RECORD OF DECISION

MANDAN, HIDATSA, AND ARIKARA NATION'S PROPOSED CLEAN FUELS REFINERY PROJECT

U.S. Environmental Protection Agency
Region 8

I. DECISION TO BE MADE

This Record of Decision (ROD) documents the decision of the U.S. Environmental Protection Agency (EPA) Region 8 pertaining to the issuance of a Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permit for discharges of treated process wastewater associated with the operation of the Three Affiliated Tribes' [Mandan, Hidatsa, and Arikara (MHA) Nation's] proposed clean fuels petroleum refinery.

This ROD is issued by the EPA pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq., the Council of Environmental Quality (CEQ) NEPA regulations, 40 C.F.R. Parts 1500-1508, and EPA's regulations implementing NEPA at 40 C.F.R. Part 6 (Procedures for Implementing the National Environmental Policy Act and Assessing the Environmental Effects Abroad of EPA Actions). This ROD is based upon analysis and information set forth in the NEPA documents prepared by the EPA, the Department of the Interior (DOI) and Bureau of Indian Affairs (BIA), as well as the analysis in the Supplemental Information Report (SIR) prepared by EPA. EPA and DOI/BIA issued the Final Environmental Impact Statement (FEIS) on August 20, 2009. The MHA Nation notified EPA and BIA in 2010 of their decision to change the refinery feedstock from synthetic crude to the local Bakken formation crude oil. A separate ROD prepared by the DOI/BIA will document the DOI/BIA decision on whether to accept certain lands, including lands on which the proposed refinery would be built, into trust for the MHA Nation.

II. INTRODUCTION

The MHA Nation proposes to construct, own and operate a 13,000 barrels-per-day petroleum refinery on the Fort Berthold Indian Reservation near Makoti in North Dakota. The MHA Nation owns the 468.39 acre site within the exterior boundaries of the Fort Berthold Indian Reservation on which they intend to construct and operate the refinery. All lands within the exterior boundaries of the Fort Berthold Indian Reservation are "Indian country" as defined at 18 U.S.C. § 1151. The proposed facility would refine Bakken crude oil into gasoline, diesel fuels, and propane. The refinery would be on 190 acres of the site. The remaining acres would be used to grow forage for the Tribes' buffalo herd (buffalo would not be located at the site). Following their purchase of the property, the MHA Nation requested DOI/BIA to accept the property into trust status. The MHA Nation also applied to the EPA for a NPDES wastewater discharge permit for the refinery.

As a general matter, federal agencies such as BIA and EPA must comply with NEPA before approving any major federal actions that may have a significant effect on the human environment. The project as proposed would require an NPDES permit from EPA. Because the project is defined as an NPDES new source (33 U.S.C. 1316(a)(2); 40 C.F.R. §§ 122.2 and 122.29), EPA is required to comply with NEPA prior to final action on the NPDES permit, 33 U.S.C. § 1371(c)(1). BIA's decision whether to accept the land into trust for purposes of the proposed project constitutes a major federal action and also invokes NEPA.

The BIA and EPA jointly issued a Draft EIS in June 2006. The public comment period on the DEIS formally started on June 29, 2006, and ran through September 14, 2006. During the public comment period, BIA and EPA held seven public hearings. Responses to the written and oral comments received are included in the FEIS. The August 2009 FEIS also included additional analysis on potential human health impacts, revisions to the Environmental Justice analysis and identified the agencies' preferred alternatives.

In 2003, the MHA Nation initially proposed to refine synthetic crude from Canada. Since that time, there has been rapid development of oil from the Bakken formation in North Dakota and Montana. On February 4, 2010, the MHA Nation informed EPA via phone of its intent to refine Bakken crude oil instead of synthetic crude from Alberta at its proposed refinery. Both the Alberta synthetic crude and Bakken crude feedstocks are light, sweet crude oils. The refinery designs for either feedstock are expected to be similar. The proposed refinery will be in the same location with the same general site footprint as described in the FEIS. In July 2011, EPA completed a Supplemental Information Report (SIR) comparing the environmental impacts associated with refining the Bakken crude with the FEIS environmental analysis to determine whether EPA needed to prepare a supplemental EIS pursuant to 40 C.F.R.§ 1502.9(c). EPA concluded that a Supplement to the FEIS is not warranted, since a change in feedstock to Bakken crude, as compared to the refinery using synthetic crude, will not significantly change the proposed action or its impacts, as described in the FEIS.

III. NEPA ANALYSIS AND ALTERNATIVES ANALYZED

The EIS analyzed five facility construction/non-construction alternatives (Alternatives 1 through 5) for the proposed refinery site and four alternatives for wastewater disposal for the proposed refinery (Alternatives A through D). A short description of each alternative follows. Further detailed information on the project alternatives can be found in the FEIS.

Construction Alternatives

Alternative 1 (*Proponent's Original Proposed Action):* BIA would accept the 468.39-acre project site into trust for the refinery and forage. The MHA Nation would construct and operate a refinery utilizing a feedstock of: 10,000 barrels per stream day (BPSD) of synthetic crude oil, 3,000 BPSD of field butane, 6 million standard cubic feet per day of natural gas, and 300 barrels of bio-diesel or 8,500 bushels per day of soybeans. The refinery would produce about 5,750 BPSD of diesel fuel, 6,770 BPSD of gasoline, and 300 BPSD of propane.

Alternative 2: BIA would accept the land into trust without construction of the proposed refinery. Under this alternative, BIA would accept the 468.39-acre site into trust status but would not approve the MHA Nation's proposal to construct, operate, and maintain a clean fuels refinery. The entire site would continue to be used for agricultural purposes similar to those that have been occurring on the property for decades.

Alternative 3 (DOI/BIA Preferred Alternative in FEIS): BIA would not accept the land into trust, but the MHA Nation may still construct the proposed refinery. This alternative was analyzed in the EIS based on the original design. It is BIA's recommendation that the design of the refinery, if constructed, be modified consistent with Alternative 4.

