FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED GAS-TO-LIQUIDS FUELS PRODUCTION AND DEMONSTRATION PROJECT

AGENCY: U.S. Department of Energy (DOE)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE has prepared an Environmental Assessment (EA), DOE/EA-1417, to analyze the potential impacts of participating in a project for constructing a facility to produce diesel fuel from natural gas at the Tulsa Port of Catoosa Industrial Park, Rogers County, Oklahoma. Ultra-clean diesel fuel produced by the facility would be tested in diesel-fueled buses operated by the Washington (DC) Metropolitan Area Transit Authority and by the National Park Service at Denali National Park and Preserve, Alaska. Fuels produced by the proposed facility would also be tested in prototype engines to determine performance with advanced emission control systems. If approved, DOE would provide approximately 44% of the $36 million required for design, construction, and initial operation of the fuels production facility and for testing product fuels.

Based on the analyses in the EA, DOE has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969, 42 United States Code 4321, et *seq*. Therefore, preparation of an Environmental Impact Statement is not required, and DOE is issuing this FONSI.

COPIES OF THE EA ARE AVAILABLE FROM:

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BACKGROUND: In response to a competitive solicitation for research and development on Ultra-Clean Transportation Fuels, a proposal from Integrated Concepts & Research Corporation (ICRC) and its partners was selected for financial support. ICRC proposed to construct a facility for producing relatively small quantities of near-zero sulfur content diesel fuel, which is subject to new fuel quality regulations scheduled to become effective starting June 1, 2006, and to demonstrate both

the technology to produce ultra-clean diesel fuel that would meet future regulatory requirements and the performance of ultra-clean diesel fuel during fleet vehicle tests in two geographically dissimilar regions of the United States. Performance characteristics of fuel products from the facility would also be tested at existing engine-test laboratories and in prototype engines with advanced emission control systems.

Engine tests would demonstrate compatibility of the ultra-clean diesel fuel with injection system components and establish the potential emission benefits and effects from use of the fuel.

DESCRIPTION OF THE PROPOSED ACTION: The proposed action is for DOE to provide, through a cooperative agreement, approximately 44% of the cost for design, construction, and demonstration testing of facility to produce 70 barrels-per-day of liquid transportation fuels, primarily ultra-low sulfur diesel fuel, from natural gas. The fuels production facility would be constructed on a IO-acre, leased site within the Tulsa Port of Catoosa Industrial Park at Rogers County, Oklahoma.,

The proposed facility would be operated for a maximum of 6 months under DOE funding to produce sufficient quantities of ultra-clean diesel fuel for testing in three buses operated by the Washington (DC) Metropolitan Area Transit Authority (WMATA) and in three buses used as shuttles for Park tours at Denali National Park and Preserve in Alaska. The results from facility operation and from vehicle testing would by used by ICRC and its partners to establish the economic viability of this gas-to-liquids technology for producing ultra-clean transportation fuels.

Following the 6-months of operation for DOE under the cooperative agreement, the fuels production facility could continue to operate with private funding.

ENVIRONMENTAL CONSEQUENCES: The environmental consequences from constructing and operating the proposed facility at the Tulsa Port of Catoosa and from testing the ultra-clean diesel fuel product in the WMATA and Denali National Park bus fleets were analyzed in the EA. The environmental resources covered by the analyses included: air; water and wastewater; ‘solid and hazardous wastes; aesthetics and visual resources; land use; soils and geology; floodplains and wetlands; biodiversity and environmentally sensitive resources; ecological resources (threatened and endangered species); cultural resources (historical and archaeological properties); socioeconomic resources; worker safety and health, traffic and transportation; and noise. Environmental justice and long-term and cumulative impacts were also considered.

The environmental analysis identified that the most notable changes to result from the proposed project would occur in the following areas: air emissions; aesthetics and land use; noise levels; and transportation. No substantive adverse impacts or environmental concerns were identified from analyzing the effects of these changes.

AIR EMISSIONS: A temporary increase in air emissions would occur during construction of the fuels production facility due to vehicular exhaust emissions and potential “fugitive” particulate emissions

from wind erosion during site development. If needed, controls such as water application would be applied to control dust generation. Vehicle exhaust would be limited to the short duration of the construction effort. Facility operation would be accompanied by emissions of criteria pollutants, primarily nitrogen oxides, carbon monoxide, and volatile organic compounds, from combustion sources, storage tanks, and plant equipment. Total emissions would be sufficiently low for classification of the facility as a minor emission ***source.*** ***De minimus*** emissions of toxic air pollutants (ammonia, methanol, pentane, and hexane) would also be produced from operation of a vapor combustor.

Ultra-clean diesel fuel used during fleet tests would replace conventional diesel fuel normally used in the six buses planned for the demonstration tests. During the 5 to 6 months of demonstration tests, exhaust emissions would be expected to be reduced by essentially 100% for sulfur oxides, 46% for carbon monoxide, 38% for hydrocarbons, 30% for particulates, and 8% for nitrogen oxides.

WATER RESOURCES: Construction activities would require temporary additional water usage, including water usage for dust suppression. No surface water or groundwater would be used. Operations would require about 10 gallons-per-minute of potable water.

WASTEWATER: Operation of the fuels production facility would produce up to 6.7 gallons-per-minute of wastewater, which would be treated for oil separation and pH adjustment prior to qualifying for discharge to the City of Tulsa's Publicly Owned Treatment Works.

