Environmental Assessment

ENTEK Lithium Separator
Manufacturing Facility

Department of Energy Loan Programs Office –
Advanced Technology Vehicles Manufacturing

September 2024

DOE/EA-2266

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List of Acronyms and Abbreviations

Term	Definition
ACS	American Community Survey
APE	area of potential effects
ARPA	American Rescue Plan Act
ATVM Program	Advanced Technology Vehicle Manufacturing Loan Program
BMP	best management practice
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CSGP	Construction Stormwater General Permit
CWA	Clean Water Act
DOE	U.S. Department of Energy
EA	environmental assessment
EJ	environmental justice
EJScreen	Environmental Justice Screening and Mapping Tool
ENTEK	ENTEK Lithium Separators, LLC
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
GHG	greenhouse gas
HAP	hazardous air pollutant
IAC	Indiana Administrative Code
IC	Indiana Code
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
IPaC	Information for Planning and Consultation
Li	lithium
LPO	Loan Programs Office
MDO	machine-direction orientation
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NATA	National-Scale Air Toxics Assessment
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_X	nitrogen oxides
NRHP	National Register of Historic Places
O_3	ozone
Pb	lead
PE	polyethylene
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
Proposed Action	construction and operation of a lithium battery separator manufacturing facility
PTE	potential to emit
PVC	polyvinyl chloride
Q1	first quarter

Term	Definition
ROW	right of way
SHPO	State Historic Preservation Office
SLA	solvent-laden air
SO_X	sulfur oxides
SWPPP	Storm Water Pollution Prevention Plan
TDO	transverse-direction orientation
TIP	Transportation Improvement Program
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound

1. PURPOSE AND NEED

1.1 Purpose and Need for Agency Action

The purpose and need for agency action is to comply with the U.S. Department of Energy (DOE) mandate under Section 136 of the Energy Independence and Security Act of 2007 to select projects for financial assistance that are consistent with the goals of the act.

ENTEK Lithium Separators, LLC (ENTEK), is a producer of battery separators and plans to construct a new facility focused on wet-process separator capacity and equivalent coating capacity in support of domestic lithium (Li) battery manufacturing for electric vehicles (EVs) and energy storage applications. The facility would be located at 950 East Entek Drive, Terre Haute, Indiana, within the Vigo County Industrial Park.

ENTEK has applied for a loan pursuant to DOE's Advanced Technology Vehicle Manufacturing Loan Program (ATVM Program), which was created by the Energy Independence and Security Act of 2007 to provide incentives for projects, including engineering costs, that retrofit, expand, or create manufacturing facilities in the United States for advanced-technology vehicles or qualifying components. The primary goal of the ATVM Program is to improve fuel economy for light-duty vehicles and thereby reduce ozone (O_3) precursors, greenhouse gas (GHG) emissions, and particulate matter emissions associated with vehicle operation. The ATVM Program is designed to stimulate the technology required to meet program objectives. ENTEK is proposing to construct a facility to produce EV-quality Li battery separators for automotive applications consistent with the primary goal of the ATVM Program.

1.2 Background

The ATVM Program is administered by DOE's Loan Programs Office (LPO). LPO originates, underwrites, and services loans to eligible automotive manufacturers and component manufacturers to finance reequipping, expanding, or establishing manufacturing facilities in the United States that produce advanced-technology vehicles and qualifying components; the cost of associated engineering integration performed in the United States is also covered.

To fund the project, ENTEK has applied to the DOE ATVM Program for financial assistance. LPO has reviewed the application and determined that it is substantially complete per the rules governing the ATVM Program in 10 Code of Federal Regulations (CFR) Part 611. ENTEK was subsequently invited to enter into LPO's due diligence process.

1.3 Scope of Environmental Assessment

DOE's LPO is preparing this environmental assessment (EA) to address construction and operation of a Li battery separator manufacturing facility (Proposed Action) in Vigo County, Indiana. Specifically, DOE's LPO is preparing this EA to comply with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality regulations implementing NEPA (40 CFR Parts 1500−1508), and DOE NEPA Implementing Procedures (10 CFR Part 1021). If no significant impacts are identified during preparation of this EA, then DOE will issue a Finding of No Significant Impact. If potentially significant impacts are identified, then DOE will prepare an environmental impact statement. As presented below, natural, physical, and socioeconomic resources that may be subject to potentially significant environmental issues are identified, as are resources that would not be subject to potentially significant environmental issues, thereby narrowing the scope of the environmental review to just the environmental issues deserving of study.

The scope of LPO's review pertains to federal financing for site development, construction and startup (both Phase 1 and 2) of the ENTEK Li battery separator facility at 950 East Entek Drive, Terre Haute, Indiana (see Figure 1). The first phase would include the construction of two manufacturing buildings, approximately 375,582 square feet each, that would house the two-separator base-file lines and the four ceramic-coating lines, along with ancillary support and environmental control equipment. The second phase would include the construction of two additional manufacturing buildings, approximately 375,582

square feet each, with additional film and ceramic-coating lines. ENTEK is contemplating a future phase to expand the site with two more manufacturing buildings, approximately 375,582 square feet each, that would house two additional lines, but that phase is not the subject of the federal financial support requested from LPO.

