

**FINAL
ENVIRONMENTAL ASSESSMENT
FOR
EXIDE TECHNOLOGIES ELECTRIC
DRIVE VEHICLE BATTERY AND
COMPONENT MANUFACTURING
INITIATIVE APPLICATION,
BRISTOL, TN, AND COLUMBUS, GA**

**U.S. Department of Energy
National Energy Technology Laboratory**



March 2010

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COVER SHEET

Responsible Agency: U.S. Department of Energy (DOE)

Title: *Environmental Assessment for Exide Technologies Electric Drive Vehicle Battery and Component Manufacturing Initiative Application, Bristol, TN, and Columbus, GA*

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Abstract: DOE prepared this EA to evaluate the potential environmental consequences of providing an American Recovery and Reinvestment Act of 2009 (the Recovery Act; Public Law 111-5, 123 Stat. 115) grant to Exide Technologies for expansion of its operations to manufacture advanced lead-acid batteries. DOE's Proposed Action is to provide \$34.3 million in financial assistance in a cost-sharing arrangement with the project proponent, Exide Technologies. The total cost of the project is estimated at \$70 million. Exide Technologies' proposed project would expand its domestic capacity to produce advanced lead-acid batteries for use in the transportation industry.

This EA evaluates 14 resource areas and identifies no significant adverse impacts for the proposed project. Beneficial impacts to the nation's air quality and transportation industry could be realized from implementation of this proposed project. In addition, beneficial socioeconomic impacts would occur from increased employment opportunities and spending in the affected local economies.

Availability: This EA is available on DOE's National Energy Technology Laboratory website at <http://www.netl.doe.gov/publications/others/nepa/ea.html>.

ACRONYMS AND ABBREVIATIONS

CFR	<i>Code of Federal Regulations</i>
DOE	U.S. Department of Energy
EA	environmental assessment
EPA	U.S. Environmental Protection Agency
FEMA	U.S. Federal Emergency Management Agency
FR	<i>Federal Register</i>
FWS	U.S. Fish and Wildlife Service
NEPA	National Environmental Policy Act of 1969, as amended
OSHA	Occupational Safety and Health Administration
PM ₁₀	particulate matter with an aerodynamic diameter of 10 micrometers or less
SHPO	State Historic Preservation Officer
Stat.	<i>United States Statutes at Large</i>
U.S.C.	United States Code

Note: Numbers in this EA have been rounded to two significant figures. Therefore, some total values might not equal the actual sums of the values.

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SUMMARY

The U.S. Department of Energy proposes to award an American Recovery and Reinvestment Act of 2009 grant to Exide Technologies for the expansion of its domestic advanced lead-acid battery manufacturing for use in the transportation industry. DOE's Proposed Action in this EA is to provide a grant to partially fund expanded manufacturing of two types of batteries at two existing Exide Technologies plants: a spiral wound absorbed glass mat design at its Bristol, Tennessee, plant and a flat plate absorbed glass mat design at its Columbus, Georgia, plant. At the Bristol plant, Exide would move new or existing process equipment into an existing 110,000-square-foot building; the spiral wound battery manufacturing would require about 50,000 square feet. At the Columbus plant, Exide would demolish some existing structures and build a 44,000-square-foot addition to the existing battery plant.

DOE evaluated 14 resource areas and identified no significant adverse impacts for the proposed project Action. In some of the resource areas, DOE determined there would be no or minimal impacts (Chapter 1). The focus for more detailed analysis was on those disciplines that would require new or revised permits, have the potential for significant adverse environmental impacts, or have the potential for controversy. For the remaining resources, DOE conducted the impact analyses this EA presents in Chapter 3.

Because the Bristol, Tennessee, plant expansion would occur within an existing building, there would be no potential environmental impacts to the surrounding environment in relation to interior building modifications, and incremental operational increases in emissions, effluent streams, and waste generation would be small and well within existing permit limits. Exide has operated the plant for 15 years.

For the Columbus, Georgia, plant the demolition of existing structures, the construction of a building addition, and the expansion of operations would occur within the existing site boundaries. The onsite areas that would be affected have already been disturbed and have been dedicated to industrial activities for the past 46 years. The incremental operational increases in emissions, effluent streams, and waste generation would be small and well within existing permit limits.

Emissions of carbon dioxide could contribute to cumulative increases in greenhouse gases and related climate change in global combination with other projects. However, the use of electric and hybrid electric vehicles in place of nonelectric and nonhybrid vehicles would reduce gasoline consumption, which would decrease carbon emissions and thereby contribute to offsetting increases in emissions from operations at the plants. Therefore, DOE expects cumulative carbon impacts to be small. In addition, the potential for reduced emissions has the potential to result in a net decrease in U.S. carbon dioxide emissions.

DOE determined there could be beneficial impacts to the nation's air quality and the transportation industry from implementation of the proposed project. In addition, beneficial socioeconomic impacts would occur from increased employment opportunities and spending in the affected local economies.

1. INTRODUCTION

As part of the American Recovery and Reinvestment Act of 2009 (the Recovery Act; Public Law 111-5, 123 Stat. 115), the U.S. Department of Energy (DOE or the Department) 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 grants for the construction (including production capacity increase of current plants), of U.S. manufacturing plants to produce batteries and electric drive components. The funding of these projects, known as the Electric Drive Vehicle Battery and Component Manufacturing Initiative, requires compliance with the National Environmental Policy Act of 1969, as amended (NEPA; 42 U.S.C. 4321 et seq.), Council on Environmental Quality regulations (40 CFR Parts 1500 to 1508), and DOE NEPA implementing regulations (10 CFR Part 1021). Therefore, DOE prepared this *Environmental Assessment for Exide Technologies Electric Drive Vehicle Battery and Component Manufacturing Initiative Application, Bristol, Tennessee, and Columbus, Georgia* (the EA) to evaluate the potential environmental consequences of providing a grant under the initiative for this proposed project. In compliance with these laws and regulations, this EA examines the potential environmental consequences of DOE's Proposed Action (that is, providing a financial assistance grant), Exide's proposed project, and the No-Action Alternative (under which it is assumed that, as a consequence of DOE's denial of financial assistance, Exide would not proceed with the project). The EA's purpose is to inform decisionmakers and the public of the likely environmental consequences of the proposed project and alternatives for facilities in Bristol, Tennessee, and Columbus, Georgia.

DOE's Proposed Action in this EA is to provide a grant to partially fund expanded manufacturing of two types of batteries at two existing Exide Technologies plants, which requires (1) the installation and operation of new manufacturing equipment in an existing building at the Bristol plant and (2) installation and operation of equipment in a newly constructed addition at the Columbus plant. However, modification of the Bristol plant and new construction at the Columbus plant would not be funded with the Recovery Act grant. Exide would be responsible for funding this part of the proposed project. The term *project* in this document represents the combination of all actions necessary to complete Exide's proposed project.

This section explains NEPA and the related procedures (Section 1.1), the background of this project (Section 1.2), its purpose and need (Section 1.3), the environmental considerations DOE did not carry forward to detailed analysis (Section 1.4), and the consultation and public comment processes (Section 1.5). Chapter 2 discusses the DOE's Proposed Action, Exide's proposed project, the No-Action Alternative, and Alternative Actions. Chapter 3 details the affected environment and potential environmental consequences of the proposed project and of the No-Action Alternative. Chapter 4 addresses cumulative impacts, and Chapter 5 provides DOE's conclusions from the analyses. Chapter 6 lists the references for this document. Appendix A contains the distribution list for this document, and Appendix B contains copies of DOE's consultation letters with other agencies, and their responses.

1.1 National Environmental Policy Act and Related Procedures

In accordance with the DOE NEPA implementing regulations, DOE must evaluate the potential environmental impacts of DOE facilities, operations, and related funding decisions. In compliance with these implementing regulations and procedures (DOE 2004), this EA examines the potential individual and cumulative environmental impacts of the proposed project and the No-Action Alternative.

DOE must meet these requirements before it can make a final decision to proceed with any proposed federal action that could cause adverse impacts to human health or the environment. This EA is intended to meet DOE's regulatory requirements under NEPA and to provide DOE with the information necessary to make an informed decision about the expansion of manufacturing of advanced lead-acid batteries at Exide Technologies' facilities in Bristol, Tennessee, and Columbus, Georgia.

This EA evaluates the potential individual and cumulative impacts of the Exide Bristol and Columbus plant proposed project. No other action alternatives are analyzed. For comparison, this EA also evaluates the impacts that could occur if DOE did not provide funding to support the construction and operation of high-volume manufacturing plants to build advanced batteries for transportation use (the No-Action Alternative).

1.2 Background

The DOE National Energy Technology Laboratory manages the research and development portfolio of the Vehicle Technologies Program for the Office of Energy Efficiency and Renewable Energy. A key objective of the Vehicle Technologies Program is accelerating the development and production of electric drive vehicle systems in order to substantially reduce U.S. consumption of petroleum. Another of its goals is the development of production-ready batteries, power electronics, and electric machines that can be produced in volume economically to increase the use of electric drive vehicles.

Congress appropriated significant funding for the Vehicle Technologies Program in the Recovery Act to stimulate the economy and reduce unemployment in addition to furthering the existing objectives of the Vehicle Technologies Program. DOE solicited applications for this funding by issuing a competitive Funding Opportunity Announcement (DE-FOA-0000026), *Recovery Act - Electric Drive Vehicle Battery and Component Manufacturing Initiative*, on March 19, 2009. The announcement invited applications in seven areas of interest:

- Area of Interest 1 – Projects that would build or increase production capacity and validate production capability of advanced automotive battery manufacturing plants in the United States.
- Area of Interest 2 – Projects that would build or increase production capacity and validate production capability of anode and cathode active materials, components (for example,

separators, packaging material, electrolytes, and salts), and processing equipment in domestic manufacturing plants.

- Area of Interest 3 – Projects that combine aspects of Areas of Interest 1 and 2.
- Area of Interest 4 – Projects that would build or increase production capacity and validate capability of domestic recycling or refurbishment plants for lithium ion batteries.
- Area of Interest 5 – Projects that would build or increase production capacity and validate production capability of advanced automotive electric drive components in domestic manufacturing plants.
- Area of Interest 6 – Projects that would build or increase production capacity and validate production capability of electric drive subcomponent suppliers in domestic manufacturing plants.
- Area of Interest 7 – Projects that combine aspects of Areas of Interest 5 and 6.

The application period closed on May 19, 2009, and DOE received 119 proposals across the seven areas of interest. DOE selected 30 projects based on the evaluation criteria in the funding opportunity announcement and gave special consideration to projects that promoted the objectives of the Recovery Act—job preservation or creation and economic recovery—in an expeditious manner.

This proposed project, titled “Accelerating the Electrification of U.S. Drive Trains: Ready and Affordable Technology Solutions for Domestically Manufactured Advanced Batteries,” was one of the 30 projects DOE selected for funding. DOE’s Proposed Action is to provide \$34.3 million in financial assistance in a cost-sharing arrangement with the project proponent, Exide Technologies. The total cost of the proposed project is estimated at \$70 million.

1.3 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 is 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 work would enable market introduction of various electric vehicle technologies by lowering the cost of battery packs, batteries, and electric propulsion systems for electric drive vehicles through high-volume manufacturing. DOE intends to further this purpose and satisfy this need by providing financial assistance under cost-sharing arrangements to this and the other 29 projects it selected under this funding opportunity announcement.

This and the other selected projects are needed to reduce the United States’ petroleum consumption by investing in alternative vehicle technologies. Successful commercialization of

electric drive vehicles would support the DOE’s Energy Strategic Goal of “protect[ing] our national and economic security by promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy.” This project would also meaningfully assist in the nation’s economic recovery by creating manufacturing jobs in the United States in accordance with the objectives of the Recovery Act.

1.4 Considerations Not Carried Forward

Chapter 3 of this EA examines the potential environmental impacts of the proposed project and No-Action Alternative in the following resource areas:

- Air quality,
- Water resources,
- Socioeconomics,
- Utilities, energy, and materials,
- Waste, and
- Occupational health and safety.

DOE EAs commonly address the resource areas in Table 1-1. In an effort to streamline the NEPA process and enable timely awards to the selected project, this assessment did not examine them at the same level of detail as the resource areas above. The focus for the more detailed analysis was on those disciplines that would require new or revised permits, have the potential for significant adverse environmental impacts, or have the potential for controversy. The table lists these areas and explains why further analysis is unnecessary. The evaluations for these environmental disciplines include the effects of both the proposed project, which relates to expanded operations, and Exide’s actions, which relate to building construction and modification. At the Bristol plant, expanded operations would occur within an existing building. At the Columbus plant, Exide Technologies would demolish an old building and related facilities and build a new addition to an existing building.

Table 1-1. Environmental disciplines with no or minimal impacts.

Environmental discipline	Bristol, Tennessee	Columbus, Georgia
Geology and soils	There would be no geologic or soil disruptions because there would be no new construction.	Demolition and construction would occur on previously disturbed areas for which there have been no known geologic or soil stability concerns in about 40 years of operations.
Land use	Expanded operations would occur within an existing building on the existing 134-acre site. There would be no changes to adjacent land uses.	Demolition and construction would occur on the existing 42-acre site. There would be no changes to adjacent land uses.

Table 1-1. Environmental disciplines with no or minimal impacts (continued).

