

**FINDING OF NO SIGNIFICANT IMPACT
FOR
ELECTRIC DRIVE VEHICLE BATTERY AND COMPONENT MANUFACTURING
INITIATIVE PROJECT
BASF CATALYSTS LLC
ELYRIA, OHIO**

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

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE completed the *Final Environmental Assessment for BASF Catalysts LLC Electric Drive Vehicle Battery and Component Manufacturing Initiative Project, Elyria, OH* (DOE/EA-1717). Based on the analyses in the Environmental Assessment (EA), DOE determined that its Proposed Action, awarding a federal grant to BASF Catalysts LLC (BASF) for the construction of a new manufacturing plant, would result in no significant adverse impacts. DOE further determined that there could be beneficial impacts to the local economy and to the nation's air quality and transportation industry from implementation of BASF's proposed project.

BACKGROUND: As part of the *American Recovery and Reinvestment Act of 2009* (Recovery Act; Public Law 111-5, 123 Stat. 115), DOE's National Energy Technology Laboratory, on behalf of the Office of Energy Efficiency and Renewable Energy's Vehicle Technologies Program, is providing up to \$2 billion in federal funding for competitively awarded agreements to facilitate the construction of U.S. manufacturing plants (including increases in production capacity at existing plants) to produce advanced batteries and electric drive components.

The federal action of providing funding for these projects, known as the Electric Drive Vehicle Battery and Component Manufacturing Initiative, requires compliance with the *National Environmental Policy Act of 1969* (NEPA; 42 U.S.C. 4321 et seq.), the Council on Environmental Quality regulations (40 CFR Parts 1500 to 1508) and DOE's NEPA implementing procedures (10 CFR Part 1021). DOE prepared an EA to evaluate the potential environmental consequences of providing a grant for this proposed project under the initiative.

PURPOSE AND NEED: The overall purpose and need for DOE action pursuant to the Vehicle Technologies Program and the funding opportunity under the Recovery Act are to accelerate the development and production of various electric drive vehicle systems by building or increasing domestic manufacturing capacity for advanced automotive batteries, their components, recycling facilities, and electric drive vehicle components in addition to stimulating the U.S. economy. This and the other selected projects are needed to reduce the U.S. petroleum consumption by investing in alternative vehicle technologies. The proposed project will also meaningfully assist with the nation's economic recovery by creating manufacturing jobs in the United States in accordance with the objectives of the Recovery Act.

DESCRIPTION OF THE PROPOSED ACTION: DOE's Proposed Action is to provide a grant to partially fund BASF's proposed project -- the planning, design, construction and startup

of a manufacturing plant that would produce cathode materials used in lithium-ion batteries. The plant would be constructed within an existing BASF facility located in Elyria, Lorain County, Ohio. The new building would have at least 40,000 square feet of total floor space in a building with up to 5 stories and a 10,000 square-foot footprint. Production capacity would be sufficient to produce enough cathode material for 20,000 to 100,000 plug-in hybrid electric cars. Raw materials used in this manufacturing include metal salts, metal powders, hydroxides, and acids. The raw materials are mixed, chemically converted, and heat-treated. The final powdered cathode material would be packaged for shipping.

The existing BASF facility currently has space for the new building, has experience with the cathode production processes, and already produces several base metals products. This plant would support anticipated growth in the lithium-ion battery industry and, more specifically, the electric drive vehicle industry and hybrid-electric vehicle industry. If approved, DOE would provide \$24.6 million in financial assistance under a cost-sharing arrangement with BASF. The total cost of the project is estimated at \$49.2 million.

ALTERNATIVES CONSIDERED: In addition to the proposed project, DOE considered the No-Action Alternative as required under NEPA. Under the No-Action Alternative, DOE would not provide funds for the proposed project. For the purposes of the EA, DOE assumed that the project would not proceed without DOE funding. This assumption establishes a baseline against which the potential environmental impacts of the proposed project are compared.