Alternative 4: *(Proponent's Modified Proposed Action*). A modification of Alternative 1 was developed to reduce impacts to wetlands and to revise the design of the proposed refinery to avoid triggering regulatory requirements under the Resource Conservation and Recovery Act (RCRA) (federal hazardous waste control law). Under this alternative, BIA would accept the 468.39 acres into trust for the construction and operation of the refinery. The refinery would be reconfigured from the MHA Nation's original proposal in order to minimize impacts to the jurisdictional wetland; use tanks instead of ponds for potentially contaminated (oily) stormwater and contaminated process wastewater; and use a sanitary collection tank or sanitary waste treatment plant instead of a leach field. The refinery would continue to be regulated as a RCRA large quantity generator. The proposed septic tank for employee wastewater would also be replaced with either a small treatment plant or wastewater would be trucked to a municipal wastewater treatment plant.

Alternative 5: No action. Under this alternative, BIA would not accept the 468.39 acres into trust status. The MHA Nation would continue to own the property outside of trust status. This alternative was analyzed based on the refinery not being constructed.

Effluent Discharge Alternatives

Alternative A: *(EPA's Preferred Alternative*) Discharge of effluent through an NPDES permit. Through the NPDES permit, EPA would authorize the MHA Nation to discharge treated wastewater from the refinery in compliance with permit limits, outfall locations, and monitoring and reporting requirements. Any discharges from the facility would need to meet the NPDES effluent limitations which incorporate the more stringent requirements of the technology-based effluent limits for the petroleum refining industry and water quality standards and criteria. All outfalls discharge into the wetlands at the northeast corner of the site, flowing north under Highway 23 into a tributary of the East Fork of Shell Creek. The number of the outfalls and the manner in which waste streams are combined differ among the refinery construction alternatives as described below.

Alternative 1 and A, and Alternative 3 and A
The refinery would be configured and designed according to the proponent's original proposal. The NPDES permit would authorize wastewater discharge through three outfalls:

001 – Uncontaminated stormwater
002 – Treated wastewater and oily stormwater
003 – Treated employee wastewater

Alternative 4 and A

The refinery design would be modified by using tanks instead of ponds and reconfigured to avoid most wetland impacts from the discharge of dredged or fill material. The NPDES permit would authorize wastewater discharge through four outfalls:

001 – Uncontaminated stormwater
002 – Treated wastewater
002a – Potentially oily stormwater after treatment and/or water quality testing
003 – Treated employee sanitary wastewater

Under Alternatives 1 and A, and 3 and A, uncontaminated stormwater would be collected and routed to the evaporation pond (water storage reservoir). Water from the evaporation pond would be used in refinery processes and in the fire water system which includes two fire water reservoirs. Surplus uncontaminated stormwater would be discharged through Outfall 001. Process wastewater from the refinery (primarily from the sour water stripper) would be routed directly to the wastewater treatment unit (WWTU). For Alternatives 1 and A, and 3 and A, the MHA Nation would need to obtain a hazardous waste Treatment Storage and Disposal permit for the facility under resource conservation Resource Conservation and Recovery Act (RCRA). After treatment the water would be stored in two effluent holding ponds. Potentially contaminated stormwater (oily) from the refinery process area, product loading area and tank farm would be conveyed to a 1.4 million gallon holding pond. Depending on water quality, the wastewater from the holding pond would be conveyed to the effluent holding ponds or sent to the WWTU for treatment and then into the effluent holding ponds. Effluent from the holding ponds would either be recycled back to the refinery or discharged through a NPDES Outfall 002.

Under Alternative 4 and A, uncontaminated stormwater would be collected and routed to the evaporation pond (water storage reservoir). Water from the evaporation pond would be used in refinery processes and in the fire water system which includes two fire water reservoirs. Surplus uncontaminated stormwater would be discharged through Outfall 001. Process wastewater from the refinery (primarily from the sour water stripper) would be routed directly to the wastewater treatment unit (WWTU). After treatment, the water would be conveyed to a series of final effluent release tanks before discharge from Outfall 002. Wastewater would be tested prior to release and if it does not meet discharge limits it would be recycled back to the wastewater treatment plant for further treatment. Potentially contaminated stormwater (oily) from the refinery process area, product loading area and tank farm would be conveyed to a group of surge tanks of sufficient volume to handle a certain storm event, and designed/engineered to required specifications. Depending on water quality, the wastewater in the surge tanks would be conveyed to either a release tank or to WWTU for treatment. Wastewater from the effluent release tanks would be discharged through NPDES Outfall 002a.

Under Alternatives 1 and A, 3 and A, and 4 and A, the refinery may decide to collect and haul employee wastewater off-site. In that case, the refinery would report that the facility is not discharging through Outfall 003. The proponent's proposal included the use of a septic tank and leach field for treatment of employee wastewater. However, upon additional evaluation, the proponent concluded that the soils in the area were unsuitable for the proposed standard septic tank and leach field. Therefore, the proposed refinery would either need to install a package

domestic wastewater treatment unit or haul employee wastewater to another wastewater treatment plant.

For Construction Alternatives 2 and 5, no refinery would be constructed; therefore no NPDES permit (Alt. A) would be needed.

Alternative B: Treated wastewater from the refinery would be disposed of through a combination of land application to irrigate crops and discharged through NPDES permitted outfalls. The NPDES portion of the alternative would be the same as Alternative A. Wastewater would be treated in the wastewater treatment units and then stored in ponds or release tanks. The refinery could use treated wastewater to irrigate trees and routed forage on the project site. Land application of wastewater would only be possible during the growing season, when saturated soil conditions do not exist.

Alternative C: The MHA Nation would discharge all effluent from the wastewater treatment units to a Class I underground injection control (UIC) well that would be drilled on the project site. This well would dispose of wastewater into isolated formations beneath the lowermost underground source of drinking water. A Class I UIC permit would need to be obtained from EPA prior to construction of the well to ensure that the well is properly designed.