Several permits and/or authorizations have been issued or are in the process of being issued by the regulatory agencies. A Construction Stormwater General Permit (CSGP) has been obtained for the Proposed Action, as has an Indiana Department of Environmental Management (IDEM) New Source Construction and Part 70 Operating Permit. Additionally, the U.S. Army Corps of Engineers (USACE) is currently reviewing documentation to determine if a USACE Individual Permit for the protection of wetlands and streams is required. A complete list of permits and approvals for the Proposed Action is provided in Appendix A, *Permits and Approvals*.

This EA describes the project and the potential impacts that may result from construction and operation of a Li separator manufacturing facility. The resource areas assessed in this EA consist of the following:

- Cultural resources, including Native American interests
- Water resources, including wetlands, groundwater, and surface water
- Air quality
- Noise
- Transportation
- Aesthetic and visual resources
- Biological resources and threatened and endangered species
- Socioeconomics and environmental justice
- Health and safety
- Waste management
- Soils and prime farmlands

These resource areas may experience project-related impacts. Therefore, each was assessed to determine the nature, extent, and significance of those impacts (see Section 3, *Environmental Consequences*). This EA examines the direct, indirect, and cumulative effects of the project by combining desktop research and analysis of existing available information with select field studies, including site assessments related to the presence/absence of wetlands, water bodies, threatened and endangered species, and cultural resources.

Resources not included in this EA are related to land use and recreation. Because the facility would be within the Vigo County Industrial Park, impacts on these resources are not anticipated to be significant; therefore, they are not included in this EA.

2. DESCRIPTION OF THE PROPOSED ACTION

Under the Proposed Action, ENTEK will construct a new manufacturing plant and associated infrastructure on approximately 342 acres located at the northeastern corner of the intersection of E. Harlan Road and S. Carlisle Street in Terre Haute, Vigo County, Indiana. Of the 342 acres Project site, ENTEK owns 340 acres, and Vigo County owns 2 acres. Project work outside the 340-acre parcel owned by ENTEK will accommodate a rail spur within a Vigo County right of way. The project's address will be 950 E. Entek Drive, Terre Haute, Indiana. The facility will be within the Vigo County Industrial Park and operated by ENTEK to produce wet-process battery separators, with equivalent coating capacity, in support of Li battery manufacturing, focusing on EV and energy storage applications. Construction of the facility will be completed in two phases; a future third phase is also being considered but is not part of the LPO financing and is included in the cumulative impacts in Section 3.13. Phases 1 and 2, including site preparation and construction activities considered for Federal financial assistance, will be considered in Section 2.

- The **first phase** will include the construction of two manufacturing buildings, approximately 375,582 square feet each, and associated structures.
- The **second phase** will include the construction of two manufacturing buildings, approximately 375,582 square feet each.

Each building will house two separator base-film lines and four ceramic-coating lines, along with ancillary support and environmental control equipment. The project will also include construction of a substation, administration building, maintenance building, detention ponds, roads, parking lots, and utility infrastructure to support the facility. As a part of the Proposed Action, a rail spur will be built in the southeast corner of the project area, crossing E. Harlan Drive. The rail spur will connect to an existing rail line approximately 175 feet south of the project area. This rail spur will be partially located within a Vigo County right of way. A site location map is included as Figure 1; a site map is included as Figure 2.

Within the 342-acre project site, 106 acres will be permanently affected and 10 acres will be temporarily affected, as follows:

- 53 acres for new construction (six manufacturing buildings and associated structures)
- 23 acres for roads, sidewalks, and parking
- 18 acres for detention ponds
- 3 acres for utilities
- 5 acres for laydown areas and staging
- 8 acres for a rail spur
- 1 acre for a substation
- 5 acres for a topsoil stockpile
- 5 acres for temporary laydown areas

The project site will have two entrances, one for cars and one for both cars and trucks, and be accessed from the east, from S. Carlisle Street. Drivers will most likely access S. Carlisle Street from E. Harlan Drive, which is adjacent to and south of the project site, connecting to U.S. Route 41. E. Harlan Drive is programmed in the Terre Haute Area Metropolitan Planning Organization's (MPO's) 2045 Bridging Metropolitan Transportation Plan, with federal assistance to allow greater flexibility in the construction timeline compared with a project that uses local funding sources. Currently, the date for completion of the design has not been determined, nor has the construction schedule. Once the schedule is determined, it is anticipated that E. Harlan Drive will be reconstructed to accommodate a truck route.

The subsections that follow describe construction and operation of the project.

