Report* (December 2007) and in the overall VOC emissions reported in the FEIS. {FEIS changes in Section 4.13}

The design for the proposed refinery does not include a fluidized catalytic cracking unit, which nearly all existing refineries utilize to process crude oils into gasoline, diesel, and other fuels. A fluidized catalytic cracking unit is one of the most significant sources of air pollutants at a refinery, because of regeneration of the catalyst. The proposed refinery is designed to use several Hydrocracker Units to accomplish the same refining as the fluidized catalytic cracking unit. Air emissions are much lower using the hydrocracking technology as compared to the fluidized catalytic cracking technology because regeneration of the catalysts are done off site.

Comment 9: Comment that the DEIS neglects to consider and calculate variability in the rate of air emissions and assumes the facility would operate perfectly, which paints an inaccurate picture and fails to take into account any resulting adverse environmental impacts.

Response 9: The air emissions listed in Table 4-14 of the DEIS represent the "potential to emit" of the proposed refinery based on the project proponent's proposed equipment and feedstocks. "Potential to emit" is defined in the PSD regulations (40 CFR 52.21(b) as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. This maximum capacity is based on a source operating for 24 hours per day, 365 days per year. Maximum environmental impacts were accounted for based on maximum or potential emissions.

Comment 10: Comment stated that the DEIS has no basis for implying that because of the relatively smaller feedstock capacity of the refinery, that the emissions would be lower.

Response 10: The feedstock capacity of a refinery is related to the amount of air pollution that will be emitted from the refinery. The smaller amount of feedstock into a refinery the lower the emissions out of the refinery. The amount of feedstock (synthetic crude oil) that is processed in the Crude Processing Unit determines the amount of heavy hydrocarbons and light hydrocarbons that are sent on as feed streams to other refinery units for processing into the final products of diesel fuel, gasoline,

propane, etc. However, there are sources of emissions from a refinery not related to the feedstock capacity. One example would be the type of fuel burned in the boilers, heaters, etc. If natural gas or fuel gas were burned, then air emissions for several pollutants would be lower than if fuel oil was burned.

Comment 11: Comments stated that since the composition of hydrocarbons and impurities of crude oil can vary substantially (as detailed in the *Air Quality Technical Report*), this can lead to uncertainty and variability in estimating annual emissions.

Response 11: The intent of the discussion about the variability in the composition of hydrocarbons and impurities of crude oil in the *Air Quality Technical Report* (May 2006, page 3-2) was to clarify that the equipment and operations of a refinery are designed and operated to process specific crude oils and produce specific products. Therefore, no two refineries are operated exactly the same because of the different compositions of crude oil used as feedstocks. The proposed refinery was designed to process the synthetic crude oil from Canada. The composition of the synthetic crude was accounted for in calculating potential annual air emissions for the refinery.

Comment 12: Several comments stated there is a lack of emissions data for startup, shutdown, and equipment malfunctions at the proposed refinery in the DEIS; that PSD regulations require that these emissions be included in the total project emissions and this data should be included in the DEIS. Comments stated when processing units are shutdown in smaller refineries with no redundant equipment, either unexpectedly or as planned, there may be nowhere to route excess gases, causing increased air pollution during refinery equipment shutdown, which occurs frequently at refineries. Comment requested that the EIS include an assessment of the average frequency of shutdowns, startups, maintenance and malfunctions at oil refineries, based on actual data from facilities around the country.

Response 12: As described in Chapter 2 of the DEIS, the proposed refinery would have a detailed maintenance plan in place for commencement of operation. The plan would include defining the requirements for equipment inspections, shutdowns, and startups. Scheduled turnarounds (shutdowns and startups) for individual process units would occur approximately every three to five years to allow for cleaning out accumulated undesirable residues, replacing catalysts, replacing absorbents, conducting repairs, etc. The plan would include a shutdown of a portion of the plant each year on a rotational basis utilizing tankage to store intermediate products, so there would not be a total outage for any of the individual units every year and flaring of emissions would be minimized. Unscheduled shutdowns result from upset plant conditions usually related to power failure, loss of cooling water, or a fire. To minimize unscheduled shutdowns and startups and associated flaring emissions, the refinery design includes two independent sources of supply to mitigate the risk of power failure, an Emergency Generator, and a UPS (Uninterruptible Power Supply) for critical equipment. In addition, the proposed refinery does not have a Cooling Tower and the process units have liberal spacing for isolation and segregation in the event of a fire.

As detailed in the *Air Quality Technical Report* (May 2006) on page 4-1, normal operation for the flare was designed for a loading rate of 15 lbs/hour (65.7 tons/year). However, to account for potential process upsets and startup/shutdown activities that could increase emissions releases a loading rate of 500 lbs/hour (2,190 tons/year) was used to calculate potential air emissions from the flare. The loading rate of 500 lbs/hour is over 30 times the normal operation loading rate of 15 lbs/hour. The potential flare emissions were also calculated based on operating the flare 24 hours a day, 365 days a year [See Flare Example NO_x calculation in Appendix C of the *Air Quality Technical Report* (May 2006)]. Therefore, potential emissions from startups, shutdowns and equipment malfunctions, were conservatively estimated for the proposed refinery.

The Air section in Chapter 4 of the FEIS includes a discussion and table of actual emissions from upsets (including malfunctions, startups, shutdowns and maintenance) from several large refineries operating in Texas and Louisiana.

Comment 13: Comments stated that fugitive VOC emissions were not accounted for in the emissions calculations. The comments stated the *Air Quality Technical Report* referenced information in the EPA document Protocol for Equipment Leak Emissions Estimates (U.S. EPA, 1995) in which various listed control measures should provide 100 percent control of fugitive VOC emissions. Comments stated that 100 percent control of fugitive emissions was unrealistic and that even subparts GGG and QQQ of 40 CFR 60 allow leakage rates of VOCs of 500 to 10,000 parts per million (ppm) above background levels. Comments requested that fugitive VOC emissions from all potential sources be estimated using a more realistic approach.

Response 13: Fugitive VOC emissions have been calculated and are now included in the revised *Air Quality Technical Report* (December 2007) and in the overall VOC emissions reported in the FEIS. {FEIS changes in Section 4.13.1.6}

Comment 14: Comments stated the DEIS incorrectly assumes that fugitive air emissions would be zero and were concerned that fugitive emissions were not calculated in the *Air Quality Technical Report* for other pollutants, such as NO_x, CO, SO_2, PM_{10} and $PM_{2.5}$.

Response 14: Fugitive particulate matter (PM_{10} and $PM_{2.5}$) emissions for a refinery would be primarily generated by truck traffic. Fugitive emissions for PM_{10}/ $PM_{2.5}$ were calculated for the proposed refinery and included in the total potential PM_{10} and $PM_{2.5}$ annual emissions. [See Appendix C of the May 2006 *Air Quality Technical Report* for calculations and 4-6 for discussion.] The only other fugitive air emissions from a refinery would be VOCs that would leak from valves, flanges, and other operating equipment. A refinery does not emit fugitive emissions of NO_x, CO, or SO_2 as evidenced by the lack of emission factors for NO_x, CO, and SO_2 fugitives in AP-42. (See, EPA publication Compilation of Air Pollution Emission Factors, Vol. I: Stationary Point and Area Sources).

Comment 15: Comment stated that the flare emissions were grossly underestimated and the proposed refinery flare system is designed for routine/daily flaring, which would cause the SO_2 and VOC emissions to be in the hundreds of tons per year.

Response 15: As detailed in the *Air Quality Technical Report* (May 2006) on page 4-1, normal operation for the flare was designed for a loading rate of 15 pounds/hour (65.7 tons/year). However, to account for potential process upsets and other activities that could increase emissions releases, a loading rate of 500 pounds/hour (2,190 tons/year) was used to calculate potential air emissions from the flare. Potential flare emissions were calculated based on operating the flare 24 hours a day, 365 days a year [See Flare Example NO_x calculation in Appendix C of the *Air Quality Technical Report* (May 2006).] Therefore, calculated potential flare emissions were conservatively estimated for the proposed refinery.

