

# Environmental Assessment for Pyrotek, Inc.

## Electric Drive Vehicle Battery and Component Manufacturing Initiative Project, Sanborn, NY

April 2010



**Prepared for:**  
Department of Energy  
National Energy Technology Laboratory



## National Environmental Policy Act (NEPA) Compliance Cover Sheet

### Proposed Action:

The U.S. Department of Energy (DOE) proposes, through a cooperative agreement with Pyrotek, Incorporated (Pyrotek), to partially fund the construction of an industrial building; installation of electrically heated furnaces and other production equipment such as conveyors, collectors, screens, and cooling towers required to accomplish the proposed expansion of Pyrotek's graphitization process. The plant expansion would enable the manufacture of anode materials for lithium-ion batteries used in electric drive vehicles (EDV). This proposed project would support the anticipated growth in the lithium-ion battery industry and, more specifically, the EDV industry and hybrid-electric vehicle industry. If approved, DOE would provide approximately 50 percent of the funding for the project.

**Type of Statement:** Final Environmental Assessment

**Lead Agency:** U.S. Department of Energy; National Energy Technology Laboratory

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### Abstract:

DOE prepared this Environmental Assessment (EA) to assess the potential for impacts to the human and natural environment of its Proposed Action-providing financial assistance to Pyrotek under a cooperative agreement. DOE's objective is to support the development of the EDV industry in an effort to substantially reduce the United States' consumption of petroleum, in addition to stimulating the United States' economy. More specifically, DOE's objective is to accelerate the development and production of various EDV systems by building or increasing domestic manufacturing capacity for advanced automotive batteries, their components, recycling facilities, and EDV components. This work will enable market introduction of various electric vehicle technologies by lowering the cost of battery packs, batteries, and electric propulsion systems for EDVs through high-volume manufacturing.

Under the terms of the cooperative agreement, DOE would provide approximately 50 percent of the funding for Pyrotek to construct an industrial building; installation of electrically heated furnaces and other production equipment such as conveyors, collectors, screens, and cooling towers required to accomplish the proposed expansion of the graphitization process on the Metallurgy Systems' Sanborn facility in Sanborn, New York. The expansion would result in an increase in anode material production capacity to meet higher projected demands, decrease processing costs to provide lower priced material to customers, and meet the objectives of the American Recovery and Reinvestment Act of 2009, by creating and preserving jobs. The project would create approximately 50 new jobs and retain approximately 55 existing facility jobs.

The environmental analysis identified that the most notable changes, although minor, to result from Pyrotek's Proposed Project would occur in the following areas: air quality, noise, geology and soils, surface water,

vegetation and wildlife, solid and hazardous waste, and transportation and traffic. No significant environmental effects were identified in analyzing the potential consequences of these changes.

**Public Participation:**

DOE encourages public participation in the NEPA process. The Draft EA was released for public review and comment on January 17, 2010. The public was invited to provide oral, written, or e-mail comments on the Draft EA to DOE by the close of the comment period on February 17, 2010. Copies of the Draft EA were also distributed to cognizant Federal and State agencies. Comments received by the close of the comment period were considered in preparing this Final EA for the proposed DOE action. The EA is also available on the DOE website at <http://www.netl.doe.gov/nepa/EA-1720.pdf>.

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## ACRONYMS

<b>Acronym</b>	<b>Definition</b>
<b>µg</b>	microgram
<b>AQRV</b>	air quality related values
<b>BMP</b>	best management practice
<b>CAA</b>	Clean Air Act
<b>CE</b>	categorically excluded
<b>CFR</b>	Code of Federal Regulations
<b>CH<sub>4</sub></b>	methane
<b>CIA</b>	Churchville silt loam
<b>CO</b>	carbon monoxide
<b>CO<sub>2</sub></b>	carbon dioxide
<b>dBa</b>	Decibels
<b>DOE</b>	United States Department of Energy
<b>EA</b>	Environmental Assessment
<b>EDV</b>	electric drive vehicle
<b>EEEP</b>	Ecology and Environment Engineering, P.C.
<b>EIS</b>	Environmental Impact Statement
<b>EPA</b>	United States Environmental Protection Agency
<b>ESA</b>	Environmental Site Assessment
<b>°F</b>	degrees Fahrenheit
<b>FEMA</b>	Federal Emergency Management Agency
<b>FIRM</b>	Flood Insurance Rate Map
<b>FONSI</b>	Finding of No Significant Impact
<b>GHG</b>	greenhouse gases
<b>HAP</b>	hazardous air pollutants
<b>HIA</b>	Hilton silt loam
<b>m</b>	meter
<b>MANE-VU</b>	Mid-Atlantic/Northeast Visibility Union
<b>mg</b>	milligram
<b>mtpy</b>	metric tons per year
<b>MSA</b>	New York Metropolitan Statistical Area
<b>NEPA</b>	National Environmental Policy Act
<b>NETL</b>	National Energy Technology Laboratory
<b>NNSR</b>	Nonattainment New Source Review
<b>NO<sub>2</sub></b>	nitrogen dioxide
<b>NO<sub>x</sub></b>	nitrogen oxides
<b>NWI</b>	National Wetlands Inventory
<b>NYSDEC</b>	New York State Department of Conservation
<b>NYCRR</b>	New York Codes, Rules and Regulations

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<b>Acronym</b>	<b>Definition</b>
<b>O<sub>3</sub></b>	ozone
<b>Pb</b>	lead
<b>PCB</b>	polychlorinated biphenyl
<b>PM</b>	particulate matter
<b>PM<sub>10</sub></b>	particulate matter 10 microns
<b>PM<sub>2.5</sub></b>	particulate matter 2.5 microns
<b>ppm</b>	parts per million
<b>PSD</b>	prevention of significant deterioration
<b>Pyrotek</b>	Pyrotek, Incorporated
<b>Recovery Act</b>	American Recovery and Reinvestment Act of 2009, Public Law 111-5
<b>ROD</b>	Record of Decision
<b>SCO</b>	soil cleanup objectives
<b>SIP</b>	State Implementation Plan
<b>SO<sub>2</sub></b>	sulfur dioxide
<b>SPCC</b>	Spill Prevention, Control and Countermeasures
<b>SWPPP</b>	Stormwater Pollution Prevention Plan
<b>TCE</b>	trichloroethylene
<b>tpy</b>	tons per year
<b>U.S.</b>	United States
<b>U.S.C.</b>	United States Code
<b>USFWS</b>	United States Fish and Wildlife Service
<b>VOC</b>	volatile organic compound



## 1.0 PURPOSE AND NEED

### 1.1 Background

The Department of Energy's (DOE's) National Energy Technology Laboratory (NETL) manages the research and development portfolio of the Vehicle Technologies (VT) Program for the Office of Energy Efficiency and Renewable Energy (EERE). A key objective of the VT program is accelerating the development and production of electric drive vehicle (EDV) systems to substantially reduce the United States' 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 EDVs.

Congress appropriated significant funding for the VT program in the American Recovery and Reinvestment Act of 2009, Public Law 111-5 (Recovery Act) to stimulate the economy and reduce unemployment in addition to furthering the existing objectives of the VT 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 (e.g., separator, 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 set forth in the funding opportunity announcement; special consideration was given to projects that promoted the objectives of the Recovery Act – job preservation or creation and economic recovery – in an expeditious manner.

This project, Pyrotek, Incorporated (Pyrotek), was one of the 30 projects that DOE selected for funding. DOE's Proposed Action is to provide \$11.3 million in financial assistance in a cost-sharing arrangement with the project proponent, Pyrotek. The total cost of the project is estimated at \$22.6 million.

### 1.2 Purpose and Need for Department of Energy Action

The overall purpose and need for DOE action pursuant to the VT program and the funding opportunity under the Recovery Act is to accelerate the development and production of various EDV systems by building or increasing domestic manufacturing capacity for advanced automotive batteries, recycling facilities, and EDV components, in addition to stimulating the United States' economy. This work will enable market introduction of various electric vehicle technologies by lowering the cost of battery packs, batteries, and electric propulsion systems for EDVs 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 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 VTs. Successful commercialization of EDVs 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 will 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.

### **1.3 National Environmental Policy Act and Related Procedures**

This Environmental Assessment (EA) is prepared in accordance with the National Environmental Policy Act (NEPA), as amended (42 U.S.C 4321), the President's Council on Environmental Quality regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR 1021). This statute and the implementing regulations require that DOE, as a Federal agency:

- Assess the environmental impacts of any Proposed Action;
- Identify adverse environmental effects that cannot be avoided, should the Proposed Action be implemented;
- Evaluate alternatives to the Proposed Action, including a No Action Alternative; and
- Describe the cumulative impacts of the Proposed Action together with other past, present, and reasonably foreseeable future actions.

These provisions must be addressed before a final decision is made to proceed with any proposed Federal action that has the potential to cause impacts to the human environment, including providing Federal funding to a project. This EA evaluates the potential individual and cumulative effects of the Proposed Project and the No Action Alternative on the physical, human, and natural environment. The EA is intended to meet DOE's regulatory requirements under NEPA and provide DOE with the information needed to make an informed decision about providing financial assistance.

NEPA requires Federal agencies to take into account the potential consequences of their actions on both the natural and human environments as part of their planning and decision-making processes. To facilitate these considerations, a number of typical actions that have been determined to have little or no potential for adverse impacts are "categorically excluded" (CE) from the detailed NEPA assessment process. Thus, the first step in determining if an action would have an adverse effect on the environment is to assess whether it fits into a defined category for which a CE is applicable. If a CE is applied, the agency prepares a Record of Categorical Exclusion to document the decision and proceeds with the action.

For actions that are not subject to a CE, the agency prepares an EA to determine the potential for significant impacts. If through the evaluation and analysis conducted for the EA process, it is determined that no significant impacts would occur as a result of the action, then the determination would result in a Finding of No Significant Impact (FONSI). The Federal agency would then publish an EA and the FONSI. The NEPA process is complete when the FONSI is executed.

If significant adverse impacts to the natural or human environment are indicated or other intervening circumstances either exist at the onset of a project or are determined through the EA process, an Environmental Impact Statement (EIS) may be prepared. An EIS is a more intensive study of the effects of the Proposed Action, and requires more rigorous public involvement. The agency formalizes its decisions relating to an action for which an EIS is prepared in a Record of Decision (ROD). Following a 30-day waiting period after publication of the Final EIS, the Agency may issue a ROD and then the NEPA process is complete.

#### **1.4 Agency Consultation**

DOE has initiated consultations with the U.S. Fish and Wildlife Service (USFWS), the National Heritage Program, and the State Historic Preservation Office per requirements of Section 7 of the Endangered Species Act, and Section 106 of the National Historic Preservation Act. Copies of the letters are included in Appendix A of this EA.

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## **2.0 PROPOSED ACTION AND ALTERNATIVES**

### **2.1 Department of Energy's Proposed Action**

DOE proposes, through a cooperative agreement with Pyrotek, to partially fund the construction of a commercial-size manufacturing plant that would produce high-performance anode material for lithium-ion batteries. The plant would be constructed as an addition to an existing plant in Sanborn, New York, owned and operated by Metallics Systems, a Division of Pyrotek. This plant would support the anticipated growth in the lithium-ion battery industry and, more specifically, the EDV industry and hybrid-electric vehicle industry. If approved, DOE would provide 50 percent of the initially estimated funding for the project.

### **2.2 Pyrotek's Proposed Project**

Pyrotek proposes the construction of a 93,000 square foot single-story pre-engineered steel industrial building; installation of electrically heated furnaces and other production equipment such as conveyors, collectors, screens, and cooling towers required to accomplish the proposed expansion of the graphitization process; extending existing on-site utility lines such as electricity, water, nitrogen, and sewer to service the proposed project; extending and rearranging an existing on-site roadway; and construction of a retention pond for control of stormwater run-off from the proposed project. Additionally, a small (approximately 2,000 square feet) single story existing concrete building would be demolished.

This project would add an additional 93,000 square feet to the existing plant. Of the 93,000 square foot plant expansion, 75,000 square feet would be used to increase the processing capacity. This would also include the acquisition of additional material handling equipment, and 12 new graphite furnaces that are scheduled to be built and brought online through Calendar Year 2012, as needed to meet the projected volume demands. Post award volume forecasts suggest the facility would be brought to full capacity at a faster pace than originally scheduled. The remaining 18,000 square feet would be used as a storage area for equipment spare parts, as well as for material storage, as needed. This storage area would be able to house an additional six new graphite furnaces when future expansion would be necessary (additional space would then need to be built for the required spare equipment and material storage).

The capacity expansion efforts associated with the project would be scheduled to meet the seasonal construction periods found in northwest New York State, while the additions of furnaces and other processing equipment would be scheduled to meet the demand growth. The new furnaces have been designed to be modular in construction, making the installation process more efficient than with older, brick furnaces. Efforts have been initiated to request and secure an additional allocation of hydropower for 12 graphite furnaces so that the electricity would be available as the new furnaces are commissioned.

### **2.3 General Description and Location**

The proposed project would be located in Sanborn, New York, in Niagara County, on property owned by Metallics Systems (Figure 2.2-1). The proposed site is a 16-acre parcel that is part of the current Metallics Systems' 26-acre property for commercial manufacturing. It is accessed via Cory Drive and consists of two general areas including the 2050 area and the 2040 area (Figure 2.2-2). The 2040 area is on the southern portion of the property and includes facilities used by Metallics Systems to produce graphite for anode material using high temperature furnaces for the graphitization process. This process is conducted indoors; however, some material handling and industrial equipment (e.g., cooling tower and dust collectors) are located on the exterior of the production building. The northern portion of the site is referred to as the 2050 area, which consists of buildings (including Building No. 2) and an undeveloped field between these buildings and the northern boundary (the area where the majority of the project would be placed). Metallics Systems is currently leasing the buildings in the 2040 area to temporary tenants.

