Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

DOE/EA 1773

FINDING OF NO SIGNIFICANT IMPACT

INEOS New Planet Bioenergy Demonstration Project, Vero Beach, Florida

AGENCY: U.S. Department of Energy, Golden Field Office

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The U.S. Department of Energy (DOE) has completed an Environmental Assessment (EA) that analyzes potential impacts associated with the final design, construction, and initial operation of the INEOS New Planet BioEnergy commercial scale integrated demonstration bioenergy center near Vero Beach, Indian River County, Florida (the "INEOS Project" or the "proposed project"). All discussion, analysis, and findings related to the potential impacts of construction and operations of the INEOS Project, including the applicant-committed mitigation measures, are contained in the Final EA. The Final EA is hereby incorporated by reference.

The INEOS Project would include the following:

- The facility would produce eight million gallons per year of cellulosic ethanol. Steam generated by the production of the bioethanol would be used to power the biorefinery and generate six megawatts of electricity for commercial use.

- The process technology of the proposed project would combine thermochemical and biochemical processes. Waste heat and vent gas streams would be used to generate steam and electric power.

- The feedstock, estimated at 150,000 tons per year, would primarily consist of locally available renewable biomass including vegetative waste and the biogenic fraction of post-recycling municipal solid waste. It is estimated that approximately 80 percent of the feedstock would be vegetative waste and the remainder would consist of woody construction debris.

This Finding of No Significant Impact (FONSI) was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321, *et seq.*, the Council on Environmental Quality Regulations for Implementing NEPA, as amended, 40 CFR 1500-1508, and Department of Energy NEPA Regulations, 10 CFR 1021.322.

The FONSI supports DOE's cost-shared funding of the construction and initial operation of the INEOS New Plant BioEnergy commercial scale integrated demonstration bioenergy center near Vero Beach, Indian River County, Florida.

ENVIRONMENTAL IMPACTS ANALYSIS: In compliance with NEPA and the DOE NEPA implementing regulations (10 CFR Part 1021) and procedures, the EA for the proposed project examined the potential environmental impacts of DOE's decision to provide funding and also examined a No-Action Alternative. Under the No-Action Alternative, DOE would not fund the proposed project and the INEOS Project would not be constructed or operated.

Since the existing site is zoned industrial, was used for industrial purposes, and still contains industrial facilities, there would be no change in land use due to the proposed project. Further, because the INEOS

Project would be developed entirely within the footprint of a citrus processing facility formerly operated by Ocean Spray Cranberries, Inc. ("Ocean Spray"), there would not be any permanent change to land use, planning and zoning in the county.

The land surrounding the proposed project site is zoned Light Industrial, (Ag-1 one house per five acres) and General Commercial. According to the Natural Resources Conservation Service prime farmland mapping, no prime farmland or unique farmland exists in the area of the proposed project.

Indian River County (IRC) currently is designated as being in attainment for all criteria pollutants under both the National Ambient Air Quality Standards and the Florida Ambient Air Quality Standards. Emissions of regulated and criteria pollutants are projected to be lower than the major stationary source threshold of 100 tons per year. The proposed project would comply with all applicable requirements of the U.S. Environmental Protection Agency (USEPA), Florida air regulations for permits and certificates, and the Florida general emissions limiting standards.

Surface water impacts would consist of filling and rerouting part of a small north-south ditch and installing a culvert in the 74th Avenue ditch. However, while this would affect 0.39 acres of U.S. Army Corps of Engineers (USACE) jurisdictional surface water, the rerouting would create 0.42 acres of surface waters and offset the surface water impacts. Therefore, no additional mitigation would be required by the USACE.

Minimal effects are expected on groundwater resources in the area. The project site is not located over an active groundwater recharge area.

Further, the project would require a number of water protection permits for construction and operation from the USACE, the Florida Department of Environmental Protection (FDEP), the St. John's River Water Management District (SJRWMD), the Indian River County Water Control District (IRCWCD), and Indian River County.

Water use during operations would stay within the limits specified in the Consumptive Use Permit originally issued to Ocean Spray and transferred with modification to INP BioEnergy by the SJRWMD. The SJRWMD regulations require the impacts to the aquifer and neighboring use to be minimal with no detrimental affects to the aquifer or no permit modification will be issued. Therefore, minimal effects are expected to the regional water supply or the aquifer.

Domestic wastewater would be disposed of through a new connection to the IRC sanitary sewer. The IRC has indicated that adequate capacity exists at its West Regional treatment facility and expects a permit to be issued.

Process wastewater and stormwater will be disposed into a deep injection well, at about one-tenth of the past permitted level. An Administrative Order was issued to Ocean Spray in December 2008, requiring identification of the source and resolution of an issue related to increasing Total Kjeldahl Nitrogen levels in the triple-zone monitoring well. It is expected that resolution will occur through corrective actions, rehabilitation of the monitoring well system, termination of the deep injection well operations, or another alternative approved by the FDEP.

The primary byproduct of the INEOS bioenergy process is residual ash that remains from the gasification process. The projected volume of residual ash is estimated at 30 tons per day (9,900 tons per year based on 330 days of operation). The ash would be non-hazardous and would be used, if a market exists, as a soil amendment or road base. Absent a market or if there is a surplus of ash, the ash would be sent to the adjacent IRC SWDD landfill for disposal or use as a daily cover.