Alternative D: No action. Under this alternative, EPA would not issue any permits for the discharge of effluents from the proposed refinery. This includes permits for NPDES regulated discharges, discharges to a Class I UIC well, and discharges from the septic system to a leach field (UIC Class V). Thus, no discharges of water of any kind from a refinery would be permitted.

IV. FINAL EIS PREFERRED ALTERNATIVE

The "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The FEIS identifies EPA’s preferred effluent discharge alternative as Alternative A, discharge of effluent through an NPDES permit, and recommends the refinery design modifications described in Alternative 4.

V. NEPA ANALYSIS - COMPARISON OF THE ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

Chapters 3 and 4 of the EIS evaluate the environmental effects associated with the proposed project alternatives. A comparison of the environmental effects is provided in Table 2-8 in the FEIS. Below are highlights of these findings applicable to the EPA preferred alternatives, Alternatives 4 A and C:

A. Ground water, Soils and Spills

- Ground water occurs beneath the refinery site. Ground water is in the underlying material called "till" which was deposited by glaciers in an approximately 100-foot thick layer. Ground water generally moves slowly in till layers due to low permeability. Depth to water in the till aquifer typically ranges from 5-15 feet. Ground water in the till appears to flow toward the southwest at about 0.4 to 2.4 ft/year. Ground water also occurs in the Ft. Union Formation, which underlies the till and the Fox Hills Formation which underlies the Ft. Union Formation.

- It is anticipated that there would be spills and leaks at the proposed refinery facility. Almost all refineries and other petrochemical facilities such as, gas stations eventually have spills and leaks. The majority of spills and leaks would be completely contained within the facility and would not impact the environment. However, over time, it is expected that there would be some contamination of soils and ground water immediately underneath the refinery site due to leaks and spills because some areas of the refinery are not paved. The contamination would remain generally within the refinery site unless a major spill occurred or a series of spills and leaks occurred over time.

- Areas within the refinery storing crude or refinery products would be required to be lined and have secondary containment (e.g., berms) to hold the entire contents of storage tanks. Areas with a high potential for spills such as the loading area for trucks and railcars would also be paved and curbed which should contain most spills.

- Due to the shallow depths to water, ground water resources in proximity to the refinery could be affected by leaks and spills. Adverse impacts to ground water withdrawn by individual well users and public supply systems are not anticipated, except for the well that was at the existing farmhouse. That well has been decommissioned. Other individual wells are not anticipated to be impacted because of the relatively low permeability of the till underlying the refinery site. The next closest farmstead is 1/3 of a mile from the proposed refinery site.

- Communities in the area such as Makoti and Plaza located three and five miles from the proposed refinery, respectively, use ground water as a source of drinking water. These communities use either the Fox Hills-Hell Creek or buried valley aquifers. Water quality in these aquifers is not expected to be impacted by the proposed facility because the buried valley aquifers do not occur in the vicinity of the refinery and the depth to the top of the Fox Hills–Hell Creek aquifer is more than 1,000 feet beneath the proposed refinery location. For wastewater disposal through an underground injection well (Alternative C), the injection zone would be required to be below any aquifer that could be used for drinking water.

- Water supply for the refinery would be from a combination of sources including the Fox Hills-Hell Creek aquifer, recycled water from the refinery and run-off collected from the site. If the refinery uses the Fox Hills-Hell Creek aquifer for the majority of its water supply, there may be localized draw down in the aquifer.

B. Surface Water

- The site is located in the headwaters of a small unnamed tributary of the East Fork of Shell Creek which is tributary to Lake Sakakawea. With regard to effluent discharge Alternative A (in the FEIS), stormwater and treated wastewater from the refinery would be discharged at the surface. For Alternative C (in the FEIS), only stormwater would be discharged at the surface and process water would be discharged through an underground injection well.

- The proposed refinery construction alternatives would need surface water discharge permits (NPDES) for stormwater discharges and wastewater discharges. The proposed NPDES permit would require that wastewater discharges be protective of aquatic life, drinking water, agriculture and wildlife uses. No NPDES permits would be needed for the non-construction alternatives and water quality would remain the same as existing conditions.

- Construction and operation of the proposed refinery would change the quantity and flow pattern of the drainage from the site. The paving/hardening of the refinery site would increase runoff and reduce infiltration. If the refinery collects most of the runoff for use as water supply, there would be less water flow from the site for the majority of storm events.

C. Solid and Hazardous Waste

- The proposed refinery would operate as a large quantity generator of hazardous waste under the Resource Conservation Recovery Act (RCRA). The facility, through the RCRA generator regulations, would be required to transport the waste to approved hazardous waste facilities for the treatment and disposal of the waste. Many of the waste streams from refineries are specifically listed under the RCRA regulations as hazardous wastes.

- Each refinery construction alternative, except for the combination of Alternatives 4 and A, could also make the facility a Treatment Storage and Disposal (TSD) facility under RCRA. The facility would potentially need to obtain a TSD permit from EPA for any of these alternatives. The TSD permit includes requirements for design, operation, location, monitoring, financial assurance, inspections and facility closure plans.

- With regard to solid waste, the facility would be required to comply with EPA "Criteria for Classification of Solid Waste Disposal Facilities and Practices" at 40 C.F.R. Part 257, as appropriate.

D. Vegetation, Wetlands

- The portion of the site that would be used for the proposed refinery would be changed from an agricultural to industrial use.

- Both jurisdictional and non-jurisdictional wetlands exist on the proposed refinery site. Jurisdictional wetlands are those wetlands which are considered to be waters of the U.S. for purposes of the Clean Water Act. Non-jurisdictional wetlands are waters that are not subject to Clean Water Act jurisdiction.