Figure 1: Project Location Map

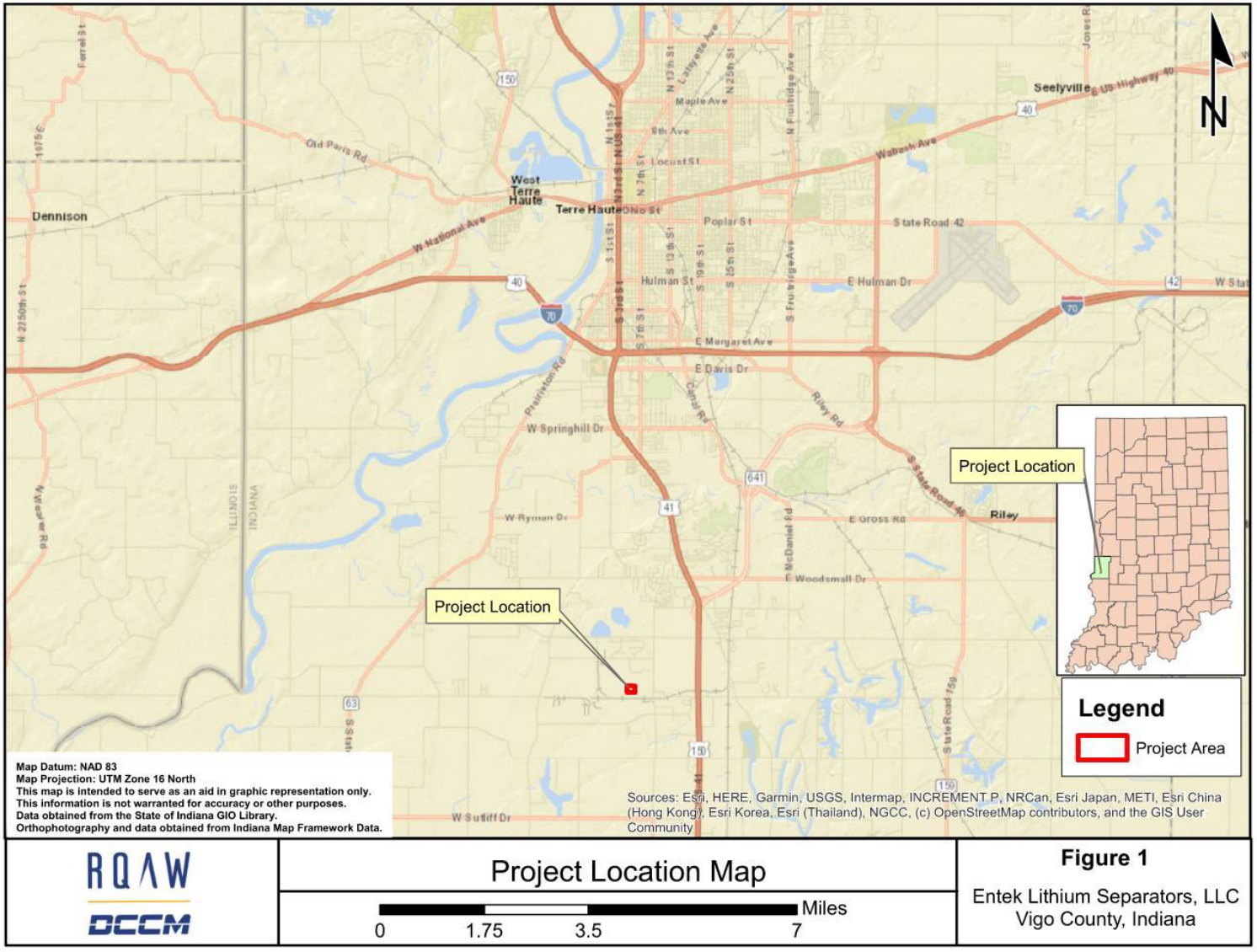
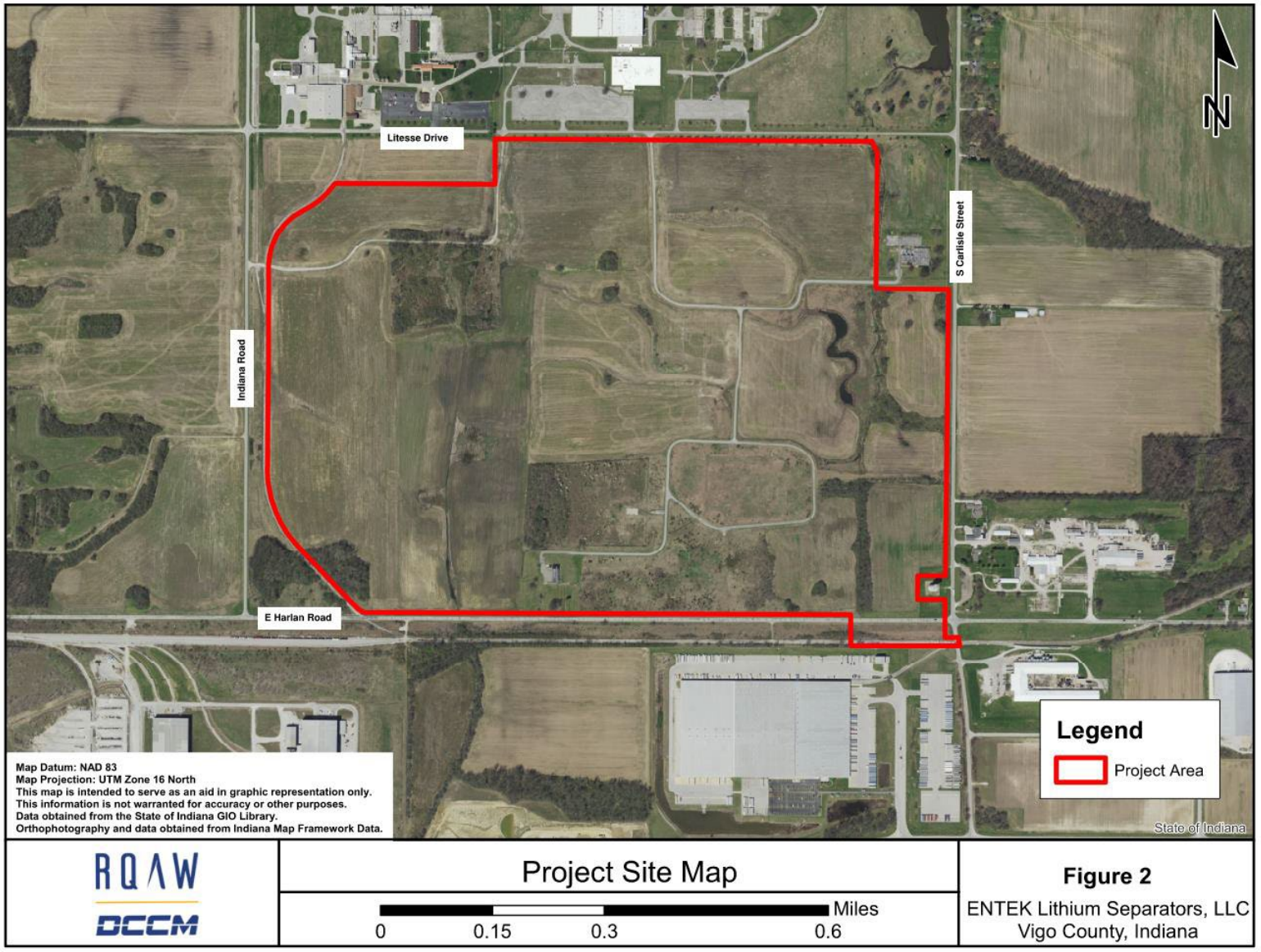