Stillage from the fermenters contains spent cells that would require disposal. Due to the potentially high solids content of this wastewater stream, several treatment options are being considered to determine the best approach. FDEP would make the appropriate determination during the permit application review process.

Operations of the proposed project would not result in the production or release of any hazardous materials other than the limited volume of air pollutants. Compliance with the deep injection well permit would limit potential adverse impacts from the generation of waste materials during operations of the proposed project. All production tanks containing ethanol, denaturant, and off-spec material would have redundant level instrumentation to prevent the spilling or release of hazardous material. In addition, containment dikes constructed around the tanks would minimize the impact of a potential spill.

Threatened or endangered species were not observed directly on the proposed project site during field visits, nor were they reported in relevant literature including the Florida Natural Areas Inventory (FNAI), Bald Eagle nest locator or the Gopher Tortoise burrow survey. Three bald eagles were observed flying over the site during a field survey but the site does not contain bald eagle nests or suitable nesting trees. While one gopher tortoise was observed on a road on the northern portion of the site, a species-specific survey found no gopher tortoises or burrows. Since no Federal threatened or endangered species were observed on site during field surveys nor is there suitable habitat, and their presence is not supported in the FNAI report, the project should not have any impact on threatened or endangered species.

None of the historical records investigated showed the property having been used for any purpose or development other than the Ocean Spray citrus processing and pectin processing plant. This was confirmed by aerial photographs, property tax records, and conversations with knowledgeable local persons. The Florida State Historic Preservation Office concurred with DOE that no historic properties would be affected.

DOE notified the Miccosukee nor Seminole tribes because in DOE's judgment, these two tribes may be directly or indirectly affected by the Proposed Action. Neither tribe expressed concern about the proposed project.

Noise from the project operations is expected to be well within the normal daytime background levels at the nearest residence, about 0.25 miles away from the facility. It is possible that nighttime noise could be intermittently audible although not intrusive at the nearest residence.

The footprint for the facility would be similar to the floor area of the former citrus plant structures and no equipment, including the proposed distillation towers, would exceed 160 feet above ground level, the ultimate proposed height of the adjacent landfill. The proposed facilities would not result in a significant change to the existing visual quality of the project site and surrounding area.

Traffic as a result of the proposed project is projected to be 278 trips per day, which represents an increase of 29 trips per day more than traffic associated with the former Ocean Spray facility. This includes employee vehicle trips, daily truck trips necessary for hauling feedstock and other materials to the facility, removing the final product (ethanol), and removing waste materials generated during operations (ash). IRC does not expect these traffic volume increases to be significant.

There is not a disproportionately high minority or low-income population in the vicinity of the proposed project site compared to the surrounding population of IRC. Further, there are no unique exposure pathways, sensitivities, or cultural practices that would result in different impacts on minority or low-income populations. Since the proposed project also would not result in any significant adverse impacts

to air quality, water quality, or the availability of public utilities and services, there would be no significant impact to environmental justice populations.

PUBLIC PARTICIPATION IN THE EA PROCESS: In accordance with applicable regulations and policies, DOE sent a scoping notice on April 20, 2010 to Federal, state, and local agencies; tribal governments; elected officials; businesses; organizations and special interest groups; and members of the general public. DOE published the Notice of Scoping online at the DOE Golden Field Office Public Reading Room.

Scoping and consultation letters were sent to the U.S. Army Corps of Engineers; the U.S. Fish and Wildlife Service (USFWS); USEPA; the Miccosukee Tribe of Indians of Florida, the Seminole Tribe of Florida; multiple offices of the FDEP; the St. Johns River Water Management District; the Florida Fish and Wildlife Conservation Commission; the Florida Division of Historic Resources; the Florida Department of Transportation; and the Florida Energy and Climate Division. Copies also were sent to multiple offices of Indian River County; the City of Vero Beach, the Indian River Farms Water Control District; the Indian River Soil and Water Conservation District; the Treasure Coast Regional Planning Council, and the Indian River County Chamber of Commerce. Adjacent property owners, the Indian River Neighborhood Association, and the Indian River Aerodrome Airport also received the scoping notice.

DOE received responses to its correspondence from USEPA, USFWS, the Florida Department of State Division of Historical Resources, and FDEP. The EA includes consideration of all responses received.

On August 16, 2010, the Draft EA for the proposed project was posted to the Golden Field Office online public reading room. Notice of Availability postcards were mailed to potentially interested parties announcing the availability of the draft EA and inviting comments on the draft. DOE received no comments on the Draft EA.

DETERMINATION: Based on the information presented in the Final EA (DOE/EA 1773), DOE determines that providing funding to support final design, construction and initial operation of the INEOS New Planet BioEnergy biorefinery would not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act. Therefore, the preparation of an Environmental Impact Statement is not required, and DOE is issuing this Finding of No Significant Impact (FONSI).

The applicant-committed measures to obtain and comply with all appropriate Federal, state, and local permits required for construction and operation of the biorefinery, and to minimize potential impacts through the implement of Best Management Practices, shall be incorporated and enforceable through DOE's financial assistance agreement.

The Final EA is available for review at: http://www.eere.energy.gov/golden/Reading_Room.aspx.

For questions about this FONSI, contact:

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For further information on the DOE NEPA process contact:

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Issued in Golden, Colorado this 13th day of September, 2010

Carol Battershell
Acting Executive Director for Field Operations