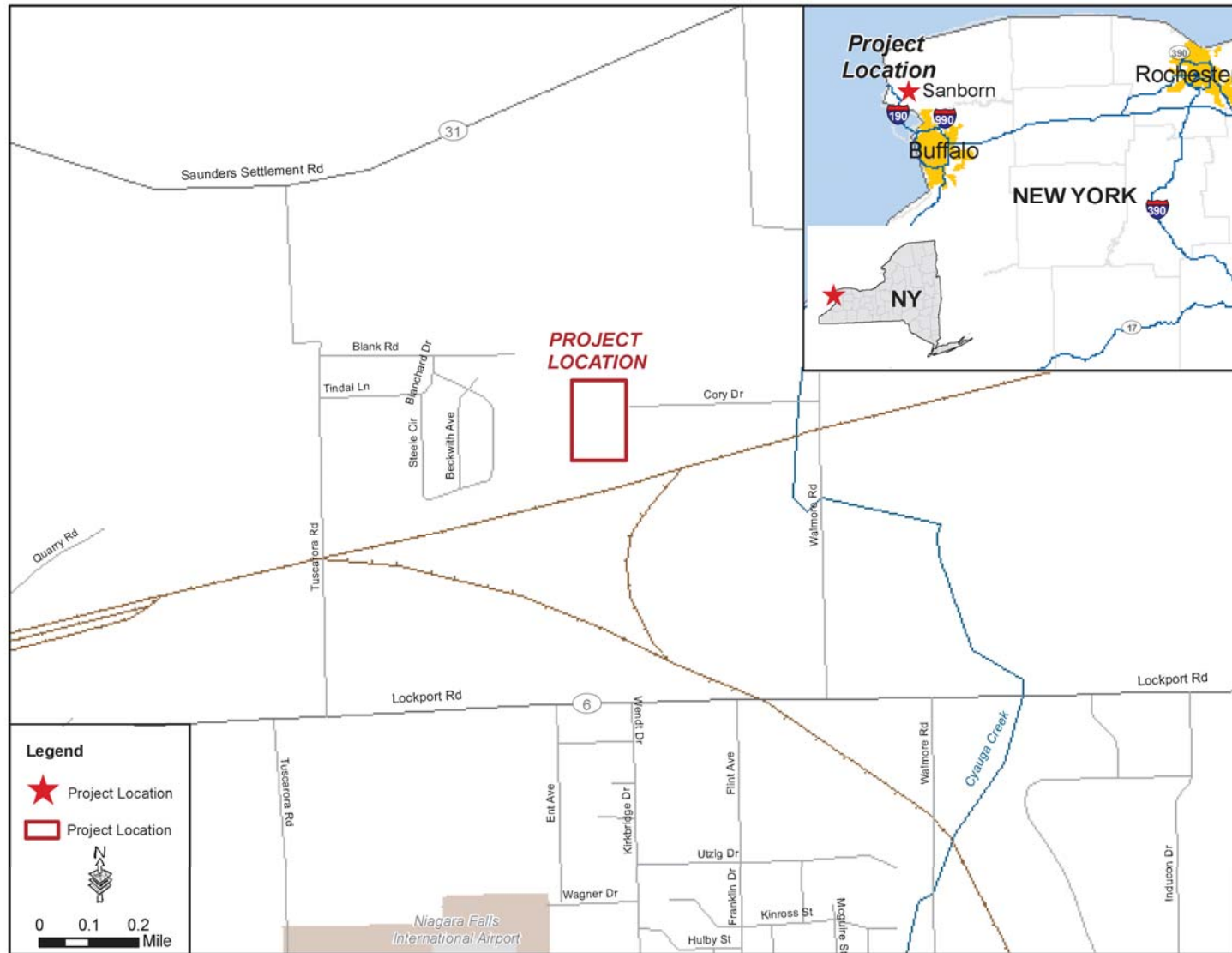


Figure 2.2-1. Regional Location Map



Figure 2.2-2. Site Location Map

Site drainage is generally to the south and east, discharging to a small creek that flows into Cayuga Creek. A substation that provides electrical feeds to the 2040 and the 2050 area is located on the eastern border of the Metallurgy Systems site, just south of the main entrance.

The main entrance to the Metallurgy Systems' facility is accessed via Walmore Road, then Cory Drive west. A building materials manufacturer is located at the intersection of Cory Drive and Walmore Road, and there are several other industrial facilities dispersed along Cory Drive. The Metallurgy Systems property is bordered by a residential area to west, high voltage transmission lines and agricultural fields to north, open fields and a rail line to the south, and a mix of industrial properties and fields to the east. Features that are beyond the immediate boundaries of the property include an Indian Reservation to the north, a quarry to the west, and an airport to the south.

## **2.4 Alternatives**

DOE's alternatives to this project consist of the 45 technically acceptable applications received in response to the Funding Opportunity Announcement, Recovery Act - Electric Drive Vehicle Battery and Component Manufacturing Initiative. Prior to selection, DOE made preliminary determinations regarding the level of review required by NEPA based on potentially significant impacts identified in reviews of acceptable applications. A variance to certain requirements in 10 CFR 1021.216 was granted by the DOE's General Counsel. 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 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 a no-action alternative for each selected project.

## **2.5 No Action Alternative**

Under the No Action Alternative, DOE would not provide funds to this proposed project. As a result, this project would be delayed while the applicant seeks other funding sources. Alternatively, the applicant would abandon this project if other funding sources are not obtained. Furthermore, acceleration of the development and production of various EDV systems would not occur or would be delayed. DOE's ability to achieve its objectives under the VT program and the Recovery Act would be reduced.

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 projects did proceed without DOE's financial assistance, the potential impacts would be essentially identical to those under DOE's action alternative (i.e., providing financial assistance that allows the project to proceed). In order 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, the project would not proceed.

## **2.6 Alternatives Considered by Pyrotek**

Two site alternatives other than the Proposed Project were considered. One site alternative was considered in the southern portion of the existing Metallurgy Systems' facility. This site was determined to be inadequate as it did not have access to electricity from hydropower, which would be necessary for making the project economically feasible. A second site in Tennessee was also considered; however, it was determined that the facility staff did not have the experience of the graphitization process and furnace operation. Therefore, both alternative sites were dismissed from further consideration.



## 2.7 Summary of Environmental Consequences

Table 2.6-1 provides a summary of the environmental, cultural, and socioeconomic impacts of the No Action Alternative and the Proposed Project.

**Table 2.6-1. Summary of Environmental, Cultural, and Socioeconomic Impacts**

Impact Area	No Action Alternative		Proposed Project	
	Construction	Operations	Construction	Operations
Land Use	Negligible	Negligible	Negligible	Negligible
Meteorology	Negligible	Negligible	Negligible	Negligible
Socioeconomics (Population and Housing)	Negligible	Negligible	Negligible	Negligible
Socioeconomics (Taxes, Revenue, Economy, Employment)	Negligible	Negligible	Minor Beneficial	Minor Beneficial
Environmental Justice	Negligible	Negligible	Negligible	Negligible
Visual Resources	Negligible	Negligible	Minor Beneficial	Minor Beneficial
Surface Water and Groundwater	Negligible	Negligible	Negligible	Negligible
Wetlands and Floodplains	Negligible	Negligible	Negligible	Negligible
Cultural Resources	Negligible	Negligible	Negligible	Negligible
Utilities and Energy Use	Negligible	Negligible	Negligible	Negligible
Health and Safety	Negligible	Negligible	Negligible	Negligible
Air Quality	Negligible	Negligible	Minor	Minor
Greenhouse Gases	Negligible	Moderate	Minor	Beneficial
Noise	Negligible	Negligible	Minor	Minor
Geology and Soils	Negligible	Negligible	Minor	Negligible
Vegetation and Wildlife	Negligible	Negligible	Minor	Negligible
Solid and Hazardous Wastes	Negligible	Negligible	Minor	Minor
Transportation and Traffic	Negligible	Negligible	Minor	Minor

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### 3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Chapter 3 provides a description of the affected environment (existing conditions) at the project site, and a discussion of the environmental consequences of the No Action Alternative and the Proposed Project. Additionally, cumulative impacts and mitigation measures are discussed where appropriate. The methodology used to identify existing conditions and to evaluate potential impacts on the physical and human environment involved the following: review of the Environmental Questionnaire and the Project Narrative prepared by Pyrotek; review of documentation provided by Pyrotek (Pyrotek, 2009a and 2009b); searches of various environmental databases; agency consultation; and a site visit conducted on November 10, 2009.

#### 3.1 Resource Areas Dismissed from Further Consideration

DOE has determined that various resources would either not be affected or would sustain negligible impacts from Pyrotek's Proposed Project and do not require further evaluation. They include land use, meteorology, socioeconomics, environmental justice, visual resources, surface water, groundwater, wetlands, floodplains, cultural resources, utilities and energy use, and human health and safety; therefore, these resource areas are briefly discussed in this section of the EA and will not be evaluated further.

**Land Use:** The Proposed Project would not result in direct impacts to land use planning and zoning. The proposed site is a 16-acre parcel that is part of the current Metallurgical Systems' 26-acre commercial manufacturing facilities in Sanborn, New York. According to the Town of Wheatfield, the entire site is zoned M-2, which is Industrial (Town of Wheatfield, 2007). The existing land use at the facility would not change under the Proposed Project and would be consistent with local zoning.

**Meteorology:** The closest climatologic reporting stations are in Buffalo in Erie County and Rochester, New York; and in Monroe County, New York. Based on regional data, Niagara County can be characterized by a fairly humid, continental type climate, which is strongly modified by the proximity of the Great Lakes (NOAA, 2009). Winters in western New York are generally cloudy, cold and snowy but are changeable and include frequent thaws and rain as well. Over half of the annual snowfall comes from the "lake-effect" process, which is very localized. Total season snowfall ranges from 70 inches in the south to over 120 inches along the eastern lake shore region. About 50 inches of this total results from general snows, the rest is due to the lake effect. Spring comes slowly to the region. The last frost usually occurs by late April near the lakes but as late as mid-May south of the region. The spring months are typically the driest months statistically, due in part to the stabilizing effect of the lakes, although soils are wet. Sunshine increases markedly in May.

Summers are warm and sunny across the region. The average high temperature is in the 70 to 72 degrees Fahrenheit (°F) range. Rain can be expected every third or fourth day, almost always in the form of showers and thunderstorms. However, this activity is more common inland than near the lake. Completely overcast days in summer are rare. Severe weather is not common, but a few cases of damaging winds and small tornadoes occur each year. The greatest risk of this type of activity is south of the region. There usually are several periods of uncomfortably warm and muggy weather in an average summer, with 9 days reaching the 90°F mark. Autumn is brief in the region. Mild and dry conditions predominate through September and much of October, but colder air masses cross the Great Lakes with increasing frequency starting in late October, and result in a drastic increase in cloud cover across the region in late October and early November. Although the first frosts may not occur until late October along the lakeshores, the first lake effect snows of the season usually occur by mid November.

Severe temperature and weather conditions could temporarily delay construction of the Proposed Project; however, severe weather conditions are infrequent and temporary, such that any delays experienced would not likely impede overall progress on the construction. The operations of the Proposed Project would occur indoors and would not likely be affected by severe weather conditions or events; however, it is possible that large snowfalls could prevent workers from getting to the plant and that severe weather conditions in the region could disrupt electrical service to the proposed facility causing temporary delays in operations.

**Socioeconomics:** The project would be a positive factor in retaining existing facility jobs (approximately 55) while allowing for the creation of new jobs (approximately 50). It is assumed that the majority of the workforce would be drawn from local candidates; therefore, no increase in population or need for housing is anticipated and thus resulting in negligible impacts.

Under Pyrotek's Proposed Project, taxes would continue to be paid on the property and no adverse impacts would occur. Construction workers employed for the construction period are assumed to be currently employed, and residing and paying taxes in the Niagara County area. Increased sales transactions for the purchase of materials and supplies would generate some additional revenues for local and state governments, which would have a negligible but beneficial impact on taxes and revenue.

Secondary jobs related to the increased economic activity stimulated by the Proposed Project may be created. Additional retail services and business employment may result from the Proposed Project through a multiplier effect, yielding additional sales and income tax revenues for local and state governments. Secondary jobs would have a minor but beneficial impact.

The Proposed Project would not result in direct impacts to community facilities, services, school systems or emergency services of Niagara County because significant numbers of employees are not anticipated to relocate near the site as a result of the Proposed Project.

**Environmental Justice:** The Proposed Project was evaluated in accordance with Executive Order 12898 *Federal Actions Address Environmental Justice in Minority Populations and Low-Income Populations*. While there are minority and low-income populations in the study area, the Proposed Project would not have a disproportionately adverse impact on these groups.

**Visual Resources:** The site is bordered by a residential area to west, a high-voltage transmission line and agricultural fields to north, open fields and a rail line to the south, and a mix of industrial properties and fields to the east. Features that are beyond the immediate boundaries of the site include an Indian Reservation to the north, a quarry to the west, and an airport to the south.

Impacts to identified views and vistas were determined based on an analysis of the existing quality of the landscape views, the sensitivity of the view, and the anticipated relationship of the scale and massing of the proposed buildings to the existing visual environment. The building design would be similar to the existing building and would include a cooling tower identical to the existing cooling tower. Therefore, although the new construction would be noticeable, the scale and massing of the building would be consistent with the buildings in the surrounding industrial area and no adverse impacts would occur on the site.

**Surface Water:** The Metallics Systems' facility is within the drainage basin of the Niagara River, which is located approximately 5 miles to the south. The closest surface water is Cayuga Creek, approximately 0.25 mile to the east (EEEPC, 2007a). Current operations do not withdraw any surface water directly for use in processes; nor does the facility discharge any process wastewaters to surface waters.

The Spill Prevention, Control and Countermeasures (SPCC) Plan for the Metallics Systems' facility, which was updated in November 2005, addresses the potential for spills or releases of contaminants that may affect surface or groundwater. As described in Section 3.2.5, the proposed project would expand the processing capabilities of the plant; but, new operations are not expected to generate new wastestreams or increased quantities of hazardous wastes. The handling and storage of materials and wastes would be similar to current operations, which are managed in conformance with the SPCC Plan to minimize the potential for impacts on surface waters.