Environmental discipline	Bristol, Tennessee	Columbus, Georgia
Aesthetics and visual resources	Expanded operations would occur in an existing building, so there would be no change to existing views.	Demolition and construction would occur on the existing site. The new construction would be similar in appearance to existing structures and would not alter the perception of adjacent views.
Noise	Noise levels for operations would be similar to those of current operations. Exide requires workers to wear ear protection and to adhere to its occupational health and safety plan. Current noise levels off the site are low, and there have been no noise complaints.	Noise from demolition and construction would temporarily affect wildlife on or near the site. Operations noise levels would be similar to those of current operations. Exide requires workers to wear ear protection and to adhere to its occupational health and safety plan. Current noise levels off the site are low, and there have been no noise complaints.
Biological resources	There would be no impacts from operations to biological resources in the vicinity. Appendix B contains consultation letters between DOE and the FWS, which concluded, “no significant adverse impacts to wetlands or federally endangered or threatened species are anticipated from this proposal.”	Impacts to wildlife in the vicinity would be minimal and temporary from demolition and construction. There would be no impacts from operations. Appendix B contains consultation letters between DOE and the FWS, which provided a list of state and federal threatened and endangered species for DOE to examine. DOE compared the habitat requirements for the listed species with the available habitat types at the Columbus plant and concluded that there is no habitat that can support any of the listed species.
Cultural resources	Appendix B contains consultation letters between DOE and the Tennessee SHPO, who concluded that “there are no National Register of Historic Places listed or eligible properties affected by this undertaking.”	Appendix B contains consultation letters between DOE and the Georgia SHPO, who concluded that “no historic properties in the proposed project’s area of potential effects will be affected.”
Environmental justice	There would be no adverse or disproportionately adverse impacts to any population group. Therefore, there would be no adverse and disproportional impacts to minority or low-income populations.	There would be no adverse or disproportionately adverse impacts to any population group. Therefore, there would be no adverse and disproportional impacts to minority or low-income populations.

Table 1-1. Environmental disciplines with no or minimal impacts (continued).

Environmental discipline	Bristol, Tennessee	Columbus, Georgia
Transportation	<p>The plant is on a main public road and has sufficient site roads and loading docks to support access to the site. The site has additional parking spaces available.</p> <p>At its peak the plant employed approximately 1,000 people; current employment is about 250.</p> <p>With the addition of Recovery Act jobs, site employment would increase to about 370 (Atkins 2009). Traffic flow to the site would be much less than in its peak years.</p> <p>Trips to the site during plant expansion would be minimal because there would be no new construction. Daily business traffic to the site during operations would increase from 27 trips per day to about 34. No weekend trips are expected (Ganster 2009a).</p>	<p>The plant is between two public roads and has sufficient site roads and loading docks to support access to the site. The site has additional parking spaces available.</p> <p>At its peak, the plant employed approximately 500 people; current employment is just over 100.</p> <p>With the addition of Recovery Act jobs, site employment would increase to about 300 (Atkins 2009). Traffic flow to the site would be much less than in its peak years.</p> <p>During the period for demolition of existing structures and building the new addition, construction traffic to the site would increase. Daily business traffic during operations would increase from 27 trips per day to about 50. No weekend trips are expected (Emerich 2009).</p>

FWS = U.S. Fish and Wildlife Service.
SHPO = State Historic Preservation Officer.

1.5 Consultations and Public Comment Response Process

1.5.1 CONSULTATIONS

DOE conducted formal consultations with the responsible U.S. Fish and Wildlife Service (FWS) field offices and with the State Historic Preservation Officers (SHPOs) in Georgia and Tennessee. DOE requested the consultations to comply with the provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), and the review requirements of Section 106 of the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.). Appendix B contains copies of the consultation letters between DOE, the FWS, and the SHPOs.

U.S. Fish and Wildlife Service

On November 5, 2009, DOE requested information from the FWS field offices in Georgia and Tennessee (p. B-2 and p. B-7, respectively) about federally and state-listed threatened, endangered, or candidate species and about critical habitat.

The Georgia field office responded on December 29, 2009, and provided a list of such species that might occur in Muscogee County (p. B-3). DOE compared the habitat requirements for the

listed species with the available habitat types at the Columbus plant and concluded that the available habitat likely does not support any of the listed species. The plant site has no water bodies, is highly industrialized, and has supported manufacturing processes for about 46 years. The only species with the potential to occur on the Columbus plant site is Michaux's sumac (*Rhus michauxii*) because it can occur on disturbed land. However, the known populations of this species in Muscogee County have been eliminated. Therefore, DOE does not expect significant adverse impacts to wetlands or federally endangered or threatened species from the proposed project.

The Tennessee FWS field office returned DOE's cover letter for the Draft EA. The letter is stamped with the determination that "no significant adverse impacts to wetlands or federally endangered or threatened species are anticipated from this proposal." The Field Supervisor signed and dated the stamp on January 8, 2010 (p. B-8).

DOE modified the biological resources discussion in Table 1-1 of this EA to reflect the results of these consultations.

State Historic Preservation Officers

On November 5, 2009, DOE requested information from the Georgia and Tennessee SHPOs (p. B-11 and p. B-15, respectively) about the existence of known historic properties within 1 mile of the proposed project sites.

On December 16, 2009, the Georgia SHPO office responded and asked if DOE intended to use NEPA documentation to comply with Section 106 of the National Historic Preservation Act (p. B-12). DOE responded that it did on December 23 (p. B-13) and provided a copy of the Draft EA when it became available. On January 21, 2010, the Georgia SHPO office indicated that, based on the information DOE provided in the Draft EA, "no historic properties in the proposed project's area of potential effects will be affected, as defined in 39 CFR Part 800.4(d)(1)" (p. B-14).

On November 23, 2009, the Tennessee SHPO requested additional information about the Bristol plant and proposed activities, which included an original U.S. Geological Survey map of the area, satellite imagery of the existing plant with identification of areas where facility modifications would occur, site photographs, and the construction dates of the existing buildings (p. B-16). The Department submitted the requested information on December 10 (p. B-17). On December 29, the Tennessee SHPO sent a letter that concluded, "...there are no National Register of Historic Places Listed or eligible properties affected by this undertaking" (p. B-20).

DOE modified the cultural resources discussion in Table 1-1 of this EA to reflect the results of these consultations. In addition, the Department has added to and enhanced the figures and text in Sections 2.1.1 and 2.1.2 to provide additional information for proposed modifications at the Bristol plant and the addition at the Columbus plant.

1.5.2 COMMENT-RESPONSE PROCESS

DOE issued the Draft EA for comment on December 18, 2009, and advertised its release in the *Bristol Herald Courier* and the *Columbus Ledger-Enquirer* on December 18, 19, and 20. In addition, the Department sent copies for public review to the Bristol Public Library and the Sullivan County Library in Tennessee and the Columbus Public Library in Georgia. The Department established a 30-day public comment period that began December 18, 2009, and ended January 16, 2010. The Department announced it would accept comments by mail, e-mail, or facsimile. DOE received one comment letter as follows.

Exide Community Homeowners Association, Bristol, Tennessee
Jerry W. Wheeler, President

Summary of Comments. Mr. Wheeler welcomed the economic advantages to the community. However, Mr. Wheeler urged DOE to contact EPA, the Tennessee Department of Environment and Conservation, and the City of Bristol Water Department to learn of past and current violations of or noncompliance with laws, rules, and regulations. Mr. Wheeler also indicated that the evaluations should include air and water resources and previous structural fires.

Response. DOE sent copies of the Draft EA for review and comment to the State of Tennessee, the City of Bristol, and other organizations (Appendix A). In this EA, the Department has examined the potential for environmental impacts of the proposed project and the No-Action Alternative to various environmental resources, including air quality and water resources (Sections 3.1.1 and 3.1.2, respectively).

DOE is aware of preexisting metals and solvent contamination at the Bristol plant that occurred before Exide purchased the facility in the mid-1990s. The former owner operated a pump-and-treat system until the contaminant levels decreased to acceptable regulatory levels. Exide has ongoing programs to monitor ambient air quality and surface water quality. Based on its evaluations, the Department does not expect that increased operations at the Bristol plant would significantly contribute to legacy site contamination (Chapter 4).

In relation to violations or noncompliances, Exide Technologies has received notices of violation from the City of Bristol and the State of Tennessee for failing to comply with permit requirements at the Bristol plant. When a deficiency has been identified, Exide has taken prompt corrective actions and addressed the matter in a timely manner. All violations were settled and penalties paid where levied. The facility is highly regulated by local, Tennessee, and federal environmental agencies. These agencies inspect the facility regularly, and occasional violations are not uncommon for industrial operations of this nature. Exide maintains a comprehensive environmental program to manage the environmental, health, and safety aspects of its operations; an onsite environmental, health, and safety staff administers the program.

On December 25, 1997, fire destroyed a portion of the Bristol plant that primarily filled battery assemblies with acid. The fire spread smoke that dissipated generally eastward, and water runoff

from firefighting efforts flowed overland to the storm water outfall. Local hazardous materials teams decontaminated firefighting personnel and equipment. After the fire, standing water remained throughout the facility, which Exide contained and tested for contaminants. Because the water contained contaminants that the onsite wastewater treatment plant could not remove, Exide transferred the contaminated water to tanker trucks for offsite treatment and disposal in a permitted hazardous waste facility. Exide sorted the debris from the fire into damaged structural steel, building debris from nonproduction areas, and contaminated debris (lead was the primary contaminant). The company recycled the damaged steel, sent the building debris to permitted disposal facilities, and sent the contaminated debris for disposal in a permitted hazardous waste facility (Exide Corporation 1998). DOE included a discussion of the 1997 fire in Chapter 4 in this EA.

2. DOE PROPOSED ACTION AND ALTERNATIVES

This chapter describes DOE's Proposed Action (Section 2.1), Exide Technologies' proposed project (Section 2.2), the No-Action Alternative (Section 2.3), and the bases for not considering other alternatives (Section 2.4).

2.1 DOE's Proposed Action

DOE's Proposed Action is to provide a grant to partially fund expanded manufacturing of advanced lead-acid batteries at two Exide Technologies plants. DOE would award a Recovery Act grant to provide \$34.3 million in financial assistance in a cost-sharing arrangement with Exide Technologies. The total cost of the proposed project is estimated to be \$70 million.

2.2 Exide Technologies' Proposed Project

Exide Technologies' proposed project includes: (1) the installation and operation of manufacturing equipment within an existing building at the Bristol plant, and (2) installation and operation of equipment in a newly constructed addition at the Columbus plant. Modification of the Bristol plant and construction of a new addition at the Columbus plant would not be funded with a Recovery Act grant. Exide would be responsible for funding this portion of the proposed project. However, the modification and new construction are important elements in the overall project development. Chapter 3 of this EA discusses the combined potential environmental impacts of expanded operations and facility modification and new construction. The evaluations for environmental areas not carried forward (Section 2.4) also considered the combined potential impacts of all actions.

For convenience, this EA refers to the two battery technologies as spiral wound and flat plate, and would be implemented as follows:

- A spiral wound absorbed glass mat design at Exide's Bristol, Tennessee, plant; and
- A flat plate absorbed glass mat design at Exide's Columbus, Georgia, plant.

Figure 2-1 shows examples of the two battery types, and Figure 2-2 shows the general locations of Bristol, Tennessee, and Columbus, Georgia. Figures 2-3 and 2-4 show a satellite image of the Bristol plant and a photograph of the building in which operations would take place, respectively. The Bristol plant would require modification of that building (Section 2.2.3). Figures 2-5 and 2-6 show a satellite image of the Columbus plant and a photograph of the proposed Columbus project area, respectively. The Columbus project would require some demolition and construction of a new addition (Section 2.2.4).

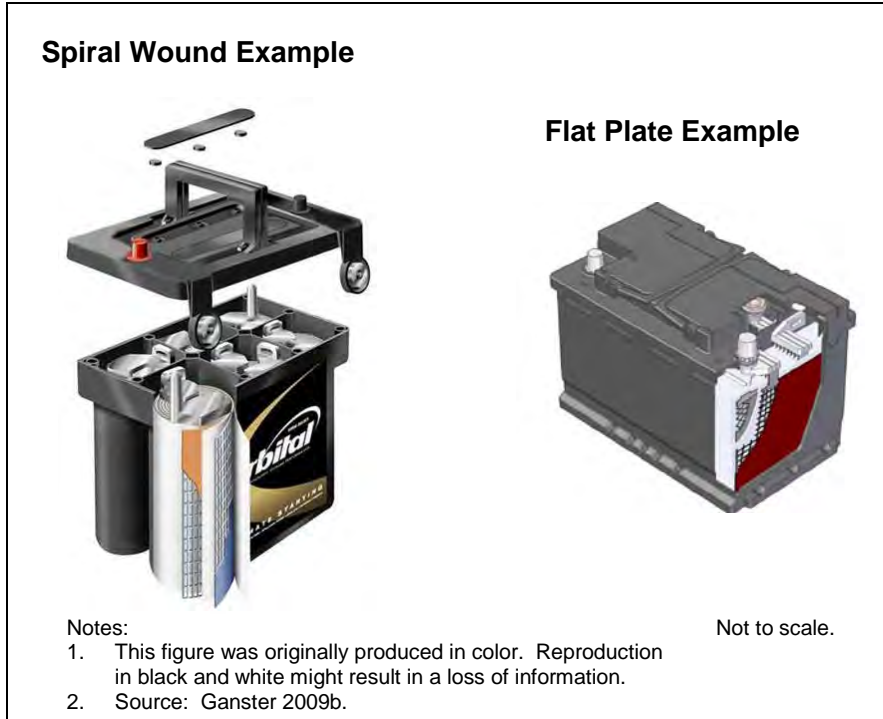


Figure 2-1. Examples of spiral wound and flat plate batteries.



Figure 2-2. General locations of Bristol, Tennessee, and Columbus, Georgia.



Figure 2-3. Satellite view of the Bristol plant and vicinity.

The following sections describe plant operations and provide general process information for both plant locations. In each case, the plant expansions would require the installation of relocated used or new process equipment. This information provides the basis for the estimation of potential environmental impacts in Chapter 3.