Figure 2: Project Site Map



2.1 Construction

Project construction will occur within a limits-of-disturbance area of approximately 116 acres, with 53 acres for building sites, 1 acre for a substation, 18 acres for detention ponds, and 34 acres for roads, sidewalks, parking, a rail spur, and utility infrastructure. Construction of the facility will be completed in phases. The project will include the construction of four manufacturing buildings, approximately 375,852 square feet each, and associated structures. The project will also include construction of a substation, administration building, maintenance building, detention ponds, roads, parking lots, and a water tank for fire suppression; utility infrastructure will be constructed to support the facility. The project also proposes the installation of new water wells on the site for nonpotable water uses. The new wells will need to meet the industrial cooling demand associated with the equipment, which requires 66 million gallons per day. Full-time employee specialties will consist of, but not be limited to, field supervisors, site workers, utility workers, structural specialists, concrete workers, heavy machinery operators, plumbers, electricians, etc.

Site preparation activities have begun and will continue. The activities include the construction of rock entrance roads and parking lots; removal of topsoil; installation of siltation ponds; earthwork; ground stabilization; construction trailer setup; installation of temporary power lines, generators, and traffic gates; installation of silt fences; site mowing; road removal; and demolition of existing onsite structures.

During site preparation, all construction vehicles and personnel will enter the site via the existing entrances off S. Carlisle Street and Litesse Drive. During the main construction phases, all construction vehicles will enter the site from Litesse Drive or the two temporary construction entrances from E. Harlan Road. These two entrances will be used primarily for construction trucks and deliveries. Figure 3 shows the facility layout, Figure 4 shows a detailed facility layout, and Figure 5 shows the utilities layout. The project site plan can be found in Appendix C.

2.1.1 Construction of Project Structures and Equipment Installation

Two 375,582-square-foot manufacturing buildings (i.e., 1,643 feet by 225 feet) will be constructed during Phase 1; two additional 375,582-square-foot manufacturing buildings will be constructed during Phase 2. Construction of all four buildings will rely on tilt-up construction. Tilt-up construction involves casting slabs of concrete horizontally on the ground. The slabs are then lifted (i.e., tilted) with a crane and moved into place. The buildings will be approximately 35 feet on the highest side. The buildings will house two separator base-film lines and four ceramic-coating lines, along with ancillary support and environmental control equipment. In addition to the manufacturing buildings, site structures will include a substation, administration building, maintenance building, parking lots, roads, and one rail spur.

Construction of each building will begin with preparation of the building pad. Later, curbs and roads, landscaping, fencing, and gates will be installed. The sequencing of building construction will be as follows: installation of beams, underground utilities, under-slab rock, and conduit. After pad preparation, the next steps will involve casting slabs of concrete for the tilt-up panels, raising the tilt-up panels, placing steel supports, and installing the roof. The final stage of building construction will involve installing the equipment that will produce the battery separators. This includes material conveying and storage equipment, mix systems, extruders, casting rolls, machine-direction orientation (MDO) machines, transverse-direction orientation (TDO) machines, extractors, dryers, winders, primary slitter coaters, dryers, secondary slitters, packaging equipment, waste grinders, chillers, boilers, environmental control systems, cooling towers, compressors, and other miscellaneous equipment.