No direct withdrawals from or process discharges to surface waters would be associated with the Proposed Project. Also, materials and wastes to be stored, used, or disposed for the Proposed Project would be comparable to those already processed at the Metallics Systems' plant. Construction of the proposed facilities would have minor temporary impacts from runoff to surface waters. These impacts would be minimized through the

implementation of a Stormwater Pollution Prevention Plan (SWPPP), as approved by the Town of Wheatfield. Prior to issuance of a Building Permit, the Town of Wheatfield would approve a formal maintenance agreement with Pyrotek for stormwater management facilities in accordance with Article 2, Section 4.4 of Town law. The agreement would be binding on all subsequent landowners (Zuber and Walck, 2009). The agreement for stormwater management facilities would remain applicable to the site following construction. Site plans for the proposed facilities provide for a stormwater detention pond as well as stormwater detention chambers beneath parking lots. By implementing the SWPPP and the SPCC Plan, the potential for impacts from facility operations on surface waters would be negligible.

**Groundwater:** Pyrotek does not withdraw any groundwater directly for human consumption or use in its processes; nor does the facility dispose of any process wastewaters by underground injection. A Phase I Environmental Site Assessment (ESA) (EEEEPC, 2007a) determined that there are no drinking water wells on the property, but 13 wells are listed by the U.S. Geological Survey within a 1-mile radius of the property. The Phase I ESA reported that groundwater flow in the overburden aquifer trends to the south, while groundwater in the shallow bedrock flows to the south, southwest, and southeast towards the Niagara River. The study determined that groundwater in the area is classified as suitable for human consumption, but that the groundwater is typically of poor quality, because of high mineral and metal content. No direct withdrawals from or process discharges to groundwater would be associated with the Proposed Project. Also, materials and wastes to be stored, used, or disposed for the Proposed Project would be comparable to those already processed at the Metallurgical Systems' plant. By implementing the SWPPP and the SPCC Plan, the potential for impacts on groundwater either from construction or operations of the Proposed Project would be negligible.

**Wetlands:** National Wetlands Inventory (NWI) mapping indicates the presence of one wetland within proximity to the study area (south of Cory Drive and directly east of the existing industrial complex) (EPA, 2009a). The wetland is characterized by the Cowardin wetland classification as an emergent/scrub shrub complex that has been beaver influenced and partially ditched (Palustrine, Emergent /Scrub-Shrub, Broad-Leaved Deciduous, Saturated, Partially Drained/Ditched). While NWI mapping does not indicate the presence of wetlands within the study area, other sources indicate that wetlands are located adjacent to the study area and could experience indirect adverse impacts. To minimize impacts during construction, staging of equipment and materials would occur on existing disturbed areas (e.g., parking lots or maintained grassy areas), measures outlined in the SPCC Plan would be followed, and sediment control devices would be implemented (if necessary). Operations of the facility would have no further impact to wetland resources.

**Floodplains:** The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Map Number 3605130001B does not indicate the presence of floodplain within the study area. Areas directly east of the study area along Cory Road are within FEMA Flood Zones A3 and B. Flood Zone A3 is classified by FEMA as a high risk flood area within the 100-year floodplain. Flood Zone B is defined by FEMA as an area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods with shallow flooding and average depths of less than 1 foot or drainage areas less than 1 square mile. FEMA FIRM mapping does not indicate the presence of floodplain within the study area; therefore, no adverse impacts would be anticipated for floodplain resources from construction or operations of the Proposed Project. Construction and operations of the Proposed Project would not impact identified floodplain areas located to the east of the study area.

**Cultural Resources:** The areas surrounding the site consist of agricultural fields to the north; manufacturing plants to the south and east; and prior Department of Defense military housing to the west. Residential housing is located within a 1-mile radius of the site. None of the buildings associated with the proposed project and no building within 1/2 mile of the project site have been identified as being over 50 years old. No impacts to historic structures are anticipated.

The proposed project would be built on land that is presently an agricultural field. The entire site is located in an archeologically sensitive area according to the New York State Historic Preservation Office GIS Website. The

buildings at the site are constructed on concrete slabs. Soil disturbance would be minimized during new construction, as the new buildings would also be on concrete slabs. Some soil disturbance is evident from past activities including the removal of underground storage tanks in the 1990s on the western portion of the site. A Phase IB field investigation was conducted at the site in March 2010. The Phase IB field investigation did not identify evidence of archaeological sites. The sole artifact recovered (a small clear glass fragment) is not considered to be significant. No prehistoric artifacts were recovered. The New York State Historic Preservation Office, in a letter dated March 19, 2010, stated the project would have “No Effect” upon cultural resources in or eligible for inclusion in the National Register of Historic Places (see Appendix A).

**Utilities and Energy Use:** The existing facility receives potable water from the Town of Wheatfield Water Department for process operations and human consumption. The facility discharges process and sanitary wastewater to Niagara County Sewer District 1 via a monitoring station at the plant outfall. Pyrotek receives electric power from the New York Power Authority via a substation located on the property. Regionally, most of the power is generated via hydroelectric plants in the Niagara Falls area. No constraints on these utilities are associated with existing plant operations (Pyrotek, 2009a).

During construction for the Proposed Project, utilities would be supplied by existing services at the Metallurgical Systems’ facility, which would not be adversely impacted by the small increases in temporary demand. The proposed process would involve the use of electrically heated furnaces that do not require substantial amounts of process water or produce substantial amounts of process wastewater. Therefore, the Proposed Project would cause a negligible increase in demand for water from the municipal water system or discharge of wastewater to the sewer district (Pyrotek, 2009a). The proposed project would increase the electrical power demand on the New York Power Authority by approximately 4 megawatts per hour of operation. National Grid owns, operates, and services the transmission lines. The New York Power Authority generates and supplies the energy to the grid. No upgrading of the primary transmission lines to the site is necessary for the 12 furnace expansion project. The load requirements have been reviewed with National Grid engineers. Additionally, the New York Power Authority approved Pyrotek’s application for Expansion Power effective for 5 years (Savino, 2009), indicating that the proposed project would have negligible effect on energy supply. The project would not require natural gas.

**Human Health and Safety:** Pyrotek maintains procedures for the Metallurgical Systems’ facility covering a wide range of health and safety topics, including the safe handling of equipment, personal protective equipment, confined space entry, an emergency plan, hazards communications, and an SPCC Plan. The facility has a perimeter fence and is manned 24 hours per day. It has never been the target of an intentionally destructive act, which would be addressed in accordance with existing emergency response procedures (Pyrotek, 2009a).

The Proposed Project would involve the installation and use of electrically heated furnaces and other production equipment required to accomplish the proposed expansion of the graphitization process. Materials and wastes to be stored, used, or disposed for the Proposed Project would be comparable to those already processed at the Metallurgical Systems’ plant. The majority of materials delivered (i.e., petroleum coke) would be in powder or dry form; thus, the primary exposure risk would be via inhalation of dust. Because these materials and resulting wastes would be stored on site, the potential risk of exposure would be greatest for employees. Employees are trained in proper safety procedures. Established worker safety programs would limit exposure to levels below those listed on respective material safety data sheets. Where appropriate, new procedures would be developed to guide the safe use of equipment. With appropriate implementation of procedures, the impacts of the Proposed Project on human health and safety would be negligible.

Because critical hourly or daily functions of strategic importance to the national economy are not reliant on facility operations, the Metallurgical Systems’ facility is not considered a potential target for intentional destructive acts. Although the supply of graphitized anodes could be interrupted temporarily by a destructive act, the interruption would be relatively brief and would not be expected to have lasting effects on the economy. The potential for impacts of an intentional destructive act on human health and safety would be reduced through implementation of the Emergency Plan.

### 3.2 Resource Areas Considered Further

Environmental resources areas carried through for further consideration of the potential impact of Pyrotek’s Proposed Project include air quality, noise, geology and soils, vegetation and wildlife, solid and hazardous wastes, and transportation and traffic.

#### 3.2.1 Air Quality and Greenhouse Gas

##### *Air Quality Management*

The purpose of the air quality analysis is to determine whether emissions from a proposed new or modified source of air pollution, in conjunction with emissions from existing sources, would cause or contribute to the deterioration of the air quality in the area. The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS include two types of air quality standards (40 CFR 50.1(e)). Primary standards protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. EPA has established NAAQS for six principal pollutants, which are called “criteria pollutants”: ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), particulate matter (PM), particulate matter 10 microns (PM<sub>10</sub>) or less, particulate matter 2.5 microns (PM<sub>2.5</sub>) or less, sulfur dioxide (SO<sub>2</sub>) and lead (Pb). A State’s air-quality regulations may further regulate concentrations of the criteria pollutants. The New York State Department of Environmental Conservation (NYSDEC) adopts the national standards and has standards for other pollutants. Table 3.2.1-1 lists the NAAQS and New York AAQS.

**Table 3.2.1-1. National and New York Ambient Air Quality Standards**

Pollutant	Standard <sup>(1)</sup>	Averaging Time	Standard Type
Carbon Monoxide	35 ppm (40 mg/m <sup>3</sup> )	1-hour	Primary
	9 ppm (10 mg/m <sup>3</sup> )	8-hour	
Lead <sup>(2)</sup>	0.15 µg/m <sup>3</sup>	Rolling 3-Month Average	Primary and Secondary
	1.5 µg/m <sup>3</sup>	Quarterly Average	
Nitrogen Dioxide	0.053 ppm (100 µg/m <sup>3</sup> )	Annual (Arithmetic Mean)	Primary and Secondary
	0.05 ppm <sup>(3)</sup>	Annual (Arithmetic Mean)	
PM <sub>10</sub> <sup>(4)</sup>	150 µg/m <sup>3</sup>	24-hour	Primary and Secondary
PM <sub>2.5</sub>	35 µg/m <sup>3</sup>	24-hour	Primary and Secondary
	15.0 µg/m <sup>3</sup>	Annual (Arithmetic Mean)	
Ozone	0.12 ppm	1-hour <sup>(5)</sup>	Primary and Secondary
	0.075 ppm (2008 std)	8-hour	
	0.08 ppm (1997 std)	8-hour <sup>(6)</sup>	
Sulfur Dioxide	0.5 ppm (1300 µg/m <sup>3</sup> )	3-hour	Secondary
	0.14 ppm	24-hour	Primary
	0.03 ppm	Annual (Arithmetic Mean)	

**Table 3.2.1-1. National and New York Ambient Air Quality Standards (continued)**

Pollutant	Standard <sup>(1)</sup>	Averaging Time	Standard Type
Total Suspended Particles <sup>(3,7)</sup>	75 µg/m <sup>3</sup>	Geometric Mean	None
	250 µg/m <sup>3</sup>	24-hour	
Hydrocarbons (non-methane) <sup>(3)</sup>	0.24 ppm	3-hour (6 to 9am)	None

(1) New York State also has standards for beryllium, fluorides, hydrogen sulfide, and settleable particulates (dustfall); however, ambient monitoring for these pollutants is not currently conducted.

(2) Final rule signed October 15, 2008. Federal standards for lead were officially adopted by New York State and became effective on January 12, 2009.

(3) New York State Standard

(4) Federal standard for yet officially adopted by New York State, but is currently being applied to determine compliance status.

(5) As of June 15, 2005. 1-hour O<sub>3</sub> was revoked in all areas except 14 8-hour O<sub>3</sub> nonattainment Early Action Compact Areas. Niagara County, New York is not an Early Action Compact.

(6) The 1997 standard and its implementation rules would remain in place as EPA undertakes rulemaking to address the transition to the 2008 standard.

(7) New York State also has 30, 60, and 90-day standards as well as geometric mean standards of 45, 55, and 65 µg/m<sup>3</sup> of total suspended particulates in Part 257 of NYCRR. While these Total Suspended Particles standards have been superseded by the PM<sub>10</sub> standards, Total Suspended Particles measurements may still serve as surrogates to PM<sub>10</sub> measurements in the determination of compliance status.

µg/m<sup>3</sup> – microgram/per cubic meter; mg/m<sup>3</sup> – milligram/per cubic meter; ppm – parts per million; std – standard.

Source: EPA, 2009b, NYSDEC, 2009b

To determine compliance with the NAAQS, emissions of criteria pollutants from a new or modified source(s) are modeled to determine their air dispersion concentrations. In addition to the six criteria pollutants outlined in the CAA, several other substances raise concerns with regard to air quality and are regulated through the CAA Amendments of 1990. These substances include hazardous air pollutants (HAPs) and toxic air pollutants (such as metals, nitrogen oxides [NO<sub>x</sub>]) and volatile organic compounds (VOCs). NO<sub>x</sub> and VOCs are precursors for O<sub>3</sub>.

Areas that meet the air quality standard for the criteria pollutants are designated as being in attainment. Areas that do not meet the air quality standard for one or more of the criteria pollutants are designated as being in nonattainment for that standard. The CAA requires nonattainment states to submit to the EPA a State Implementation Plan (SIP) for attainment of the NAAQS (40 CFR 51.166, 40 CFR 93). Maintenance areas are those that at one point had not met the NAAQS but are currently maintaining the standards through the requirements in the SIP.

The 1990 Amendments to the CAA require Federal actions to show conformance with the SIP. Federal actions are those projects that are funded by Federal agencies and include the review and approval of a Proposed Action through the NEPA process. Conformance with the SIP means conformity to the approved SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards (40 CFR 51 and 93). The need to demonstrate conformity is applicable only to nonattainment or maintenance areas.

***Class I Areas and Sensitive Receptors***

For areas that are already in compliance with the NAAQS, the Prevention of Significant Deterioration (PSD) requirements provide maximum allowable increases in concentrations of pollutants, which are expressed as increments (40 CFR 52.21). Allowable PSD increments currently exist for three pollutants: SO<sub>2</sub>, NO<sub>2</sub>, and PM<sub>10</sub> (Table 3.2.1-2).

**Table 3.2.1-2. Allowable Prevention of Significant Deterioration Increments (µg/m<sup>3</sup>)**

Pollutant-- Averaging Period	Class I Area	Class II Area
SO <sub>2</sub> --3-Hour --24-Hour --Annual	25	512
	5	91
	2	20
NO <sub>2</sub> --Annual	2.5	25
PM <sub>10</sub> --24-Hour --Annual	8	30
	4	17

Source: 40 CFR 52.21(c).