Comment 16: Comment that the DEIS fails to identify the methods and equipment discussed by EPA such as flaring prevention investigations and methods, sufficient sulfur gas treatment capacity to meet the 230 mg/dscm hydrogen sulfide limit within the flare (which limits SOx emissions from the flare) and other NSPS requirements for flares. Additional comments that the DEIS must be corrected to reflect large emissions from flaring currently designed into the proposed refinery, require an air permit for large emissions from flaring, require that BACT and NSPS standards be applied to flares, including sufficient compressor and treatment capacity to prevent routing flaring, with sufficient monitoring.

Response 16: Appendix A of the *Air Quality Technical Report* (May 2006) listed the refinery flare as not subject to NSPS. This determination was incorrect. The flare for the proposed refinery will be subject to NSPS, subparts A and Ja. The *Air Quality Technical Report* (December 2007) has been revised and now includes the specific NSPS requirements for the flare, as well as, the other refinery units.

Comment 17: Comment that the emissions from the storage tanks were underestimated, because an inspection program for tank seals and vents was not required and evaporation of VOCs caused by tank cleaning was also omitted.

Response 17: Most of the storage tanks will have to meet specific design requirements or have a closed vent system for recovering volatile organic compounds under NSPS, subpart Kb. These tanks will have to be inspected and seals repaired as needed. Leak detection and repair for valves, flanges, pump seals, etc. is a requirement for the proposed refinery under NSPS, subpart GGGa.

As stated on page 2-56 of the DEIS, it was estimated that tank cleanings would be required every 6-9 years. Emissions of VOCs from degassing and cleaning of tanks are minimal (i.e., less than 1.0 tons per tank cleaning event for all tanks combined).

Comment 18: Comment stated that releases from refinery accidents and malfunctions can be huge, can dwarf emissions from regular operations and must be assessed in the EIS.

Response 18: Refinery accidents and major malfunctions are rare events. There is a potential for ruptures, fires, etc., at the proposed refinery just like any industrial facility. As noted on page 2-50 of the DEIS, the operation of equipment and the various processes would be closely monitored with an extensive, computerized plant information network to provide early warnings of developing problems, such as a unit failure. This system will help prevent accidents and malfunctions and minimize emissions. A leak detection and repair program is required under NSPS for the proposed refinery, to minimize and eliminate leaks. In addition, as described in the DEIS (page 2-51), the refinery will be required to prepare several types of emergency response plans and prepare for spills. These plans will require planning, coordination, facility design, and training that will need to be implemented at the proposed refinery to address emergency situations, such as spills, leaks, and in the rare event a fire or explosion. [See Response 1 under section E. Emergencies, Spills and Safety of this Response to Comments document for more specifics on the required plans and FEIS Table "Selected Environmental Permits, Plans and Mitigation Measures."

Comment 19: Comments stated additional emissions would result from expansion of the refinery and asked how these additional emissions would be handled by the air permit. One commenter requested that the EIS be amended to include a re-evaluation of air emissions in light of the maximum capacity of the refinery and then reissued as draft. If this is not done, the commenter stated that the capacity of the refinery should be limited to the permitted capacity. Comment asked if refinery expands in the future and increases emissions, what permits will be required.

Response 19: The need for a PSD was evaluated by EPA based on the maximum proposed capacity of the refinery and the potential emissions based on this capacity. Therefore, a re-evaluation of all air emissions is not necessary (some additional VOC emissions were calculated as discussed above). If the project proponent proposes to expand the refinery, then EPA's determination that no "major source" PSD air permit is needed would be revisited. The project proponent would have to resubmit a new air analysis (emissions and air quality impact) for EPA's evaluation and determination of applicability of a PSD permit.

Comment 20: Comment asked what facilities are using this same state-of-the-art technology. DEIS refers to the Turbo refinery but it was shut down in 1992. Since the DEIS compares this refinery to the Turbo refinery, is there any data about the actual emissions from Turbo?

Response 20: The FEIS has been revised to reflect closure of the Turbo refinery. Emissions data from the Turbo refinery were not used to calculate potential or maximum emissions from the proposed refinery. Potential emissions from the proposed refinery were calculated using manufacturer's data and EPA's publication Compilation of Air Pollution Emission Factors, Volume I: Stationary Point and Area Sources, (commonly known as "AP-42"). The design of the proposed refinery will be comparable to other refineries that are retrofitted to refine the synthetic crude or other refineries that have added on units to refine the synthetic crude.

D.8.(d). Air Quality Monitoring

Comment 1: Comments expressed concern about the location of the White Shield ambient air monitoring station, stated the monitoring stations are not in the correct locations to provide accurate data for facility emissions given that the prevailing winds blow away from MHA Nation air monitoring stations, and questioned the integrity of the ambient air quality data being monitored and retrieved by the environmental staff from the Three Affiliated Tribes from the Tribal air monitoring stations.

Response 1: The intent of siting Ambient Air monitoring stations is not to characterize individual sources of pollutants, but rather to get a general idea of the concentrations of pollutants for a representative parcel of air surrounding the placed monitor. For purposes of determining existing air quality for the project area, it is appropriate to rely on both the White Shield and Beulah monitors because they provide a conservative assessment of existing ambient conditions for the project area. While prevailing winds will generally not transport facility emissions directly toward the White Shield and Beulah monitors, winds from the appropriate transport direction (north) are not unusual in western North Dakota. In addition, EPA provided comments to the MHA Nation Environmental Division on September 11, 2006 concerning the current location of the White Shield monitor and the parameters being monitored. EPA's comments suggested that the monitor be moved to a new location to better characterize the ambient air in populated areas, one being near the Town of White Shield. Additional changes to the monitoring network that EPA suggested are the re-siting of the Dragswolf monitor to better characterize the air in New Town, changing the pollutant parameters being monitored at both sites (shut down PM_{10}, and the commencement of $PM_{2.5}$ monitoring), adding monitoring near the proposed refinery location (near Makoti), and the addition of one more monitoring station near the town of Twin Buttes. The Tribes' Environmental Division is currently in the process of locating and commencing operation of a monitoring station near the proposed refinery site to monitor for SO_2, NO_2, and $PM_{2.5}$.

EPA Region 8 has annually granted the MHA Nation a Clean Air Act §105 grant for monitoring and other air program activities. Stipulations within the MHA Nation workplan require Quality Assurance and oversight of the MHA Nation monitoring network, and adherence to EPA monitoring requirements and guidelines. Within these guidelines are certain measures which ensure the validity and integrity of the data gathered by MHA Nation such as comparing monitoring methods to reference standards, and having external audits of monitoring equipment conducted by independent organizations (contracted and EPA). EPA Region 8 also conducts audits on all of its air monitoring grantees every 3 years to meet a requirement of the Code of Federal Regulations (40 CFR Part 58 Appendix A). Based on EPA's monitoring data requirements, there is no compelling reason to distrust the data that have historically been gathered at MHA Nation monitoring locations.

Comment 2: Comments stated concerns of inadequate information on air emission controls and/or monitoring. Comment that inspection and maintenance programs are essential for ensuring that fugitive source emissions are minimized, and are not discussed in the DEIS.

Response 2: Appendix A of the *Air Quality Technical Report* (May 2006) lists the emission controls for each proposed refinery unit. As stated in several responses in Section D.8(c) of this Response to Comments document, the proposed refinery will be subject to several NSPS (40 CFR part 60) requirements, which will impose emission limits, fuel gas specifications, or design requirements and require testing, monitoring, recording keeping, and reporting for many units. Tanks will have to be inspected and seals repaired as needed. Leak detection and repair for valves, flanges, pump seals, etc. is a requirement for the proposed refinery under NSPS, subpart GGGa. The fuel gas burned will have to be monitored for sulfur dioxide content.

The *Air Quality Technical Report* (December 2007) has been revised and now includes the specific NSPS requirements for each applicable refinery unit. The Air section in Chapter 4 of the FEIS has been revised and summarizes emission controls and the applicable NSPS requirements. {FEIS changes in Section 4.13.1.1}

Comment 3: Comment asked how the refinery will monitor hydrogen sulfide gas.

Response 3: The refinery will monitor for hydrogen sulfide (H_2S) from the sulfur recovery plant under NSPS subpart Ja through the use of a continuous monitor. The sulfur recovery plant must not discharge any gases containing H_2S in excess of 10 parts per million by volume (ppmv) determined hourly on a 12-hour rolling average. The refinery will also monitor indirectly for hydrogen sulfide by monitoring continuously for sulfur dioxide (SO_2) from the refinery combustion units. NSPS subpart Ja requires that the fuel gas burned in the refinery combustion units (i.e. crude heater, reformer heaters, boilers, hydrocrackers, flare, etc.) meet a SO_2 limit of 20 ppmv on a 3-hour rolling average and a limit of 8 ppmv determined daily on a 365 successive day rolling average.