Figure 3: Facility Layout Map

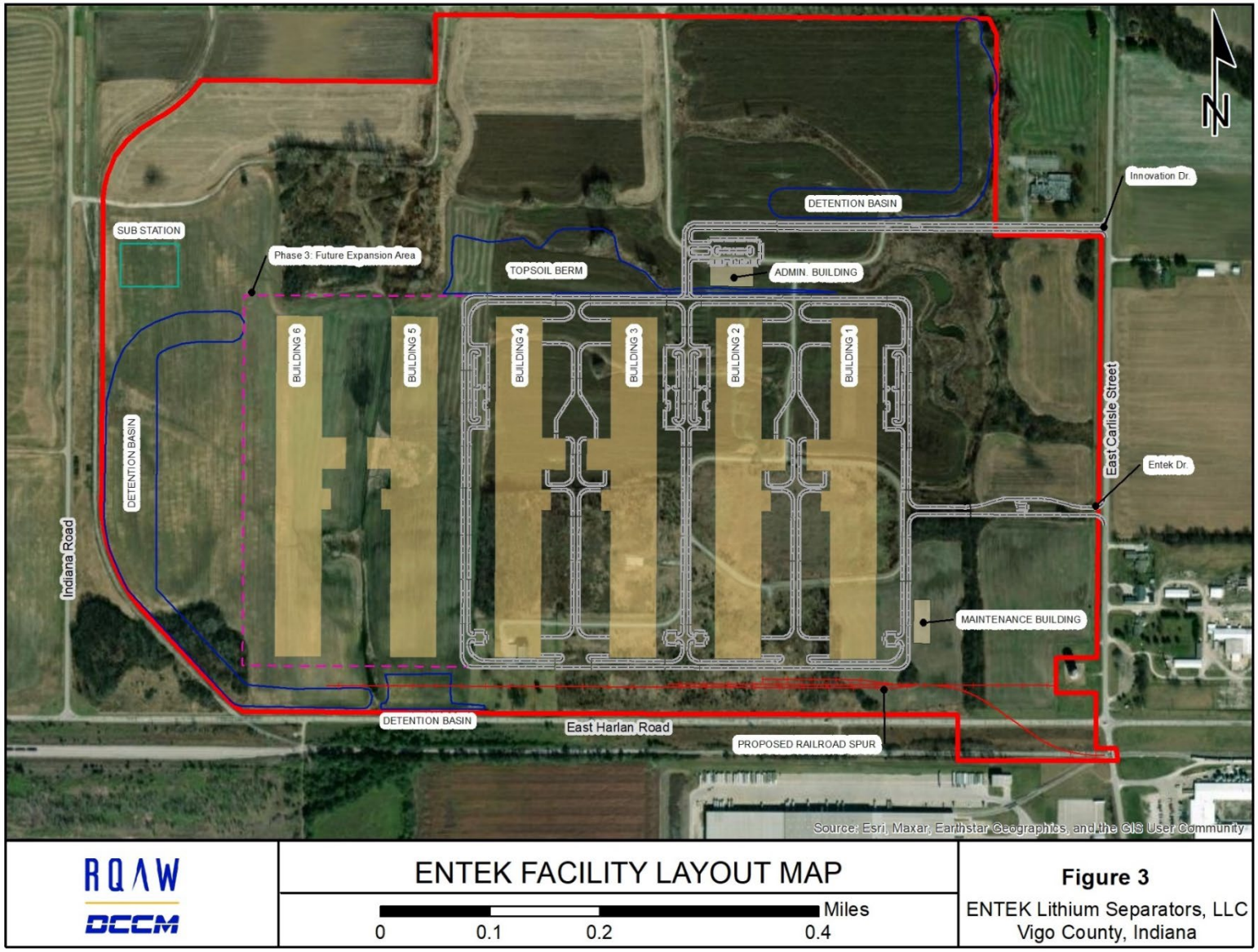


Figure 4: Facility Layout Map (Detailed View)