ENVIRONMENTAL CONSEQUENCES: DOE considered seventeen environmental resource areas in the preparation of the EA. However, not all areas were evaluated at the same level of detail. DOE focused more detailed analysis on areas that would require new or modified permits, have the potential for significant adverse environmental impacts, or have the potential for controversy. The areas DOE evaluated in more detail included air quality; noise; and solid and hazardous wastes. For these areas, DOE determined there would be minimal potential environmental impacts.

Air emissions would require a modification to BASF's current Title V Permit. DOE expects that the facility would continue to operate within federally enforceable limits. In relation to greenhouse gas emissions, an increase in the manufacture and use of advanced batteries potentially offers the positive benefits of reduced reliance on fossil fuels and long-term improvement in air quality through reduced emissions of greenhouse gases (and other pollutants).

Typical construction noises would be generated. Operational noises outside the building would come primarily from low-speed ventilation fans and vehicle traffic.

During construction, there is a potential to encounter soil contaminated by previous operations at the site. If encountered during excavation, contaminated soil would be sampled and analyzed prior to offsite transport to an appropriate treatment or disposal facility. Alternatively, contaminated soils would be appropriately managed on-site. A new facility constructed on top of remaining contaminated soil would replace the existing cap at that location. Like the existing cap, the new facility would reduce the potential for worker exposure and for leaching of

contaminants. BASF would coordinate with and obtain permits from the Ohio Environmental Protection Agency (OEPA) prior to construction to ensure adherence to regulatory requirements.

During plant operations, hazardous wastes would include lithiated transition metal oxide powders (off-spec cathode product) (less than 1,000 pounds per year) that would either be reclaimed or recycled offsite, or treated and disposed of at a permitted landfill. RCRA wastes would not be treated or disposed of onsite. The facility currently operates as a large-quantity generator of hazardous wastes regulated by federal and state regulations; therefore, an increase in hazardous wastes generated could be accommodated through adequate management, accumulation areas, and collection for offsite treatment and disposal. Because hazardous wastes generated would be common industrial byproducts, the wastes would be acceptable at a number of treatment, storage and disposal facilities.

DOE also evaluated socioeconomic factors to determine the potential positive benefits of the proposed project on the affected communities. The proposed project is anticipated to result in small increases in local employment opportunities and local spending, potentially providing a minor beneficial impact to the local community.

The other environmental areas DOE evaluated for potential impacts were: geology and soils; land use; visual resources; vegetation and wildlife; cultural resources; environmental justice; surface water and ground water, wetlands and floodplains, utilities and energy use, and human health and safety. DOE determined that there would be no potential for adverse impacts for these resource areas, or that the impacts would be negligible, temporary, or both. The EA gives the reasons DOE did not conduct more detailed evaluations.

Under the No-Action Alternative, the project would either be delayed, as BASF sought other funding sources, or abandoned altogether. If abandoned, the potential environmental consequences and benefits would not occur.

PUBLIC AVAILABILITY: DOE distributed the Draft EA on December 23, 2009, and advertised its release in the *Morning Journal* and *The Chronicle Telegram* on December 27, 28, and 29. In addition, the Department sent copies for public review to the Central Library in Elyria, Ohio. The Department established a 30-day public comment period that began December 27, 2009 and ended January 28, 2010. The Department announced it would accept comments by mail, e-mail, and facsimile.

The Draft EA was distributed to various federal, state, and local agencies with jurisdiction or special expertise. DOE conducted formal consultations by mail with the responsible U.S. Fish and Wildlife Service field office in Columbus, Ohio, the Natural Heritage Program office in Ohio, and the State Historic Preservation Officer in Ohio. In each case, DOE received correspondence supporting a determination of no potential impacts to threatened or endangered species and critical habitat, and no potential impacts to properties listed on or eligible for inclusion in the *National Register of Historic Places*.

Copies of the Final EA and this FONSI will be sent to stakeholders that provided comments or consultation, and will be available at DOE's National Energy Technology Laboratory web site at <http://www.netl.doe.gov/publications/others/nepa/ea.html>.

