

**FINDING OF NO SIGNIFICANT IMPACT
FOR
ELECTRIC DRIVE VEHICLE BATTERY AND COMPONENT MANUFACTURING
INITIATIVE PROJECT
TODA AMERICA, INCORPORATED
BATTLE CREEK, MICHIGAN**

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

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE completed the *Final Environmental Assessment for Toda America, Incorporated, Electric Drive Vehicle Battery and Component Manufacturing Initiative Project, Battle Creek, MI* (DOE/EA-1714). Based on the analyses in the Environmental Assessment (EA), DOE determined that its Proposed Action, awarding a Federal grant to Toda America, Incorporated (Toda) 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 Toda'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 Toda's proposed project -- the planning, design, construction and startup

of a manufacturing plant that would produce cathode materials (specifically LiNiCoAlO_2 and LiNiCoMnO_2) used in lithium-ion batteries. The plant would be constructed within the existing Fort Custer Industrial Park in Battle Creek, Calhoun County, Michigan. The new plant would have 80,000 square feet of total floor space and be approximately two stories tall with three mechanical platforms. The construction would also include offices, storage space (30,000 square feet), and a wastewater pre-treatment facility. The proposed project would occur in two phases. Under Phase I, two production lines would be set up to convert powder precursor materials (mostly metal hydroxides and carbonates) into one of two cathode materials. Precursors would be mixed with the lithium compound, and then passed through high-temperature electric kilns, pulverized (i.e., crushed), then sorted by particle size or otherwise treated or classified, blended, and packaged as end products. Under Phase II, Toda would expand its manufacturing capabilities by adding two production lines that would use next-generation processing equipment and process improvements, possibly using a wet-processing (surface treatment), which would create the need for a wastewater pre-treatment plant. After Phase II becomes operational, total production volume at this facility would be sufficient to supply batteries for approximately 450,000 hybrid electric vehicles (HEVs) or 125,000 plug-in HEVs.

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 \$35 million in financial assistance in a cost-sharing arrangement with the project proponent, Toda. The total cost of the project is estimated at \$70.1 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 revised permits, have the potential for significant adverse environmental impacts, or have the potential for controversy. The areas DOE evaluated in more detail included land use, air quality, noise, geology and soils, surface water and groundwater, vegetation and wildlife, solid and hazardous waste, utilities and energy use, transportation and traffic, and human health and safety. For these areas, DOE determined there would be minimal potential environmental impacts.

Construction of the facility within the Fort Custer Industrial Park would result in a change in land use from an undeveloped field to a manufacturing facility. According to the City of Battle Creek, the site is zoned I-2 Heavy Industrial and is consistent with the planned land use for this site. The planned building height of the new Toda facility is 75 feet, which exceeds the Industrial Park's Protective Covenant building height restriction of 40 feet; therefore, approval of a variance would be required, although this is not anticipated to be of concern as other facilities in the Industrial Park have obtained variances.

The Toda facility would not be major source of air pollutants as set by the National Ambient Air Quality Standards (NAAQS) of the Clean Air Act (CAA) and Michigan Department of Natural Resources and Environmental (MDNRE, formerly MDEQ) regulations. Toda has determined, however, that it would be required to obtain a Permit to Install from MDEQ for the proposed facility in Battle Creek because the facility's initial risk screening level for nickel was $0.0042 \mu\text{g}/\text{m}^3$. MDEQ Rule R 336.1290(a) (ii) (D) requires a Permit to Install for any unit that emits a carcinogen (e.g., nickel), which is not listed in R336.1122 (f) (Toda, 2009b). A Permit to Install is a state license to construct a source of air contaminant emissions. Overall, the air quality impacts would be measurable or noticeable but would be of minimal consequence because of equipment control devices and air permit conditions. 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 noise would be generated. Operational noises outside the building would come primarily from heating, ventilation and air conditioning unit fans and from vehicle traffic.

Construction would occur on up to 17 acres of previously disturbed urban-mapped soils, thus minimizing any adverse impacts to soil resources. Best management practices (BMPs) such as sediment control devices and seeding or sodding of temporarily disturbed areas following construction would minimize the potential for adverse indirect impacts such as soil erosion. This area is covered by open meadow vegetation, which would be replaced by the proposed building, associated structures, parking lots, driveway and lawn. Any wildlife would be displaced from this area.