Comment 4: Comment stated the Tribes are proposing to establish an air monitoring station near Makoti to obtain PSD data and baseline data, before the start up of the refinery.

Response 4: In 2007, EPA worked with the MHA Nation Environmental Division on revisions to their Annual Network Review, which is a review of the Tribes' current monitoring network to determine if monitoring needs for the Reservation are being met. As detailed in Response 1 in this section, one of EPA's initial comments on the Annual Network Review suggested siting an air monitoring station near Makoti and the proposed refinery location prior to construction of the refinery. This monitoring station would be used to monitor for compliance with the National Ambient Air Quality Standards (NAAQS) and for determining preconstruction ambient pollutant concentrations (baseline data). EPA will not require the project proponent to conduct PSD monitoring prior to construction, since the proposed refinery does not require a PSD permit.

Comment 5: Comment asked how many real time air pollution monitoring systems the refinery will install to monitor on a real time, instantaneous basis, the air emissions from all process units and stacks.

Response 5: NSPS, subpart Ja requires that the fuel gas burned in the refinery combustion units (i.e. crude heater, reformer heaters, boilers, hydrocrackers, flare, etc.) meet an SO_2 limit of 20 ppmv on a 3-hour rolling average and a limit of 8 ppmv determined daily on a 365 successive day rolling average. Compliance with these limits must be determined using a continuous monitoring system. NO_x emissions from the process heaters will require continuous monitoring, as well as, H_2S emissions from the sulfur recovery plant.

Comment 6: Comment asked if the refinery's flares and pollution rates will be monitored, if so, by what means, what the expected combustion efficiency rate or percentage is, and whether flare gases vented into each flare will be continuously monitored and by whom.

Response 6: The proposed refinery is designed with only one flare. The flare systems operations are described in Section 2 of the EIS as described in Response 5 above, subpart Ja requires that the fuel gas burned in the flare not exceed an SO_2 limit of 20 ppmv on a 3-hour rolling average and a limit of 8 ppmv determined daily on a 365 successive day rolling average. Compliance with this concentration limit will be continuously monitored.

The proposed refinery's VOC emissions will be controlled with both a vapor recovery system and a flare. Under NSPS, subpart QQQ the vapor recovery system must meet an efficiency of at least 95 percent. The general provisions of the NSPS, subpart A (40 CFR 60.18) and subpart QQQ require that the flare be designed and operated: 1) with no visible emissions, except for periods not to exceed a total of 5 minutes during any two consecutive hours; 2) with a flame present at all times; and 3) to meet a specific exit velocity, depending on the flare type. The presence of a flame shall be monitored using a thermocouple, visible emissions shall be monitored with opacity readings done by a certified observer, and the exit velocity will be calculated using the measured volumetric flowrate and the area of the flare tip. Performance tests and data for the flare must be submitted to EPA for review.

D.8.(e). Climate Change

Comment 1 - Refinery Greenhouse Gas Emissions: Several comments expressed concern that emissions from the refinery would contribute to climate change.

Response 1: In response to comments on the DEIS, EPA has collected additional information regarding estimated emissions of greenhouse gases from the refinery and the potential for those emissions to contribute to climate change. This information is available in Section 4.13 of the FEIS.

Comment 2: One comment stated that carbon dioxide emissions from the proposed refinery could exceed limits set by the North Dakota Health Department.

Response 2: The State of North Dakota has not set any limits on carbon dioxide emissions.

Comment 3: Several comments expressed concern that the DEIS did not address the contribution of the proposed refinery to the cumulative impacts of greenhouse gas emissions globally and locally.

Response 3: In response to comments on the DEIS, the Agencies have collected additional information regarding the contribution of the proposed refinery to the cumulative effects of greenhouse gas emissions. This information is available in Section 4.13 of the FEIS.

Comment 4: Several comments objecting to the proposed refinery stated that climate change and global warming have a severe and disproportionate effect on indigenous peoples, including American Indians and Alaska Natives. One commenter noted that unpredictable weather patterns within the homelands of the MHA Nation have created drought conditions, crop and livestock loss, creating economic hardships.

Response 4: While it is possible that indigenous and local communities could bear a greater portion of the impacts from global climate change because of their close association with their traditional lands and water, attempting to make linkages of specific climatological changes or other environmental effects to a single emissions source is not useful because such linkages are difficult to isolate and understand. Information included in Section 4.13 of the FEIS addresses the magnitude of

the proposed refinery's greenhouse gas (GHG) emissions compared with other emission sources, the proposed refinery's GHG emissions in the context of total GHG emissions at a national and global scale, and the impacts of climate change generally.

Comment 5 : One comment stated the emissions of greenhouse gases within the United States was the subject of international court action related to the United State's obligations pursuant to international environmental and human rights laws. The comment further stated that these obligations were not consistent with development of the proposed refinery because global climate change would be exacerbated by emissions from the refinery.

Response 5: Regarding the commenter's statement that the United States is in violation of international human rights law as set forth in the Inuit Circumpolar Commission's petition brought before the Inter-American Commission on Human Rights, having reviewed the petition, the Commission, in January 2007, determined it to be "inadmissible". This means that the Commission considered that the petition filed against the United States failed to meet the basic requirements for a human rights case to be considered in the Inter-American human rights system.

Any related international law assertions with regard to this proposed project are beyond the purview of this NEPA analysis. The Final EIS appropriately analyzes and describes the proposed refinery project's potential environmental impacts. Section 4.13 of the Final EIS estimates the GHG emissions from the proposed refinery, evaluates the proposed refinery's greenhouse gas emissions in the context of total annual U.S. and global CO2-equivalent emissions, provides information on the magnitude of the refinery's greenhouse gas emissions as compared to other emission sources, and describes the impacts of climate change generally, including impacts within the United States.

Comment 6: Several comments expressed concern about the potential for global climate change to adversely impact the State of North Dakota, including temperature increases, water shortages and drought.

Response 6: A complete analysis of the impacts of global climate change on North Dakota is beyond the scope of this EIS. The amount of greenhouse gas emissions relative to this project has been discussed in Section 4.13 of the FEIS.

D.9. SOCIOECONOMICS

Comment 1: Several comments expressed concern about the Tribes' financial status and past Tribal enterprises, including comments expressing concern for the financing of the construction and operation of the refinery when the Tribes are experiencing financial difficulties presently and concern with paying land taxes and inability to get land back for economic development as a Tribal member.

Response 1: 25 CFR Part 151 does not require BIA to conduct an analysis of the Tribes' financial status for acquisitions of land in trust that are on-reservation. It is possible that the Tribes may enter into business lease arrangements under which the BIA might review certain aspects of the Tribes' financial status.

Comment 2: Several comments expressed concern about the economic viability of the project and wondered why it would go forward when it is not cost-effective. Comment questions how this small refinery could compete with the current market and be a viable economic investment.

Response 2: The economic viability for the project is not part of the Federal Agency decision making process. The BIA reviews business plans for economic benefits associated with the proposed business

purpose for Off-Reservation acquisitions or business lease agreements. This is part of the well established Federal policy of respect for tribal self government.

Comment 3: Comments stated that the Tribes intend to sell the refinery to investors instead of owning and operating the facility as proposed.

Response 3: The Federal Agencies have not received any indication from the Tribes that the project will not be owned and operated by them. The EIS analysis assumes that the Tribes will be owner and operator of the facility.

If there is to be an outside investor for the operation of the refinery on land held in trust status, a business lease pursuant to 25 CFR Part 162 will be required. Additional compliance with NEPA and other Federal regulations will be required prior to the BIA's action on a business lease.

Comment 4: Various comments were made about the economic benefits of the proposed refinery and how the refinery supports Tribal sovereignty and the Reservation economy. Several comments asked about the use of profits from the refinery, including whether Tribal members would receive dividends from the project and concern that the Tribes would only make a small fraction of the income made by the refinery.

Response 4: These comments have been referred to the Tribes for consideration as the issues are not part of the Federal Agency decision making process.