One set of allowable increments exists for Class II areas, which covers most of the United States and another set of more stringent allowable increments exists for Class I areas. Because of their pristine environment, Class I areas require more rigorous safeguards to prevent deterioration of their air quality. For the purposes of PSD review, the Federal government has identified mandatory Class I Areas, which as defined in the CAA, are the following that were in existence as of August 7, 1977: national parks over 6,000 acres, national wilderness areas and national memorial parks over 5,000 acres, and international parks (NPS, 2009a). In general, proposed projects that are within 62 miles (100 kilometers) of Class I areas must evaluate impacts of the proposed project on air quality related values (AQRVs) such as visibility, flora/fauna, water quality, soils, odor, and any other resources specified by the Federal Land Manager (NPS, 2009b).

Areas that are not in attainment with the NAAQS are subject to the Nonattainment New Source Review (NNSR). Overall, for the purposes of air quality analysis, any area to which the general public has access is considered a sensitive receptor site, and includes residences, day care centers, educational and health facilities, places of worship, parks, and playgrounds.

### **Greenhouse Gases**

Greenhouse gases (GHGs) are pollutants of concern for air quality and climate change. GHGs include water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), NO<sub>x</sub>, O<sub>3</sub>, and several chlorofluorocarbons. Water vapor is a naturally occurring GHG and accounts for the largest percentage of the greenhouse effect. Next to water vapor, CO<sub>2</sub> is the second-most abundant GHG and is typically produced from human-related activities. The largest source of CO<sub>2</sub> emissions globally is the combustion of fossil fuels such as coal, oil and gas in power plants, automobiles, industrial facilities and other sources. Additionally, a number of specialized industrial production processes and product uses such as mineral production, metal production and the use of petroleum-based products can also lead to CO<sub>2</sub> emissions. The manufacturing of lithium-ion battery anode material can produce CO<sub>2</sub> emissions.

Although regulatory agencies are taking actions to address GHG effects, there are currently no Federal or state standards or regulations limiting CO<sub>2</sub> emissions and concentrations in the ambient air. In response to the *FY2008 Consolidated Appropriations Act* (H.R. 2764; Public Law 110-161), EPA issued the *Final Mandatory Reporting of Greenhouse Gases Rule* (GHG Reporting Rule), which became effective on January 1, 2010. The GHG Reporting Rule requires annual reporting of GHG emissions to EPA from large sources and suppliers in the United States, including suppliers of fossil fuels or industrial GHGs; manufacturers of vehicles and engines; and facilities that emit greater than 25,000 metric tons per year (mtpy) (27,558 tons per year [tpy]) each of CO<sub>2</sub> and other GHGs. The intent of the rule is to collect accurate and timely emissions data to inform future policy decisions and programs to reduce emissions, as well as fight against the effects of climate change.

Additionally, on September 30, 2009, EPA proposed, under the CAA, new thresholds for GHG that would tailor New Source Review and Title V operating permit programs to specify which facilities would be required to obtain permits and would cover nearly 70 percent of the nation's largest stationary source GHG emitters—including power plants, refineries, and cement production facilities, while shielding small businesses and farms from permitting requirements. The proposed thresholds are currently being reviewed by Congress.

#### **3.2.1.1 Affected Environment**

##### **Air Quality**

The NYSDEC is responsible for monitoring air quality for each of the criteria pollutants and assessing compliance. New York State air pollution regulations are located in 6 NYCRR Parts 200-317. Niagara County is part of the Buffalo-Niagara Falls, New York Metropolitan Statistical Area (MSA). In March 2009, the MSA was recommended to be designated as a nonattainment area for the new 8-hr O<sub>3</sub> standard (EPA, 2009c). The county is currently in nonattainment for the 1997 8-hour O<sub>3</sub> standard and had previously been in moderate nonattainment for the 1-hr O<sub>3</sub> (EPA, 2009d).

Because Sanborn is within the Niagara County nonattainment area, Federal actions within Sanborn, New York must show conformity with the SIP, and the Proposed Project would fall under the General Conformity Rule. In New York State, the NYSDEC has not promulgated a rule incorporating Federal General Conformity regulations by reference or establishing its own General Conformity regulations. Therefore, the New York SIP does not contain an EPA-approved SIP revision incorporating General Conformity (NYSDEC, 2009c). As specified in 40 CFR 93, Subpart B, if a state has not developed its own General Conformity rule or formally adopted the Federal General Conformity rule, then the provisions in 40 CFR 93 Subpart B apply. Under 40 CFR 93, Subpart B, Federal actions are covered under General Conformity requirements unless the actions do not exceed de minimis levels. This section provides further discussions on the current and projected emissions from the Metaullics Systems' facility.

New York is working with other Northeastern states to improve visibility in Class I areas through the Mid-Atlantic/Northeast Visibility Union (MANE-VU) Regional Planning Organization (MARAMA, 2009a). There are seven Class I areas in the MANE-VU region; however, none of these areas are within 62 miles (100 kilometers) of the proposed project site. Therefore, a PSD increment and AQRV analysis for Class I areas would not be required. All other areas within the New York border would be considered Class II. The nearest sensitive receptors to the site are the residential properties in the approximate 100-acre neighborhood bordering the western edge of the property. Beyond the immediate boundaries of the site there are an Indian Reservation to the north and an airport to the south.

### ***Current Emissions***

The Metaullics Systems' facility is an existing industrial plant that manufactures graphite, carbon, and ceramic products for industrial applications under NYSDEC issued Air Facility Registration, ID 9-2940-00030/02000. This process is conducted indoors; however, some material handling and industrial equipment (e.g., cooling tower and dust collectors) are located on the exterior of the production building. As a result of the proposed graphitizing expansion, Pyrotek submitted an application for a Title V Permit on October 23, 2009, for the entire facility including the proposed expansion. The Title V permit would replace the existing Air Facility Registration for the plant site (Pyrotek, 2009a). A Title V Major Source Permit is granted to a facility that has the potential to emit more than 100 tpy of any of the six criteria pollutants, or more than 10 tpy of any single HAP or more than 25 tpy of any combination of HAPs. Current emissions from the existing plant operations are presented in Table 3.2.1-3 in the following section.

#### **3.2.1.2 Environmental Consequences**

##### **3.2.1.2.1 No Action Alternative**

The No Action Alternative is treated in this EA as the "No-Build" Alternative. That is, under the No Action Alternative, Pyrotek would not increase its facility's graphitizing capacity required for the production of graphitized powders used in the manufacture of lithium-ion batteries for electric vehicles because of the absence of DOE funding assistance.

With the No Action Alternative, DOE's goal of supporting United States based manufacturing plants to produce advanced EDV batteries and components would be reduced. In the absence of DOE's funding, industries may not be willing to invest in the advanced technology that will help increase production of these batteries, especially the lithium-ion batteries and their components. Because of its greater energy density than that of other batteries, as well as its light weight, lithium batteries are proving to be most promising for the commercial viability of electric vehicles (DOE, 2001). Without alternative fuel sources for automobiles, the United States will continue its dependence on and consumption of petroleum and other fossil fuels, consequentially, the current trends of increased CO<sub>2</sub> concentrations in the Earth's atmosphere will continue, increasing the effect on climate change.

### 3.2.1.2.2 Proposed Project

#### **Construction**

The proposed site for the project is a 16-acre parcel that is part of the current Metallics Systems' 26-acre commercial manufacturing site in Sanborn, New York. This project is structured into a two-phased expansion over the next 3 years (Pyrotek, 2009a). Overall, the site is approximately 60 to 70 percent green space and is serviced by all necessary utilities and transportation infrastructure. The capacity expansion efforts associated with the facility would be scheduled to meet the seasonal construction periods found in northwest New York State.

During the actual construction period at the facility, the equipment used to construct the proposed facilities would intermittently emit quantities of five criteria air pollutants: CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and VOCs. In addition to tailpipe emissions from heavy equipment, ground surface disturbances during excavation, including pulverization of surface materials and entrainment of dust by wind, could potentially generate fugitive dust. Fugitive dust, such as dirt stirred up from construction sites, can affect both environmental and public health. The type and severity of the effects depend in large part on the size and nature of the dust particles. Large dust particles typically settle out near the source, creating potential nuisance issues. Particles larger than 100µm generally settle out within 20 to 30 feet from the source while particles between 20 and 100µm typically fall out within a few hundred feet of the source. Smaller particles, especially particles smaller than 10µm (PM<sub>10</sub>) can persist in the atmosphere, possibly contributing to diminished visibility (MARAMAR, 2009b).

The types of effects that can occur to humans include inhalation of fine particles that can then accumulate in the respiratory system causing various respiratory problems including persistent coughs, wheezing, eye irritations, and physical discomfort. Construction personnel would implement appropriate mitigation measures, such as applying water to exposed surfaces or stockpiles of dirt, when windy or dry conditions promote problematic fugitive dust emissions. In contrast to other fugitive dust sources, construction activities are temporary with a definable beginning and end, and vary significantly over different phases of the construction project. Dust and diesel emissions from construction sites vary daily depending on the level of activity, specific operations, specific machinery used, and meteorological conditions. Other factors that play a role in dust emissions include the silt (particles smaller than 75µm in diameter) content of the soil, soil moisture, and the speed and weight of construction equipment (MARAMAR, 2009b). Adhering to mitigation measures and best management practices (BMPs) would reduce the adverse impacts from fugitive dust emissions. DOE expects the overall impacts from fugitive dust emissions would be temporary in duration and of minor intensity.

#### **Operations**

The proposed project would consist of constructing a new industrial building to allow for installation of potentially 18 electrically heated graphitizing furnaces along with other material handling and processing equipment (i.e., screening, bagging, etc). The furnaces use a large amount of electric energy to reach and sustain the high temperatures required for Pyrotek's graphitization process. The proposed facility location allows for the use of hydropower available from the New York State Power Authority. Although the building would be constructed to allow for the installation of a maximum of 18 additional graphitizing furnaces, only 12 of the furnaces would initially be installed as a part of the proposed project. The remaining six furnaces would be installed in the future only to meet product demand and if additional hydropower to operate the furnaces can be obtained from the power authority (Pyrotek, 2009c). Table 3.2.1-3 provides the air emissions from the current operations and proposed project at the Metallics Systems' facility. Current emissions of CO<sub>2</sub> are not known; however, because the facility has been authorized to use hydropower in its future operations, total CO<sub>2</sub> emissions from the facility are expected to be low to negligible.

**Table 3.2.1-3. Current and Projected Emissions (tpy) from Pyrotek Project**

Pollutant	Actual Emissions (with Control)			Emissions Rate Potential (no Control)		
	Total	Existing	New	Total	Existing	New
CO	126.63	1.27	125.36	126.63	1.27	125.36
SO <sub>2</sub>	16.95	15.37	1.58	16.95	15.37	1.58
Particulate	13.65	6.12	7.53	481.36	284.11	197.25
VOC	4.99	4.99	0.00	161.69	161.69	0.00
HAPS	12.40	9.64	2.76	37.23	9.64	27.59

All emissions shown above are based on 8,760 hours/year. Emissions for existing air emission points are obtained from original NYSDEC air emission permits for those points. Emissions for proposed and potential future (new) graphitizing air emission points are obtained from a stack test for an existing identical graphitizing furnace. The stack test, which is part of the Title V application, was conducted on February 3-6, 2009 on Graphitizing Furnace No. 4 by Empire Stack Testing LLC, 5252 Ramsey Road, Ashville, New York 14710.

Source: Pyrotek, 2009d and 2009e

As indicated in Table 3.2.1- 3, the proposed facility would be a major source of CO and PM. Pyrotek has applied for a Title V permit. However, the emissions presented in Table 3.2.1-3 for the proposed facility operations are conservative estimates. Actual historical plant operations data have shown that most emission points are not capable of operating for 365 days per year, 24 hours per day (8,760 hours) due to numerous operational factors. For example a typical graphitizing furnace would operate on average only 300 days per year due to the fact the furnace must be turned off and rebuilt frequently during the year in addition to other operational problems such as furnace "plug-ups" etc. This means that the emission rate potential and actual emissions would be less than shown (Pyrotek, 2009d). Additionally, as part of the Title V process, the facility could accept Federally-enforceable limits for its emissions of air pollutants, below 100 tpy, in order to meet the requirements of the SIP and not cause the continued deterioration to the air quality in the region. For this EA, DOE would not need to demonstrate SIP conformity because the proposed project is a major new source of air pollutant emissions that is undergoing the permitting process under the NNSR regulations (40 CFR 93.153(d)(1)).

There are no Class I areas nearby the facility and the Proposed Project would not have any impact to Class I areas. Although there are sensitive receptors nearby, a majority of the manufacturing process at the facility would be enclosed indoors with control devices to limit the amount of pollutants emitted into the atmosphere. Through its Title V permit, the facility would demonstrate that dispersion of air pollutants would be limited and would not cause a deterioration of the surrounding air quality beyond allowable increments.

Given permit limits to be established under NNSR, the proposed project would have minor adverse impacts on air quality. Although air emissions from the facility are measurable, they would result in minor consequences.

### **Carbon Footprint**

GHG emissions for the State of New York totaled 284 million tons of CO<sub>2</sub> equivalent in 2007, 2.5 percent higher than 1990, but 6.9 percent lower than 2000 levels (NYSERDA, 2009). CO<sub>2</sub> comprised the vast majority of GHG emissions (88.5 percent), most of which resulted from fuel combustion (98.3 percent). Overall, transportation-related fuel combustion accounted for 34 percent of the GHG emissions. New York's GHG emissions represent 3.8 percent of total emissions in the United States, even though New York accounts for 6.5 percent of the United States population. New York's emissions are relatively low because of extensive use of public transportation in New York City; a State economy weighted towards services rather than industrials; and greater employment of hydroelectric, nuclear, and natural gas electricity generation than the national average (NYSERDA, 2009).

The CO<sub>2</sub> emissions for the proposed project are expected to be very low, especially with use of hydropower for electricity. The new *Final Mandatory Reporting of Greenhouse Gases Rule*, which became effective on January 1, 2010, is not applicable to the proposed project because it would emit less than 25,000 mtpy of CO<sub>2</sub>.