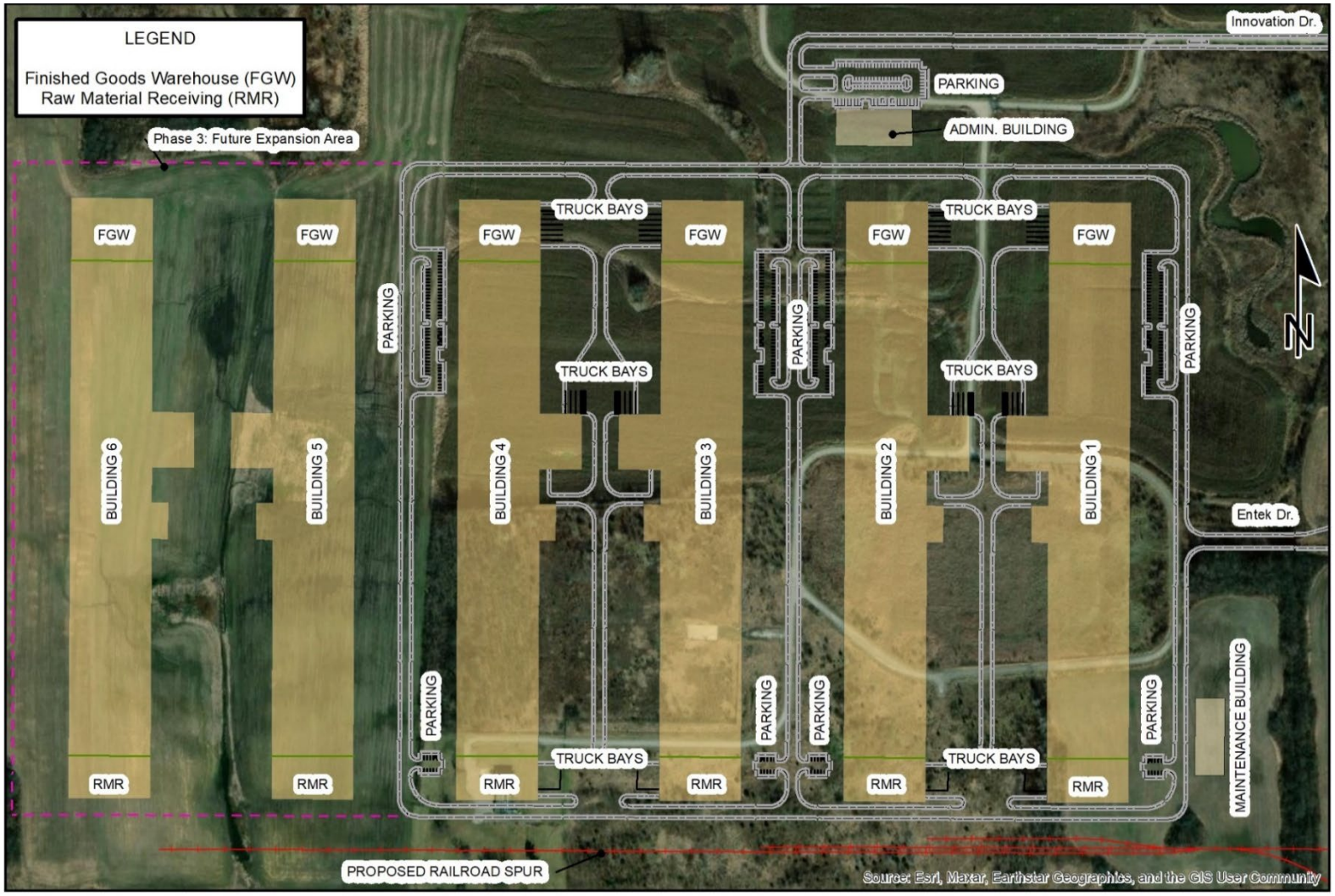
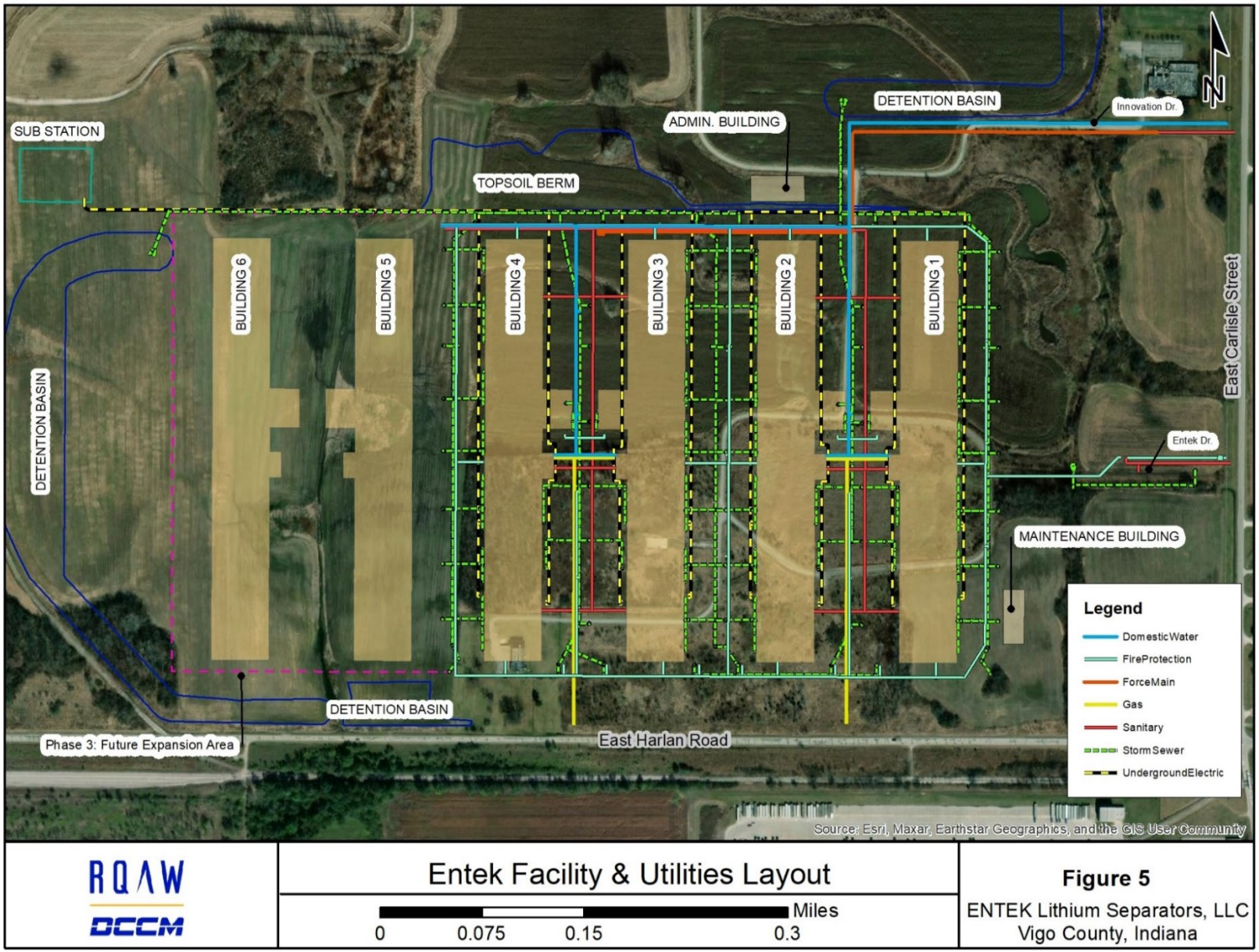


Figure 5: Facility and Utilities Layout Map



The project site is surrounded predominately by industrial areas. More than 1,000 feet to the east are a few residences. A large, wooded area will remain and will screen project buildings, as viewed from the residences. Landscaping for the project site will include grass lawns and a mix of trees and bushes for the employee parking lots and the entrances to both the administration and manufacturing buildings. The majority of the remaining area will be covered with landscape fabric and rock to minimize soil erosion, dust, maintenance, and water usage.