Comment 5: Several comments concerned employment of Tribal members at the facility stating a variety of concerns, including: the numbers of jobs that will be available at the refinery, the refinery will only create technical jobs, past projects promised employment to Native Americans but never came through, lack of technical jobs in the area so Tribal members need to go to other states, the need for employment to combat illness and health complications, only employment available is at the casino which has health hazards, as well as statements that surrounding area power plants and coal mines pay the same as the refinery and there is no need for the additional job opportunities the refinery may bring, newly unemployed people could find employment at the refinery, the project could have a positive impact on the Reservation economy and increase Reservation jobs so members will not have to move off the Reservation to find work.

Response 5: Please refer to the DEIS, page 4-111, Economy and Employment. According to the DEIS (page 4-111), the majority of the construction and operation workforce would be local hires. The labor pool is anticipated to be hired through the MHA Nation and through private contractors. The MHA Nation has a set hiring practice in accordance with the Tribal Employment Rights Office (TERO). Therefore, qualified Tribal members will have a hiring preference.

The statements on employment opportunities or lack thereof have been noted.

Comment 6: Several comments discussed local oil usage and mineral revenues for landowners.

Response 6: The project as presented to the Federal Agencies by the Tribes is to use synthetic crude oil from Alberta Canada. The facility is designed to process synthetic crude oil only. It is not designed to process local crude oils which would require additional desalting and other refining outside the capacity of this facility. Therefore, there would be no benefits for mineral owners.

Comment 7: Comments stated concern about a decrease in property values around the refinery, asked whether there would be negotiated buyouts or other compensation if property values decrease, and stated that property value impacts are not discussed in EIS.

Response 7: The construction and operation of the refinery is not anticipated to cause changes in adjacent agricultural land values. Changes in residential land values may occur from employees moving closer to the refinery instead of commuting 60 miles or more. However, this is entirely speculative as an analysis of the potential work force conducted as part of the feasibility for the project indicated that most individuals were willing to commute 60 miles to their workplace. In fact, many Tribal employees currently commute more than 60 miles to work in New Town, ND.

Comment 8: Comments expressed concern regarding increased demand on surrounding infrastructure including roads, water, health services, fire protection, and ambulance services, including the increased costs of covering these services.

Response 8: During construction and operation of the refinery, there is the potential to affect community facilities and infrastructure. There will be increased road use and demands on emergency services. The Agencies are unaware of any plans to improve or pay for improvements of roads between Makoti and the refinery or other surrounding communities. There will be a new turnout on Highway 23 into the refinery.

Fire protection, emergency health care services, ambulance service, and site security would be provided by the refinery as construction begins and operations continue. The details of fire and other emergency services will be developed as the emergency response plans are developed. The refinery will have its own fire response team and equipment on site. Emergency planning will need to be coordinated with other emergency services in the surrounding areas in accordance with Local Emergency Response Planning.

Comment 9: Comments discussed the adequacy of consideration given to cumulative impacts, including an increase in environmental impacts as the refinery ages and stating that there is a conflict between noting that no other projects are planned in the area yet the refinery will stimulate local development.

Response 9: The environmental impacts from the facility projected throughout the life of the refinery have been analyzed under the direct and indirect impacts sections for each resource in the EIS. For example see the information in Chapter 4 regarding Ground Water, Spills and potential impacts during reclamation and closure of the refinery in the Solid and Hazardous Waste Section.

The cumulative impacts analyses included existing activities and reasonably foreseeable development in the area which could affect the same resources as the refinery. For most resources, the majority of impacts were from historic and existing agricultural activities. The cumulative impacts analysis anticipated that the area surrounding the refinery would continue to be used for agriculture. See the cumulative impacts discussion in Chapter 4 in the Land Use and other sections. The minor development that could occur in order to provide services to the refinery or refinery workers is not anticipated to be significant (e.g. small in scale and likely to occur in the surrounding small towns which have unused capacity). Transportation (an increase in traffic) is the main resource that would be affected by growth induced by the refinery (indirect impact). For more information about the cumulative impacts of specific resources, please see that section in the response to comments. For example the air cumulative effects comments are discussed in section E.8(b) of this Response to Comments.

Comment 10: Comment stated concern that if the land becomes contaminated, relocation is not an option for Tribal members who are not welcome off the Reservation.

Response 10: Adverse impacts to properties or residences immediately adjacent to the project site are not anticipated. The existing farm house on the refinery site would not be suitable for habitation while

the refinery is operating. There are no other residences in the immediate area. The closest home, other than the existing farm house, is about 500 yards from the edge of the site. It is not anticipated that any of the residences within the 1-mile radius would become contaminated.

Comment 11: Comment asked if there are any grants available from the Tribes or whether the refinery will qualify for State funds from North Dakota to support the Town of Makoti's water, roads and other infrastructure needs.

Response 11: The MHA Nation does not anticipate having funds available to help pay for infrastructure improvement projects in the surrounding communities. The State of North Dakota, Energy Development Impact Office does have some funding available to local governments to cope with increased populations and infrastructure needs associated with energy projects. We do not know if Makoti and other communities would qualify for state funding. More information is available on the internet at: http://www.land.state.nd.us/.

D.10. ENVIRONMENTAL JUSTICE

Comment 1: Several comments expressed concerned about putting the refinery in an EJ community.

Response 1: EPA evaluated the potential for adverse human health or environmental effects on communities with EJ indicators surrounding the reservation as part of the NEPA process. EPA concluded that there would be no disproportionately high and adverse effects on these communities. These results are described in the Environmental Justice Tier One Analysis, which is appended to the FEIS.

Comment 2: Comments stated that the DEIS is not in compliance with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." (EO 12898)

Response 2: The purpose of EO 12898 is to define the approaches by which EPA will ensure that disproportionately high and adverse human health or environmental effects to minority communities and low-income communities are identified and addressed. The EJ analysis in the EIS evaluates whether there are any disproportionately high and adverse human health or environmental effects on any communities, including minority and low-income communities. It is EPA's policy that no group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Both the Draft and Final EISs have analyzed potential impacts to human health (pages 4-116 through 4-138 DEIS and Section 4.16 FEIS), economic and social effects of this action, including the effects on minority and low-income populations (pages 4-110 through 4-116 in the DEIS and Sections 4.14 and 4.15 in the FEIS). Further, as part of its NPDES permitting process, EPA prepared an Environmental Justice Tier 1 Analysis which evaluated existing data for indicators of Environmental Justice concerns.

In response to comments on the DEIS, the Environmental Justice analysis was revised to include an expanded geographic area and improve data availability in the area surrounding the refinery. See section 4.15 of the FEIS. The Environmental Justice Tier 1 Analysis for the NPDES permit has also been revised (December 21, 2007) and is available as a technical report. Some modifications have been made in the FEIS to section 4.14 – Socioeconomics. Additional human health analysis has also been prepared evaluating the availability of existing health information for the MHA Nation and potential food chain impacts. The revised information is available in Section 4.16 of the FEIS,

Appendix D and the technical report - *Qualitative and Quantitative Human Health Risk Assessment: TAT Refinery EIS*, December 2007.

Comment 3: Several comments stated that the Environmental Justice analysis failed to adequately address health and environmental impacts.

Response 3: As part of the NEPA process, the Agencies analyzed potential impacts to human health in the Health and Safety section starting on page 4-116 of the DEIS. Since the DEIS was issued, EPA collected additional health information, and that information has been incorporated into the FEIS, Appendix D and the technical report - *Qualitative and Quantitative Human Health Risk Assessment: TAT Refinery EIS*, December 2007. {FEIS changes in Section 4.16}

Comment 4: Several comments asked how EPA developed the 10-mile "affected area" for analyzing Environmental Justice impacts and expressed concern that this area was not large enough to adequately represent the potentially impacted area. It was suggested that the EJ analysis should consider at least an area that is within a 60-mile radius from the project site, or more accurately, the entire radius considered within EPA's own risk assessment guidelines. A comment noted the fact that existing air monitoring is done 15 to 40 miles from pollution sources.