- The USACE determined one wetland, which covers 11.7 acres in the northwest corner of the site, to be subject to Clean Water Act jurisdiction. According to the initial site plan (Alternative 1), 0.5 acres of the jurisdictional wetland would be filled by the proposed refinery. An alternative site plan (Alternative 4) was developed in part to reduce filling of jurisdictional wetlands to 0.1 acres. A Clean Water Act Section 404 permit for the discharge of dredged or fill material would be needed from the USACE prior to construction.

- The jurisdictional wetland would be impacted by the proposed refinery. Changes in the quality and quantity of water flowing into this wetland would change the hydrology and vegetation in the wetland.

- Non-jurisdictional wetlands would also be impacted during construction of the refinery.

- Any filling of jurisdictional wetlands would be mitigated as required under the applicable Nationwide Permit and the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule, April 10, 2008.

E. Wildlife, Threatened and Endangered Species

- EPA determined that issuance of an NPDES permit for the proposed refinery would have "no effect" on the threatened or endangered species in the area or their designated critical habitat. The U.S. Fish and Wildlife Service (FWS) agreed with EPA's determination. The FWS did express concerns about potential effects to the threatened piping plover and endangered whooping cranes from landing on open water areas in the refinery wastewater treatment facilities or colliding with overhead power lines. The FWS identified mitigation measures to discourage birds from using ponds within the refinery site, including adding netting to prevent birds from landing in open tanks or ponds with oily wastewater and placing cobbles on the sideslopes of the constructed ponds to discourage plovers from nesting. They also recommended that electrical transmission lines be constructed to minimize collision and electrocution risks to birds.

F. Transportation

- For all of the refinery construction alternatives, the refinery would increase traffic on local roads and on the rail line. With the shipment of refinery products, as well as the

transportation of hazardous waste off-site for treatment and disposal, there would be an increased probability of petroleum products spills along the pipeline corridor, transportation corridors and the rail line. To mitigate the impacts of increased traffic on US 23, EPA recommends that right turn lanes be added on US Highway 23 at the two access points to the highway. An acceleration lane should also be added for east bound US 23. As part of the final design, we also recommend conducting a traffic study to evaluate the need for left turn lanes into the refinery.

G. Air Quality

- The FEIS presents modeling of potential refinery air emissions conducted by the MHA Nation assuming use of synthetic crude as the refinery feedstock. This modeling demonstrated that the proposed facility would not cause any exceedances of the National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) Class I increments. As discussed below in Section VII, in 2011, the MHA Nation submitted to EPA additional air emissions calculations and modeling related to refining of Bakken crude. This new information is presented and evaluated in the attached Supplemental Information Report (SIR). Also explained in the FEIS, in 2005 EPA made a determination that no Clean Air Act PSD pre-construction permit would be required for the facility; however, as discussed below in Section VII, EPA has withdrawn this determination.

- The facility will need an air emissions permit for operations. The requirement for the refinery to apply for a Clean Air Act Title V operating permit within 12 months of commencing operation was triggered by the promulgation of New Source Performance Standards. For example, 40 C.F.R. Part 60, Subpart GGGa, Standards of Performance for equipment leaks of volatile organic compounds in petroleum refineries, was issued on November 16, 2007 and this requirement and others would make the facility subject to the Clean Air Act Title V permitting requirements as defined by Clean Air Act Title V permitting requirements (40 C.F.R. § 71.3).

H. Human Health

- With proper operation of the refinery, potential impacts to human health are anticipated to be negligible to the general public. 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.

- Transporting, handling, storing, and disposing of chemicals and hazardous materials inherently pose a risk of a release to soil, ground water, air, surface water, and sediment. Numerous regulatory programs would be implemented at the proposed facility to prevent or control potential releases such as the emergency response planning, oil spill response planning and containment measures, NPDES permits, RCRA, and OSHA requirements.

- In the remote event of a catastrophic spill or fire, there could be emissions from the facility that would be of concern to public health in the immediate area of the refinery;

however, there are currently no residences or businesses located in the immediate area of the refinery site that would remain occupied once refinery operations commenced.

- The air modeling analyses in the FEIS show that the potential impacts of hazardous air pollutants would be below levels of concern to human health through both direct inhalation and food chain pathways outside of the proposed refinery site process area.

- Epidemiological and toxicological studies, as discussed in Chapter 4 of the EIS, did not identify any increases in health effects for people living near petroleum refineries. One occupational health study observed increased rates for one type of cancer for workers in the petrochemical industry.

I. Environmental Justice, Socioeconomics

- Environmental justice concerns include many of the issues addressed above, such as air pollution emissions, discharge of pollutants into surface waters and ground water, and hazardous waste generation. Other issues include the socioeconomic effects of constructing and operating a new refinery. EPA conducted an environmental justice analysis in conjunction with the EIS and draft NPDES permit, and concluded that there would be no disproportionately high and adverse effects on minority or low-income communities.

- Economic benefits associated with the refinery could increase the quality of life for members of the MHA Nation. However, the communities surrounding the facility could experience negative effects to their quality of life due to increases in highway traffic, noise, and light pollution during construction and operation of the facility.

VI. SUBSTANTIVE COMMENTS RECEIVED ON FEIS

Fifteen individuals and/or entities commented on the FEIS and raised various issues including: opposition to the refinery; support for the refinery; impacts analyses for air quality; absence of a CAA PSD permit; greenhouse gas emissions; cumulative impacts; human health; concerns about lack of controls and monitoring for air and ground water impacts; concerns about lack of Tribal and regulatory capacity to protect the environment from the refinery; and Environmental Justice. Most comments were very similar to or the same as the comments on the DEIS. EPA and DOI/BIA previously addressed these comments in the response to comments on the DEIS, which the Agencies included as an appendix in the FEIS The FEIS comments regarding air included more detail about the air emissions calculations and objected to EPA's 2005 determination that a PSD permit would not be needed for the facility. In the comments on the FEIS, there was one new area of concern – the potential unavailability of synthetic crude as a feedstock for the refinery.