The manufacture of EDV batteries and components would increase production of EDVs in the United States. Electric vehicles emit no tailpipe pollutants. Therefore, they can provide significant air-quality benefits to

targeted regions (DOE, 1999). Overall, there would be beneficial impacts on climate change as the Proposed Project would help the viability of the commercial market for EDVs; thereby reducing the carbon footprint of the transportation sector.

### **3.2.1.3 Cumulative Impacts**

The proposed Pyrotek project would generate minor impacts that would contribute to cumulative impacts associated with the historical trend for the past, present, and reasonable foreseeable future actions.

### **3.2.1.4 Proposed Mitigation Measures**

During construction, typical mitigation measures to minimize air quality issues caused by fugitive dust and tailpipe emissions would include the following:

- Require all construction crews and contractors to comply with the states regulations for fugitive dust control during construction.
- Maintain the engines of construction equipment according to manufacturers' specifications.
- Minimize the idling of equipment while the equipment is not in use.
- Implement reasonable measures, such as applying water to exposed surfaces or stockpiles of dirt, when windy or dry conditions promote problematic fugitive dust emissions. Adhering to these BMPs would minimize any fugitive dust emissions.

During operations, State regulatory authority over air emissions would ensure that the proposed project continues to meet the requirements of their air operating permits. Because of the control devices used on the equipment and BMPs employed at the facility, historical data of actual emissions are well below permitted limits. Emissions of CO<sub>2</sub> would be minimized through the use of hydroelectric power.

## **3.2.2 Noise**

### **3.2.2.1 Affected Environment**

The site is located in an industrial area bordered by a small residential neighborhood on the west; agricultural fields to the north; open fields and a rail line to the south; and industrial properties and fields on the east. A building materials manufacturer is located at the intersection of Cory Drive and Walmore Road, and there are several other industrial facilities dispersed along Cory Drive.

Existing plant operational noise (primarily cooling tower fans) can be observed on the streets closest to the facilities. Currently, the site experiences the coming and going of four to five trucks per day, as well as the personal vehicles of the employees.

The nearest sensitive receptors to the site are the residential properties in the approximate 100 acre neighborhood bordering the western edge of the property. The building expansion would be approximately 130 yards from the nearest homes. (The building would be 119 yards from the western property line). The closest two schools are approximately 800 yards SE and 2000 yards NE of the site. No churches or hospitals are in the vicinity. The Tuscarora Indian Reservation is approximately 1 mile north of the site.

The site is located within the vicinity of various existing noise sources that contribute to the baseline noise level. The site is bordered by a railroad to the south; a quarry is located 800 yards to the west; and Niagara Falls International Airport is located approximately 1 mile south of the site. Generally, background noise is related to traffic and various industrial facility noises.

### **3.2.2.2 Environmental Consequences**

#### **3.2.2.2.1 No Action Alternative**

Under the No Action Alternative, construction and operations would not occur, therefore, noise levels would remain unchanged within the study area.

#### **3.2.2.2.2 Proposed Project**

##### ***Construction***

The construction phase would involve demolition of a small (approximately 2,000 square feet) concrete building, construction of an additional 93,000 square feet of steel non-heated industrial building, installation of furnaces and production equipment, extension of on-site utility lines, extension of an on-site roadway, and construction of a retention pond for stormwater. The building and equipment installation would be separated into two phases. During the construction phases, noise levels would be localized, intermittent, and temporary. Increases in noise levels during construction would mainly result from the use of heavy construction equipment and delivery trucks. The typical noise levels from any construction site would be expected to be within the range of 75 to 90 decibels (dBA). Construction noise levels onsite would primarily be limited to the immediate vicinity of the project site; although, it would likely be heard by the residents of the adjacent neighborhood to the west due to their proximity to the site. Therefore, short-term, measurable impacts are expected during construction. The construction is anticipated to begin in March and last for approximately 6 months.

##### ***Operations***

The main sources of noise during operations would be from the new mechanical equipment and from an increase in truck and employee-vehicle traffic.

All the furnaces and operational activities would be indoors; however, the project includes four dust collectors and a cooling tower that would be located outdoors. The dust collectors would use low speed fans mounted at ground level with slow velocity air discharge. The cooling tower and two of the dust collector fans would be placed on the east of the building, and likely shielded from the residential properties. The other two dust collector fans would be placed on the western side of the building. The fan manufacturer noise data report indicates that the estimated sound pressure levels outside the fan due to housing radiated noise is 69.8 dBA at 5 feet (New York Blower Company, 2009). The two fans on the western side of the building would emit a collective noise level of 72.8 dBA. Using the sound attenuation calculation for point sources (i.e., sound level decreases by 6 dBA for each doubling in distance from the source), the estimated noise level from the two fans at approximately 72 feet away would be below 50 dBA, which is typically considered the threshold limit for nighttime noise levels in local noise ordinances. Because the closest resident is located over 300 feet from the property, it is expected that noise from the fans would be minimally detected by the residents in the nearby neighborhood. Additionally, the proponent plans to place a six-foot high earthen berm with evergreens between the facility and the residential properties; the earthen berm should provide both noise and visual shielding.

Project planners expect an additional three trucks every 2 days in and out of the property. Nearby residents may be slightly affected by the increase in truck traffic noise.

Because this is an addition to an existing industrial facility that currently operates production equipment and has truck and personal-vehicle traffic, the increase in ambient noise levels resulting from operations of the Proposed Project would be minor although possibly noticeable from the perspective of the residential neighborhood to the west of the site. However, there are other existing comparable noise sources in the vicinity, including existing truck traffic, railroad, quarry, and airport.

### 3.2.2.3 Cumulative Impacts

The proposed Pyrotek project would generate minor impacts that would contribute to cumulative impacts associated with the historical trend for the past, present, and reasonable foreseeable future actions.

### 3.2.2.4 Proposed Mitigation Measures

The dust collectors would use low speed fans mounted at ground level with slow velocity air discharge to minimize noise production. Additionally, the proponent plans to place a six-foot high earthen berm with evergreens between the facility and the residential properties; the earthen berm should provide both noise and visual shielding.

## 3.2.3 Geology and Soils

### 3.2.3.1 Affected Environment

Three geological landforms are present within the study area, which include lake plains, till plains, and drumlins. Lake plains are characterized by a nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves. Till plains are characterized by an extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines. Drumlins are characterized by a low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift (NRCS, 2006). The Niagara County Soil Survey (NRCS, 2006) indicates two soil types within proximity to the study area which include Churchville silt loam (CIA) and Hilton silt loam (HIA). Table 3.2.3-1 contains the properties of each soil unit and their respective geological landform.

**Table 3.2.3-1. Study Area Soils**

Soil Unit	Geologic Landform	Slope (percent)	Flooding Frequency	Hydric Rating	Prime	Commercial Building Construction
CIA	Lake and till plains	0-2	None	Not hydric	Prime Farmland (if drained)	Very limited
HIA	Drumlins and till plains	0-3	None	Not hydric	Prime Farmland	Somewhat limited

Source: NRCS, 2006

As shown in Table 3.2.3-1, soils within the study area are not prone to flooding. A “none” frequency rating means that flooding is not probable; the chance of flooding is nearly 0 percent in any year and flooding occurs less than once in 500 years (also refer to Section 3.1 for floodplain discussion). Prime farmland soils are protected under the Farmland Protection Policy Act of 1981. Prime farmland soils, as defined by the United States Department of Agriculture, are soils that are best suited to food, feed, forage, fiber, and oilseed crops. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources. Farming these soils results in the least damage to the environment. Although the site contains soils classified as prime farmland soils, the site is not subject to the provisions of the Farmland Protection Policy Act because it is already in urban development (zoned as M-2, Industrial) and would result in a very low score on the Land Evaluation and Site Assessment rating system based on adjacent land uses.

Overall, soils within the study area are somewhat to very limited (primarily due to depth to saturated zone) for commercial building construction (e.g., structures typically less than three stories high and lacking basements). The construction ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs (i.e., depth to a water table, ponding, flooding, subsidence, shrink-swell potential, and compressibility). “Somewhat limited” indicates that the soil has features that are moderately favorable for the specified use and limitations can be overcome or minimized

by special planning, design, or installation. In addition, fair performance and moderate maintenance can be expected.

The November 10, 2009, site visit confirmed that the study area is relatively flat and consists of primarily undisturbed vegetative cover. A majority of the site was historically farmed, but is no longer used for agriculture. Section 3.2.4 discusses current herbaceous cover.

### **3.2.3.2 Environmental Consequences**

#### **3.2.3.2.1 No Action Alternative**

Under the No Action Alternative, construction and operations would not occur, therefore, no impacts would occur to existing geology and soils.

#### **3.2.3.2.2 Proposed Project**

##### ***Construction***

Under Pyrotek's Proposed Project, a direct permanent adverse impact would occur to soils from the loss of approximately 9.85 acres due to the establishment of impervious surfaces. Construction activities associated with the proposed project would require site grading, paving, and excavation to support the facility and associated infrastructure (i.e., parking and stormwater management). These impacts, however, would be localized and minor. BMPs such as sediment control devices and seeding or sodding of temporarily disturbed areas following construction would reduce the potential for adverse indirect impacts such as soil erosion. As stated within Section 3.2.3, CIA soils within the study area of the proposed project are very limited for commercial building construction due to the depth to the saturated zone. Design and engineering of the facility and associated infrastructure would take into account the soil engineering properties onsite, minimizing impacts.

##### ***Operations***

Operations of the site would have no impacts to either geology or soil resources. Manufacturing would occur within the facility and the product would be transferred offsite using existing road infrastructure.

#### **3.2.3.3 Cumulative Impacts**

Industrial and residential uses adjacent to the study area have caused localized and adverse disturbances to soils. The proposed Pyrotek project would generate minor impacts that would contribute to cumulative impacts associated with the historical trend for the past, present, and reasonable foreseeable future actions.

#### **3.2.3.4 Proposed Mitigation Measures**

No mitigation measures would be required for geology and soil resources.

### **3.2.4 Vegetation and Wildlife**

#### **3.2.4.1 Affected Environment**

##### **Vegetation**

The November 10, 2009, site visit of the study area verified the majority of the site is regularly maintained grass or periodically maintained meadow. Dominant vegetation composition is a combination of grasses and herbaceous meadow species such as goldenrod (*solidago sp.*) and aster (*Aster sp.*).

##### **Wildlife**

No wildlife species were observed within the study area during the November 10, 2009, site visit. Common wildlife species within the region that utilize this type of habitat include white-tailed deer (*Odocoileus virginianus*), red foxes (*Vulpes vulpes*), raccoons (*Procyon lotor*), cottontail rabbits (*Sylvilagus floridanus*), squirrels (*Sciurus niger*), and various other small mammal species such as white-footed mice (*Peromyscus*



*Leucopus*) and shrews (*Sorex sp.*). The study area could also serve as habitat for common meadow nesting songbirds such as bobolink (*Dolichonyx oryzivorus*) and meadowlark (*Sturnella magna*).

### **3.2.4.2 Environmental Consequences**

#### **3.2.4.2.1 No Action Alternative**

Under the No Action Alternative, construction and operations would not occur; therefore, no impacts would occur to vegetation or wildlife resources.

#### **3.2.4.2.2 Proposed Project**

The following sections discuss the potential impacts to vegetation and wildlife as a result of the Proposed Project. Informal coordination letters have been sent to both the USFWS and the New York Natural Heritage Program to verify the project would have no impact on any Federally- or state-listed threatened, endangered, or candidate species, or critical habitat within the vicinity of the Proposed Project (see Appendix A). In a letter dated November 24, 2009, the USFWS deferred the information request regarding protected species to the New York Natural Heritage Program. A response received from the Natural Heritage Program indicated that there are no known occurrences of rare or state-listed animals or plants, significant communities, or other significant habitats on or in the immediate vicinity of the site (see Appendix A).

#### **Vegetation**

##### ***Construction***

Under Pyrotek's Proposed Project, a direct adverse impact would occur to vegetation from the loss of approximately 9.85 acres of maintained grassland and meadow. Construction activities associated with the proposed project would require site grading and removal of vegetation. Neither of these vegetation communities, however, would be considered rare or of high value within the region. In addition, both of these communities already experience human disturbance from periodic mowing (with the grassy areas frequently mowed). Overall impacts would therefore be minor from construction. Following construction, those areas temporarily disturbed would be either seeded or sodded with grass and maintained as grassy areas.

##### ***Operations***

Other than maintenance of grass areas surrounding the proposed project, operations are not anticipated to cause adverse impacts to vegetation.

#### **Wildlife**

##### ***Construction***

Under Pyrotek's Proposed Project, an indirect adverse impact would occur to wildlife from the loss of approximately 9.85 acres of grass and meadow habitat. Construction activities associated with the proposed project would require site grading and removal of vegetation. These activities could destroy small mammal burrows (if present) within the construction footprint. These animals would likely move to similar habitat available adjacent to the site. In addition, if ground disturbance and vegetation removal occurs within meadow habitats during the nesting season (May through mid-August) (NYSDEC, 2009a), individual species of ground-nesting birds could be lost. Noise from construction activities (see Section 3.2.2, Noise) would have the potential to disturb wildlife species within proximity to the study area. Overall adverse impacts, however, would be minor as the area already has disturbance to habitat within the study area from periodic maintenance (mowing), and the site is adjacent to an existing industrial activity that contains human activity and existing associated disturbances.

##### ***Operations***

Operation of the proposed project is not anticipated to create additional disturbance to wildlife other than the mowing of established grassy areas.

### **3.2.4.3 Cumulative Impacts**

Industrial and residential uses adjacent to the study area have caused localized and adverse disturbances to vegetation and wildlife. The proposed Pyrotek project would generate minor impacts that would contribute to cumulative impacts associated with the historical trend for the past, present, and reasonable foreseeable future actions.

### **3.2.4.4 Proposed Mitigation Measures**

No mitigation measures would be required for biological resources.

## **3.2.5 Solid and Hazardous Wastes**

### **3.2.5.1 Affected Environment**

The major raw material used at the facility is petroleum coke that is in the form of graphite flours delivered in super sacks. Other raw materials are primarily petroleum-based materials (Pyrotek, 2009a).