Electric, natural gas, domestic water, sanitary sewer, fire protection, and storm sewer utilities will be installed on the project site, primarily around the perimeter of the site and between the manufacturing buildings. Public infrastructure to support the site already exists and/or will be available by the time the site is operational. The utilities will need to be installed only on the project site.

Utility installation at the project site will occur concurrently with development of the buildings on the site. The onsite owner-constructed electrical substation will be on the west side of the property. Duke Energy will provide an offsite overhead electrical feed to power the substation. Two new water services will be fed from an existing water line on the east side of the property: (1) a 12-inch C900 polyvinyl chloride (PVC) line to feed the onsite storage tank for fire service and (2) a 12-inch C900 PVC domestic water line to service each of the mechanical rooms. A new 12-inch gravity sanitary sewer will extend from the administration building area to the existing sanitary sewer along the eastern property line. Each manufacturing building will have a gravity sewer that will discharge into a common sanitary lift station north of the buildings. A force main from that lift station will discharge into the new gravity sewer that will be installed close to the administration building.

2.1.2 Project Schedule

Site preparation activities began in January 2024 and will be completed in July 2024. Phase One construction is scheduled to begin at the end of Q2 and is expected to be completed in summer 2028. Construction of the four manufacturing buildings included in Phase 1 and Phase 2 of the Proposed Action will be staggered. Equipment installation at the four manufacturing buildings will occur as follows:

- Phase 1
  - Building 1: Begin Q1 2024 – Complete Q3 2025
  - Building 2: Begin Q2 2024 – Complete Q2 2025
- Phase 2
  - Building 3: Begin Q3 2026 – Complete Q3 2027
  - Building 4: Begin Q2 2027 – Complete Q2 2028

Site preparation activities are under way and include mowing, brush clearing, pavement removal, and building removal in preparation for utility work and grading. Utility installation began in Q1 of 2024. The installation of underground utilities (i.e., storm, sanitary, water) is expected to be completed in summer 2024. Temporary electric utility installations will be completed in fall 2024; permanent installations will be completed in spring 2026.

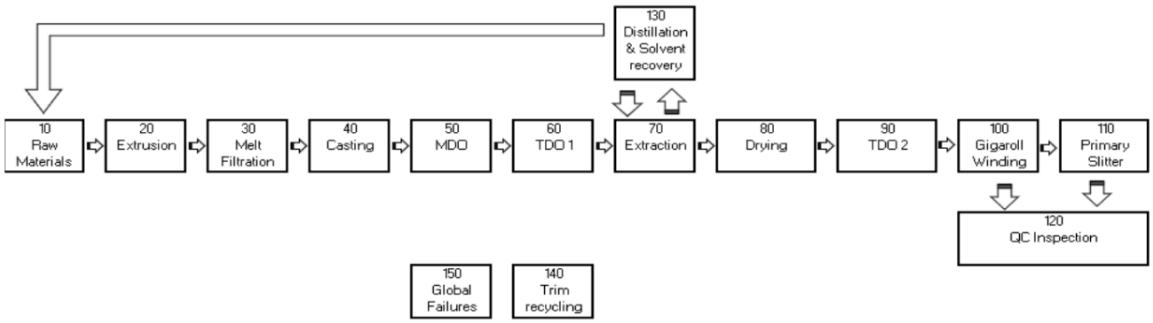
2.2 Operation

ENTEK will operate the manufacturing facility. Operation of the Li battery separator manufacturing facility will involve raw material receiving, the separator manufacturing process (i.e., extrusion casting, stretching, extracting, drying, winding and primary slitting, coating, secondary slitting, packaging), a finished goods storage warehouse and shipping area, and ancillary equipment and processes (e.g., spare parts, a control room, cleaning room, air compressors). The buildings will be organized into sequential process areas for material conveyance and storage, mix systems, extruders, casting rolls, MDO, TDO, extractors, dryers, winders, primary slitter coaters, dryers, secondary slitters, packaging waste grinders, chillers, boilers, environmental control systems, cooling towers, and air compressors, along with other miscellaneous equipment. The finished separators will then be stored in a finished goods warehouse, which will be in the northern portion of each building.

2.2.1 Manufacturing Process Summary

Multiple parallel manufacturing lines will be used to create battery separator rolls. Exhibit 1 shows the polyethylene (PE) cast-film process flow.