SOLID AND HAZARDOUS WASTES: Municipal solid waste would be produced at an average rate of 8 cubic feet per day during the three-year project. This non-hazardous waste would be transported to a public landfill permitted by the City of Tulsa Public Works Department. Potentially hazardous wastes would consist of small quantities of used catalysts, caustic materials used for water treating, and oil-waterseparator residues. Consistent with State of Oklahoma regulations, these wastes would be transported to an appropriately permitted treatment or disposal facility outside Oklahoma.

AESTHETICS AND LAND USE: Construction of the proposed facility on 10 acres of leased property within the 2,000-acre Tulsa Port of Catoosa Industrial Park would result in installation of an industrial facility consistent in type and scale with other tenants at the Industrial Park. The proposed facility would exhibit vertical profiles ranging from 20 to 50 feet elevation for storage tanks and exhaust stacks, which are consistent with profiles of other operations at the Industrial Park. An existing fuel tank owned by WMATA and a temporary, skid-mounted fuel tank to be installed in the bus fueling area at Denali National Park would be used for dispensing ultra-clean diesel fuel; these would comprise the only physical changes to existing operations within WMATA and Denali National Park.

SOIL/GROUNDWATER: Potential short duration effects due to erosion could occur during the 12-month construction effort on the 1 O-acre leased site. Soils on adjacent properties would not be affected. Control measures, such as water application to suppress creation of windbome dust during

construction and use of silt fences and hay bales to control erosion and sedimentation, would be used as necessary. A Storm Water Pollution Prevention Plan would be prepared and used during construction to control and minimize erosion. No concerns exist regarding potential groundwater contamination impacts since construction activities would not reach groundwater levels. Secondary containment would be used for storage tanks to avoid contamination from accidental releases and leaks.

FLOODPLAINS AND WETLANDS: The proposed facility would not be located within either a 100-year or a 500-year floodplain. No wetland areas exist at the site or within any area that would be affected by the proposed facility.

BIODIVERSITY AND ENVIRONMENTALLY SENSITIVE RESOURCES: The proposed facility would be located in an area that is devoid of environmentally sensitive resources and currently vegetated with locally abundant woodlands, grasses, and forbs.

ECOLOGICAL RESOURCES: The U.S., Fish & Wildlife Service was consulted and confirmed that no Federally listed species are known to occur within the vicinity of the project area.

HISTORIC AND CULTURAL RESOURCES: Consultations regarding resources of historic, cultural, or archaeological value indicated that no known resources of significance are located within the project's area of potential effect.

SOCIOECONOMICS: Labor requirements during the 12-month construction period would be readily available from the local labor force, and an operating workforce of 24 jobs, comprising 17 job transfers and 7 new jobs, would be needed. The required operating labor would increase the current level of 2,600 employees at the Industrial Park by about 1%.

WORKER HEALTH AND SAFETY: Occupational hazards would exist during facility construction and operation. Safety and health regulations established by the Occupational Safety and Health Administration are applicable to the types of construction and operational activities that would be needed for the proposed project and would be implemented to protect workers and the public.

TRAFFIC AND TRANSPORTATION: Temporary traffic increases would occur during the 12-month construction period, and a permanent increase of up to 24 additional vehicles could be experienced during facility operation. This additional traffic would represent a negligible increase over current traffic produced by the 50 corporate enterprises and 2,600 employees at the Industrial Park.

NOISE: Temporary and intermittent noise disturbances would result from operation of machinery and increased traffic during the 12-month construction effort. These noise disturbances would be localized, sporadic, and limited to normal daytime working hours. Workers would be required to wear proper hearing protective equipment. Noise levels during facility operation would be limited to 60 dB or 4 dB above background, whichever is greater.

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ENVIRONMENTAL JUSTICE: The proposed activity would occur in an area with no low income or minority communities. No disproportionately high or adverse impact on minority or low-income communities would be expected.

LONG-TERM AND CUMULATIVE IMPACTS: Following completion of the anticipated 6-month, DOE-sponsored operating program, ICRC and its partners could continue to operate the fuels production plant. The scale and type of long-term operation would not be expected to change, and no new environmental consequences would beanticipated. Contributions to cumulative impacts resulting from use of the lo-acre site within the 2,000-acre Industrial Park would be negligible.

ALTERNATIVES CONSIDERED: In addition to the proposed action, the no-action alternative was considered. Under the no-action alternative, DOE would not provide funding to construct the fuels production facility. In the absence of DOE funds, ICRC and its project partners would be expected to seek a replacement source of funds. In the absence of additional funds, the proposed site at the Tulsa Port of Catoosa would remain available for lease to other industrial tenants, and the future environmental consequences would be dependent on the planned use by any new tenant.

PUBLIC AVAILABILITY: A draft EA was distributed for review and comment to Federal and State agencies and to the public. Copies were made available for review at the Tulsa City-County Library and the Catoosa Public Library, and the EA was posted for review on the DOE/National Energy Technology Laboratory's web site. Public notices announcing availability of the draft EA were placed in the Tulsa World and Claremore Proeress newspapers. No comments expressing opposition to the proposed action were received.

DETERMINATION: Based on the information and analyses in the EA, DOE has determined that the proposed Federal action, to provide cost-shared funding for design, construction, and initial operation of a 70 barrel-per-day ultra-clean transportation fuels production facility at the Tulsa Port of Catoosa Industrial Park in Rogers County, Oklahoma, and to conduct fleet vehicle and engine tests of produced diesel fuel, does not constitute a major Federal action that would significantly affect the quality of the human environment within the meaning of the National Environmental Policy Act. Therefore, an Environmental Impact Statement is not required and DOE is issuing this FONSI.

ISSUED IN PITTSBURGH, PA, this 13 day of May, 2002.

Rita A. Bajura
Director
National Energy Technology Laboratory