Response 4: Determination of the "affected area" for purposes of environmental justice assessments is made on a case-by-case basis after assessing the potential impacts of a project. In determining the affected area for the proposed refinery, EPA's evaluation included the potential extent of impacts to air, water and the surrounding community. EPA reviewed the air dispersion modeling results for the project and compared these results to the National Ambient Air Quality Standards (NAAQS). The NAAQS are health-based standards, set at a level sufficient to protect public health with an adequate margin of safety. As discussed in the air impacts section of the EIS and the accompanying air quality technical report, the predicted air quality impacts from the proposed refinery would occur within a one-mile radius of the refinery site and that air quality impacts would diminish rapidly with distance from the refinery site. The air quality impact modeling fully complied with EPA's guidance for conducting these types of analyses. The NPDES permit limits require discharges from the proposed refinery to be protective of aquatic life, drinking water, agriculture and wildlife uses at the point of discharge which is within the refinery site. Thus, no increased area beyond the one-mile radius was needed to evaluate these impacts from air emissions and wastewater discharges. Regarding socioeconomic impacts, the nearest communities to the refinery site would be Makoti, located two miles east of the site, and Plaza, located four miles northwest of the site.

As discussed above in Response 2 of this section, the environmental justice analysis has been revised, expanding the geographic scope of the analysis. The analysis now includes data from the four zip code areas which surround the refinery. The switch from a simple 10-mile radius to an area defined by surrounding zip codes improved the availability of census data and improved the analysis for communities in the vicinity of the proposed refinery site.

Using EPA's criteria for evaluating environmental justice concerns, the Agencies concluded that there would be no disproportionately high and adverse effects on the communities within 10 miles of the proposed refinery and the four zip code areas surrounding the refinery. By ensuring that there would be no disproportionately high and adverse effects on communities that are located near the proposed refinery, the Agencies have also ensured that communities located further away from the proposed refinery would not be subjected to any disparate adverse impact from the refinery.

Comment 5: Several comments expressed concern that refinery emissions, either individually or in combination with existing sources of air pollution, will increase the amount of pollution within a 30-

mile radius of the proposed refinery, causing an increase in disproportionate effects of toxics (immediate and bio-accumulative) to the community.

Response 5: The *Air Quality Technical Reports* (May 2006 and December 2007) and EIS provide the results of air modeling to assess the potential adverse health effects of criteria pollutant emissions and hazardous air pollutants. The air modeling input parameters consider not only potential refinery emissions, but also ambient air monitoring data, long-term exposures, and potential chronic adverse health effects of these pollutants. The results indicate that refinery emissions would have no significant adverse impacts on the health of local area communities. See also responses under sections D.8, Air Quality, and E.2., Cumulative Air Impacts for more information. The FEIS Air Quality analysis, Section 4.13 and *Air Quality Technical Report* (December 2007) have been rewritten to include recent and future regulatory changes and address comments on the DEIS. Refinery emissions are expected to have no measurable adverse impacts on the health of local residents.

Comment 6: A few comments were concerned that the EJ analysis did not address the possibility of disproportionate impacts on Tribal members resulting from their consumption of fish, buffalo meat, wildlife and plants.

Response 6: The two primary exposure pathways from refinery operations are from air emissions and effluent discharges. As stated in the Air Quality Analysis and Human Health sections of the EIS, no measurable adverse human health effects from refinery air emissions are anticipated. Table 4-21 in the DEIS shows the results of a comparison of estimated ambient concentrations of hazardous air pollutants (HAPs) resulting from refinery emissions with National Ambient Air Quality Standards (NAAQS). This comparison showed that HAP concentrations from the proposed refinery would be 18 to 40 times below EPA's health-based levels. As a result, adverse health effects due to inhalation of HAPs from the refinery by human receptors are not expected. To more completely document the consideration of other exposure pathways, EPA has added text to Chapter 4 of the FEIS. The additional text provides a qualitative comparison of modeled emitted concentrations of contaminants from the proposed refinery with actual emitted concentrations of similar contaminants from existing refineries that are processing synthetic crude or the precursor material to synthetic crude, bitumen, or a combination of these feedstocks. These refineries include: Petro-Canada, Scotford, Heartland, and North West refineries located in Alberta, Canada. Canadian environmental studies conducted for these refineries included an evaluation of the effects of air emissions on the surrounding environment. Bioaccumulative effects of the potentially emitted HAPs, as well as other contaminants that may adversely effect the environment, such as benzene, polycyclic aromatic hydrocarbons (PAH), and formaldehyde, were considered to be insignificant for each of the refineries, which are many times larger than the proposed refinery. Finally, EPA conducted a quantitative analysis of refinery emissions, which included an evaluation of toxic air emissions potentially entering the food chain through various pathways including bison, wildlife and plants. The results of this analysis indicate that there would be no adverse impacts to humans consuming these foods grown or raised in proximity to the refinery.

The NPDES permit would require that wastewater discharges from the proposed refinery are protective of multiple uses including: aquatic life, drinking water, agriculture and wildlife uses. The discharge limits take into account indirect pathways of exposure, such as humans eating fish, cattle or bison and wildlife eating fish or other wildlife. The Agencies expect no direct impacts to fish as a result of refinery construction and operations, given that no fisheries are located in proximity to the proposed refinery site. The State of North Dakota Historical Preservation Office and the MHA Nation Cultural Preservation Office have indicated that there are no known historical or cultural resources at the site. The MHA Nation Tribal Government has further indicated that there are no cultural or ceremonial uses of the proposed refinery site and that no hunting of wildlife or gathering of plants occurs there. Text has been added to Chapter 4 of the FEIS to evaluate and discuss the potential for bioaccumulation and uptake of refinery emissions and discharges through the food chain. See also the

responses to comments regarding impacts to wildlife and human health in section D. {FEIS changes in Section 4.16.1.2}

Comment 7: A few comments expressed concern that the DEIS did not address potential impacts to traditional Indigenous lands or communities of the Cree and Dene in Canada.

Response 7: The DEIS identified and analyzed the reasonably foreseeable impacts associated with the proposed project. Development of the tar sands in Canada is not anticipated to expand as a result of this project, which is designed to use 10,000 barrels per day of synthetic crude. According to the Government of Alberta's web site, Alberta exported about 1.34 million barrels per day (mbpd) of crude oil to the U.S. in 2007. The MHA Nation refinery would be a very small customer of Alberta refinery feedstock at 0.01 mbpd (<1%). Also as with other commodities, products of the same type are generally interchangeable, there is no specific mine associated with the synthetic crude that will be delivered via pipeline from Canada.

D.11. HUMAN HEALTH

Comment 1: Several comments expressed interest in health impacts associated with other refineries. There was specific interest in epidemiological study results about birth defects and mortality in human populations living near other refineries and whether health statistics were available for communities surrounding the Tesoro refinery in Bismarck, North Dakota, in particular.

Response 1: Chapter 4 of the DEIS included epidemiological results from a study of cancer incidence surrounding a large refinery in Ponca City, Oklahoma performed by the Air Quality Division of the Oklahoma Department of Environmental Quality (ODEQ) in 2002 (ODEQ, 2004). As discussed on page 4-128 of the DEIS, the study concluded that there was no significant increased lifetime cancer risk from volatile organic air toxics in the Ponca City area. The Ponca City oil refinery has a production capacity about ten times larger than the proposed refinery. A 20-kilometer square area was selected for analysis, which included all the major sources of air pollution in the immediate area. Modeling was conducted as per the Regional Air Impact Modeling Initiative developed by EPA Region 6. The conclusion of the risk modeling was that there was no significant increased lifetime cancer risk from the volatile organic air toxics in the Ponca City area. The model predicted increased lifetime cancer risks in the range of $1X10^{-5}$ (one in one-hundred-thousand) to $1X10^{-6}$ (one in one-million) immediately next to the refinery, which is within the EPA's target risk range.

During preparation of the DEIS, EPA initiated additional studies to evaluate potential human health impacts of the proposed refinery. These studies included an April 2006 request to the Agency for Toxic Substances and Disease Registry (ATSDR) for assistance in resolving public health concerns associated with the proposed refinery. ATSDR organized and worked closely with an interagency team to prepare a report addressing these concerns, which they submitted to EPA on February 28, 2007 (ATSDR, 2007). The report comprises multiple components including a literature review and summary of studies of health outcomes of residents living near refineries in the United States. Since the last major refinery built in the United States was completed in 1976, the literature review revealed that health outcome studies conducted of conventional refineries using old technology did not adequately represent potential exposures that might result from the proposed refinery using new and cleaner technological processes. The interagency team contacted experts in air quality and adverse health outcomes associated with refineries and identified additional relevant industry-specific reports for refineries built or significantly modified in western Canada during the years 2001-2006. The health assessments conducted for the Canadian refineries concluded that there were no significant adverse health effects on nearby populations resulting from refinery operations. The *Qualitative and*

Quantitative Human Health Risk Assessment Technical Report, December 2007 included with the FEIS provides more information on these health assessments.