Figure 2-4. View of the south and west sides of the Bristol plant building. Exide would modify a portion of the building (to the rear in this view) for the proposed operations.

2.2.1 MANUFACTURE OF SPIRAL WOUND BATTERIES IN BRISTOL, TENNESSEE

The process for manufacturing spiral wound batteries begins with the casting of molten lead into grids. At the same time, lead is converted to lead oxide and then mixed with sulfuric acid and other materials to form a paste, which is applied to the grids. The positive and negative plates from this process are separated and then spiral wound into groups. The groups are placed in curing ovens to dry and harden the paste onto the grid. The assembly process follows, which involves casting a lead strap across the lugs of each plate and connecting terminals to the lead strap. This forms an element, which is then inserted in plastic containers and tested for quality. The elements are welded in series, and plastic covers are heat-sealed to the container. Next, the terminal posts are welded to the batteries and they are leak-tested, filled with acid, and put in a water bath. The batteries are hooked to an electrical circuit for forming (a series of charges, discharges, and recharges). The batteries are then washed, tested further for electrical quality, and labeled.

The raw materials necessary to manufacture these batteries include lead, separators, plastic, and sulfuric acid. Exide has its own recycling plants that would provide lead and plastic.

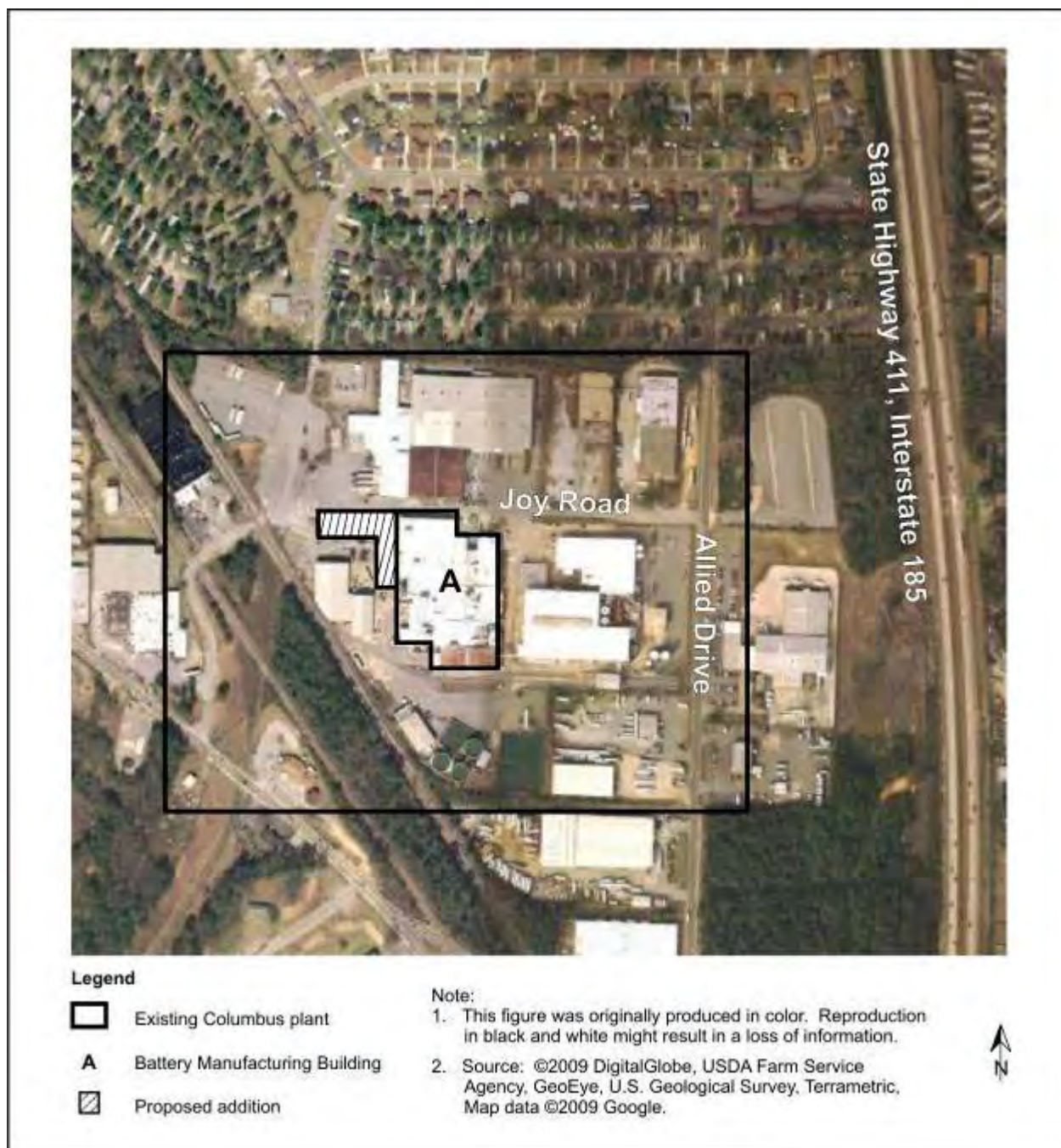


Figure 2-5. Satellite view of the Columbus plant and vicinity.

2.2.2 MANUFACTURE OF FLAT PLATE BATTERIES IN COLUMBUS, GEORGIA

The process for manufacturing flat plate batteries begins with the same casting, pasting, and curing processes as those for the spiral wound batteries Section 2.1.1 describes. The assembly process for flat plate batteries starts with stacking separators between alternating positive and negative plates. The stacks are permanently connected together by burning a lead strap across the lugs of each plate, and terminals are connected to the strap. This forms an element, which is then compressed together by machines and inserted in plastic containers. Plastic covers are



Figure 2-6. View of the south side of the proposed Columbus project area. Exide would remove the baghouse, demolish the building to the right, and then construct the addition in this area.

heat-sealed to the case. The assembled batteries are leak- and voltage-tested, filled with acid, and put in a water bath. The forming (charging, discharging, and recharging) and finishing processes are basically the same as those in Section 2.1.1 for the spiral wound battery.

The raw materials necessary to manufacture these batteries include lead, separators, posts, plastic cases and covers, and sulfuric acid. Exide's existing recycling plants would provide the lead.

2.2.3 BUILDING MODIFICATION AT THE BRISTOL PLANT

The spiral wound project would entail modification of an existing rented building on the Bristol plant site. Exide owns the 134-acre site and has operated the plant for 15 years. A former owner built the main building in 1955. The project would require 50,000 square feet within an existing 110,000-square-foot building (Taylor 2009), which Exide built in 1997. Exide would build a wall inside the building to partition the area for the production area. As part of the modification, Exide would construct three new baghouses for emissions control.

2.2.4 BUILDING DEMOLITION AND CONSTRUCTION AT THE COLUMBUS PLANT

The flat plate project would entail an addition to an existing building at the Exide plant in Columbus. Exide owns the 42-acre site, which has been a manufacturing facility for 46 years. The buildings were constructed during the early 1960s. After expansion the plant would total about 180,000 square feet; Exide would use 74,000 square feet for flat plate battery manufacturing. The expansion would require new construction of about 44,000 square feet (Taylor 2009).

As part of the project expansion, Exide would demolish an old maintenance building with seven loading docks and construct five new loading docks. The plant has eight existing baghouses, two of which it would relocate, and Exide would add four new baghouses to accommodate expanded operations. The company would add four transformers to meet the project's electricity needs. Exide would demolish the current acid unloading area and build a new one (Taylor 2009).

2.3 No-Action Alternative

Under the No-Action Alternative, DOE would not provide funds to the proposed projects. As a result, these projects would be either delayed as the manufacturers sought other funding sources to meet their needs or abandoned if other funding sources were not obtained. Furthermore, acceleration of the development and production of various electric drive vehicle systems would not occur or would be delayed. DOE's ability to achieve its objectives under the Vehicle Technologies Program and the Recovery Act would be impaired.

Although this and other selected projects might proceed if DOE decided not to provide financial assistance, DOE assumes for purposes of this environmental analysis that the project would not proceed without DOE assistance. If manufacturers did proceed without DOE's financial assistance, the potential impacts would be essentially identical to those if DOE provided the funding. To allow a comparison between the potential impacts of a project as implemented and the impacts of not proceeding with a project, DOE assumes that if it were to decide to withhold assistance from a project, it would not proceed.

2.4 Alternative Actions

DOE's alternatives to this proposed project consist of the 45 technically acceptable applications it received in response to the Funding Opportunity Announcement, *Recovery Act - Electric Drive Vehicle Battery and Component Manufacturing Initiative*. Before selection, DOE made preliminary determinations about the level of review under NEPA based on potentially significant impacts that were identified in reviews of acceptable applications. DOE conducted these preliminary environmental reviews pursuant to 10 CFR 1021.216 and a variance to certain requirements in that regulation that was granted by the Department's General Counsel (74 FR 30558; June 26, 2009). These preliminary NEPA determinations and reviews were provided to the selecting official, who considered them during the selection process.

Because DOE's Proposed Action is limited to providing financial assistance in cost-sharing arrangements to projects that were submitted by applicants in response to a competitive funding opportunity, DOE's decision is limited to either accepting or rejecting the project as proposed by the proponent, including its proposed technology and selected sites. DOE's consideration of reasonable alternatives is therefore limited to the technically acceptable applications and the No-Action Alternative for each selected project.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Sections 3.1 and 3.2 detail the affected environment and potential environmental consequences for the proposed project and the No-Action Alternative at the Bristol and Columbus plants, respectively. Each section discusses air quality; water resources; socioeconomics; utilities, energy, and materials; waste; and occupational health and safety.

In terms of construction, both plants would comply with all federal, state, and local law including building permit requirements and zoning regulations. In addition, Exide would follow best management practices for control of surface water runoff and erosion and would have plant-specific hazardous waste spill prevention plans. These measures would result in avoidance or mitigation of impacts.

3.1 Manufacture of Spiral Wound Batteries in Bristol, Tennessee

3.1.1 AIR QUALITY

3.1.1.1 Affected Environment

The Exide Technologies Bristol plant is in Sullivan County, Tennessee, which is in a U.S. Environmental Protection Agency (EPA)-designated attainment area for all criteria pollutants (EPA 2009). The Bristol plant is not currently designated as a major air emission source and does not require a Tennessee Title V permit.

The majority of air emissions from current plant operations result from burning natural gas for the manufacturing process. At present, the Bristol plant uses about 230 million cubic feet of natural gas per year (Ganster 2009a). The current plant has 4 boilers and 47 other combustion sources. Table 3-1 summarizes emissions of particulate matter with median aerodynamic diameter of 10 micrometers or less (PM₁₀), nitrous oxides, carbon monoxide, sulfur dioxide, and volatile organic compounds from combustion based on the current production rate.

Table 3-1. Bristol plant air emissions.

Pollutant	Emissions (tons per year)
PM ₁₀	17
Nitrous oxides	8.5
Carbon monoxide ^a	9.7
Sulfur dioxide	0.029
Volatile organic compounds ^a	0.63

Note: Numbers are rounded to two significant digits.

Source: Ganster 2009a.

a. Estimated based on natural gas use at the plant and EPA AP-42 emission factors for natural gas combustion.

PM₁₀ = particulate matter with median aerodynamic diameter of 10 micrometers or less.

In addition, the plant emitted about 1,400 pounds of lead to the air from the baghouses, which remove particulates and lead during smelting, and fugitive emissions. The building has five existing baghouses and as well as three existing scrubbers for control of emissions.

3.1.1.2 Environmental Consequences

3.1.1.2.1 Proposed Project

Construction Impacts

There would be no new building construction at the Bristol plant as part of the project. Therefore, there would be no air quality impacts.

Operations Impacts

The proposed project would increase production of batteries. To provide a conservative analysis based on production rates, DOE assumed emissions would increase by about 10 percent for each of the pollutants in Table 3-1. Exide would construct five new baghouses to bring the total to eight. These baghouses and three existing scrubbers would combine to reduce total emissions at the plant. Therefore, DOE expects the emissions increase would be less than the 10-percent conservative estimate.

The total air emissions at the plant would be below the minimums that trigger a major source designation, and the plant would therefore not require a Title V permit. The plant would continue to operate as an emissions source in accordance with the State of Tennessee regulations for individual point source emissions. The plant is in an attainment area for all criteria pollutants and does not exceed the threshold emission rate. Therefore, no conformity determination under the Clean Air Act (42 U.S.C. 7401 et seq.) would be necessary (DOE 2000).

Emissions of carbon dioxide, a known greenhouse gas, would increase by about 10 percent during operations. The increase carbon emissions would result from slight increases in emissions from transportation, temporary construction, and the use of natural gas and electricity to power the plant. DOE is not aware of any method to correlate the carbon dioxide emissions exclusively from the proposed project to a specific impact on climate change; however, studies by the Intergovernmental Panel on Climate Change and many other organizations support the premise that carbon dioxide emissions from the proposed project, together with global greenhouse gas emissions, would have a slight cumulative impact on climate change. Although the proposed project would increase emissions at the plant that could contribute to cumulative increases in greenhouse gases and related climate change in global combination with other projects, the carbon dioxide emissions from the proposed project would be minimal. However, the use of electric and hybrid electric vehicles in place of nonelectric and nonhybrid vehicles would reduce gasoline consumption, which would decrease carbon emissions and thereby contribute to offsetting increases in emissions from operations at the plant. Therefore, DOE

expects cumulative carbon impacts to be small. In addition, the potential for reduced emissions has the potential to result in a net decrease in U.S. carbon dioxide emissions.

3.1.1.2.2 No-Action Alternative

Under the No-Action Alternative, site emission levels would not increase due to expanded operations; they would be similar in magnitude to current levels.