VII. REVISED FEEDSTOCK AND CONSTRUCTION

As discussed above, following issuance of the Final EIS, the Tribes informed EPA of their intent to change the refinery feedstock from synthetic crude as described in the EIS to the local Bakken crude oil. The change in feedstock modified the preliminary design of the construction

alternatives analyzed in the EIS. Consequently, EPA has evaluated the changes in impacts resulting from the switch to the Bakken crude feedstock and the EIS to determine: (1) if substantial changes have been made to the project since completion of the FEIS in 2009 that are relevant to environmental concerns, and (2) if significant new circumstances or information relevant to environmental concerns and bearing on the proposed refinery or its impacts have occurred since the FEIS was completed. EPA summarized its evaluation in a Supplemental Information Report (SIR) (attached). Following are highlights from the SIR:

- The Tribes are still proposing to build a refinery on the same site and at the same capacity as described in the EIS. While the synthetic and Bakken crudes are both light, sweet crudes, the Tribes plan to add several additional process units to the refinery to process the Bakken crude, besides those described in the EIS for Alternative 4.

- The MHA Nation submitted to EPA additional air emissions modeling related to refining of Bakken crude. Refinery air emissions will increase because of the additional refinery process units; however, no exceedances of the National Ambient Air Quality Standards (NAAQS) are anticipated with the potential exception of the SO_2 hourly standard. The hourly SO_2 standard may be exceeded if the flare operates more frequently than anticipated, and both the sulfur recovery unit and the back-up unit are down at the same time.

- Under the Clean Air Act (CAA), the allowable deterioration to air quality is expressed as an incremental increase to ambient concentrations of criteria pollutants, referred to as PSD increment. The revised air modeling predicted PM_{10} concentrations at nearfield receptors levels greater than the Class II PSD increment. The model comparison to the Class II increments was solely for informational purposes and does not represent a regulatory PSD increment consumption analysis under the CAA. The main refinery unit contributing PM_{10} emissions in the model was soybean crushing for biodiesel. The MHA Nation has determined that they no longer plan to produce biodiesel at the refinery. Instead they plan to purchase biodiesel from other facilities if needed.

- Given the Tribes' decision to use the Bakken crude as the refinery feedstock and based on additional analysis EPA conducted on the potential to emit from the proposed refinery, EPA concluded, in a letter to the Tribes dated March 24, 2010, that the project information no longer supports EPA's April 25, 2005 applicability determination that a preconstruction PSD permit would not be required for the proposed refinery. In a May 5, 2011 letter, EPA notified the Tribes that the March 9, 2011, Addendum to the *Air Quality Technical Report for the FEIS for the MHA Nation Proposed Clean Fuels Refinery Project* did not have the information needed for EPA to concur with the Tribes assessment that the facility would be a minor source for air emissions. EPA recommended that the Tribes apply for a PSD permit.

- With the proximity of the Bakken oil field to the refinery, other crude transportation options besides the pipeline described in the FEIS are feasible. The refinery operator may opt to receive crude oil via a local pipeline, truck or rail or a combination of these alternatives.

- A new brine waste stream would be produced from the new desalter at the refinery. This waste stream would be disposed of through a Class I UIC well. The FEIS analyzed the option of disposal of refinery wastewater into an underground injection well (Alternative C). The brine waste stream would be an additional source of wastewater.

- EPA determined the feedstock change would not alter EPA's determination of "no effect" on listed and potentially listed Threatened and Endangered species for the issuance of the NPDES discharge permit. EPA informally consulted with FWS regarding this reevaluation of the "no effect" determination.

VIII. ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and meets the purpose and need of the project. It also means the alternative which best protects, preserves and enhances historic, cultural and natural resources. Under Alternative D, the No Action alternative, no refinery would be constructed and EPA would not issue an NPDES or other federal effluent discharge permits. Alternative D best meets the definition of the environmentally preferable alternative; however, this alternative does not meet the applicant's purpose and need.

Based on the analysis in the FEIS, EPA's environmentally preferable action alternative for the effluent discharge is Alternative A, the preferred alternative. Alternative A is the environmentally preferable action alternative because:

- There would be effluent discharge limits, monitoring and reporting requirements; and
- EPA has the authority to take enforcement action if the conditions of the NPDES permit are not met.

Following EPA's reevaluation of the project described in the SIR, EPA's environmentally preferred alternative for effluent discharge continues to be Alternative A (as described above) with the addition of Alternative C for the brine waste stream. The MHA Nation would discharge brine to a Class I underground injection control (UIC) well that would be drilled on the project site. Alternative C would be the environmentally preferred action alternative for disposing of brine waste streams because:

- Brine or salty wastewaters are difficult to treat to the limits needed for discharges to surface waters and generating a concentrated saline or salt waste stream;
- There would be well construction requirements, injection permit limits and monitoring and reporting requirements to protect groundwater.
- EPA has the authority to take enforcement action if the conditions of the UIC permit are not met.

In addition, EPA recommends that the design of the refinery be modified consistent with the Alternative 4, and incorporate the changes described in the SIR to refine Bakken crude.

IX. EPA DECISION

This ROD documents EPA's decision to issue an NPDES permit for the refinery (Alternative A). The NPDES permit specifies discharge effluent limitations, outfalls, monitoring and reporting requirements, and other legal conditions governing discharges from the refinery. EPA developed effluent limits in consideration of Tribal water quality standards, North Dakota water quality standards for the purpose of ensuring compliance with the applicable water quality requirements of a downstream state, EPA CWA Section 304(a) water quality criteria, and the Effluent Limitation Guidelines and Standards for the Petroleum Refining Point Source Category pursuant to 40 C.F.R. § 419.36. The NPDES permit allows the discharge of effluent only through specific outfalls and when effluent water quality meets or is cleaner than the discharge limitations in the permit. The permittee is also required to frequently monitor the water quality of the effluent and report the analysis results to EPA.