The site is located in EPA Region 2 and is a small quantity generator of hazardous waste (which means the facility generates more than 220.5 pounds (100 kilograms), but less than 2,200 pounds (1,000 kilograms), of hazardous waste per month) (EPA Identification Number is NYD986890143). The facility formerly (2005) operated as a large quantity generator of hazardous waste (generated more than 2,200 pounds (1,000 kilograms) of hazardous waste or more than 2.2 pounds (1 kilogram) of acutely hazardous waste per calendar month) based on their biennial report for reporting year 1995 (EPA, 2009e). At present, hazardous waste generated at the facility is from the maintenance parts cleaning machine. All wastes from this machine are handled through Safety Kleen. Other hazardous waste could potentially be generated by a spill of hazardous materials and the subsequent clean up (Metaullics Systems, 2005). Other waste generated includes scrap graphite and insulating materials generated from rebuilding of the onsite furnaces. The scrap graphite material is sold for beneficial reuse and the insulating material is reclaimed.

Based on available information, the Metaullics Systems' facility does not store or manufacture materials in quantities that require reporting under Emergency Planning and Community Right-To-Know Act, also known as Superfund Amendment and Reauthorization Act Title III Toxic Chemical Release Inventory Reporting. There are no underground or aboveground storage tanks located at the facility.

NYSDEC implements New York's hazardous waste management and solid waste programs and enforces the rules for hazardous and non-hazardous waste management. Hazardous waste must be managed in accordance with 6 NYCRR Parts 370, 371, 372, 373, 374 and 376 (the Part 370 series) administered by the NYSDEC, as well as all applicable Federal regulations under 40 CFR 260-268, 273, and 279 and 29 CFR 1910.

The facility stores more than 1,320 gallons of oil in aboveground containers and therefore must prepare a SPCC Plan in accordance with 40 CFR Part 112. The facility has a SPCC Plan that was last revised in November 2005. The facility has not had a spill or release of any liquid hazardous substances currently utilized at the facility (Metaullics Systems, 2005).

In 2007, a Phase I ESA was performed by Ecology and Environment Engineering, P.C. (EEEEPC) on behalf of Metaullics Systems, as part of due diligence efforts by Metaullics Systems for their proposed purchase of the property. Previous assessments indicated that the property is part of a site that was contaminated with chlorinated solvents including trichloroethylene (TCE), found both in the soil and bedrock. TCE was used as a degreaser at the Carborundum Company from 1963 to 1983. After the contamination was discovered by NYSDEC, remediation efforts were taken to control the spread or migration and to remove the contaminants from the site. A groundwater recovery system and a soil remediation system were constructed and have been in operation since 1994. The remediation was successful in reducing the total amount of contamination present within the site and

controlling the offsite migration of the contaminants. While groundwater remediation has continued, the soil remediation system, by means of soil vapor extraction/air-sparging, has been decommissioned. A sump was also installed in the northeast source area to help in controlling the contaminant plume (EEEEPC, 2007a).

The Phase I ESA identified the following in connection with the property:

- Polychlorinated biphenyl (PCB) in old transformers: Two transformers were confirmed to contain PCBs. While one unit contains a concentration of 30 ppm, which is less than the 50 ppm threshold, the other unit contains PCBs at a concentration of 260 ppm. Both units pose a concern due to possible releases.
- TCE plume in site groundwater: A TCE plume exists in site groundwater. A previous site owner has entered into an Order of Consent to address this plume.
- Other areas of environmental interest identified at this site included:
  - Soil pile
  - Former underground storage tanks
  - Transformers
  - Hazardous waste storage shed
  - Septic field
  - Cooling water cistern
  - Arsenic room
  - Blow downs for the air compressors
  - Thorium use
  - Current operations room
  - Air compressor blow down discharge
  - Solvent storage room
  - Utility rooms(EEEEPC, 2007a)

EEEEPC completed Phase II environmental sampling and analytical testing at the facility in July 2007, as a follow-up to recommendations made in the Phase I ESA (EEEEPC, 2007b). Surface and subsurface soil samples were collected as part of the Phase II assessment and compared to NYSDEC soil cleanup objectives (SCOs). Water samples collected from the cooling water system were not compared to any criteria as they were cooling water samples collected from the cistern. The cooling water system is a closed-loop system and is not used for drinking purposes.

In general, the results of the Phase II assessment indicated that exceedances of SCOs for industrial facilities were limited to the areas identified below.

- Metals, most notably lead, were present at concentrations exceeding their industrial SCO in subsurface soil at the potential septic leach field northeast of Building 1. Cyclohexane and methyl cyclohexane concentrations in subsurface soil collected from the Former Kynol Manufacturing Process Tank Area indicate a release of these compounds. The presence of VOCs further indicates a release in this area.
- PCBs were detected in surface soil collected below the air compressor blowdowns north of the Building 1 mechanical room. The suspected continuous nature of the mechanism for their introduction into this area indicates deeper soil may contain PCBs and additional sampling might be required. PCB presence at the transformer bases and former drum storage area indicates releases into the soil of these areas. However, all sample concentrations are below the industrial SCOs.
- Trace VOC and polycyclic aromatic hydrocarbon concentrations in subsurface soils around the cooling water cistern were found. None of the concentrations identified exceeded their respective industrial use SCO.

- Several organic compounds were identified in soil collected immediately in front of the hazardous materials storage building doors and might indicate multiple releases have occurred in these areas. None of the concentrations identified exceeded their respective industrial use SCO. (EEEPC, 2007b)

A follow-up to the Phase II was conducted in September 2007, and referred to as Phase IIB. Phase IIB sampling efforts sampled surface and subsurface soil in areas where PCBs were detected during Phase II sampling. Based on the Phase IIB sampling results, PCBs are present in surface and subsurface soil at concentrations above unrestricted SCOs (0.1 ppm) established by the NYSDEC (6 NYCRR Part 375), but did not exceed industrial SCOs (25 ppm) (EEEPC, 2007c).

The site is not listed on the EPA's National Priorities List, which designates high-priority cleanup sites under the Comprehensive Environmental Response Compensation and Liability Act, more commonly known as the Superfund Program. No areas of contamination are known to exist at adjacent properties. There are no Superfund sites immediately adjacent to the facility. The nearest Superfund site is the Forest Glen Mobile Home Subdivision located approximately 3.5 miles southwest of the proposed project (EPA, 2009f).

### **3.2.5.2 Environmental Consequences**

#### **3.2.5.2.1 No Action Alternative**

Under the No Action Alternative, construction and operations would not occur, thus the existing facility would continue its current operations and would generate the same types and quantities of hazardous and non-hazardous wastes. Wastes would continue to be collected and transported for offsite disposal or recycling in accordance with Federal, state and local regulations. The onsite groundwater remediation would continue until such time as the NYSDEC determines treatment is no longer necessary. The facility would continue to operate as an industrial site.

#### **3.2.5.2.2 Proposed Project**

##### ***Construction***

Construction of the proposed project would require the demolition of a small (approximately 2,000 square feet) single-story concrete building and the construction of a new, larger single-story pre-engineered steel building. Construction of a 270 foot by 125 foot stormwater retention pond is also proposed. Demolition of the existing single-story concrete building would generate waste concrete and other building materials associated with this structure (e.g., electrical wiring and piping). The existing facility was constructed in the 1960s (EEEPC, 2007a) and asbestos containing material or lead-based paint could be present. An assessment for these materials would have to be performed prior to demolition to determine if they are present. If present, there is a potential for workers to come into contact with asbestos containing material and lead-based paint; however, proper personal protective equipment and handling and management of these materials in accordance with Federal regulations would reduce the likelihood for exposure to workers. Solid waste and sanitary waste generated during construction activities would be limited to common construction-related waste streams. In-state or out-of-state landfills or recycling facilities would have the capability and capacity to accept these wastes; therefore, there would be no impact associated with disposal of these materials. Construction of the stormwater retention pond would require soil removal and either offsite disposal of the soil or placement of the soil onsite. Due to the presence of contaminants in the onsite soil, Pyrotek would likely have to coordinate with the NYSDEC and obtain approval before soil disturbance. Adherence to NYSDEC requirements would minimize off-site migration of contaminants in soil.

##### ***Operations***

Operations at the proposed project would expand the processing capability of the plant and require additional raw materials from what the facility is currently using. The major raw material used at the facility is petroleum coke

that is in the form of graphite flours delivered in super sacks. Approximately 5,000 tons per year of coke would be used when the facility is operating at full capacity (Pyrotek, 2009a). Underground storage tanks would not be constructed.

The facility is currently a small quantity generator of hazardous waste. New operations are not expected to generate a new wastestream or to increase the quantity of hazardous waste generated. However, should operations generate increased amounts of hazardous waste, the facility may have to change its regulatory status to large quantity generator and adhere to applicable Federal, state and local regulations for large quantity generators. The quantity and type of hazardous waste generated would be acceptable to treatment, storage and disposal facilities, and therefore, commercially available treatment or disposal would be available. RCRA waste would not be treated or disposed of onsite. Non-hazardous waste would be generated in quantities above what are currently generated. The handling and storage of non-hazardous waste would be similar to current operations, namely, the waste would be collected in containers or dumpsters for offsite disposal or for recycling. No impact would result from an increase in hazardous and non-hazardous waste generated.

### **3.2.5.3 Cumulative Impacts**

The proposed Pyrotek project would generate minor impacts that would contribute to cumulative impacts associated with the historical trend for the past, present, and reasonable foreseeable future actions.

### **3.2.5.4 Proposed Mitigation Measures**

Once operational, waste materials would be sent offsite for recycling, or treated and disposed of at a hazardous waste disposal facility or landfill.

During construction, preventative measures such as fencing around the construction site, establishing contained storage areas, and controlling the flow of construction equipment and personnel would reduce the potential for a release to occur. In addition, the NYSDEC could require additional measures (e.g., truck wash and water collection before equipment leaves site) be taken to ensure onsite soil contaminants do not migrate offsite during construction. In the event that a release should occur, immediate action would be taken to contain and clean up a release in accordance with Federal, state, and local regulations. In addition, the existing facility has an SPCC Plan that outlines procedures to follow in the event of a release from the facility. If areas of asbestos containing material or lead-based paint are present in the concrete building planned for demolition, Pyrotek would adhere to standard operating practices in accordance with Federal regulations for the handling, removal, and disposal of these materials. The removal and disposal of asbestos containing material would be completed in accordance with Federal and state regulations by a contractor certified to handle asbestos containing material.

## **3.2.6 Transportation and Traffic**

### **3.2.6.1 Affected Environment**

The proposed project site is located in Sanborn, Niagara County, New York. Interstate 190 (Niagara Expressway) is the major arterial in the region, located approximately 4 miles to the west of the property. The east-west Highways 31 (Saunders Settlement Road) and 6 (Lockport Road) are located north and south of the site, respectively, with Walmore Road traversing north-south between them. The main entrance to the Metaullics Systems' facility is accessed via Cory Drive, which travels west off of Walmore Road. The site currently experiences a low volume of truck traffic related to deliveries and shipments (estimated at four to five trucks per day), and the local roadway network can easily accommodate this volume.

### **3.2.6.2 Environmental Consequences**

#### **3.2.6.2.1 No Action Alternative**

Under the No Action Alternative, construction and operations would not occur; therefore, there would no change to transportation and traffic.

#### **3.2.6.2.2 Proposed Project**

The Proposed Project would result in only minor impacts to traffic. Short-term but measurable adverse impacts are expected during construction. Long-term increases in traffic conditions during operations would be minimal.

##### ***Construction***

Short-term but measurable adverse impacts to traffic are expected during the construction phase of the proposed project. Construction vehicles and construction workers vehicles would add to existing local traffic and would potentially cause minor congestion, higher traffic noise, and increased vehicle emission levels along the routes. The roads most impacted would be Cory Drive, Walmore Road, and Highways 31 and 6. Increased traffic from construction is expected to have minor, temporary, and localized impact as these roads have little current volume and can adequately accommodate the increase. The construction is expected to last for approximately 6 months.

##### ***Operations***

The Proposed Project would be expected to result in an increase of three trucks every 2 days in and out of the property. The trucks would use the established truck routes currently in place. The project design also incorporates a new road constructed around the perimeter of the proposed project. The additional truck trips to the site would be negligible and easily accommodated within the existing roadway and intersection network.

The Proposed Project would generate a minor long-term increase in personal vehicle traffic due to the hiring of approximately fifty additional permanent employees. Because the Proposed Project is an addition to an existing industrial facility that currently operates production equipment and has existing truck and personal-vehicle traffic, this small increase in vehicle traffic would have only a minor impact to the surrounding community.

#### **3.2.6.3 Cumulative Impacts**

The proposed Pyrotek project would generate minor impacts that would contribute to cumulative impacts associated with the historical trend for the past, present, and reasonable foreseeable future actions.

#### **3.2.6.4 Proposed Mitigation Measures**

A road would be constructed around the site to more easily accommodate truck and vehicle access throughout the facility. This road may also help to minimize congestion along Cory Drive.