3.1.2 WATER RESOURCES

3.1.2.1 Affected Environment

Surface Water

The Bristol plant is within the South Fork Holston River watershed. There is no surface water within the plant boundary, and the nearest surface water body, Back Creek, is about 400 yards from the site. The State of Tennessee lists 14 miles of Back Creek as impaired waters under the Clean Water Act (33 U.S.C. 1251 et seq.) because the creek has nitrate contamination from pasture grazing, unrestricted cattle access, channelization, and discharges from local storm water systems (TDEC 2008).

The wastewater from the battery manufacturing processes (casting, pasting, formation, hygiene facilities, and general cleanup) goes to an onsite treatment plant that chemically neutralizes it and precipitates the metals content. The treated wastewater is then sent under permit to the Bristol Department of Public Works treatment plant.

Groundwater

Exide does not use groundwater to operate the Bristol plant. The Bristol Department of Public Works provides all potable and process water and does not draw from the underlying aquifer for potable drinking water. There are currently no underground storage tanks at the plant.

Floodplains and Wetlands

The plant is not within a 100-year floodplain, which the U.S. Federal Emergency Management Agency (FEMA) designates. There are no wetlands on the site (Espinosa 2009).

3.1.2.2 Environmental Consequences

3.1.2.2.1 Proposed Project

Construction Impacts

The plant modification would occur within an existing building. Therefore, there would be no potential for ground-disturbing activities that could result in runoff or erosion.

Operations Impacts

Surface Water

Exide would continue to treat all wastewater in an onsite treatment plant that chemically neutralizes it and precipitates the metals content. This treated wastewater would be sent to the Bristol Department of Public Works treatment plant. The plant does not discharge wastewater to any surface water body. Therefore, there would be no impact in terms of the impairment status of Back Creek.

Groundwater

Exide does use groundwater for operations, and there are no underground storage tanks on the site. Therefore, impacts to groundwater availability and quality would be unlikely from normal operations. The potential for and impacts from accidental spills of contaminants would be prevented or mitigated through an Exide spill prevention and mitigation plan. Section 3.1.5 addresses aboveground storage of sulfuric acid and mechanisms for control of accidental release.

Floodplains and Wetlands

The plant is not in a 100-year floodplain, which FEMA designates. There are no wetlands on the site (Espinosa 2009). Therefore, there would be no impacts.

3.1.2.2.2 No-Action Alternative

Under the No-Action Alternative, there would be no impacts to surface water, groundwater, floodplains, or wetlands.

3.1.3 SOCIOECONOMICS

3.1.3.1 Affected Environment

Bristol is in Sullivan County, Tennessee. Sullivan County is not a part of a metropolitan or micropolitan area as defined by the Bureau of the Census. Sullivan County's estimated population of about 150,000 persons in 2008 reflects a 0.6-percent growth since 2000 (Bureau of the Census 2009a). In 2008, the Sullivan County population was 96.1 percent white, 2.3 percent black, 0.6 percent Asian, and 0.3 percent American Indian or Alaskan Native. About 0.8 percent of the population reported themselves as being of two or more races. Persons of Hispanic or Latino origin made up 1.1 percent of the population (Bureau of the Census 2009a).

The county's employment figures reflect the suburban nature of the community; the county hosted about 93,000 nonfarming jobs in 2007 and about 14,000 jobs (15 percent) were in manufacturing (BEA 2009a). In 2000, about 65 percent of the total jobs were held by residents of Sullivan County (Bureau of the Census 2009b). The county's August 2009 labor force experienced an unemployment rate of 9.2 percent (TAMU 2009a).

The 2007 per capita income in Sullivan County of \$32,141 was 92 percent of the State of Tennessee per capita income (BEA 2009b). In 2007, 15 percent of County residents and 15.8 percent of Tennessee residents were in poverty (Bureau of the Census 2009a).

3.1.3.2 Environmental Consequences

The modification of the existing building would create jobs at the Bristol Plant. The Recovery Act grant would also create jobs for expanded operations. These jobs would generate wages taxable by the local, state, and federal governments. In addition, these wages would lead to an increase in banking deposits, which would increase the community lending base, and to spending on consumable and durable goods and services. The increase in jobs and wages in the community would have a small positive impact.

3.1.3.2.1 Proposed Project

Exide experienced a workforce reduction earlier in 2009. While short-term construction and expanded operations at the Bristol plant would result in an increased number of jobs, the total workforce would remain below previous levels. Therefore, DOE expects that all new or rehired workers would be part of the existing labor force in the area. It is unlikely the additional jobs would cause a noticeable increase in the local population from workers moving into the area. Therefore, impacts to the existing infrastructure, housing, medical care, social services, police and fire protection, schools, or other community services would be unlikely. Therefore, DOE does not address these resources further.

Construction Impacts

The Bristol plant renovations would take approximately 2 years. Modification of the existing building would require 2 directly employed craft workers during the first year and 11 in the second (Atkins 2009). Each of these positions would create indirect jobs via the multiplier effect, in which the wages workers spend create the need for additional jobs. Therefore, the Sullivan County area would have an estimated 4 new jobs during the first year of construction (2 direct and 2 indirect) and 24 new jobs during the second year (11 direct and 13 indirect) (BEA 2009c). The short duration of these positions would result in a smaller indirect effect than that during operations.

Operations Impacts

At its peak the Bristol plant employed about 1,000 people; current employment is about 250. The proposed project would create 120 direct jobs at the plant during operations (Atkins 2009). In turn, these jobs would generate an additional 240 indirect jobs, for a total of 360 new jobs. The aggregate number of jobs would have a small positive impact (about 0.53 percent) on the labor force by creating job opportunities that could reduce unemployment and increase labor participation. It is likely that residents of Sullivan County would fill most of the new direct and indirect jobs. In addition, the proposed project would result in six new direct positions at Exide's

Lampeter, Pennsylvania, facility to support the increased production at both the Bristol and Columbus plants. These positions would generate a small number of indirect jobs. These jobs would represent a small positive socioeconomic impact in the Lampeter area.

3.1.3.2.2 No-Action Alternative

The No-Action Alternative would result in no Recovery Act grant and the potential environmental impacts of using the Recovery Act funding for the expansion of facilities in Bristol would not occur. In addition, the prospective positive benefits of the proposed project, including the retention and creation of jobs, would not occur.

3.1.4 UTILITIES, ENERGY, AND MATERIALS

3.1.4.1 Affected Environment

The existing Bristol plant uses electricity, natural gas, and water in the manufacturing process. Electricity is from Bristol Tennessee Essential Services, natural gas is from East Tennessee Natural Gas Company, and water is from the Bristol Department of Public Works. At present, the Bristol plant uses about the following annual amounts (Ganster 2009a):

- 85 million kilowatt-hours of electricity,
- 230 million cubic feet of natural gas, and
- 32 million gallons of water.

3.1.4.2 Environmental Consequences

3.1.4.2.1 Proposed Project

Construction Impacts

The remodeling and refitting activities would consume small amounts of electricity, natural gas, and water. The annual impact to ongoing utility service to the plant during construction would be very small.

Operations Impacts

The proposed expanded production would increase utilities use by about 10 percent. The local area providers of electricity, natural gas, and water have the capacity to supply the plant with the required utility support. The Bristol Department of Public Works has a design capacity of 10 million gallons per day and is operating at about 57 percent of capacity (Baxter 2009), Bristol Tennessee Essential Services provides electricity, and the East Tennessee Natural Gas Company has a capacity of 1.5 billion cubic feet per day (Spectra Energy 2009). In comparison with these capacities, the impacts of using the estimated total amounts would be small.

3.1.4.2.2 *No-Action Alternative*

Under the No-Action Alternative, use of utilities, energy, and materials would not increase. Consumption levels would remain approximately the same as those under current operations.

3.1.5 WASTE

3.1.5.1 Affected Environment

Exide recycles nonhazardous solid waste such as pallets, cardboard, and plastic wrap from current operations as well as universal waste. There are no underground waste storage tanks at the Bristol plant. The plant does have storage tanks for sulfuric acid for the manufacturing processes. The tanks are above ground and have secondary containment structures.

Table 3-2 lists the types and amounts of industrial waste the Bristol plant currently generates.

Table 3-2. Bristol plant industrial waste.

Type	Amount
Recycled plant scrap (tons)	36,000
Hazardous waste (pounds)	800,000
Wastewater (millions of gallons)	16
Lead released in wastewater (pounds)	50

Source: Ganster 2009a.

Note: Numbers are rounded to two significant digits; totals might not equal the sum of the values.

The plant collects lead scrap at the point of generation in 55-gallon steel drums that comply with U.S. Department of Transportation regulations. Exide ships the scrap for recycling to one of its smelters under a hazardous waste manifest in compliance with federal and state laws and regulations.

Hazardous waste at the plant includes used lead-contaminated personal protection equipment and other materials with small amounts of lead and lead oxide. The plant has accumulation containers to collect the waste until sending it to a licensed commercial hazardous waste landfill.

The wastewater from the battery manufacturing processes (casting, pasting, formation, hygiene facilities, and general cleanup) goes to an onsite treatment plant that chemically neutralizes it and precipitates the metals content. The treated wastewater is then discharged under permit to the Bristol Department of Public Works treatment plant.

3.1.5.2 Environmental Consequences

3.1.5.2.1 Proposed Project

Construction Impacts

Construction waste would be minimal because Exide would convert space in an existing building. There would be small amounts of wood, metal, and cabling waste from renovations of the existing building in preparation for installation of process equipment.

Operations Impacts

The characteristics of the waste for the proposed project would be the same as the waste the site currently generates. The proposed project would result in an increase of about 10 percent in the amount of waste. These levels of waste generation are not large enough to affect a landfill or wastewater treatment plant.

The proposed projects would not require expansion of the existing acid storage tanks because they can accommodate the needs to the expansions without modification, so there would be no additional risk of impacts from increased production.

Exide would require a new National Pollutant Discharge Elimination System permit, and the increase in hazardous waste would result in a modification to the plant's hazardous waste generator permit. Exide would continue to recycle nonhazardous solid waste and universal waste. Exide would continue to send hazardous waste off the site for treatment or disposal.

3.1.5.2.2 No-Action Alternative

Under the No-Action Alternative, waste generation would not increase. Waste levels would remain approximately the same as those under current operations.

3.1.6 OCCUPATIONAL HEALTH AND SAFETY

3.1.6.1 Affected Environment

Exide maintains a comprehensive health and safety management program at its Bristol plant. Engineering controls are in place to prevent injuries and to control employee exposure to chemicals in the workplace. The company provides comprehensive safety training to new employees and periodic additional training for current workers. Exide also maintains a safety professional on staff at the plant to provide support and direction to the plant management team.

3.1.6.2 Environmental Consequences

3.1.6.2.1 Proposed Project

Construction

No new building construction would be necessary for expansion of the Bristol operations. Exide would install new or used process equipment in the existing building space. The company would adhere to its health and safety procedures, so DOE expects workplace accident and incident rates would be typical of industry averages for this type of work.

Operations

The proposed expansion of operations in the Bristol plant would be similar in nature to Exide's existing operations from a health and safety perspective. It is unlikely that expanded operations would result in a change in Exide's historical health and safety record. Exide maintains and tracks health and safety information on its employees on a regular basis. The Bristol plant had an Occupational Safety and Health Administration (OSHA) recordable incident rate of 3.15 incidents per 200,000 hours in 2008 (Ganster 2009c), which is below the industry average of 5.3. In addition, Exide administers a program to ensure that lead levels in its employees' blood (blood lead levels) stay below the OSHA medical standard of 50 micrograms of lead per 100 grams of blood. The employee average for the Bristol plant is about 13 micrograms per 100 grams. DOE expects these rates would remain at their current low values under expanded operations. The Bristol plant is OSHA 18001-certified, and there are annual health and safety audits (Ganster 2009c).

3.1.6.2.2 No-Action Alternative

Under the No-Action Alternative, plant expansion would not occur and Exide would not hire new employees. DOE expects the incident rates would remain at relatively low levels, as would average blood lead levels.

3.2 Manufacture of Flat Plate Batteries in Columbus, Georgia

3.2.1 AIR QUALITY

3.2.1.1 Affected Environment

The Exide Technologies Columbus plant is in Muscogee County, Georgia, which is in an EPA-designated attainment area for all criteria pollutants. The plant has a synthetic minor air permit from the Georgia Department of Natural Resources (GDNR 2009) and has operated below the permitted air emission levels. A synthetic minor air permit imposes federally enforceable limits to restrict a facility's potential emissions to below major source thresholds. The option makes it possible for those facilities that can comply with the permit's federally enforceable limits to

operate without the need for a permit under Title V of the Clean Air Act (42 U.S.C. 7401 et seq.).

The majority of air emissions from current plant operations result from burning natural gas for the manufacturing process. At present, the Columbus plant uses about 44 million cubic feet of natural gas per year (Emerich 2009). Table 3-3 summarizes emissions of PM₁₀, nitrous oxides, carbon monoxide, sulfur dioxide, and volatile organic compounds from combustion based on the current production rate.

Table 3-3. Columbus plant air emissions.

Pollutant	Emissions (tons per year)
PM ₁₀	0.32
Nitrous oxides	4.2
Carbon monoxide	3.5
Sulfur dioxide	0.025
Volatile organic compounds	0.23

Note: Numbers are rounded to two significant digits.

Source: Emerich 2009.

PM₁₀ = particulate matter with median aerodynamic diameter of 10 micrometers or less.

In addition, the plant emitted about 660 pounds of lead to the air from the baghouses, which remove particulates and lead during smelting. The plant has eight existing baghouses for control of emissions.

3.2.1.2 Environmental Consequences

3.2.1.2.1 Proposed Project

Construction Impacts

Air emissions from construction activities at the Columbus plant would include combustion emissions from vehicles and heavy-duty equipment for construction of new facilities and fugitive dust from site preparation activities. Demolition activities would also contribute to short-term dust generation.