The required mitigation measures set forth in this ROD and the NPDES permit conditions reflect EPA's authority to place limitations and conditions related to the NPDES discharge. Mitigation measures not directly related to EPA's NPDES authorities are recommended actions.

EPA's decision is based on several assumptions: First, the capacity of the refinery and refinery process units will be consistent with the revised proposal described in the SIR. Specifically, the refinery will have a capacity of 13,000 barrels per day of products. The feedstock will be the Bakken crude. The refining of heavier or sour crude oil feedstocks were not analyzed in the NEPA analysis. The EIS environmental analyses were also based on a properly designed, operated and maintained facility.

The second group of assumptions is that the layout of the refinery units will follow the configuration described in Alternative 4. Specifically, tanks will replace all ponds that have the potential to contain or generate hazardous waste and the refinery layout will be changed to avoid most wetland impacts from the discharge of dredged or fill material so that the project can avail itself of a U.S. Army Corps of Engineers Clean Water Act Section 404 nationwide permit rather than an individual permit. If the ponds proposed in the original proposal (Alternative 1) are constructed instead of tanks, or if the tanks are operated in a manner that does not meet the definition of an exempt wastewater treatment unit under RCRA the facility would need to apply to EPA for a RCRA TSD permit. Similarly, if the layout of the facility follows the Alternative 1 configuration or a similar layout, the MHA Nation would need an individual Section 404 permit under the Clean Water Act from the Army Corps of Engineers for the discharge of dredged or fill material into waters of the U. S.

X. FACTORS CONSIDERED IN THE DECISION

In reaching the decision to grant the NPDES permit for the proposed refinery, EPA is required to take into account "any significant beneficial and adverse impacts of the proposed action and a review of the recommendations contained in the EIS…" 40 C.F.R. § 122.29(c)(3).

EPA has taken into consideration the evaluations as described in the FEIS. The FEIS analyzes project alternatives, associated environmental impacts, and the extent to which the impacts can be mitigated. EPA has also considered the objectives of the project proponent and public

comments received during the EIS and NPDES permit review periods, and comments received following issuance of the Final EIS.

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. This is also reflected in Executive Order 13175, entitled, "Consultation and Coordination with Indian Tribal Governments" (Nov. 6, 2000); EPA Policy on Consultation and Coordination With Indian Tribes (May 4, 2011); the Presidential Memorandum issued on November 5, 2009, directing agencies to develop a plan to implement fully Executive Order 13175; and EPA's 1984 Policy for the Administration of Environmental Programs on Indian Reservation. With regard to the proposed project, EPA and BIA have continuously consulted with the Three Affiliated Tribes on a government-to-government basis. EPA and BIA have consulted with the Tribal Business Council at each major milestone in the NEPA process. EPA has taken into consideration the views of the MHA Nation as appropriate.

EPA has also consulted with the U.S. Fish and Wildlife Service, tribal and state historic preservation officers to determine compliance of EPA's permit action with the Endangered Species Act (ESA) and the National Historic Preservation Act (NHPA). With respect to ESA, on August 22, 2006, the U.S. Fish and Wildlife Service (FWS) sent a letter to EPA, concurring with EPA's determination that issuance of the new NPDES permit would have "no effect" on the identified species or their designated critical habitat, as described in EPA's biological evaluation in the DEIS. Also on August 22, 2006, FWS sent a memorandum to BIA, concurring with BIA's determinations that the construction and operation alternatives discussed in the DEIS will have "no effect" on the gray wolf, Dakota skipper, interior least tern, bald eagle, and pallid sturgeon. Further, FWS concurred with BIA determination that the construction and operation alternatives "may affect, but are not likely to adversely affect" piping plovers and whooping cranes. The "not likely to adversely affect" determination was based on the implementation of conservation measures the FWS described in a memorandum dated January 11, 2006. The FWS stated in the memorandum "that 4 to 6 inch rock (as opposed to gravel) should be used to line exposed in-slopes of all wastewater/storage ponds. Any ponds having the potential to hold contaminated water should be netted. The larger rock and netting will prevent the creation of an attractive nuisance for piping plovers and other migratory shorebirds." EPA and BIA notified the FWS of the completion of the FEIS in correspondence dated October 28, 2009, and September 11, 2009, respectively. EPA determined the change in refinery feedstock would not alter EPA's "no effect" determination regarding issuance of the NPDES permit. EPA informed the FWS of this finding by memo, dated July 15, 2011.

The State Historical Society of North Dakota, in a March 24, 2005 letter to the MHA Nation Cultural Preservation Office, identified a low probability for cultural resources on the proposed refinery site and recommended a "no historic properties affected" determination. Similarly, the MHA Nation Cultural Preservation Office, in an April 4, 2005 letter to Horace Pipe, made a "No Historic Properties Affected" determination for the two tracts of land in the proposed site.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was published in February 1994 and directs agencies, to the greatest extent practicable and permitted by law, to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs,

policies, and activities on minority and low-income populations in the United States and its territories. The Environmental Justice 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. EPA also conducted an Environmental Justice analysis for the proposed project to assess whether the occurrence and severity of possible adverse impacts that might result from environmental sources of stress, including, but not limited to, potential release of contaminants to air, surface water, ground water and soils are disproportionately higher in the potentially affected community than in a larger reference community. EPA concluded that there would be no disproportionately high and adverse effects on minority or low-income communities.

XI. MITIGATION MEASURES; PERMITS, DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

The following table summarizes the permits, plans, monitoring, inspecting and mitigation measures for the agencies' preferred alternatives. The table also describes: whether or not the measures are required or are likely to be implemented; who would be responsible for implementing the mitigation measures; reporting and monitoring requirements, if any; and the agency that could enforce the measure, if applicable.