#### 4.0 REFERENCES

- 40 CFR 50. National Primary and Secondary Ambient Air Quality Standards. U.S. Environmental Protection Agency, Code of Federal Regulations.
- 40 CFR 51.166. Requirements for Preparation, Adoption and Submittal of Implementation Plans: Prevention of Significant Deterioration of Air Quality. U.S. Environmental Protection Agency, Code of Federal Regulations.
- 40 CFR 52.21. Prevention of Significant Deterioration of Air Quality. U.S. Environmental Protection Agency, Code of Federal Regulations.
- 40 CFR 93. Determining Conformity of Federal Actions to State or Federal Implementation Plans. U.S. Environmental Protection Agency, Code of Federal Regulations.
- DOE, 1999. Department of Energy. GREET 1.5 Transportation Fuel-Cycle Mode. U.S. Department of Energy - Energy Efficiency and Renewable Energy, Alternative Fuels and Advanced Vehicles Data Center. Accessed on November 7, 2009 at [http://www.afdc.energy.gov/afdc/vehicles/emissions\\_electricity.html](http://www.afdc.energy.gov/afdc/vehicles/emissions_electricity.html) (last updated August 6, 2009).
- Ecology and Environmental Engineering, PC (EEEEPC), 2007a. Phase I Environmental Site Assessment of the Saint-Gobain Facility, Sanborn, New York. Prepared for Metallurgical Systems, a Division of Pyrotek, Inc. October, 2007.
- EEEEPC, 2007b. Letter from Thomas R. Heines, PE (EEEEPC) to Mr. Kevin J. Scott (Pyrotek), (September 18, 2007).
- EEEEPC, 2007c. Letter from Thomas R. Heines, PE (EEEEPC) to Mr. Kevin J. Scott (Pyrotek), (November 16, 2007).
- EPA, 2009a. Environmental Protection Agency. NEPAAssist. National Wetland Inventory Data Layer – Sanborn, New York Site Search. Accessed November 12, 2009 at [http://epamap9.epa.gov/nepave/nepamap.aspx?action=openses&p\\_nepaid=09492820091026FCARE](http://epamap9.epa.gov/nepave/nepamap.aspx?action=openses&p_nepaid=09492820091026FCARE).
- EPA, 2009b. National Ambient Air Quality Standards (NAAQS). Accessed October 31, 2009 at <http://epa.gov/air/criteria.html> (last updated July 14, 2009).
- EPA, 2009c. *2008 Ground-level Ozone Standards — Region 2 Recommendations and EPA Responses*. Accessed November 19, 2009 at [http://www.epa.gov/ozonedesignations/2008standards/rec/letters/02\\_NY\\_rec.pdf](http://www.epa.gov/ozonedesignations/2008standards/rec/letters/02_NY_rec.pdf) (letter dated March 12, 2009).
- EPA, 2009d. The Green Book Nonattainment Areas for Criteria Pollutants. Accessed October 31, 2009 at <http://www.epa.gov/oar/oaqps/greenbk/index.html> (last updated October 8, 2009).
- EPA, 2009e. NEPAAssist. Hazardous Waste Permits (RCRIS) Data - Pyrotek (METALLICAL SYSTEMS CO LP), Sanborn, NY. Accessed October 26, 2009 at <http://data.rtknet.org/rcris/rcris.php?reptype=f&database=rcris&detail=3&datatype=T&all...>
- EPA, 2009f. Resource Conservation and Recovery Act (RCRAInfo) - Pyrotek (METALLICAL SYSTEMS CO LP), Sanborn, NY. Accessed October 26, 2009 at [http://oaspub.epa.gov/enviro/rcris\\_web.report?PGM\\_SYS\\_ID=NYD986890143](http://oaspub.epa.gov/enviro/rcris_web.report?PGM_SYS_ID=NYD986890143)
- Federal Emergency Management Agency (FEMA). Flood Insurance Rate Map Panel Number 3605130001B. Accessed November 12, 2009 at <http://www.fema.gov/hazard/map/firm.shtm>
- MARAMA, 2009a. Mid-Atlantic Regional Air Management Association, Regional Haze. Accessed on November 12, 2009 at <http://www.marama.org/visibility> (last updated August 8, 2008).

- MARAMA, 2009b. MANE-VU Construction Management Technical Support Document, *Technical Support Document on Measures to Mitigate the Visibility Impacts of Construction Activities in the MANE-VU Region*, October 20, 2006. Accessed on November 21, 2009 at [http://www.marama.org/reports/Construction\\_TSD\\_102006.pdf](http://www.marama.org/reports/Construction_TSD_102006.pdf)
- Metaullics Systems, 2005. Spill Prevention, Control, and Countermeasures (SPCC) Plan.
- NRDC. 2006. National Resource Conservation Service. Niagara County Soil Survey. Version 6, December 14, 2006. Accessed November 3, 2009 at <http://websoilsurvey.nrcs.usda.gov> (last updated November 3, 2009).
- New York Blower Company, 2009. Fan-to-Size, Fan Selection Data, Version 1.76.85-R. October.
- New York State Department of Environmental Conservation (NYSDEC), 2009a. *New York State Breeding Bird Atlas*. Accessed November 12, 2009 at [http://www.dec.ny.gov/docs/wildlife\\_pdf/brddate.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/brddate.pdf)
- NYSDEC, 2009b. *New York State Ambient Air Quality Standards*. Accessed November 19, 2009 at <http://www.dec.ny.gov/chemical/8542.html?showprintstyles>
- NYSDEC, 2009c. *State Implementation Plan*. Accessed November 19, 2009 at <http://www.dec.ny.gov/chemical/8403.html>
- NOAA, 2009. National Oceanic and Atmospheric Administration, National Weather Service Forecast Office, Buffalo, NY: Buffalo Climate Narrative and Rochester Climate Narrative. Accessed November 21, 2009 at [http://www.weather.gov/climate/local\\_data.php?wfo=buf](http://www.weather.gov/climate/local_data.php?wfo=buf) (last updated July 21, 2006).
- NPS, 2009a. National Park Service. Class I Area Location. Accessed November 2, 2009 at <http://www.nature.nps.gov/air/Maps/classIoc.cfm> (last updated December 16, 2007).
- NPS, 2009b. National Park Service, Permit Application, PSD Overview. Accessed November 2, 2009 at <http://www.nature.nps.gov/air/permits/index.cfm> (last updated March 28, 2006).
- NYSERDA, 2009. New York State Energy Research and Development Authority, New York State Greenhouse Gas Emissions Inventory and Forecasts for the 2009 State Energy Plan. August 06, 2009.
- Pyrotek, 2009a. Information Provided in Support of Application to U.S. Department of Energy. Pyrotek Corporation. October 2009.
- Pyrotek, 2009b. Environmental Assessment Questionnaire, Information Provided by Pyrotek in Support of Application to Department of Energy for preparation of the Environmental Assessment (2009). [confidential].
- Pyrotek, 2009c. New York State Department of Environmental Conservation, Air Permit Application. October 23, 2009. Sanborn, NY.
- Pyrotek, 2009d. Metaullics Air Emissions Summary, September 2009. Sanborn, NY.
- Pyrotek, 2009e. Emissions Test Report, February 3-9, 2009, Sanborn, NY.
- Savino, Tony, 2009. Letter to Mr. Kevin J. Scott, Operations Manager, Metaullics Systems, regarding approval of an application for Expansion Power. New York Power Authority, White Plains, NY. September 29, 2009.
- Town of Wheatfield, 2007. Town of Wheatfield Zoning Map. March 2007. Accessed at <http://wheatfield.ny.us/maps/07zoning.pdf>
- Zuber, Timothy J., P.E. and Timothy G. Walck, P.E., 2009. Letter to Mr. Richard Muscatello, Planning Board Chairman, Town of Wheatfield, regarding Metaullics Systems Building Addition Site Plan Review. Wendel Companies. August 27, 2009.



**5.0 LIST OF PREPARERS**

<b>Department of Energy</b>		
John Tabacchi	Project Manager	
Mark McKoy	NEPA Document Manager	
Jesse Garcia	NEPA Document Manager	
<b>Pyrotek Incorporated</b>		
Kevin Scott	Operations Manager	
Michael Sekedat	Finance Manager	
Mike Balent	Project Engineer/Manager	
<b>PHE</b>		
<b>Analyst</b>	<b>Responsibilities</b>	<b>Degrees and Experience</b>
Frederick Carey, P.E.	Senior Engineer, QA/QC	M.S., Environmental Engineering B.S., Civil Engineering 17 years experience, 17 years NEPA experience
Austina Casey	Technical Writer: Air Quality and Climate	M.S., Environmental Science and Policy B.S., Chemistry 18 years experience, 6 years NEPA experience
Angela Drum	Senior Word Processor	10 years experience, 5 years NEPA experience
Joseph Grieshaber	QA/QC	M.B.A., Finance M.S., Biology B.S., Biology 34 years experience, 21 years NEPA experience
Robin Griffin	Assistant Project Manager, Technical Writer: Socioeconomics, Environmental Justice, Cultural	M.S., Environmental Management B.A., English Composition 17 years experience, 15 years NEPA experience
Jamie Martin-McNaughton	Sharepoint Administrator	B.S., Geology-Biology 7 years experience, 5 years NEPA experience
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Deborah Shinkle	GIS Specialist	B.A., Environmental Studies 6 years experience, 5 years NEPA experience
Rachel Spangenberg	Technical Writer: Materials and Waste Management	B.S., Biology 20 years experience, 15 years NEPA experience
Debra Walker	Project Manager	B.S., Biology 33 years experience, 20 years NEPA experience
Andrea Wilkes	Technical Writer: Noise, Traffic and Transportation	M.A., Science Writing B.S., Civil and Environmental Engineering B.S., English Literature 24 years experience, 2 years NEPA experience

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## 6.0 DISTRIBUTION LIST

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Buffalo, NY 14203-2999

Mr. Doug Borschel  
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Division of Environmental Permits, Region 9  
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North Tonawanda, NY 14120

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New York State Department of Environmental  
Conservation-DFWMR  
NY Natural Heritage Program-Information Services  
625 Broadway, 5th Floor  
New York, NY 12233-4757

The Honorable David Paterson  
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State of New York  
State Capital  
Albany, NY 12224

Environmental Protection Office  
Seneca Nation of Indians  
84 Iroquois Drive  
Irving, NY 14081

Seneca Nation  
P.O. Box 231  
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Field Manager  
Bureau of Land Management  
626 E. Wisconsin Avenue, Suite 200  
Milwaukee, WI 53202-4617

Tonawanda Band of Senecas  
7027 Meadville Road  
Basom, NY 14013

Tuscarora Nation  
5616 Walmore Road  
Lewiston, NY 14092

U.S. Fish and Wildlife Service  
3817 Luker Road  
Cortland, NY 13045

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**Appendix A**  
**Agency Consultation**

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## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

New York Field Office

3817 Luker Road

Cortland, NY 13045

Phone: (607) 753-9334 Fax: (607) 753-9699

<http://www.fws.gov/northeast/nyfo>

Project Number: 100062

To: Pierina Fayish

Date: Nov 24, 2009

Regarding: Electric Drive Vehicle Battery & Component Manufacturing Facility

Town/County: Town of Sanborn / Niagara County

We have received your request for information regarding occurrences of Federally-listed threatened and endangered species within the vicinity of the above-referenced project/property. Due to increasing workload and reduction of staff, we are no longer able to reply to endangered species list requests in a timely manner. In an effort to streamline project reviews, we are shifting the majority of species list requests to our website at <http://www.fws.gov/northeast/nyfo/es/section7.htm>. Please go to our website and print the appropriate portions of our county list of endangered, threatened, proposed, and candidate species, and the official list request response. Step-by-step instructions are found on our website.

As a reminder, Section 9 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) prohibits unauthorized taking\* of listed species and applies to Federal and non-Federal activities. Additionally, endangered species and their habitats are protected by Section 7(a)(2) of the ESA, which requires Federal agencies, in consultation with the U.S. Fish and Wildlife Service (Service), to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. An assessment of the potential direct, indirect, and cumulative impacts is required for all Federal actions that may affect listed species. For projects not authorized, funded, or carried out by a Federal agency, consultation with the Service pursuant to Section 7(a)(2) of the ESA is not required. However, no person is authorized to "take"\* any listed species without appropriate authorizations from the Service. Therefore, we provide technical assistance to individuals and agencies to assist with project planning to avoid the potential for "take," or when appropriate, to provide assistance with their application for an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA.

Project construction or implementation should not commence until all requirements of the ESA have been fulfilled. If you have any questions or require further assistance regarding threatened or endangered species, please contact the Endangered Species Program at (607) 753-9334. Please refer to the above document control number in any future correspondence.

Endangered Species Biologist: Sandra Doran *Sandra Doran*

\*Under the Act and regulations, it is illegal for any person subject to the jurisdiction of the United States to *take* (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species and most threatened fish and wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. "Harm" includes any act which actually kills or injures fish or wildlife, and case law has clarified that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Division of Fish, Wildlife & Marine Resources**  
**New York Natural Heritage Program**

625 Broadway, Albany, New York 12233-4757  
Phone: (518) 402-8935 • FAX: (518) 402-8925



Alexander B. Grannis  
Commissioner

November 20, 2009

Robin Griffin  
Potomac-Hudson Engineering  
7830 Old Georgetown Rd, Suite 220  
Bethesda, MD 20814

Dear Ms. Griffin:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Construction of Electric Drive Vehicle Battery and Component Manufacturing Facility, site as indicated on the map you provided, located north of Town of Sanborn, Niagara County.

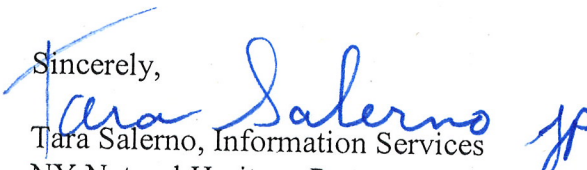
We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

  
Tara Salerno, Information Services  
NY Natural Heritage Program

cc: Reg. 9, Wildlife Mgr.





## New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

www.nysparks.com

David A. Paterson  
Governor

Carol Ash  
Commissioner

January 8, 2010

Robin Griffin  
Potomac-Hudson Engineering  
7830 Old Georgetown Road, Suite 220  
Bethesda, Maryland 20814

Re: ARRA, DOE  
Metallurgy Systems Plant Expansion/Battery  
Facility  
2050 Cory Road/WHEATFIELD, Niagara Co.  
09PR06527

Dear Ms. Griffin:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based on reported resources, there is a prehistoric archeological site adjacent to your project area. Therefore the New York State Historic preservation Office recommends that a Phase 1 archeological survey is warranted for all portions of the project to involve ground disturbance, unless substantial prior ground disturbance can be documented. If you consider the project area to be disturbed, documentation of the disturbance will need to be reviewed by this office. Examples of disturbance include mining activities and multiple episodes of building construction and demolition.

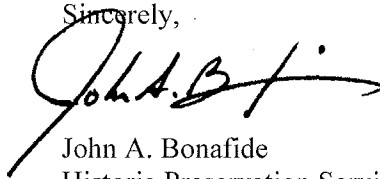
A Phase 1 survey is designed to determine the presence or absence of archeological sites or other cultural resources in the project's area of potential effect. The OPRHP can provide standards for conducting cultural resource investigations upon request. Cultural resource surveys and survey reports that meet these standards will be accepted and approved by the OPRHP. Our office does not conduct cultural resources surveys. A 36 CFR 61 qualified archeologist should be retained to conduct the Phase 1 survey.