These emissions would have short-term adverse impacts that Exide could mitigate through best management practices such as soil stabilization and watering of exposed soils. Fugitive dust emissions would cease on completion of construction, so long-term impacts would be negligible.

Operations Impacts

The proposed project would increase production of batteries. To provide a conservative analysis based on production rates, DOE assumed emissions would increase by about 190 percent for each of the pollutants in Table 3-3. Exide would construct 4 new baghouses to bring the total to

12. These baghouses would reduce total emissions at the plant. Therefore, DOE expects the emissions increase would be less than the 190-percent conservative estimate.

The total air emissions at the plant would be below the minimums that trigger a major source designation, and the plant would therefore not require a Title V permit. The plant would continue to operate as an emissions source in accordance with the State of Georgia regulations for individual point source emissions. The plant is in an attainment area for all criteria pollutants and does not exceed the threshold emission rate. Therefore, no conformity determination under the Clean Air Act (42 U.S.C. 7401 et seq.) would be necessary (DOE 2000).

Emissions of carbon dioxide, a known greenhouse gas, would increase by about 190 percent during operations. DOE is not aware of any method to correlate the carbon dioxide emissions exclusively from the proposed project to a specific impact on climate change; however, studies by the Intergovernmental Panel on Climate Change and many other organizations support the premise that carbon dioxide emissions from the proposed project, together with global greenhouse gas emissions, would have a slight cumulative impact on climate change. Although the proposed project would increase emissions at the plant that could contribute to cumulative increases in greenhouse gases and related climate change in global combination with other projects, the carbon dioxide emissions from the proposed project would be minimal. However, the use of electric and hybrid electric vehicles in place of nonelectric and nonhybrid vehicles would reduce gasoline consumption, which would decrease carbon emissions and thereby contribute to offsetting increases in emissions from operations at the plant. Therefore, DOE expects cumulative carbon impacts to be small. In addition, the potential for reduced emissions has the potential to result in a net decrease in U.S. carbon dioxide emissions.

3.2.1.2.2 No-Action Alternative

Under the No-Action Alternative, site emission levels would not increase due to expanded operations; emissions would be similar in magnitude to the current levels.

3.2.2 WATER RESOURCES

3.2.2.1 Affected Environment

Surface Water

The Columbus plant is in the Chattahoochee watershed. There is no surface water within the plant boundary, and the nearest surface water, Bull Creek, is about 300 yards from the site boundary. Bull Creek has been classified as an impaired water under the Clean Water Act (33 U.S.C. 1251 et seq.), but the 2008 State of Georgia water quality evaluation proposes to reclassify the creek as unimpaired (GDNR 2008).

The wastewater from the battery manufacturing processes (casting, pasting, formation, hygiene facilities, and general cleanup) goes to an onsite treatment plant that chemically neutralizes it and

precipitates the metals content. The treated wastewater is then sent under permit to the Columbus Water Works treatment plant.

Groundwater

Exide does not use groundwater to operate the Columbus plant. The Columbus Water Works provides all potable and process water and does not draw from the underlying aquifer for potable drinking water. There are no underground storage tanks at the plant.

Floodplains and Wetlands

The plant is not in a 100-year floodplain, which FEMA designates. There are no wetlands on the site (Espinosa 2009).

3.2.2.2 Environmental Consequences

3.2.2.2.1 Proposed Project

Construction Impacts

The two primary water concerns in relation to new construction at the Columbus plant would be soil erosion and storm water runoff. Ground-disturbing activities would include construction of a new building addition with impermeable surfaces and demolition of existing structures. Because exposed soils are subject to erosion, increased runoff could carry sediment into local waterways during precipitation events. Increased sedimentation in culverts, drainage systems, and waterways could impede surface water drainage from the site and increase the risk of flooding. However, the use of appropriate erosion control and storm water management measures could substantially reduce the impacts of erosion and increased runoff.

Operations Impacts

Surface Water

Exide would continue to treat all wastewater in an onsite treatment plant that chemically neutralizes it and precipitates the metals content. This treated wastewater would be sent to the Columbus Water Works treatment plant. The plant does not discharge wastewater to any surface water body. Therefore, there would be no impact in terms of the impairment status of Bull Creek.

Groundwater

Exide does use groundwater for operations, and there are no underground storage tanks on the site. Therefore, impacts to groundwater availability and quality would be unlikely from normal operations. The potential for and impacts from accidental spills of contaminants would be prevented or mitigated through an Exide spill prevention and mitigation plan. Section 3.2.5 addresses aboveground storage of sulfuric acid and mechanisms for control of accidental release.

Floodplains and Wetlands

None of the proposed construction or demolition activities would occur in a 100-year floodplain. Because the proposed project would be within the existing site boundary, there would be no impacts to existing floodplains or wetlands. The proposed project is consistent with Executive Order 11988, “Floodplain Management,” and Executive Order 11987, “Protection of Wetlands.”

3.2.2.2.2 No-Action Alternative

Under the No-Action Alternative, there would be no impacts to surface water, groundwater, floodplains, or wetlands.

3.2.3 SOCIOECONOMICS

3.2.3.1 Affected Environment

Columbus is in Muscogee County, Georgia. Muscogee County is part of the Bureau of the Census Columbus GA–Alabama metropolitan area. Muscogee County’s estimated population of about 190,000 persons in 2008 reflects a 0.4-percent growth since 2000 (Bureau of the Census 2009c). In 2008, the Muscogee County population was 48.9 percent white, 46.6 percent black, 2 percent Asian, and 0.4 percent American Indian or Alaskan Native. Approximately 1.8 percent of the population reported themselves as being of two or more races. Persons of Hispanic or Latino origin made up 4.2 percent of the population (Bureau of the Census 2009c).

The county’s employment figures reflect the metropolitan nature of the community; the county hosted 120,000 nonfarming jobs in 2007 (BEA 2009d). About 8,000 jobs or 6.4 percent of these positions were in manufacturing (BEA 2009d). In 2000, about 71 percent of the total jobs were held by residents of Muscogee County (Bureau of the Census 2009d). The county’s August 2009 labor force experienced an unemployment rate of 9.1 percent (TAMU 2009b).

The 2007 per capita income in Muscogee County of \$36,353 was 86.3 percent of the State of Georgia per capita income (BEA 2009b). In 2007, 18.6 percent of County residents and 14.3 percent of Georgia residents were in poverty (Bureau of the Census 2009c).

3.2.3.2 Environmental Consequences

The demolition of old facilities and construction of the new addition at the Columbus plant would create jobs at the Columbus plant. The Recovery Act grant would also create jobs for expanded operations. These jobs would generate wages taxable by the local, state, and federal governments. In addition, these wages would lead to an increase in banking deposits, which would increase the community lending base, and to spending on consumable and durable goods and services. The increase in jobs and wages in the community would have a small positive impact.

3.2.3.2.1 Proposed Project

Exide experienced a workforce reduction earlier in 2009. While short-term construction and expanded operations at the Columbus plant would result in an increased number of jobs, the total workforce would remain below previous levels. Therefore, DOE expects that all new or rehired workers would be part of the existing labor force in the area. It is unlikely the additional jobs would cause a noticeable increase in the local population from workers moving into the area. Therefore, impacts to the existing infrastructure, housing, medical care, social services, police and fire protection, schools, or other community services would be unlikely. Therefore, DOE does not address these resources further.

Construction Impacts

Construction activities at the Columbus plant would last approximately 3 years. The plant would require 29 directly employed construction and craft workers during the first year of construction activities, 73 in the second year, and 19 in the third year (Atkins 2009). Each of these positions would create additional indirect jobs via the multiplier effect in which the wages workers spend create the need for additional jobs. Therefore, the Muscogee County area would have an estimated total of 62 new jobs during the first year of construction (29 direct and 33 indirect), which would rise to 157 new jobs during the second year (73 direct and 84 indirect), then fall to 41 new jobs during the third year (19 direct and 22 indirect) (BEA 2009c). The short duration of construction positions would result in a smaller indirect effect than that during operations.

Operations Impacts

At its peak the Columbus plant employed about 500 people; current employment is just above 100. The proposed project would create 200 direct jobs at the plant during operations (Atkins 2009). In turn, these jobs would generate an additional 380 indirect jobs, for a total of 580 new jobs. The aggregate number of jobs would have a small positive impact (about 0.75 percent) on the county's labor force by creating job opportunities that could reduce unemployment and increase labor participation. It is likely that residents of the Columbus GA–Alabama metropolitan area would fill most of the new direct and indirect jobs. In addition, the proposed project would result in six new direct positions at Exide's Lampeter, Pennsylvania, facility to support the increased production at both the Bristol and Columbus plants. These positions would generate a small number of indirect jobs. These jobs would represent a small positive socioeconomic impact in the Lampeter area.

3.2.3.2.2 No-Action Alternative

The No-Action Alternative would result in no Recovery Act grant and the potential environmental impacts of using the Recovery Act funding for the expansion of facilities in Columbus would not occur. In addition, the prospective positive benefits of the proposed project, including the retention and creation of jobs, would not occur.

3.2.4 UTILITIES, ENERGY, AND MATERIALS

3.2.4.1 Affected Environment

The existing Columbus plant uses electricity, natural gas, and water in the manufacturing process. Electricity is from Georgia Power, natural gas is from Atmos Energy Corporation, and water is from Columbus Water Works. At present, the Columbus plant uses about the following annual amounts (Emerich 2009):

- 21 million kilowatt-hours of electricity,
- 44 million cubic feet of natural gas, and
- 4.3 million gallons of water.

3.2.4.2 Environmental Consequences

3.2.4.2.1 Proposed Project

Construction Impacts

Construction activities would consume very small amounts of electricity, natural gas, and water. The annual impact to ongoing utility service to the plant during construction would be very small.

Operations Impacts

The proposed expanded production would increase utilities use by about 190 percent. The local area providers of electricity, natural gas, and water have the capacity to supply the plant with the required utility support. The Columbus Water Works has a design capacity of 90 million gallons per day and is operating at about 31 percent of capacity (CWW 2009), Georgia Power sold 86 billion kilowatt-hours of electricity in 2007 (GP 2008), and Atmos Energy Corporation sold 430 million cubic feet of natural gas in 2007 (AEC 2009). In comparison with these capacities, the impacts of using the estimated total amounts would be small.

3.2.4.2.2 No-Action Alternative

Under the No-Action Alternative, use of utilities, energy, and materials would not increase. Consumption levels would remain approximately the same as those under current operations.

3.2.5 WASTE

3.2.5.1 Affected Environment

Exide recycles nonhazardous solid waste such as pallets, cardboard, and plastic wrap from current operations as well as universal waste. There are no underground waste storage tanks at the Columbus plant. The plant does have storage tanks for sulfuric acid for the manufacturing processes. The tanks are above ground and have secondary containment structures.

Table 3-4 lists the types and amounts of industrial waste the Columbus plant currently generates.

Table 3-4. Columbus plant industrial waste.

Type	Amount
Recycled plant scrap (tons)	930
Hazardous waste (tons)	86
Wastewater (millions of gallons)	28
Lead released in wastewater (pounds)	0.72

Note: Numbers are rounded to two significant digits.

Source: Emerich 2009.

The plant collects lead scrap at the point of generation in 55-gallon steel drums that comply with U.S. Department of Transportation regulations. Exide ships the scrap for recycling to its smelter in Frisco, Texas, under a hazardous waste manifest in compliance with federal and state laws and regulations.

Hazardous waste at the plant includes used lead-contaminated personal protection equipment and other materials with small amounts of lead and lead oxide. The plant has accumulation containers to collect the waste and transfers it to a 30-cubic-yard storage area until sending it to a licensed commercial hazardous waste landfill.

The wastewater from the battery manufacturing processes (casting, pasting, formation, hygiene facilities, and general cleanup) goes to an onsite treatment plant that chemically neutralizes it and precipitates the metals content. The treated wastewater is then sent under permit to the Columbus Water Works treatment plant.

3.2.5.2 Environmental Consequences

3.2.5.2.1 Proposed Project

Construction Impacts

For the demolition of existing structures and the construction of the new plant addition, construction-related debris would include wood, metal, and concrete. Exide would ship construction waste to an appropriate commercial landfill or recycling facility.

Operations Impacts

The characteristics of the waste for the proposed project would be the same as the waste the site currently generates. Based on production rates, DOE expects the amount of waste to increase by about 190 percent. These levels of waste generation are not large enough to affect a landfill or wastewater treatment plant.

The proposed projects would not require expansion of the existing acid storage tanks because they can accommodate the needs of the expanded operations, so there would be no additional risk of impacts from increased production.

Exide would require a new National Pollutant Discharge Elimination System permit, and the increase in hazardous waste would result in a modification to the plant's hazardous waste generator permit. Exide would continue to recycle nonhazardous solid waste and universal waste. Exide would continue to send hazardous waste off the site for treatment or disposal.

3.2.5.2.2 No-Action Alternative

Under the No-Action Alternative, waste generation would not increase. Waste levels would remain approximately the same as those under current operations.

3.2.6 OCCUPATIONAL HEALTH AND SAFETY

3.2.6.1 Affected Environment

Exide maintains a comprehensive health and safety management program at its Columbus plant. Engineering controls are in place to prevent injuries and to control employee exposure to chemicals in the workplace. The company provides comprehensive safety training to new employees and periodic additional training for current workers. Exide also maintains a safety professional on staff at the plant to provide support and direction to the plant management team.

3.2.6.2 Environmental Consequences

3.2.6.2.1 Proposed Project

Construction

Exide would demolish some existing site structures and build a 44,000-square-foot addition (Section 2.2.1). The construction work\force would be small and temporary in nature (Section 3.2.3.1). DOE expects workplace accident and incident rates would be typical of industry averages for this type of work.