The refineries evaluated in the epidemiological studies referenced above likely represent a worst case scenario when compared with the proposed refinery, because their operating capacity is many times that of the proposed refinery and their primary feedstock materials contain significantly higher concentrations of contaminants capable of eliciting adverse health impacts than synthetic crude, the feedstock for the proposed refinery. Given that no significant adverse health risks were determined for the Ponca City and Canadian refineries, it is very unlikely that emissions from the proposed refinery will result in a measurable increase in adverse health effects to populations in the surrounding area.

The ATSDR report also examined the issue of cancer incidence (for selected cancers) and asthma across all North Dakota counties, although the report did not analyze the incidence data relative to the Tesoro refinery, which is located in Mandan (Morton County). Chapter 4 of the FEIS includes a summary of the results of this report, and further details are included in responses to other comments in this section.

Comment 2: Several comments expressed concern about health impacts to people who eat the Tribes' buffalo, or eat fish, plants and berries collected near the proposed refinery due to the potential for toxicants from the refinery to bioaccumulate in these plants and animals.

Response 2 See D.10, Response 6.

Comment 3: Several comments expressed concern regarding the adequacy of the assessment of the health risks posed by the refinery and objected to an allowance for any increased cancer incidence, asthma, or other health risks. Some comments expressed concern about chronic, lifetime exposures to contaminants emitted by the proposed refinery and the potential increase in cancer, disease, birth defects, and genetic mutations that may result in the surrounding population. Many comments expressed concern about adverse health effects to sensitive receptors such as children, pregnant women and their unborn children.

Response 3: In Chapter 4 of the DEIS, the evaluation of risks from refinery NAAQS pollutant and HAP toxic emissions was based on comparisons with health-based screening levels and included conservative assumptions designed to overestimate risks. EPA performed air modeling to estimate worst-case concentrations of chemicals in emissions from the proposed refinery. These estimated concentrations were compared with health-based screening levels including the NAAQS and the PSD increments. The NAAQS and PSD levels are calculated using conservative exposure assumptions that are designed to be protective of sensitive sub-populations of human beings such as children, pregnant women, and the elderly. These health-based screening levels represent concentrations below which unacceptable increases in cancer are not expected to occur. For example, these health-based screening levels are derived by assuming that a lifetime exposure (i.e., 70 years) to specific levels of air toxicants will produce an increased cancer incidence of only one in one million. The current national average of cancer incidence is one in three; therefore, EPA's benchmark for increased cancer incidence due to environmental exposures increases this incidence rate to 1.000001 in 3. As shown in Table 4-21 of the DEIS, the predicted emissions from the proposed refinery are well below (i.e., 18 to 40 times below) EPA's conservative health-based levels for benzene, formaldehyde and PAHs, which are the primary cancer causing chemicals in emissions from refineries. Because the predicted concentrations of chemicals in emissions from the proposed refinery are substantially less than the levels that have conservatively been established as being protective of human health, adverse health effects for receptors, even sensitive subpopulations, exposed to emissions from the refinery are unlikely.

The ATSDR report (February 2007) included a summary of data on asthma prevalence in adults and children who reside throughout North Dakota collected by the North Dakota Department of Health's Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a state-based system of telephone health surveys of adults that collects timely information primarily related to chronic disease and injury. Each month throughout the year, telephone calls are made to randomly selected households, and a single adult respondent is asked if he or she will participate. North Dakota has one of the highest response rates in the nation for collection of this health data. The BRFSS data will provide a means to evaluate changes in asthma incidence in the populations in the area potentially impacted by the refinery relative to baseline (i.e., pre-refinery) conditions.

Similarly, the ATSDR report included a summary of cancer incidence for selected cancers in North Dakota. All cancers are reportable in North Dakota. All medical diagnostic laboratories, physicians, and other health care providers who administer screening, diagnostic or therapeutic services are required to report cancer to the state. Hospitals and other health care facilities that provide inpatient and/or outpatient services and mobile units that provide screening, diagnostic or therapeutic services also are required to report newly diagnosed (incident) cancer cases. Since 2001, the North Dakota Department of Health's Cancer Registry has received the Gold Standard Certification award from the North American Association of Central Cancer Registries (NAACCR). These data will provide a means to evaluate changes in cancer incidence in the populations in the area potentially impacted by the refinery relative to baseline (i.e., pre-refinery) conditions.

Comment 4: A few comments stated that the toxicology used in the DEIS looks at pollution effects one chemical at a time and this is not accurate because exposure will be to a mixture of chemicals.

Response 4: EPA's risk assessment methodology allows for evaluation of mixtures of environmental contaminants. Specifically, the Agency calculates risk estimates for cancer causing chemicals using an additive approach, and systemic toxicants (i.e., non-cancer disease causing chemicals) are often evaluated in aggregate based on the target organ or system affected. When developing air emission, wastewater, and other types of discharge limits, EPA considers the nature and complexity of the contaminant mixture in order to establish levels protective of human health and the environment.

Comment 5: Several comments stated that additional data should be collected to allow for a complete analysis of health effects and to perform a baseline health study as part of the NEPA process.

Response 5: ATSDR has researched the status of adverse health effects in communities near refineries and conducted a baseline health assessment for residents of the Fort Berthold Indian Reservation, with an emphasis on asthma and cancer (ATSDR report February 2007). The report summarized information from a number of sources including the Aberdeen Area Indian Health Service (AAIHS), which provides healthcare to American Indian residents on or near the Fort Berthold, North Dakota reservation. ATSDR used the data from the study of potential adverse health effects associated with refineries to focus the baseline health assessment of cancer and asthma in North Dakota and in the three counties surrounding the proposed refinery site in particular. The results of this assessment indicate that currently there is no known increased incidence of specific cancers (i.e., kidney and non-Hodgkin's lymphoma) in North Dakota, nor in McLean, Mountrail, and Ward counties. Similarly, the prevalence rates of lifetime asthma in adults in North Dakota were similar to the U.S. and American Indian prevalence rates during the reporting period studied. Because these data have been collected in the past and are expected to be collected in the future, they provide a baseline of the current health status of the population and provide a possible mechanism for monitoring the actual effects of the proposed refinery on cancer incidence and asthma prevalence in the future.

The health effects associated with potential air emissions from the proposed refinery were carefully evaluated in the EIS, and adverse health effects caused by exposures to emissions via the inhalation

and food chain pathways were specifically considered in the risk analyses performed. While there may be potential uncertainties associated with these analyses of impacts to human health and the environment due to a lack of specific data, the conservative assumptions built into the process of evaluating impacts to human health and the environment typically result in an overestimation of adverse effects and should more than account for these uncertainties and ensure protectiveness of human health and the environment.

Comment 6: Several comments expressed concern that the proposed refinery would add to the burden on the existing healthcare system, which currently cannot meet their healthcare needs. Many expressed concern that there is already too much cancer and other health problems in the surrounding communities.

Response 6: The health impacts of all chemicals released as emissions from the proposed refinery, including those chemicals that cause cancer, asthma and other chronic adverse health outcomes, have been evaluated based on a comparison with conservative health-based screening levels. The results of this evaluation indicate that no adverse health effects are likely to occur as a result of the emissions from the proposed refinery. Because adverse health risks associated with the proposed refinery are expected to be negligible, no additional burden should be placed on the local health care system.

The baseline health assessment data compiled in the ATSDR report do not support the conclusion that there are elevated incidence rates of cancer or asthma in the communities surrounding the site of the proposed refinery, although the small populations somewhat limit the statistical analysis of the data.

Comment 7: A few comments expressed concern about potential adverse affects to workers exposed to hazardous substances while working at the refinery.

Response 7: The maximum 1-hour, 8-hour, and 24-hour modeled ambient air impacts for the proposed refinery were compared with health-based screening levels including the NAAQS and the PSD increments. These shorter duration air concentrations are designed to estimate worst-case exposures for refinery workers. In addition, the NAAQS and PSD levels are calculated using conservative exposure assumptions. These levels represent concentrations of chemicals below which adverse health effects are highly unlikely if exposure were to occur.