Mitigation Measures, Environmental Permits, Plans, Monitoring, Inspections, Reporting and Follow-up for the Agencies' Preferred Alternatives: Revised Construction Alternative (designed following Alt. 4) and Alternatives A (issue NPDES permit) and C (issue UIC permit) for brine waste water

Mitigation Measures, Permits, Plans, Monitoring, Reporting and Follow-up	Is the measure required?	Measure likely to be implemented?	Who Imple-ments?	Reason for Mitigation	Report to?	Enforced by?
NPDES Permits						
NPDES permit during refinery operations						
Wastewater discharges must meet or be cleaner than permit effluent limits	Permit requirement	Yes	MHA Nation	Protect water quality.	EPA	EPA
Monitoring of effluent quality may also include downstream water quality monitoring	Permit requirement	Yes	MHA Nation	Determine if effluent water quality is in compliance with permit	EPA and TAT Environ. Division	EPA
Best Management Practices (BMP), separation of contaminated and uncontaminated stormwater	Permit requirement	Yes	MHA Nation	Prevent/reduce contamination of water.		EPA
Develop and Implement a Stormwater Pollution Prevention Plan (SWPPP)	Permit requirement	Yes	MHA Nation	Prevent/reduce contamination of water.	Maintain records on site	EPA
Facility inspections – Implementation of BMP, and SWPPP	Permit requirement	Yes	MHA Nation	Evaluate implementation of BMPs and SWPPP	Maintain records on site	EPA
NPDES general stormwater construction permit						
Develop and Implement a Stormwater Pollution Prevention Plan. Typical measures include: silt fences, erosion protection	Permit requirement	Yes	MHA Nation	Protect water quality	Maintain records on site	EPA
Inspect/monitor implementation of Stormwater Pollution Prevention Plan. Typical measures include: silt fences, erosion protection	Permit requirement	Yes	MHA Nation	Determine if SWPPP is being properly implemented and if the plan is sufficient to protect water quality.	Maintain records on site	EPA
UIC Permit for Brine Disposal						
Obtain a Class I UIC permit before constructing a brine disposal injection well.	Required	Yes	MHA Nation	Protect underground sources of drinking water	EPA	EPA

Mitigation Measures, Permits, Plans, Monitoring, Reporting and Follow-up	Is the measure required?	Measure likely to be implemented?	Who Imple-ments?	Reason for Mitigation	Report to?	Enforced by?
Financial Assurance						
Bonding/Financial Assurance Financial assurance for cleanup during operations and closure	Recommended.	MHA Nation considering implementation, no action to date.	MHA Nation	Money to pay for clean-up	N/A	N/A
	May be required later, under RCRA generator regulations, if the refinery cannot demonstrate clean closure		MHA Nation/	" "	EPA	EPA
During Operations -- Inspections, Monitoring and Clean-up of Hazardous Wastes, Oil, and Petroleum Products						
Ground Water						
Ground water monitoring during operation following ground water quality monitoring program	General ground water monitoring recommended	MHA Nation considering implementation, no action to date.	MHA Nation	To determine if ground water has become contaminated, the extent of contamination, and to help evaluate remediation options.	N/A	N/A
Ground water monitoring for UIC Permit	Required	Yes	MHA Nation	Determine if UIC permit conditions are being met	EPA	EPA
Tribal ground water protection program	Recommended	MHA Nation considering implementation, no action to date.	MHA Nation	Protection of Tribes' groundwater resources	N/A	N/A
Cleanup of Spills and Leaks						
Clean-up spills and leaks of hazardous waste, oil and petroleum products and oily water.	Required	Yes	MHA Nation	Reduce/prevent contamination Clean up contamination	Reporting depends on spill type/volume EPA or Coast Guard	EPA
	Cleanup actions required under RCRA included in the RCRA, SPCC and FRP plans					

Mitigation Measures, Permits, Plans, Monitoring, Reporting and Follow-up	Is the measure required?	Measure likely to be implemented?	Who Imple-ments?	Reason for Mitigation	Report to?	Enforced by?
Inspections for spills or leaks from process units & tanks for the entire facility	Required	Yes	MHA Nation	Determine presence of spills and leaks. Check the integrity of tanks and containment. Indentify problems early to quickly initiate corrective actions such as repairs and clean-up.	Maintain records on site	EPA
RCRA Inspection of hazardous wastes accumulation areas –RCRA Part 262 and other regulations cross referenced by 262, such as Parts 263 and 265 and 268, as applicable	Required	Yes	MHA Nation	Determine if wastes properly stored and contained.	Maintain records on site	EPA
Inspection of hazardous waste tanks regulated by RCRA –RCRA Part 262 regulations	Required	Yes	MHA Nation	Determine if hazardous wastes are properly contained (e.g., overtopping, ruptures, air releases, deterioration of tanks and ancillary equipment, no spills or leaks, covers and valves properly operating).	Maintain records on site	EPA
Closure of Refinery						
General refinery closure & reclamation plan - Monitoring of soil and ground water - Inspection of the site during closure - Plan to decommission the refinery	Recommended	MHA Nation considering implementation, no action to date.	MHA Nation	To determine if the site is sufficiently cleaned up and reclaimed to return to agricultural use.	N/A	N/A
RCRA closure plan for entire facility Includes closure requirements, financial assurance, monitoring. and inspection of specific hazardous waste management units (HWMU)	Recommended	Unlikely to be implemented.	MHA Nation	To determine if hazardous waste units have been successfully closed and if cleanup has been sufficient	Recommended	N/A
RCRA Closure Plan for temporary hazardous waste storage areas –RCRA Part 262 regulations	Required for temporary hazardous waste storage areas	Yes	MHA Nation	Plan to decommission and clean up if needed temporary hazardous waste storage areas.	EPA	EPA
RCRA Closure Monitoring of hazardous waste storage areas –RCRA Part 262 regulations	Required	Yes	MHA Nation	Determine if the area(s) used to temporarily store hazardous wastes have become contaminated.	EPA	EPA