Operations

The proposed expansion of operations in the Columbus plant would be similar in nature to Exide's existing operations from a health and safety perspective. It is unlikely that the expanded operations would result in a deviation from Exide's historical health and safety record. Exide maintains and tracks health and safety information on its employees on a regular basis. The Columbus plant had an OSHA recordable incident rate of 0.73 incidents per 200,000 hours in 2008 (Ganster 2009c), which is below the industry average rate of 5.3. In addition, Exide administers a program to ensure that lead levels in its employees' blood (blood lead levels) stay below the OSHA medical standard of 50 micrograms of lead per 100 grams of blood. The employee average for the Columbus plant is 15 micrograms per 100 grams (Ganster 2009c). DOE expects these rates would remain very near their current low values under expanded operations.

3.2.6.2.2 *No-Action Alternative*

Under the No-Action Alternative, plant expansion would not occur and Exide would not hire new employees. The incident rates would remain at relatively low levels, as would average blood lead levels.

4. CUMULATIVE IMPACTS

Cumulative impacts result from the incremental effects the project could have in combination with the impacts of past, present, and reasonably foreseeable actions. Exide's Bristol and Columbus plants have been in operation for 15 and 46 years, respectively. The Bristol plant is on an existing 134-acre site, and the Columbus plant is on an existing 42-acre site. Both sites consist of disturbed lands that have been in industrial use for years. Both sites have sufficient access, onsite roads, and the infrastructure to support expanded operations.

Past environmental impacts from historical operations at both plants have already passed through the environment or are captured as part of existing baseline conditions. For most environmental disciplines, there would be no to minimal measurable incremental impacts (Section 1.3).

However, the Bristol plant has preexisting metals and solvent contamination on the property from a previous metal-plating operation that closed before Exide purchased the site in the mid-1990s. The former owner operated a pump-and-treat system until the contaminant levels decreased to acceptable regulatory levels and continues to monitor groundwater at the site. DOE does not expect the increase in operations to contribute to these contamination levels, so there would be no cumulative impacts.

On December 25, 1997, fire destroyed a portion of the Bristol plant that primarily filled battery assemblies with acid. The fire spread smoke that dissipated generally eastward, and water runoff from firefighting efforts flowed overland to the storm water outfall. Local hazardous materials teams decontaminated firefighting personnel and equipment. After the fire, standing water remained throughout the facility, which Exide contained and tested for contaminants. Because the water contained contaminants that the onsite wastewater treatment plant could not remove, Exide transferred the contaminated water to tanker trucks for offsite treatment and disposal in a permitted hazardous waste facility. Exide sorted the debris from the fire into damaged structural steel, building debris from nonproduction areas, and contaminated debris (lead was the primary contaminant). The company recycled the damaged steel, sent the building debris to permitted disposal facilities, and sent the contaminated debris for disposal in a permitted hazardous waste facility (Exide Corporation 1998).

The Columbus plant also has preexisting metals and solvent contamination on the property from a lead smelter that is no longer in operation. Exide is working with the Georgia Environmental Protection Division to investigate the extent of the contamination and if necessary to develop corrective actions. DOE does not expect the increase in operations to contribute to these contamination levels, so there would be no cumulative impacts.

In comparison with current levels of operations, the proposed expanded operations at both sites would contribute small incremental impacts to air emissions, wastewater discharges, solid waste generation, and utilities use (electricity, natural gas, and water). The Bristol plant would expand into an existing building, so only small amounts of waste from modifying the interior of the

building for equipment installation would be small. The removal of existing structures and the construction of a new addition at the Columbus plant would result in a small increased consumption of construction materials in the community; the razing of existing structures would result in construction waste or material that Exide could recycle. At both plants, expanded operations would result in the use of additional raw materials including lead, separators, plastic, and sulfuric acid for the Bristol plant and lead, separators, posts, plastic cases and covers, and sulfuric acid for the Columbus plant. The amounts of these materials would not combine with other actions to form a significant impact.

Initial construction at both plants would result in slightly increased carbon dioxide emissions, and expanded operations would result in conservatively estimated increases of about 10 and 190 percent from transportation and use of natural gas and electricity to power the Bristol and Columbus plants, respectively. These emissions would have a small cumulative impact, together with global greenhouse gas emissions, on climate change. However, the use of electric and hybrid electric vehicles in place of nonelectric and nonhybrid vehicles would reduce gasoline consumption, which would decrease carbon emissions and thereby contribute to offsetting increases in emissions from operations at the plants. Therefore, DOE expects cumulative carbon impacts to be small. In addition, the potential for reduced emissions has the potential to result in a net decrease in U.S. carbon dioxide emissions.

Expanded operations would result in an increase in each plant's employment base and result in the creation of indirect jobs. While this would represent a small positive increase in regional employment, the anticipated employment levels would still be less than the employment levels each plant had at its peak.

The expanded operations at either the Bristol or Columbus plants would have little cumulative impact because the plants are on existing disturbed lands that have been industrial sites for many years. In addition, the incremental increases from each plant's expanded operations would be small and within permitted limits.

5. CONCLUSIONS

The expansion of operations at the Exide Technologies facilities in Bristol, Tennessee, and Columbus, Georgia, would take place on existing company-owned plant sites. The Bristol site occupies 134 acres, and Exide has operated it for about 15 years; the Columbus site occupies 42 acres and has operated for 46 years.

The analyses for this EA considered all the environmental disciplines DOE typically includes in NEPA documents. DOE considered both its Proposed Action of providing Recovery Act funding and Exide Technologies' proposed project for expanded operations at two existing sites. The proposed project includes modification of an existing building at the Bristol plant and construction of a new addition at the Columbus plant. After review, DOE decided not to carry several disciplines forward to a characterization of the affected environmental or additional analyses because there would be no impacts, impacts would be too small to characterize, or impacts would only occur for short durations. In addition, both sites consist of disturbed lands that have been in industrial use for years, and potential impacts would be unlikely beyond the site boundaries. The disciplines DOE did not carry forward include:

- Geology and soils,
- Land use,
- Aesthetics and visual resources,
- Noise,
- Biological resources,
- Cultural resources,
- Environmental justice, and
- Transportation.

In comparison with current levels of operations, the proposed expanded operations at both sites would contribute small incremental impacts to air quality, wastewater discharges, solid waste generation, and utilities use (electricity, natural gas, and water). The Bristol plant would expand into an existing building, so the amount of waste from preparing for the installation of equipment would be small. The removal of existing structures and the construction of a new addition at the Columbus plant would result in a small increased use of construction materials in the community; the razing of existing structures would result in construction waste including wood, metal, and concrete that Exide would ship to an appropriate commercial landfill or recycling facility. Expanded operations would also result in the use of additional raw materials (Sections 2.1.1 and 2.1.2).

Expanded production at both the Bristol and Columbus plants would have a small impact on local carbon dioxide emissions, which could in combination with global emissions have a cumulative effect on climate change. However, the use of electric and hybrid electric vehicles in place of nonelectric and nonhybrid vehicles would reduce gasoline consumption, which would decrease carbon emissions and thereby contribute to offsetting increases in emissions from operations at the plants. Therefore, DOE expects cumulative carbon impacts to be small. In

addition, the potential for reduced emissions has the potential to result in a net decrease in U.S. carbon dioxide emissions.

Expanded operations would result in an increase in each plant's employment base and result in the creation of indirect jobs. While this represents a small positive increase in regional employment, the anticipated employment levels would still be less than the employment levels each plant had at its peak.

As Section 1.5 notes, DOE conducted formal consultations with the responsible FWS field offices and with the SHPOs in Georgia and Tennessee. Appendix B contains copies of these consultation letters and the subsequent correspondence. Based on the information and/or conclusions the FWS field offices provided, DOE concluded there would be no impacts to federal or state threatened or endangered species from the proposed projects at either site. The SHPOs responded that there would be no impacts to historic properties from the proposed projects at either site.

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APPENDIX A DISTRIBUTION LIST

The Honorable Phil Bredeson
Governor of Tennessee
Nashville, Tennessee

Mr. Frederick Ganster
Director of Environment, Health, & Safety, North America
Exide Technologies
Reading, Pennsylvania

The Honorable Steve Godsey
Mayor
Sullivan County
Blountville, Tennessee

Mr. James C. Hardeman
Manager, Environmental Radiation Program
Georgia Department of Natural Resources
Atlanta, Georgia

Mr. Noel A. Holcomb
Georgia State Historic Preservation Officer
Atlanta, Georgia

Mr. Isaiah Hugley
City Manager
Columbus Consolidated Government
Columbus, Georgia

Ms. Mary Jennings
Field Supervisor
U.S. Fish and Wildlife Service
Cookville Ecological Services Office
Cookville, Tennessee

Mr. Patrick McIntyre
Tennessee State Historic Preservation Officer
Nashville, Tennessee

Mr. John Owsley
Tennessee Department of Environment and Conservation
Oak Ridge, Tennessee

Ms. Mary Parkman
Tennessee Department of Environment and Conservation
Nashville, Tennessee

The Honorable Sonny Perdue
Governor of Georgia
Atlanta, Georgia

Mr. Charles Runco
Columbus Plant Manager
Exide Technologies
Columbus, Georgia

The Honorable Joel Staton
Mayor
Bristol, Tennessee

Ms. Sandy Tucker
Field Supervisor
U.S. Fish and Wildlife Service
Athens Ecological Services Office
Athens, Georgia

The Honorable Jim Wetherington
Mayor
Columbus Consolidated Government
Columbus, Georgia

Mr. Jim York
Bristol Plant Manager
Exide Technologies
Bristol, Tennessee

APPENDIX B CONSULTATIONS

This appendix contains copies of consultation letters between DOE, the FWS, and the Georgia and Tennessee SHPOs. The maps and photographs DOE included with these letters contain essentially the same information as Chapter 2, so they are not reproduced here. The letters to and from these agencies are grouped by consultation agency and then date as follows:

- FWS Athens, Georgia, Ecological Services Office,
- FWS Cookville, Tennessee, Ecological Services Office,
- Georgia SHPO, and
- Tennessee SHPO.



NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



November 5, 2009

Ms. Sandy Tucker, Field Supervisor
U.S. Fish and Wildlife Service
Athens Ecological Services Office
105 Westpark Drive
Athens, GA 30606

Dear Ms. Tucker:

SUBJECT: U.S. Department of Energy Consultation for the Exide Battery Project, Columbus, Georgia

The U.S. Department of Energy (DOE) is proposing to provide a financial grant to Exide Technologies through the Electric Drive Vehicle Battery and Component Manufacturing Initiative of the American Reinvestment and Recovery Act (ARRA). Funding to the company would be used to expand the manufacturing of advanced lead-acid batteries for use in the transportation industry at Exide's existing facility in Columbus, GA (3639 Joy Road, Columbus, GA, 31906-4741).

Expansion of the Exide Columbus facility would require the dismantlement of an existing building and loading docks and the construction of a new 43,850 square foot addition to the existing plant. All construction activity would occur within the 42-acres of land owned by Exide Technologies (see attached map). The construction site has been previously disturbed and dedicated to industrial uses for the past 46-years.

To comply with Section 7(a)(2) of the Endangered Species Act, the DOE requests information on any federally or state listed threatened, endangered, or candidate species or critical habitat within the project area.

An environmental assessment currently is being prepared for this project by the DOE's National Energy Technology Laboratory to meet the requirements of the National Environmental Policy Act. A copy of that Environmental Assessment will be sent to your office upon its completion.

Please reply to Pierina Fayish of the National Energy Technology Laboratory at 412-386-5428 or pierina.fayish@netl.doe.gov.

Sincerely,

A handwritten signature in black ink that reads "Pierina N. Fayish".

Pierina N. Fayish

826 Cochran Mill Road, P.O. Box 10940, Pittsburgh, PA 15236



United States Department of the Interior

Fish and Wildlife Service

105 West Park Drive, Suite D
Athens, Georgia 30606
Phone: (706) 613-9493
Fax: (706) 613-6059

West Georgia Sub-Office
Post Office Box 52569
Fort Benning, Georgia 31995-2569
Phone: (706) 544-6428
Fax: (706) 544-6419

Coastal Sub-Office
4980 Wildlife Drive
Townsend, Georgia 31331
Phone: (912) 832-8739
Fax: (912) 832-8744

DEC 29 2009

National Energy Technology Laboratory
Attn: Pierina Fayish
626 Cochran Mill Road
P.O. Box 10940
Pittsburgh, Pennsylvania 15236

Re: FWS Log No. 2010-CPA-0308


Dear Mr. Fayish:

The Service has received your November 5, 2009, letter requesting information on any federally or state listed threatened, endangered, or candidate species or critical habitat within the Exide Battery Project location (3639 Joy Road, Columbus, GA, 31906-4741).

We are providing a list of the federally endangered (E) and threatened (T) species which potentially occur in Muscogee County for your use. Species list by county for the state of Georgia can be found at <http://www.fws.gov/athens/endangered.html> if you need information on additional counties in the future. The Service recommends surveys be conducted by comparing habitat requirements for listed species with available habitat types at the project site. Field surveys for the species should be performed if habitat requirements overlap with that available at the project site. Surveys for protected plant species must be conducted by a qualified biologist during the flowering or fruiting period(s) of the species. We also recommend you contact the Georgia Department of Natural Resources (GADNR) Natural Heritage Program at (770) 918-6411 concerning known populations of Federal and/or State endangered or threatened species, and other sensitive species within the above mentioned county. Please notify this office with the results of any surveys for the attached list of species.

Your interest in ensuring the protection of endangered and threatened species and our nation's valuable resources is appreciated. If you have further questions or require additional information, please contact Bean Dudley of the West Georgia Sub Office at (706) 544-6253.