As shown in Tables 30 and 31 of the *Air Quality Technical Report* (EPA, 2006) and Tables 31 and 32 of the *Air Quality Technical Report* (December 2007), the predicted emissions from the proposed refinery are well below (i.e., 18 to 40 times below) EPA's conservative health based levels for ambient air contaminants and for various hazardous air pollutants. Because the predicted concentrations of chemicals in emissions from the proposed refinery are substantially less than the levels that have conservatively been established as being protective of human health, adverse health effects for workers exposed to air emissions from the proposed refinery are likely to be insignificant.

The survey of the literature related to occupational exposures of refinery workers, included in the, ATSDR report, identified an increased incidence of two specific types cancers in this worker population, cancers of the kidney and non-Hodgkin's lymphoma. Chapter 4 of the DEIS, *Refinery Employees Health Risk*, summarizes six toxicological studies of refinery worker health. As stated on page 4-129, there are limitations to the use of these studies for a direct comparison to the likely health effects on workers at the proposed refinery, due to differences in technology, feedstock materials, and employee population demographics between studied facilities and the proposed refinery.

Comment 8: One comment questioned the conclusion in the DEIS on page 4-138, that no cumulative impacts were identified for health and safety, noting that many different pathways of exposure may result from refinery emissions. A related comment noted that refinery air emissions would result in

deposition of contaminants into surface water, which could be used for drinking water and could lead to ill health effects.

Response 8: The analysis of cumulative impacts that is included in the Air Quality section of Chapter 4 of the DEIS evaluated the potential effects of refinery emissions on local and regional air quality. The conclusions of the analyses were that the refinery emissions would have negligible impacts on local and regional air quality. The *Air Quality Technical Reports* (May 2006 and December 2007) provide a detailed discussion of the analysis, including the basis for modeling inputs and corresponding outputs.

Consideration of other exposure pathways was added to Chapter 4 of the FEIS. The additional text provides a comparison of modeled emitted concentrations of contaminants from the proposed refinery with actual emitted concentrations of similar contaminants from existing refineries that are processing synthetic crude or the precursor material to synthetic crude, bitumen, or a combination of these feedstocks. These refineries include: Petro-Canada, Scotford, Heartland, and North West refineries located in Alberta, Canada.

The scale of operation of the individual Canadian refineries is approximately ten times greater than the proposed refinery; and the feedstock material, bitumen, contains much higher levels of contaminants than synthetic crude. Consequently the Canadian refineries would be expected to yield higher concentrations of contaminants in refinery emissions. Canadian environmental studies conducted for the Petro-Canada, Scotford, Heartland, and North West refineries included an evaluation of the effects of air emissions on the surrounding environment. Bioaccumulative effects of the potentially emitted HAPs, as well as other contaminants that may adversely effect the environment, such as benzene, PAHs, and formaldehyde, were considered to be insignificant for each of the refineries. These results further support the conclusion that it is reasonable to assume that the proposed refinery emissions will pose no significant human health impacts, because the scale of operation is substantially smaller than the comparison refineries, it will utilize a cleaner feedstock material, and it will incorporate the latest available pollution control technology. {FEIS changes in Section 4.16.1}

Finally, EPA conducted a quantitative analysis of refinery emissions, which included an evaluation of projected refinery toxic air emissions entering the human food chain through various pathways including ingestion of potentially contaminated soil, drinking water, livestock, and plants. The results of this analysis indicate that there would be no adverse impacts to humans consuming the drinking water or these foods grown or raised in proximity to the refinery.

Comment 9: One comment asked if random biological monitoring would be conducted on wildlife, livestock, aquatic life, Tribal buffalo, and humans to assess potential effects of pollution.

Response 9: EPA's statutory and regulatory requirements will require testing and monitoring of wastewater and some air emissions from the refinery, but do not include biological monitoring of humans, wildlife, livestock, aquatic life or buffalo. The Tribal Environmental Division may consider this on a voluntary basis. In addition, as stated elsewhere in the responses to these Human Health comments, ATSDR has collected baseline health data on cancer and asthma that may be used for comparison to future health data that the Tribe may collect.

Comment 10: A comment noted that the DEIS makes the disclaimer that "limited data are available" when discussing potential impacts to human health. The comment was that this limitation resulted in an incomplete analysis.

Response 10: Although there is somewhat limited information available regarding the potential adverse health impacts resulting from refinery operations, particularly clean-fuels refineries, there are

ongoing studies of health impacts from petroleum handling and processing activities. EPA, with support from ATSDR, has researched and evaluated all available data including reports from clean fuels refineries currently operating in Canada (ATSDR 2007). This analysis of refinery health impact data is adequate for purposes of this EIS.

E. EMERGENCIES, SPILLS AND SAFETY

Comment 1 – Major Accident at Refinery: Several comments expressed concerns regarding impacts from a major accident, fire, upset, explosion or chemical release at the refinery. Comments included the following questions: how many people in the area surrounding refinery could be killed or injured if there was a large chemical spill, accident, fire, or explosion; what is the worst-case chemical spill assessed under the refinery's Risk Management Plan; has the potential for a combination of catastrophic events been considered; what chemicals are involved, and what is the radius of death or injury from this spill; and how long will it take for a toxic cloud to reach neighboring houses, schools and health clinics; How long will it take toxic gases to filter into the places where people shelter in place; and how big is the zone where neither sheltering or evacuation will work?

Response 1: As described in the DEIS, the refinery will be required to prepare for spills and other emergency events. There will be specific requirements for planning, coordination, facility design (e.g. containment around tanks), and training that will need to be implemented at the proposed refinery to address emergency situations such as spills and leaks and in the rare event a fire or explosion. There are three main areas of regulation for emergencies and spills.

- Spill Prevention, Control, and Countermeasures (SPCC) Plan and Facility Response Plan (FRP), — Planning and design requirements to contain and respond to spills of oily substances such as synthetic crude, distillates, soybean oil, oily sludges, gasoline, and diesel.
- OSHA Process Safety Management Plan (PSM) and EPA Risk Management Plan (RMP) — Covers facilities with highly hazardous chemicals and establishes a comprehensive management program that integrates technologies, procedures, and management practices. For the refinery, the emphasis will be on flammable materials. For more information about health and safety concerns at petroleum refinery see the OSHA Technical Manual, Section IV: Chapter 2, Petroleum Refining Processes at http://www.osha.gov/dts/osta/otm/otm_iv/otm_iv_2.html.
- Fire prevention and fire suppression — Includes: the design of refinery systems and infrastructure reduce the chance of fire and limit the impacts of potential fires; fire control and extinguishing systems for this refinery; fire protection practices that will be followed in operating and maintaining the refinery. The facility will also have to develop a fire response team for the refinery in coordination with the local fire departments, the Tribes' fire department, and county and state emergency planning committees to coordinate responses and develop mutual aid agreements.

These emergency response and safety plans have not been developed yet. The plans must be in place prior to operation of the refinery. There are several other plans which will also need to be developed and followed during emergency situations such as release reporting requirements. See page 4-33 of the DEIS, for more information.

Details regarding the potential severity of a hypothetical incident, information regarding the speed of response expected by various personnel and agencies under emergency circumstances and specific procedures for notifying people in the area surrounding the refinery about a spill, fire, or explosion will be provided in the documents identified above.

EPA's Risk Management Plan (RMP) program requires that a worst-case scenario be developed for highly flammable or toxic chemicals. Based on preliminary design information in the EIS, the most likely worst-case scenario that would be examined in the RMP would the rupture of one of the propane tanks. Explosions of this type are extremely rare and are unlikely to occur during the life of the refinery. Assuming the tank was full and the contents vaporized, the areal extent of the explosion has been estimated to be one kilometer (km) or .6 miles from the refinery. Currently, there are no residences within 1 km (.6 mile) of the proposed location of the propane tanks. The farmhouse on the site would not be occupied as a residence during refinery operations.

There were also concerns regarding whether residents would be asked to shelter in place. The emergency response planning efforts will identify of the types of responses appropriate for different situations. In most cases the recommendations for area residents will be to avoid the area, allowing emergency response personnel to address the situation. There may be a few rare situations, such as the propane explosion mentioned above, where it could be recommended for residents in the immediate area to shelter in place.

Comment 2: Comments asked questions related to the amount and type of chemicals to be used and stored on site (particularly chlorine), and the toxic chemicals that could be released during processing crude oil (particularly hydrogen sulfide gas).