Mitigation Measures, Permits, Plans, Monitoring, Reporting and Follow-up	Is the measure required?	Measure likely to be implemented?	Who Imple-ments?	Reason for Mitigation	Report to?	Enforced by?
Air Quality Protection						
Part 60 New Source Performance Standards and Part 61 National Emission Standards for Hazardous Air Pollutants	Required	Yes.	MHA Nation	Air quality emission limitations and monitoring requirements for specific petroleum refinery process units.	EPA	EPA
Operating permit (Part 71) for the facility, Air Title V CAA permit. Refinery must submit Part 71 application within 12 months of start-up. Within 18 months of receipt of a complete application, Region 8 must issue the operating permit	Required	Yes	MHA Nation	Outlines applicable air quality emission limits and monitoring requirements.	EPA	EPA
Unit emissions monitoring to be required through mix of NSPS, NESHAP, or future operating permit	Required, for specific units of the refinery.	Yes	MHA Nation	Determine compliance with air quality regulations and permit.	EPA	EPA
Tribal air quality monitoring near proposed site	Recommended	Monitoring station now installed near Makoti.	MHA Nation	Determine air quality in the vicinity of the refinery.	EPA	N/A
Air quality mitigation measures: - Control flaring to a maximum of a hundred hours per year and add a flare gas recovery unit - Install a second sulfur recovery unit as a full backup	Recommended	Yes, MHA Nation included in revised air information reports	MHA Nation	Reduce air emissions	N/A	N/A
Refinery operations plans						
Refining of light, sweet crude only	Modified Refinery proposal	Yes	MHA Nation	Fewer refinery processes, and few heavier petroleum compounds reducing air and water pollution.	N/A	N/A

Mitigation Measures, Permits, Plans, Monitoring, Reporting and Follow-up	Is the measure required?	Measure likely to be implemented?	Who Imple-ments?	Reason for Mitigation	Report to?	Enforced by?
Recycling of wastewater, operation of wastewater treatment plants.	Included as part of MHA Nation proposal	Yes	MHA Nation	Reduce water consumption and reduce volume of wastewater discharges from facility.	N/A	N/A
Refinery design and construction plans						
Double-liners and leak detectors, evaporation and holding ponds.	Included as part of refinery redesign for Alternative 4	Yes	MHA Nation	Prevent/reduce potential for contamination from leaks and spills.	N/A	N/A
Hazardous waste containers/tanks, e.g., double-walled tanks	Required, Generator regs.	Yes	MHA Nation	Prevent/reduce potential for contamination from leaks and spills.	N/A	EPA
Separate oil and non oily stormwater handling systems	Partially required by NPDES permit	Yes	MHA Nation	Reduce volume of oily waste water and reduce wastewater treatment costs.	N/A	EPA
Controls to prevent mixing of uncontaminated stormwater with potentially contaminated stormwater	Partially required by NPDES permit	Yes	MHA Nation	Reduce volume of oily waste water and reduce wastewater treatment costs.	N/A	EPA
Pave vulnerable areas such as the loading and unloading areas. Potentially contaminated (oily) wastewater conveyed in pipes or paved ditches.	Partially required by SPCC regulations and included in refinery design	Yes	MHA Nation	Protect soil and groundwater from contamination and contain spills on site.	EPA	EPA
Desalter wastewater holding tanks with sufficient storage for at least one weeks brine volume.	Recommended	Unknown	MHA Nation	Backup for brine disposal UIC well.	N/A	N/A
Emergency and spill response plans						
Spill Prevention, Control, and Countermeasure, Plans (SPCC) -- Oil Pollution Act	Required	Yes	MHA Nation	Prevent/contain oil and oily water spills to protect surface waters	EPA	EPA
Facility Response Plan (FRP) – Oil Pollution Act	Required	Yes	MHA Nation	Prevent/contain oil and oily water spills to protect surface waters provide. Develop measures to respond to oil spills that could reach surface waters.	EPA	EPA

Mitigation Measures, Permits, Plans, Monitoring, Reporting and Follow-up	Is the measure required?	Measure likely to be implemented?	Who Imple-ments?	Reason for Mitigation	Report to?	Enforced by?
CAA Risk Management Plan Hazardous Materials	Required	Yes	MHA Nation		EPA	EPA
Superfund Emergency Plan	Required	Yes	MHA Nation		EPA	EPA
RCRA Preparedness and Prevention Plans: Hazardous Waste Contingency Plan (HWCP) and refinery employee training for hazardous waste management and emergency response	Required	Yes	MHA Nation		EPA	EPA
Transportation Act (HMTA) Response Plan	Required	Yes	MHA Nation		EPA	EPA
Wetlands Permits and Mitigation						
Plan to replace or mitigate any non-jurisdictional wetlands filled by project (fill and other impacts)	Recommended	Unlikely to be implemented	MHA Nation	Protect/reduce impacts to wetlands resources		
Jurisdictional wetlands impacted by the project will need a Nationwide 404 permit, if the project is designed to following Alternative 4. If the layout follows Alternative 1, an individual 404 permit will be required.	Required	Yes	MHA Nation	Protects/reduce impacts to wetlands resources	COE	COE
Wildlife mitigation measures						
Cobbles to discourage plovers from water impoundments Bird friendly power line construction specifications	Recommended	Yes, Tribes have agreed to implement. No action to date.	MHA Nation	Protect piping plover, whooping cranes and raptors.	FWS	FWS
				Failure to implement these requirements could result in an unauthorized taking pursuant to the ESA.		
Netting of ponds with oily water	Measure no longer needed. Ponds with oily water have been replaced with tanks per design modifications for alternative 4.		N/A	Protect birds from oily or hazardous wastes	N/A	N/A

XI. CONTACTS

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Approved by:

James B. Martin
Regional Administrator

August 3, 2011
Date