Construction would have minor temporary indirect impacts from runoff to surface waters that would be minimized through the implementation of a Stormwater Pollution Prevention Plan (SWPP). Operation of the Toda facility would produce approximately 33,000 gallons per day (gpd) of wastewater that would be treated first at an onsite wastewater treatment system, and then sent to the City of Battle Creek wastewater treatment plant where it would be treated again before being discharged to the Kalamazoo River. Minor impacts to the Kalamazoo River would be expected from an increased rate of wastewater discharge.

During construction, an erosion control plan and adoption of BMPs would guide the avoidance, minimization, and response to spills that could affect groundwater contamination. Operation would require approximately 33,000 gpd of process and potable water, which would be supplied by the municipal water system that obtains its water from the Verona Well Field. Considering the relatively small increase in demand and the abundance of groundwater resources in the region, minor impacts on the availability of groundwater resources would be expected, and the existing City wells would be adequate to meet the increased demand.

Historically, the site was part of the Fort Custer Military Base (1917 to 1964), and had vehicle maintenance facilities on this parcel of land. According to recent site assessments and soil samples, historical releases at the site have resulted in existing soil contamination of PCBs, naphthalene and numerous metals at concentrations that exceed residential and commercial clean-up criteria, but only two samples tested have had contaminant concentrations exceeding the applicable industrial clean-up criteria. Soils contaminated above the industrial clean-up

criteria would be excavated and properly disposed of in an offsite licensed landfill. A Baseline Environmental Assessment (BEA) has been prepared in accordance with Michigan law to allow Toda to lease and begin operating a facility without being held liable for existing contamination. While the site is regulated under authority of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), it is not listed on the EPA's National Priority List, which designates high-priority cleanup sites under CERCLA. During construction, there is a potential to encounter contaminated soil remaining from historical operations at the site by prior owners. If encountered during excavation, contaminated soil would be sampled and analyzed prior to offsite transport to an appropriate treatment or disposal facility and would be managed in accordance with Federal and State requirements.

During plant operations, waste generated would include municipal solid waste and off-specification materials (quantity would vary). During Phase 2, a wet-process could be used that would generate approximately 4 tons per year of sludge containing LiNiCoAlO_2 . Toda plans to reuse materials as much as possible (with a target of 100 percent re-utilization of the valuable metals) and would dispose of other materials in offsite landfills in accordance with applicable regulations, creating a minor impact on the quantity of solid waste land-filled offsite. Hazardous waste would not be treated or disposed of onsite. The quantity of hazardous waste generated at the facility would determine its generator status and the applicable Federal and State regulations to which the facility must adhere. The Proposed Project would have a minor impact associated with the quantity of hazardous waste generated and the amount of waste that would require offsite treatment and disposal.

Construction and operation of the Toda facility would have a minor impact on the municipal water system, the municipal wastewater system (after the wastewater is pre-treated onsite), the electric power utility (Consumers Energy Company), and the natural gas supplier (SEMCO Energy Gas Company). All of these utility providers have adequate capacity to meet the demands of the Proposed Project.

Construction would have short-term but measurable adverse minor impacts to traffic lasting for approximately 12 months. Operations would have a minor long-term impact due to the increase in truck and personal-vehicle traffic in the surrounding community resulting from the expected 10 truck trips per day for deliveries and shipments and 70 personal vehicle trips per day from the commuting of approximately 50 employees. The existing roadway and intersection network can easily accommodate this increase in traffic.

During construction, there is the potential for construction workers to encounter contaminated soil that could affect them through inhalation or direct contact. For operations, Toda would develop and abide by safety plans and worker procedures to meet applicable Federal and State requirements, including safe work practices, industrial hygiene, and maintenance of safe facilities, environmental compliance, and emergency preparedness. Materials to be used and stored at the facility would include simple compounds in powder form of lithium, nickel, manganese, cobalt, and aluminum. The risk of exposure would be greatest for Toda employees. Personal protective equipment and training in proper safety procedures would be required by employees handling these materials. The principal hazards associated with plant operations (exposure to dust from chemical handling and equipment operation) would be contained within

buildings and secure areas of the property, thus risk of exposure to the general population would be minor.

DOE also evaluated socioeconomics 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 (approximately 50 permanent jobs) and local spending, potentially providing a beneficial impact to the local community.