Sincerely,


Sandra S. Tucker
Field Supervisor

cc: file, USFWS, West GA Office

Listed Species in Muscogee County (updated May 2004)				
Species	Federal Status	State Status	Habitat	Threats
Bird				
Red-cockaded woodpecker <i>Picoides borealis</i>	E	E	Nest in mature pine with low understory vegetation (<1.5m); forage in pine and pine hardwood stands > 30 years of age, preferably > 10" dbh	Reduction of older age pine stands and to encroachment of hardwood midstory in older age pine stands due to fire suppression
Reptile				
Alligator snapping turtle <i>Macrochelys temminckii</i>	No Federal Status	T	Rivers, lakes, and large ponds near stream swamps.	Destruction and modification of habitat and overharvesting.
Gopher tortoise <i>Gopherus polyphemus</i>	No Federal Status	T	Well-drained, sandy soils in forest and grassy areas; associated with pine overstory, open understory with grass and forb groundcover, and sunny areas for nesting	Habitat loss and conversion to closed canopy forests. Other threats include mortality on highways and the collection of tortoises for pets
Invertebrate				
Gulf moccasinshell mussel <i>Medionidus pencillatus</i>	E	E	Medium streams to large rivers with slight to moderate current over sand and gravel substrates; may be associated with muddy sand substrates around tree roots	Habitat modification, sedimentation, and water quality degradation
Oval pigtoe mussel <i>Pleurobema pyriforme</i>	E	E	River tributaries and main channels in slow to moderate currents over silty sand, muddy sand, sand, and gravel substrates	Habitat modification, sedimentation, and water quality degradation
Purple banklimber mussel <i>Elliptioideus sloatianus</i>	T	T	Main channels of ACF basin rivers in moderate currents over sand, sand mixed with mud, or gravel substrates	Habitat modification, sedimentation, and water quality degradation
Shiny-rayed pocketbook mussel <i>Hamiota subangulata</i>	E	E	Medium creeks to the mainstems of rivers with slow to moderate currents over sandy substrates and associated with rock or clay	Habitat modification, sedimentation, and water quality degradation
Fish				
Bluestripe shiner	No			

<i>Cyprinella callitaenia</i> Plant	Federal Status	T	Brownwater streams	
Pickering's morning-glory <i>Stylisma pickeringii</i>	No Federal Status	T	Coarse white sands on sandhills near the Fall Line and on a few ancient dunes along the Flint and Ochopee Rivers	
Croomia <i>Croomia nauctiflora</i>	No Federal Status	T	Rich moist deciduous woodlands, ravines, and river bluffs, often with ginseng	
Georgia Rockcress <i>Arabis georgiana</i>	Candidate Species	T	Rocky bluffs and slopes along waterways; also on sandy, eroding riverbanks	
Georgia rock-cress <i>Arabis georgiana</i>	Candidate Species	T	Rocky (limestone, shale, granite-gneiss) bluffs and slopes along watercourses; also along sandy, eroding riverbanks	
Granite rock stonecrop <i>Sedum pusillum</i>	No Federal Status	T	Granite outcrops among mosses in partial shade under red cedar trees	
Indian olive <i>Nestronia umbellula</i>	No Federal Status	T	Dry open upland forests of mixed hardwood and pine	
Michaux's sumac <i>Rhus michauxii</i>	E	E	Sandy or rocky open woods, usually on ridges with a disturbance history (periodic fire, prior agricultural use, maintained right-of-ways); the known population of this species in Muscogee County has been extirpated	Low reproductive capability (dioecious), low genetic variability associated with geographic isolation, hybridization with <i>R. copallina</i> and <i>R. glabra</i> , and habitat loss due to development
Nevius' stonecrop <i>Sedum nevii</i>	No Federal Status	T	Shallow soil over granitic gneiss on steep bluffs along the Chattahoochee River	
Relict trillium <i>Trillium reliquum</i>	E	E	Hardwood forests; in the Piedmont, found in either in rich ravines or adjacent alluvial terraces with other spring-flowering herbs	Logging, road construction, agricultural conversion, mining, residential/industrial development, and encroachment by Japanese honeysuckle and kudzu
Shoals spider-			Major streams and rivers in	

lily <i>Hymenocallis coronaria</i>	No Federal Status	E	rocky shoals and in cracks of exposed bedrock; plants can be completely submerged during flooding
Sweet pitcher-plant <i>Sarracenia rubra</i>	No Federal Status	E	Acid soils of open bogs, sandhill seeps, Atlantic white-cedar swamps, wet savannahs, low areas in pine flatwoods, and along sloughs and ditches



NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



November 5, 2009

Ms. Mary Jennings, Field Supervisor
U.S. Fish and Wildlife Service
Cookville Ecological Services Office
105 Westpark Drive
Cookville, TN 38501

Dear Ms. Jennings:

SUBJECT: U.S. Department of Energy Consultation for the Exide Battery Project, Bristol, Tennessee

The U.S. Department of Energy (DOE) is proposing to provide a financial grant to Exide Technologies through the Electric Drive Vehicle Battery and Component Manufacturing Initiative of the American Reinvestment and Recovery Act (ARRA). Funding to the company would be used to expand the manufacturing of advanced lead-acid batteries for use in the transportation industry at Exide's existing facility in Bristol, Tennessee (364 Exide Drive, Bristol, TN, 37620-8955).

Expansion of the Exide Bristol facility would be limited to installing new and/or old process equipment into an existing warehouse. No construction activities outside the existing building are planned. Expanded operations would occur within the 134-acres of land owned by Exide Technologies (see attached map). The site has been previously disturbed and dedicated to industrial uses for the past 15-years.

To comply with Section 7(a)(2) of the Endangered Species Act, the DOE requests information on any federally or state listed threatened, endangered, or candidate species or critical habitat within the project area.

An environmental assessment currently is being prepared for this project by the DOE's National Energy Technology Laboratory to meet the requirements of the National Environmental Policy Act. A copy of that Environmental Assessment will be sent to your office upon its completion.

Please reply to Pierina Fayish of the National Energy Technology Laboratory at 412-386-5428 or pierina.fayish@netl.doe.gov.

Sincerely,

A handwritten signature in black ink that reads "Pierina N. Fayish".

Pierina N. Fayish

626 Cochran Mill Road, P.O. Box 10940, Pittsburgh, PA 15236





NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OH · Morgantown, WV · Pittsburgh, PA



December 18, 2009

DEC 22 2009

EC-0018

Dear Reader:

Enclosed for your review and comment is the U.S. Department of Energy's (DOE's) *Draft Environmental Assessment for Exide Technologies Electric Drive Vehicle Battery and Component Manufacturing Initiative Application, Bristol, TN, and Columbus, GA* (DOE/EA-1712D) (Draft EA).

DOE prepared the Draft EA to evaluate the potential environmental consequences of providing an *American Recovery and Reinvestment Act of 2009* (the Recovery Act; Public Law 111-5, 123 Stat. 115), as amended, grant to Exide Technologies for the expansion of domestic advanced lead-acid battery manufacturing for use in the transportation industry. DOE's Proposed Action is to provide \$34.3 million in financial assistance in a cost-sharing arrangement with the project proponent, Exide Technologies. The total cost of the project is estimated at \$70 million. The project would expand Exide's domestic capacity to produce advanced lead-acid batteries for use in the transportation industry. The Draft EA evaluates 14 resource areas and identifies no significant adverse impacts for the Proposed Action. Beneficial impacts to the nation's air quality and transportation could be realized from implementation of the Proposed Action. In addition, beneficial socioeconomic impacts would occur from increased employment opportunities and spending in the affected local economies. This proposed project was one of the 30 projects DOE selected for funding under the funding opportunity announcement (DE-FQA-0000026), *Recovery Act - Electric Drive Vehicle Battery and Component Manufacturing Initiative*, on March 19, 2009.

The DOE Proposed Action is to provide a grant to partially fund expanded manufacturing of two types of batteries at two Exide Technologies plants: a spiral wound absorbed glass mat design Exide would manufacture at its Bristol, Tennessee, plant, and a flat plate absorbed glass mat design it would manufacture at its Columbus, Georgia, plant. At the Bristol plant, Exide would move new or existing process equipment into an existing 110,000-square-foot building; the spiral wound battery manufacturing would require about 50,000 square feet. At the Columbus plant, Exide would demurphish some existing structures and build a 44,000-square-foot addition to the existing battery plant.

Invitation to Comment

DOE invites interested parties to comment on this Draft EA, as described below, during a 30-day public comment period that begins on December 18, 2009 and ends January 16, 2010. Submit comments to Mr. Mark W. Lusk, Office of Project Facilitation & Compliance, U.S. Department of Energy, National Energy Technology Laboratory, by mail to 3610 Collins Ferry Road, P.O. Box 880, MS B07, Morgantown, WV 26507-0880, by facsimile at (304) 285-4403, or by e-mail to mark.lusk@netl.doe.gov. Envelopes and the subject line of e-mails and faxes should be labeled "Exide Draft EA Comments." Comments that are received after the close of the comment period will be considered to the extent practicable.

3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507

Individual names and addresses, including e-mail addresses, received as part of the comment documents normally are considered part of the public record. Persons wishing to withhold his or her name, address, or other identifying information from the public record must state this request prominently at the beginning of the comment document; DOE will honor this request to the extent allowable by law. All submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses will be included in the public record and open to public inspection in their entirety.

Thank you for your interest in the Electric Drive Vehicle Battery and Component Manufacturing Initiative and this Draft EA. For further information on the Draft EA or to request additional copies, please contact Mr. Mark W. Lusk as noted above.

Sincerely,


Mark W. Lusk
NEPA Document Manager

No significant adverse impacts to wetlands or federally listed endangered or threatened species are anticipated from this proposal.


Field Supervisor Date
U. S. Fish and Wildlife Service
Cookeville, TN 38501



NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



November 5, 2009

Mr. Noel A. Holcomb, State Historic Preservation Officer
Historic Preservation Division, Division of Natural Resources
34 Peachtree Street, NW
Suite 1600
Atlanta, GA 30303-2316

Dear Mr. Holcomb:

SUBJECT: U.S. Department of Energy Consultation for the Exide Battery Project, Columbus, Georgia

The U.S. Department of Energy (DOE) is proposing to provide a financial grant to Exide Technologies through the Electric Drive Vehicle Battery and Component Manufacturing Initiative of the American Reinvestment and Recovery Act (ARRA). Funding to the company would be used to expand the manufacturing of advanced lead-acid batteries for use in the transportation industry at Exide's existing facility in Columbus, GA (3639 Joy Road, Columbus, GA, 31906-4741).

Expansion of the Exide Columbus facility would require the dismantlement of an existing building and loading docks and the construction of a new 43,850 square foot addition to the existing plant. All construction activity would occur within the 42-acres of land owned by Exide Technologies (see attached map). The construction site has been previously disturbed and dedicated to industrial uses for the past 46-years.

An environmental assessment currently is being prepared for this project by the DOE's National Energy Technology Laboratory to meet the requirements of the National Environmental Policy Act. A copy of that Environmental Assessment will be sent to your office upon its completion.

To aid in the preparation of that Environmental Assessment, and to meet our obligations under Section 106 of the National Historic Preservation Act to take into account the effects of undertakings by federal agencies on historic properties, DOE is requesting any additional information your office has developed or obtained on historic properties that may occur within one mile of the proposed project site.

Please reply to Pierina Fayish of the National Energy Technology Laboratory at 412-386-5428 or pierina.fayish@netl.doe.gov.

Sincerely,

A handwritten signature in black ink that reads "Pierina N. Fayish".

Pierina N. Fayish

626 Cochran Mill Road, P.O. Box 10940, Pittsburgh, PA 15236



CHRIS CLARK
COMMISSIONER

DR. DAVID GRASS
ACTING DIVISION DIRECTOR

December 16, 2009

Pierina Fayish
National Energy Technology Laboratory
626 Cochran Mill Road
PO Box 10940
Pittsburgh, Pennsylvania 15236
pierina.fayish@ntri.doe.gov

**RE: Partial Demolition and New Construction of Exide Battery Plant, 3639 Joy Road, Columbus
Muscooke County, Georgia
HP-091130-003**

Dear Ms. Pierina:

The Historic Preservation Division (HPD) has received initial information concerning the above referenced project. Our comments are offered to assist the US Department of Energy (DOE) and their applicants in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Thank you for notifying us of this federal undertaking. We look forward to receiving Section 106 compliance documentation from you when it becomes available. Please note that if DOE intends to use National Environmental Policy Act (NEPA) documentation and procedures to comply with Section 106 of the NHPA in lieu of the procedures set forth in 36 CFR Part 800.3 through 800.6, DOE must notify HPD and the Advisory Council on Historic Preservation (ACHP) in advance, pursuant to 36 CFR Part 800.8(c).

For information pertaining to historic properties in the subject area of potential effect (APE), please see our website under "Historic Resources" for information concerning the multiple file sources available for research in our office. Please refer to project number **HP-091130-003** in future correspondence concerning this undertaking. If we may be of further assistance, please do not hesitate to contact me at (404) 463-6687, or Michelle Volkema, Environmental Review Specialist, at (404) 651-6546.

Sincerely,

A handwritten signature in black ink that reads "Elizabeth Shirk".

Elizabeth Shirk
Environmental Review Coordinator

ES:mav

cc: Will Johnson, Columbus Historic and Architectural Review Board
Allison Stocum, River Valley RC

254 WASHINGTON STREET, SW | GROUND LEVEL | ATLANTA, GEORGIA 30334
404.656.2840 | FAX 404.657.1368 | WWW.GASHPO.ORG



NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



December 23, 2009

Ms. Elizabeth Shirk
Environmental Review Coordinator
Georgia Historic Preservation Division
254 Washington Street, SW
Ground Level
Atlanta, GA 30334

RE: HP-091130-003

Dear Ms. Shirk:

Thank you for your letter of December 16, 2009. It is the Department of Energy's (DOE) intent to use the National Environmental Policy Act process to comply with the provisions of Section 106 of the National Historic Preservation Act, pursuant to 36 CFR 800.8(c), regarding the actions proposed for the Exide Technologies battery plant in Columbus, Georgia.