Response 2: Based on the preliminary design of the refinery and chemicals typical found at petroleum refineries, chlorine is the only highly toxic chemical under the Risk Management Plan (RMP) regulations which is likely to be present on-site in sufficient quantities to be of concern. Chlorine could be used at the proposed refinery site for water and wastewater treatment. Depending on the amount of chlorine and chemical state of the chlorine, the OSHA Process Safety Management Plan (PMS) and EPA RMP plans may need to include processes associated with chlorine. The procedures would be the same as those developed for drinking and wastewater treatment plants that use chlorine for disinfection. Any chlorine gas would be transported to the refinery under Department of Transportation regulations.

Hydrogen sulfide is not anticipated to be present at the refinery in significant quantities. The proposed refinery would have a closed process containing hydrogen sulfide, however the system would be closed to the atmosphere and quantities of hydrogen sulfide gas would not accumulate as the process would be used to remove sulfur from the synthetic crude and convert the sulfur to elemental form. In addition, the refinery will not be refining any sour crude which has higher levels of sulfur.

Comment 3: Several comments asked what steps were being taken to prevent terrorism and other sabotage. The comments also asked how many victims can the local fire fighters, emergency medical services, and hospitals accommodate if a worst-case scenario occurred.

Response 3: These issues will be addressed in the refinery's emergency response plans and the Emergency Response Plans (ERP) for the Tribes, State, and other responders as required under the Homeland Security Act. The refinery will have on site emergency response and will coordinate with additional emergency management systems along with specialized emergency responders as part of its ERP. The refinery will also have security present on site.

Comment 4: Several comments were received that asked questions regarding refinery operations and power failures or power surges. Specifically, the comments wanted to know the following:

- What equipment would shut down during a power failure or power surge?
- Would the air pollution control and monitoring equipment continue to function during a power surge/upset?
- Were higher emission rates resulting from power failures, power surges, or other upsets considered in the DEIS?
- How long will it take the refinery to return to routine operations after a power failure?
- How long will any backup power systems run the refinery systems?
- How long will it take the refinery equipment to freeze up during winter power failures?
- What types of upsets, other than power failures, can occur at a refinery?

Response 4: Power failures are discussed in general on page 2-17 (Plant 45, Emergency Power) and page 2-18 (Plant 47, Power Supply) of the DEIS. An emergency generator will be used to supply power during a power outage. The other questions regarding specific details of refinery operations during a power failure cannot be answered at the preliminary design phase. The answers would be dependent on the type and duration of the power failure, the backup power capacity, etc. The OSHA regulations and safety codes include provisions for emergency shutdowns including power failure. These measures will be included as part of the safety systems and planning for the refinery. For more information on other potential upsets at refineries see the OSHA Technical Manual, Section IV: Chapter 2, Petroleum Refining Processes at http://www.osha.gov/dts/osta/otm/otm_iv/otm_iv_2.html.

Comment 5: Comments asked what type of safety features will be in place at the proposed refinery and also recommended various safety features.

Response 5: All tanks storing petroleum or oily material such as the synthetic crude, gasoline and diesel fuels are required to have containment for the entire contents of the tank plus precipitation. The refinery site process areas will be paved and curbed to the refinery wastewater plant preventing almost all spills from leaving the site.

During the environmental review of a project such as this EIS, the design is in the preliminary design phase. Specific design details would not be developed until after the federal agencies have made their decisions about the project. The information in the EIS has been developed to follow standard refinery practices and regulations. There are many fire and safety codes that will need to be implemented at the proposed refinery including the OSHA regulations and other codes which are incorporated into the OSHA regulations at 29 CFR 1910.6 including the American Petroleum Institute (API), American Society for Testing and Materials (ASTM), and National Fire Protection Association (NFPA).

Comment 6: Comment addressed the discussion of the average annual number of spills reported between 1984 and 1996, as described on page 4-27 in the DEIS. The commenter does not understand why a spill of less than ten gallons is attributed to human error or mechanical failure and what other causes for a spill are likely, if not human error or mechanical failure.

Response 6: Spills can also occur as a result of an act of nature (e.g., tornado, hail) damaging refinery equipment or tanks, a train derailment at the refinery, or a failure of a large tank caused by a manufacturing defect. This information was included in the DEIS to illustrate that that most spills are quite small (70 percent involved less than 10 gallons) and are the result of a minor error, such as not tightening a hose, or a mechanical failure.

F. CLOSURE

F.1. CLEANUP

Comment 1: Several comments raised concerns regarding cleanup of the refinery once operations cease. Specifically, commenters wanted to know how contamination would be cleaned up, how much the cleanup would cost, who would pay for the cleanup, and what office would regulate the cleanup. Comments inquired as to whether a cleanup bond could be required and whether BIA would assume liability for cleanup costs.

Response 1: Generally, all owners and operators would share liability for a cleanup. Since the Tribes propose to own and operate this facility, they would be responsible for all clean-up. There are certain regulatory requirements for clean-up and closure plans.

Under Alternatives 1 and 3 with Alternative A, B, or C, and Alternative 4 with Alternative B or C, (All refinery construction alternatives except Alternative 4 and A), the proposed refinery would be required to obtain a RCRA Treatment, Storage, and Disposal (TSD) permit under 40 CFR Part 264. EPA would issue and maintain regulatory authority over a TSD permit at the facility. A TSD permit would require the facility to conduct adequate corrective action, closure, and post-closure activities for all hazardous waste management units. It would not address other portions of the refinery not covered by the TSD permit, except for corrective action, as appropriate. The Tribes would be responsible for all of the cleanup costs as owner and operator of the facility. Page 4-48 of the DEIS describes the types of activities that would be conducted during RCRA closure and cleanup, including certification by the owner/operator that the requirements of the approved plan were met, and appropriate remediation of all contaminated soil and ground water. A post-closure RCRA TSD permit could be required for all remaining hazardous waste management units that are not clean-closed.

Under Alternative 4 and A, where the facility would be a RCRA generator under 40 CFR Part 262, the refinery is not required to obtain a RCRA TSD permit. However, EPA would maintain regulatory authority over the facility. Generators must meet closure performance standards contained in 40 CFR 265.111, and 265.114. Those requirements include steps to remove contamination from units and equipment to prevent releases and mitigate impacts. A RCRA TSD permit could be required if RCRA generator requirements are violated. That could include storing hazardous wastes onsite for greater than 90-days or routine and systematic releases of hazardous waste or hazardous waste constituents to the environment. It could also include failure to clean-close a hazardous waste management unit(s) at the time of closure. In that case, a post-closure RCRA TSD permit could be required for all remaining hazardous waste management units.

If a RCRA TSD permit is needed, EPA will require financial assurance for corrective action. If the facility is a RCRA generator only and does not require a RCRA permit, there are no formal requirements for financial assurance for corrective action. However, EPA and BIA have recommended to the Tribes that they establish a special fund to cover potential cleanup costs. The Tribes have committed to providing financial assurance, as evidenced by their letter provided in Appendix D.

A number of comments expressed concern about potential cleanup costs of contaminated soil and ground water at the proposed facility. Cleanup costs could be significant if monitoring and corrective action plans are not followed.

F.2. FINANCIAL ASSURANCE

Comment 1: Comment that steps should be taken to ensure that the public would not have to pay for clean up.

Response 1: If a RCRA permit is needed, EPA will require financial assurance for cleanup. If the facility is a RCRA generator only (Alternative 4 and A) and does not obtain a RCRA permit, there are no formal requirements to provide financial assurance to pay for cleanup/ corrective action. However, EPA and BIA have recommended to the Tribes that they establish a special fund to cover potential cleanup costs. For more information, see the Tribes' April 19, 2007, letter to EPA Region 8 regarding the Tribes commitment to develop some type of financial assurance for cleanup costs (in Appendix D of the FEIS).

A number of comments expressed concern about potential cleanup costs of contaminated soil and ground water at the proposed facility. Cleanup costs could be significant if the facility is not operated correctly, and if monitoring and follow-up actions are not implemented promptly.

Comment 2: Comment stated if a RCRA permit is not required, cleanup could be delayed at the time of final refinery closure.

Response 2: EPA agrees that adequate cleanup could be delayed if a RCRA permit is not required. However, this could be mitigated if the project proponents agree to establish a clean up fund.