COMMENTS: Comments were received from one entity, the Region 5 office of the U.S. Environmental Protection Agency (EPA). These comments noted the possibility that excavation for the building foundation and site development could remove protective cap material over areas of previously contaminated soil and groundwater, thereby causing erosion and leaching of the contaminated soils and the flushing of contaminated groundwater to the nearby river. EPA requested that DOE impose six specific mitigation measures as a condition for financial assistance. DOE and BASF have addressed these comments, following consultation with OEPA, by agreeing to a mitigation measures that would be most practicable for BASF's proposed project. Responses to comments are included in Appendix B of the final environmental assessment.

MITIGATION REQUIREMENTS: Construction activities that would disturb contaminated soils must follow specifications of a permit or permit modification from OEPA. By mutual agreement of the relevant parties (BASF, OEPA and DOE), BASF will employ the following mitigation measure pursuant to the permitting process of OEPA:

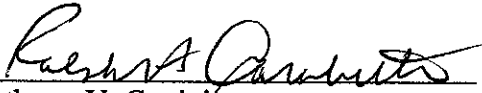
1. BASF must produce a new construction work plan for OEPA's approval that, among other things, specifies procedures for opening, managing, removing, and disposing of the existing cap materials and for maintaining the existing cap. This plan shall assure the new construction will adequately re-cap (if disturbed) and seal the project area;
2. As part of the plan prepared under mitigation measure 1, BASF will establish specify a soil sampling/testing procedure. The plan shall specify how contaminated soil would be managed if testing reveals contamination;
3. To reduce windblown dust and contaminants, and reduce rainwater infiltration and storm water runoff, BASF shall use building plans, site development plans and construction techniques that minimize disturbance of the existing cap over the project area or preserve the functions of the existing cap, to the extent practicable. Construction activities that disturb the existing cap shall minimize soil exposure (and erosion) and rainwater infiltration or preserve the cap's functions during the construction process to the extent practicable. Following disturbance, BASF shall re-establish the cap's functions as quickly as practicable. Details of the plans for minimizing adverse effects and for preserving the functions of the existing cap shall be established between OEPA and BASF during the normal course of the permitting process;
4. BASF shall abide by a construction site visitor and worker protection plan that includes soil and ground water contact protection and response along with procedures to be used when visitors and workers leave the site. This protection plan shall be part of the Health and Safety Plan that is submitted with the plan prepared under mitigation measure 1; and
5. BASF will manage construction machinery and equipment to ensure that each potentially contaminated piece would be cleaned before leaving the site. This requirement shall be specified in the Health and Safety Plan that is normally submitted with the plan prepared under mitigation measure 1.

With regards to potential groundwater and surface water impacts, OEPA will use its judgment and discretion in the permitting process regarding the need for on-site monitoring. If monitoring of ground water is necessary, DOE believes that it may be most practical to monitor water in any existing down gradient wells (e.g., wells V-5, MW-15, MW-16) and perhaps in any down gradient seeps located along the escarpment leading down to the river.

EPA recommends that potential air pollution during construction should be addressed under the construction permit or permit modification from the OEPA.

DETERMINATION: On the basis of the evaluations in the Final EA and subject to the mitigation measures set forth above, DOE determined that its Proposed Action - to provide a \$24.6 million federal grant - and BASF's proposed project - to construct and operate a new manufacturing plant - would have no significant impact on the human environment. Although the proposed project would cause an increase in air emissions from BASF's operations, potentially disturb contaminated soils, generate increased noise, and produce more manufacturing wastes, these impacts would be minor. The project proponent would be required to adhere to applicable permit requirements during construction and operations. All other potential environmental impacts identified and analyzed in the EA would be negligible. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this Finding of No Significant Impact.

Issued in Pittsburgh, PA, this 25th day of March 2010.


Anthony V. Cugini
Acting Director
National Energy Technology Laboratory