DOE prepared the Draft Environmental Assessment (EA) for *Exide Technologies Electric Drive Vehicle Battery Component Manufacturing Application, Bristol, TN, and Columbus, GA* (DOE/EA-1712D) to evaluate the potential environmental impacts of this project. The EA was distributed to the public the week of December 14, 2009. A legal announcement of availability was published in the *Columbus Ledger-Enquirer* Friday December 18th through Sunday December 20th. The public comment period ends January 16, 2010.

Your office was included in the distribution of the Draft EA. Additionally, the original letter requesting consultation, submitted to your office by Ms. Fayish on November 5, 2009, is reproduced in Appendix B of the EA. Based on this consultation, DOE will modify the Final EA as appropriate, and consider your findings in the Department's determination of the potential environmental significance of its proposed actions. Should you need additional information or any clarification of DOE's proposed undertaking, please contact me at (304) 285-4145 or mark.lusk@netl.doe.gov.

Sincerely,

A handwritten signature in black ink that reads "Mark Lusk". The signature is written in a cursive, flowing style.

Mark Lusk
Document Manager/NEPA Compliance Officer

Cc: Advisory Council on Historic Preservation
Attn: Mr. John M. Fowler, Executive Director

3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507



CHRIS CLARK
COMMISSIONER

DR. DAVID CIASS
ACTING DIVISION DIRECTOR

January 21, 2010

Mark Lusk
Document Manager/NEPA Compliance Officer
National Energy Technology Laboratory
U.S. Department of Energy
3610 Collins Ferry Road
P.O. Box 880
Morgantown, West Virginia 26507
mark.lusk@netl.doe.gov

**RE: Partial Demolition & New Construction of Exide Battery Plant, 3639 Joy Road, Columbus
Muscooke County, Georgia
HP-091130-003**

Dear Mr. Lusk:

The Historic Preservation Division (HPD) has reviewed the *Draft Environmental Assessment for Exide Technologies Electric Drive Vehicle Battery and Component Manufacturing Initiative Application, Bristol, TN, and Columbus, GA*, dated December 2009. Our comments are offered to assist the U.S. Department of Energy (DOE) and its applicants in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Based on the information provided in the draft environmental assessment, HPD finds that no historic properties in the proposed project's area of potential effects (APE) will be affected, as defined in 36 CFR Part 800.4(d)(1). Please note for future projects and in order to facilitate a timely review, this level of documentation of historic properties is not generally sufficient for us to review as a stand-alone document. HPD staff consulted additional information sources in regards to the subject industrial complex in Columbus, portions of which may be close to 50 years of age. In the future, additional information should be provided about the project site, particularly photographs illustrating the project area.

Please refer to project number **HP-091130-003** in any future correspondence regarding this undertaking. If we may be of further assistance, please do not hesitate to contact me at (404) 651-6624, or Jackie Tyson, Environmental Review Historian, at (404) 651-6777.

Sincerely,

A handwritten signature in cursive script that reads "Elizabeth Shirk".

Elizabeth Shirk
Environmental Review Coordinator

ES: jhr

cc: Allison Slocum, River Valley RC
Will Johnson, Columbus Historic and Architectural Review Board

254 WASHINGTON STREET, SW | GROUND LEVEL | ATLANTA, GEORGIA 30334
404.656.2840 | FAX 404.657.1368 | WWW.GASHPO.ORG



NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



November 5, 2009

Mr. Patrick McIntyre, State Historic Preservation Officer
Tennessee Historic Commission
2491 Lebanon Road
Nashville, TN 37243-0442

Dear Mr. McIntyre:

SUBJECT: U.S. Department of Energy Consultation for the Exide Battery Project, Bristol, Tennessee

The U.S. Department of Energy (DOE) is proposing to provide a financial grant to Exide Technologies through the Electric Drive Vehicle Battery and Component Manufacturing Initiative of the American Reinvestment and Recovery Act (ARRA). Funding would be used to expand the manufacturing of advanced lead-acid batteries for use in the transportation industry at Exide's existing facility in Bristol, Tennessee (364 Exide Drive, Bristol, TN, 37620-8955).

Expansion of the Exide Bristol facility would be limited to installing new and/or old process equipment into an existing warehouse. No construction activities outside the existing building are planned. Expanded operations would occur within the 134-acres of land owned by Exide Technologies (see attached map). The site has been previously disturbed and dedicated to industrial uses for the past 15-years.

An environmental assessment currently is being prepared for this project by the DOE's National Energy Technology Laboratory to meet the requirements of the National Environmental Policy Act. A copy of that Environmental Assessment will be sent to your office upon its completion.

To aid in the preparation of that Environmental Assessment, and to meet our obligations under Section 106 of the National Historic Preservation Act to take into account the effects of undertakings by federal agencies on historic properties, DOE is requesting any additional information your office has developed or obtained on historic properties that may occur within one mile of the proposed project site.

Please reply to Pierina Fayish of the National Energy Technology Laboratory at 412-386-5428 or pierina.fayish@netl.doe.gov.

Sincerely,

A handwritten signature in black ink that reads "Pierina N. Fayish".

Pierina N. Fayish



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

November 23, 2009

Ms. Pierina N. Fayish
NETL
Post Office 10840
Pittsburgh, Pennsylvania, 15236

RE: DOE, 364 EXIDE DRIVE, BRISTOL, SULLIVAN COUNTY

Dear Ms. Fayish:

In response to your request, received on Wednesday, November 18, 2009, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. You have submitted documents that are insufficient for us to complete our review. To complete the Tennessee State Historic Preservation Office review of this undertaking, you will need to provide us with ALL of the following documents unless instructed otherwise by the Tennessee Historical Commission's Review and Compliance Coordinator:

1. A letter requesting Section 106 review of your undertaking that should include: (a) The name of the federal agency funding, licensing, or permitting your undertaking; (b) The name, address, and phone number of the applicant for federal funding, licensing, or permitting; (c) The street address, city, and county of the undertaking; (d) A list of Consulting Parties invited to participate in consultation relative to the undertaking; (e) A USGS 7 1/2 minute topographic map (be sure to include the name of the map) clearly indicating the boundary of the undertaking, the location of all undertaking elements, and the undertakings Area of Potential Effects. You may obtain such a map by contacting the Department of Environment and Conservation, Division of Geology, Maps and Publications Sales Office at (615) 532-1515. Please be sure to give us the name of the quad map.
2. Other suitably scaled maps or site plans as necessary to depict the extent of the undertaking and its locational relationship to its surroundings and environment.
3. A narrative which describes the undertaking in sufficient detail to enable a reader unfamiliar with the undertaking or its location to gain a full understanding of the undertaking and all of its elements and their potential to affect directly and indirectly any historic properties within the Area of Potential Effects.
4. Original chemical or digital photographs of the undertaking Area of Potential Effects that are numbered and clearly keyed to one of the above maps or site plans.
5. Any available information including dates of construction of buildings either inside the undertaking footprint or within view or sound of the undertaking. Be sure to include photographs of buildings within the undertakings Area of Potential Effects.

Upon receipt of this documentation, we will complete our review of this undertaking as quickly as possible. Please be advised that until this office has provided you a final written comment on this undertaking, you have not met your Section 106 obligation under federal law. Please direct questions and comments to Joe Garrison (615) 532-1550-103. We appreciate your cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Patrick McIntyre, Jr.".

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/yy



U.S. Department of Energy

National Energy Technology Laboratory



December 10, 2009

Mr. E. Patrick McIntyre, Jr.
Executive Director and State Historic Preservation Officer
Tennessee Historical Commission
Department of Environment and Conservation
2941 Lebanon Road
Nashville, TN 37243-0442

Dear Mr. McIntyre:

This is in response to your letter of November 23, 2009, to Ms. Pierina Fayish, and is a follow-up to our letter to you dated November 18, 2009. The U.S. Department of Energy (DOE) is requesting a Section 106 review under the *National Historic Preservation Act* for the proposed expansion of operations at Exide Technologies' Bristol, Tennessee, battery plant. The Department will be issuing the *Draft Environmental Assessment for Exide Technologies Electric Drive Vehicle Battery and Component Manufacturing Initiative Application, Bristol, TN, and Columbus, GA*, for public comment before the end of December 2009. Following is the information requested in your letter of November 23:

1(a). DOE's National Energy Technology Laboratory is responsible for funding this and other proposed projects as part of the *American Recovery and Reinvestment Act of 2009* (Public Law 111-5, 123 Stat. 115). Congress appropriated significant funding for the Vehicle Technologies Program to stimulate the economy and reduce unemployment. DOE solicited applications for this funding by issuing a competitive Funding Opportunity Announcement (DE-FOA-0000026). The proposed action at the Exide Technologies Bristol plant is one of the projects DOE selected for funding.

1(b). The applicant is Exide Technologies.
Local point-of-contact:

Mr. Jim York
Plant Manager
364 Exide Drive
Bristol, TN 37620
423-968-1010

1(c). The address of the facility in which the proposed action would take place is:

364 Exide Drive
Bristol, TN
Sullivan County, TN

1(d). In addition to the Tennessee Historical Commission, DOE has consulted with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the *Endangered Species Act*.

1(e). Figure 1 is an excerpt from the 7.5-minute topographic map (Blountville, Tenn.-VA.; N630-W8215). The rectangle on the map is the approximate boundary of the main manufacturing area at the Exide battery plant in Bristol. The A denotes the main manufacturing facility (constructed in 1955) and the B denotes the location of an existing warehouse (constructed in 1997) where expanded operations under the proposed action would occur. The map was last revised in 1978, so the warehouse does not appear on the map. All proposed activities would take place within the warehouse and within the existing site boundary. Exide also owns a tract of land just north of Edison Drive. This tract is undeveloped, and Exide has no plans to expand manufacturing operations onto that tract at this time. Exide has operated the Bristol plant for 15 years.

2. Figure 2 is a satellite image showing the existing Exide Bristol battery plant. As noted above, the A denotes the main plant facility and the B denotes the existing warehouse in which expanded operations under the proposed action would occur. The shaded portion of the warehouse is the part that would be modified to house the new manufacturing equipment and process lines.

3. Under the proposed action, as a result of the DOE funding, Exide would commence the manufacturing of spiral wound batteries. The manufacturing processes associated with the expanded Bristol operations would be limited to the existing warehouse and within the existing site boundary.

The spiral wound battery project would entail modification of the existing warehouse. The existing warehouse is 110,000 square feet in size. The new spiral wound battery process would require 50,000 square feet, which approximately corresponds to the shaded portion of building B in Figure 2. Exide would build a wall inside the warehouse to partition the new production areas from other existing uses.

4. Figures 3 through 5 provide exterior photos of the warehouse (labeled B in Figure 2) that would be modified to house the expanded manufacturing activities.

- Figure 3 - View of loading docks on the west side of the warehouse.
- Figure 4 - View of the south side of the warehouse.
- Figure 5 - View of the south and west sides of the warehouse.

5. Buildings A and B as shown on Figure 2, were constructed in 1955 and 1997, respectively. As noted in 1(e) above, all proposed activities under the proposed action would take place within the existing site boundary. DOE's draft environmental assessment, which will be issued before the end of 2009, has concluded that there would be no significant impacts, and that impacts that could occur due to expansion of operations would be small and confined to the existing site, and/or remain within permit limits.

Should you have any questions, please feel free to contact me. I look forward to your response and wish to thank you for your timely assistance on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Lusk". The signature is fluid and cursive, written over a light gray rectangular background.

Mark Lusk
NEPA Document Manager/NEPA Compliance Officer
National Energy Technology Laboratory

Attachments:

Figures 1 to 5

USGS 7.5-minute topographic map (Blountville, Tenn.-VA; N630-W8215)



December 29, 2009

TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2341 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

Mr. Mark W. Lusk
NETL
Post Office Box 880
Morgantown, West Virginia, 26507

RE: DOE, EXIDE TECHNOLOGIES EXPANSION, BRISTOL, SULLIVAN COUNTY

Dear Mr. Lusk:

In response to your request, received on Wednesday, December 16, 2009, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process.

After considering the documents you submitted, we determine that THERE ARE NO NATIONAL REGISTER OF HISTORIC PLACES LISTED OR ELIGIBLE PROPERTIES AFFECTED BY THIS UNDERTAKING. We have made this determination either because of the specific location, scope and/or nature of your undertaking, and/or because of the size of the area of potential effect, or because no listed or eligible properties exist in the area of potential effect, or because the undertaking will not alter any characteristics of an identified eligible or listed property that qualify the property for listing in the National Register or alter such property's location, setting or use. Therefore, we have no objections to your proceeding with your undertaking.

If your agency proposes any modifications in current project plans or discovers any archeological remains during the ground disturbance or construction phase, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. If you are applying for federal funds, license or permit, you should submit this letter as evidence of consultation under Section 106 to the appropriate federal agency, which, in turn, should contact us as required by 36 CFR 800. If you represent a federal agency, you should submit a formal determination of eligibility and effect to us for comment. You may find additional information concerning the Section 106 process and the Tennessee SHPO's documentation requirements at <http://www.tennessee.gov/environment/hist/federal/sect106.shtml>. You may direct questions or comments to Joe Garrison (615) 532-1550-103. This office appreciates your cooperation.

Sincerely,

A handwritten signature in cursive script that reads "E. Patrick McIntyre, Jr.".

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jyg