The other environmental areas DOE evaluated for potential impacts were: environmental justice; visual resources; wetlands and floodplains; and cultural resources. 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 Toda 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 Battle Creek Enquirer (January 31, February 1 and February 10, 2010 and in the Battle Creek Shopper News on January 28, 2010. In addition, the Department sent copies for public review to the Willard Public Library in Battle Creek, Michigan. The Department established a 30-day public comment period that began January 31, 2010 and ended March 2, 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 East Lansing, Michigan; the Michigan Department of Natural Resources in Lansing, Michigan; and the State Historic Preservation Officer in Michigan. 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 U.S. Environmental Protection Agency (EPA), Region 5 Office. These comments acknowledged that natural resource impacts have already occurred as a result of previous industrial activities on the proposed site and neighboring sites, that the site appears to have been enrolled previously in the State of Michigan Brownfields Program, and that study of the site under the auspices of the MDEQ (now known as the Michigan Department of Natural Resources and Environment or MDNRE) identified hazardous substances (primarily metals) in the soil. Based on available information, EPA concluded that the proposed project does not appear to pose an unacceptable onsite risk from exposure to soils, and that this project could reduce the potential for future exposure to contaminated soils from this site after construction has been completed. Due to the nature of the

soil's multiple contaminants, and considering all construction activities on a site such as this must follow the specifications of State and local permits, the EPA recommends that the construction permits specify certain precautions and mitigation measures to be taken to protect sensitive receptors nearest the proposed Toda site. EPA's comment letter and Toda's response letter are included in Appendix B of the final Environmental Assessment.

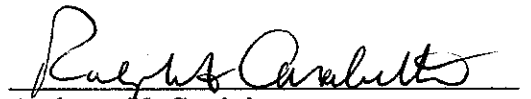
MITIGATION REQUIREMENTS: Construction activities at the site that would disturb onsite contaminated soils must follow the procedures outlined in an environmental Due Care Plan pursuant to MDNRE requirements. By mutual agreement of Toda and DOE, Toda shall employ the following mitigations:

- 1) Toda shall work closely with MDNRE's Brownfields Program staff, the City of Battle Creek, and the Battle Creek Brownfield Redevelopment Authority (BCBRA) and obtain a liability exemption for pre-existing contamination prior to Toda's leasehold. This liability exemption shall be maintained into the future. Prior to leasing the property, Toda shall complete appropriate due diligence efforts and "All Appropriate Inquiry."
- 2) Toda shall comply with the "continuing obligations" that arise under CERCLA for a "bona fide prospective purchaser." Toda shall also comply with Michigan's Part 201 "Due Care" standard to protect site workers and others. (Reference: Natural Resources and Environmental Protection Act, 1994 PA 451, Part 201, as amended) Accordingly, Toda shall prepare a "Due Care Plan" to address these Michigan and CERCLA requirements. Regarding "Institutional Controls," Toda shall notify subsequent leaseholders and purchasers of the contamination that is present on the land parcel proposed for this project, as required under Michigan's Part 201 statutory language. The procedure for notification shall be specified in Toda's "Due Care Plan." Toda shall work closely with MDNRE and comply with the Brownfield Program's restrictions and requirements.
- 3) Toda's "Due Care Plan" shall specify, and Toda shall ensure, the appropriate application of construction-related dust suppression measures and track-out control to reduce as much as practicable fugitive air emissions of fine soil particles that may be contaminated with metals and other hazardous substances. The U.S. EPA's recommendation (see EPA's letter in Appendix B of the final Environmental Assessment) for addressing construction-related air emissions under the construction permit from MDNRE shall be addressed through compliance with required construction permits and the Due Care Plan.
- 4) Toda shall control storm water runoff and erosion to the extent practicable during construction and subsequently during Toda's leasehold.
- 5) The U.S. EPA's recommendation (see EPA's letter in Appendix B of the final Environmental Assessment) for green design, groundwater protection, surface water protection and runoff control will be considered by Toda during its planning and project implementation and by MDNRE during the permitting process.

DETERMINATION: On the basis of the evaluations in the Final EA and subject to the mitigation measures set forth in this FONSI, DOE determined that its Proposed Action - to

provide a \$35 million federal grant - and Toda's proposed project - construction and operation a new manufacturing plant - would have no significant impact on the human environment. Although the proposed project would disturb potentially contaminated soils; create manufacturing wastes; cause air emissions; disturb vegetation and wildlife; increase demand on local utilities; increase water demand from groundwater resources; increase municipal wastewater treatment and discharge to the Kalamazoo River; and generate increased noise and traffic; 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.



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