Documentation of ground disturbance should include a description of the disturbance with confirming evidence. Confirmation can include current photographs and/or older photographs of the project area which illustrate the disturbance (approximately keyed to a project area map), past maps or site plans that accurately record previous disturbances, or current soil

borings that verify past disruptions to the land. Agricultural activity is not considered to be substantial ground disturbance and many sites have been identified in previously cultivated land.

If I can be of any further assistance do not hesitate to contact me at (518) 237-8643, ext. 3263.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Bonafide". The signature is written in a cursive style with a long horizontal stroke extending to the right.

John A. Bonafide  
Historic Preservation Services  
Coordinator



## New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

www.nysparks.com

March 19, 2010

Robin Griffin  
Potomac-Hudson Engineering  
7830 Old Georgetown Road, Suite 220  
Bethesda, Maryland 20814  
(via email only)

David A. Paterson  
Governor

Carol Ash  
Commissioner

Re: ARRA, DOE  
Metallurgical Systems Plant Expansion/  
Battery Facility  
2050 Cory Road  
Town of Wheatfield, Niagara County  
09PR06527

Dear Ms. Griffin:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the Phase I Cultural Resources End-of-Field Letter, prepared by Commonwealth Cultural Resources Group and dated March 19, 2010, in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the SHPO's opinion that your project will have **No Effect** upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

The SHPO appreciates the opportunity to comment on this information and looks forward to receiving a copy of the Phase I Cultural Resources Investigation Report. Please telephone me at ext. 3280 with any questions you may have.

Sincerely,

Nancy Herter  
Scientist, Archaeology

cc. Robert Peltier, CCRG (via email only)

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## **Appendix B**

**Public Comments on the Draft Environmental Assessment and Responses from the  
Department of Energy and Pyrotek, Inc.**

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New York State Department of Environmental Conservation  
Division of Environmental Permits, Region 9  
270 Michigan Avenue, Buffalo, New York, 14203-2916  
Phone: (716) 851-7165 · Fax: (716) 851-7168  
Website: www.dec.ny.gov

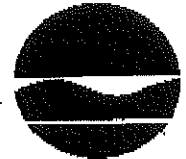


Alexander B. Grannis  
Commissioner

## FACSIMILE

TO: *Jesse Garcia*  
FAX #: *304/285-4403*  
FROM: *Doug Borschen*  
SUBJECT:  
DATE: *1/27/10*  
PAGES: 3, including this cover sheet

**New York State Department of Environmental Conservation**  
**Division of Environmental Permits, Region 9**  
 270 Michigan Avenue, Buffalo, New York, 14203-2915  
 Phone: (716) 851-7165 · Fax: (716) 851-7168  
 Website: [www.dec.ny.gov](http://www.dec.ny.gov)



Alexander B. Grannis  
 Commissioner

December 4, 2009

Timothy Walck, P.E.  
 Wendel Duchscherer  
 140 John James Audubon Parkway  
 North Tonawanda, New York 14120

**FILE COPY**

Dear Mr. Walck:

**SEQR/COORDINATED REVIEW  
 METALLICS SYSTEMS DIVISION OF  
 PYROTEK, INC. PLANT EXPANSION  
 TOWN OF WHEATFIELD, NIAGARA COUNTY  
 DEC #9-2940-00030/02001**

We have received the Town's request for SEQR Lead Agency status for the review of the proposed Metallics Systems Facility Expansion. We agree that the Town of Wheatfield Planning Board should act as SEQR Lead Agency. The Department is an involved agency since Metallics Systems must obtain a Title V Air Pollution Control Permit from this Department.

A review of the information we received and have on this facility indicates the following concerns:

1. The Department has received a Title V Permit application which is incomplete at this time. Technical information that has been requested has not been submitted as of this date.

The Description & Location of Action section of the Lead Agency Designation Form states that the applicant expects to receive a Department permit within the next 30 days. The issuance of a permit within that time frame is procedurally impossible. A Title V Permit under the Clean Air Act, which has been delegated to New York State by the US Environmental Protection Agency (EPA), must have a public notice comment period of 30 days. After the public noticing requirement has been met, there is an EPA 45 day review period. It is only after the EPA review period that the DEC can issue a permit. Notwithstanding the specific public notice time frames and the EPA review period just described, the applicant has not provided the Department with specific technical information that has been requested. The Department cannot "call" the application complete and initiate the public noticing requirement until:

- A. The Department has received all technical information requested of the applicant.
- B. OPRHP has agreed that the project will not impact cultural resources.
- C. The SEQR Lead Agency has been established.

For all of the above reasons, it is likely that a Title V Permit could be issued until April of next year, at the earliest.



Timothy Walck, P.E.  
 December 4, 2009  
 Page 2

2. The whole site appears to be within an archaeologically sensitive area, as shown on the enclosed New York State Office of Parks, Recreation and Historic Preservation (OPRHP) map (Website [www.oprhp.state.ny.us/ny/main.asp](http://www.oprhp.state.ny.us/ny/main.asp)). As part of the SEQR process, the project sponsor must evaluate this concern, unless it can be verified by appropriate documentation that the site has been significantly disturbed in a way that would destroy potential artifacts. Please recognize that normal agricultural activities, such as plowing, would not constitute such land disturbance. If there are any questions regarding this, contact OPRHP (telephone: 518/237-8643). Since there is a Department Approval required, an appropriate archaeological investigation must be conducted in order to satisfy the New York State Historic Preservation Act. A sign-off letter from OPRHP will be needed before DEC can call the Title V application complete. Typically, federal funding has the same requirements.
  
3. Since project activities will involve land disturbance of 1 acre or more, the project sponsor, owner or operator is required to obtain a State Pollutant Discharge Elimination System General Permit (GP-0-08-001) for Stormwater Discharges from Construction Activity. This General Permit requires the project sponsor, owner or operator to control stormwater runoff according to a Stormwater Pollution Prevention Plan (SWPPP), which is to be prepared prior to filing a Notice Of Intent (NOI) and prior to commencement of the project. More information on General Permit GP-0-08-001, as well as the NOI form, is available on the Department's website at [www.dec.ny.gov](http://www.dec.ny.gov). The NOI is required to be sent to NOTICE OF INTENT, NYSDEC, Bureau of Water Permits, 625 Broadway, 4<sup>TH</sup> Floor, Albany, New York 12233-3505, telephone: 518/402-8111 and be approved by the Department before construction commences.

Thank you for providing us the opportunity to comment on the proposal.

Respectfully,



Steven J. Doleski  
 Regional Permit Administrator

DEB:deb

cc: Mr. Larry Sitzman, NYSDEC Division of Air Resources  
 Town of Wheatfield Planning Board  
 Niagara Co. Dept. of Economic Development; Attn: Ms. Amy E. Fisk  
 Mr. Timothy Arlington, APEX Consulting

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**DOE Response to NYSDEC Comments on Draft Environmental Assessment for Pyrotek, Inc.**

<b>Comment Number</b>	<b>Public Comment on Pyrotek EA from NYSDEC</b>	<b>Response</b>
1	<p>The Department has received a Title V Permit application which is incomplete at this time. Technical information that has been requested has not been submitted as of this date. The Description &amp; Location of Action section of the Load Agency Designation Form states that the applicant expects to receive a Department permit within the next 30 days. The issuance of a permit within that time frame is procedurally impossible. A Title V Permit under the Clean Air Act, which has been delegated to New York State by the US Environmental Protection Agency (EPA), must have a public notice comment period of 30 days. After the public noticing requirement has been met, there is an EPA 45 day review period. It is only after the EPA review period that the DEC can issue a permit. Notwithstanding the specific public notice time frames and the EPA review period just described, the applicant has not provided the Department with specific technical information that has been requested. The Department cannot "call" the application complete and initiate the public noticing requirement until:</p> <ul style="list-style-type: none"> <li>A. The Department has received all technical information requested of the applicant.</li> <li>B. OPRHP has agreed that the project will not impact cultural resources,</li> <li>C. The SEQOR Lead Agency has been established.</li> </ul> <p>For all of the above reasons, it is likely that a Title V Permit could be issued until April of next year, at the earliest.</p>	<ul style="list-style-type: none"> <li>A. <i>Pyrotek will provide required technical information and meet requirements of the permitting process.</i></li> <li>B. <i>A Phase IB field investigation was conducted at the site in March 2010, in accordance with Section 106 and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP).. The Phase IB field investigation did not identify evidence of archaeological sites. The sole artifact recovered (a small clear glass fragment) is not considered to be significant. No prehistoric artifacts were recovered. The New York State Historic Preservation Office, in a letter dated March 19, 2010, stated the project would have "No Effect" upon cultural resources in or eligible for inclusion in the National Register of Historic Places (see Appendix A of the EA)..</i></li> <li>C. <i>The Town of Wheatfield Planning Board is acting as the SEQOR Lead Agency.</i></li> </ul>

**DOE Response to NYSDEC Comments on Draft Environmental Assessment for Pyrotek, Inc.**

Comment Number	Public Comment on Pyrotek EA from NYSDEC	Response
2	<p>The whole site appears to be within an archaeologically sensitive area, as shown on the enclosed New York State Office of Parks, Recreation and Historic Preservation (OPRHP) map (website oprhp.state.ny.us/nr/main.asp). A part of the SEQR process, the project sponsor must evaluate this concern, unless it can be verified by appropriate documentation that the site has been significantly disturbed in a way that would destroy potential artifacts. Please recognize that normal agricultural activities, such as plowing, would not constitute such land disturbance. If there are any questions regarding this, contact OPRHP (telephone: 518/237-8643). Since there is a Department Approval required, an appropriate archaeological investigation must be conducted in order to satisfy the New York State Historic Preservation Act. A sign-off letter from OPRHP will be needed before DEC can call the Title V application complete. Typically, federal funding has the same requirements.</p>	<p><i>See response to Comment 1-B, above.</i></p>
3	<p>Since project activities will involve land disturbance of 1 acre or more, the project sponsor, owner or operator is required to obtain a State Pollutant Discharge Elimination System General Permit (GP-0-08-001) for Stormwater Discharges from Construction Activity. This General Permit requires the project sponsor, owner or operator to control stormwater runoff according to a Stormwater Pollution Prevention Plan (SWPPP), which is to be prepared prior to filing a Notice Of Intent (NOI) and prior to commencement of the project. More information on General Permit GP-0-08-001, as well as the NOI form, is available on the Department's website at www.dec.ny.gov. The NOI is required to be sent to NOTICE OF INTENT, NYSDEC, Bureau of Water Permits, 625 Broadway, 4<sup>th</sup> Floor, Albany, New York 12233-3505, telephone: 518/402.8111 and be approved by the Department before construction commences.</p>	<p><i>In Section 3.1, Resource Areas Dismissed from Further Consideration, Surface Water, states that Pyrotek will implement a Stormwater Pollution Prevention Plan (SWPPP), as approved by the Town of Wheatfield. Prior to issuance of a Building Permit, the Town of Wheatfield would approve a formal maintenance agreement with Pyrotek for stormwater management facilities in accordance with Article 2, Section 4.4 of Town law.</i></p>



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2  
290 BROADWAY  
NEW YORK, NY 10007-1866

FEB 08 2010

Mr. Jesse Garcia  
DOE NEPA Document Manager  
DOE National Energy Technology Laboratory  
3610 Collins Ferry Road  
PO Box 880  
Morgantown, WV 26507

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has reviewed the Department of Energy's (DOE) January 2010 Draft Environmental Assessment for Pyrotek, Inc. Electric Drive Vehicle Battery and Component Manufacturing Initiative Project located in Sanborn, New York. The DOE's National Energy Technology Laboratory proposes to fund the construction of an industrial building, associated equipment, and utilities to expand production of the graphitization process used in the manufacture of lithium ion battery anode materials. The proposed project would be owned and operated by Pyrotek, Incorporated.

EPA agrees with DOE's finding that this project will have no significant effect on the environment. However, we do recommend that:

- All reasonable efforts are made to reduce construction equipment emissions, such as installation of particulate filters and minimization of idling times. EPA's Clean Diesel website address is <http://www.epa.gov/diesel/>.
- All landscaping and replacement vegetation be native to the area, and that all grass seed mixes should not contain invasive plant species.

Thank you for the opportunity to comment. If you have any questions concerning this letter, please contact Lingard Knutson of my staff at (212) 637-3747.

Sincerely,

A handwritten signature in cursive script, appearing to read "Grace Musumeci".

Grace Musumeci, Chief  
Environmental Review Section  
Strategic Planning and Multi-Media Programs Branch

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**DOE Response to USEPA Comments on Draft Environmental Assessment for Pyrotek, Inc.**

<b>Comment Number</b>	<b>Public Comment on Draft EA for Pyrotek from USEPA</b>	<b>Response</b>
1	<p>The Environmental Protection Agency (EPA) has reviewed the Department of Energy’s (DOE) January 2010 Draft Environmental Assessment for Pyrotek, Inc., Electric Drive Battery and Component Manufacturing Initiative Project located in Sanborn, New York. The DOE’s National Energy Technology Laboratory proposes to fund the construction of an industrial building associated equipment, and utilities to expand production of the graphitization process used in the manufacture of lithium ion battery anode materials. The proposed project would be owned and operated by Pyrotek, Incorporated.</p>	<p><i>Introduction noted.</i></p>
2	<p>EPA agrees with DOE’s finding that this project will have no significant effect on the environment. However, we do recommend that:</p> <ul style="list-style-type: none"> <li>a) All reasonable efforts are made to reduce construction equipment emissions, such as installation of particulate filters and minimization of idling times. EPA’s Clean Diesel website address is <a href="http://www.epa.gov/diesel/">http://www.epa.gov/diesel/</a>.</li> <li>b) All landscaping and replacement vegetation be native to the area, and that all grass seed mixes should not contain invasive plant species.</li> </ul>	<ul style="list-style-type: none"> <li>a) <i>Pyrotek will make all reasonable efforts to reduce construction equipment emissions.</i></li> <li>b) <i>Pyrotek will use landscaping and replacement vegetation native to the area and free of invasive plant species.</i></li> </ul>