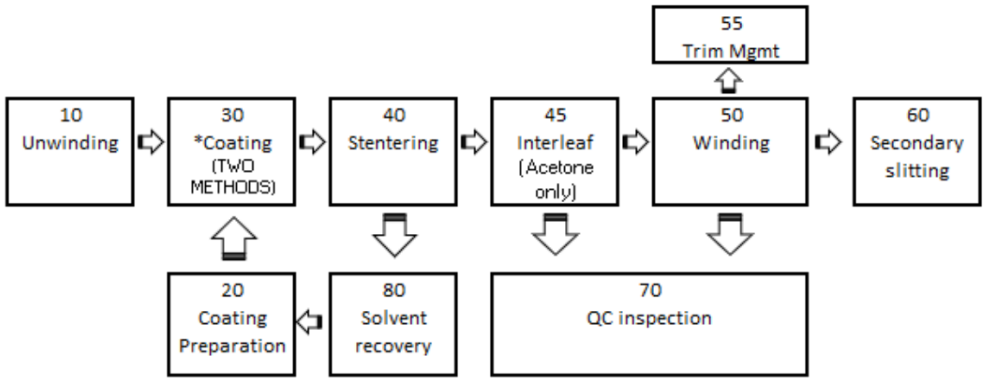
Exhibit 1: Polyethylene Cast-Film Process Flow



For the base-sheet lines in the mixing area (refer to Box 10 in Exhibit 1), the facility will meter and mix several types of polymers, which will be fed into an extruder (Box 20). Oil will also be fed into the extruder and mixed with the polymers, then degassed using a vacuum system. The blended and melted polymer will be forced through a melt filter (Box 30) using a melt pump. The melted polymer will exit the melt filter and enter a sheet casting die to transform the melted polymer into a sheet that can be fed onto a casting-box (Box 40) cooling drum. The cooled sheet will be fed into the MDO machine (Box 50), which will stretch the oil-filled sheet in the machine direction to orient the polymer chains. The sheet will then exit the MDO machine and be fed into a TDO machine (Box 60) that will stretch the sheet in the cross-machine direction to orient the polymer chains. The oil-filled sheet will exit the TDO machine and be fed into the extractor (Box 70), at which point the oil will be removed from the sheet. The oil and extraction fluid will be distilled (Box 130) to separate them for reuse in the system. The sheet will exit the extractor and be fed into the dryer (Box 80) to remove the extraction fluid from the film. The extraction fluid will be captured using environmental control systems. The sheet will exit the dryer and be fed into a secondary TDO machine (Box 90) for the final stretch, along with heat stabilization to remove stress from the sheet. The sheet will exit the second TDO machine and be automatically inspected (Box 120), then wound on a winder (Box 100) as part of a master roll. The master rolls will be placed on a primary slitter (Box 110) to slit them down to 1.2 to 2.4 meters wide. These are referred to as *mini master rolls*.

The next stage is the coated-separator process (see Exhibit 2).

Exhibit 2: Coated-Separator Process Flow



The mini master rolls will be placed in one of the ceramic-coating line unwinders (refer to Box 10 in Exhibit 2) for application of a ceramic coating. The ceramic-coating lines have a mixing system (Box 20) that blends ceramic materials with either water or a solvent that is coated on the base film. The rolls of base film are then fed through coating heads (Box 30) that apply the coating slurry to the base film. The coated base film is fed into a sintering oven (Box 40) to dry the water or solvent in the coating solution. The sheet then exits the sintering oven and wound (Box 50) as coated mini master rolls. Some products will have an adhesive layer that will require an interleaf to be wound (Box 45) to prevent the material from sticking to itself. The mini master rolls will then be placed on one of the secondary slitters (Box 60) for final slitting to the customer's desired width. The final product will be inspected (Box 70), packaged, boxed, and then placed in the finished goods warehouse.

2.2.2 Production Process Summary

Projected production of the battery separator is expected to require four shifts per day, 7 days a week, 24 hours a day. The first two phases will reach full capacity in 2028. The estimated total number of full-time employees is 654, with approximately 50 production employees required per shift. The anticipated staff phasing is provided in Table 1.

Table 1: Anticipated Site Staffing

Phase	Early Phase 1	Phase 1 Building 1	Phase 1 Building 2	Phase 2 Building 3	Phase 2 Building 4	Total
Number of Employees	10	178	149	167	150	654
Year	2024	2025	2025	2027	2028	

2.2.3 Shipping and Receiving

Raw materials for the project will enter the site from S. Carlisle Street via 900 E. Entek Drive. These truck deliveries will then be received at the raw materials warehouse. Incoming raw materials will require two to six truck trips each day; outgoing product shipping will approximately three to seven truck trips each day. Approximately five to 12 total truck trips per day, 365 days a year, will be required to provide raw materials to the facility and then ship the final products from the facility. The anticipated number of inbound and outbound trucks per day for each phase is shown in Table 2.

Table 2: Daily Truck Traffic

Phase	Phase 1 Building 1	Phase 1 Building 2	Phase 2 Building 3	Phase 2 Building 4
Inbound Trucks	1.13	2.27	3.4	4.53
Outbound Trucks	1.6	3.2	4.8	6.5

2.2.4 Waste Management

The project will involve the use and handling of various hazardous materials, including fabrication metals, polymers, ceramic coatings, and industrial solvents. All such handling will occur on a daily basis as part of manufacturing activities. ENTEK will implement proper hazardous material handling and disposal practices; therefore, project activities that involve hazardous materials will pose no risk to the public. All hazardous materials will be managed in accordance with all applicable federal, state, and local environmental laws, policies, and regulations. See Section 3.11, *Waste Management*, for details about how the waste will be disposed of and/or recycled.

ENTEK will follow existing corporate health and safety policies and procedures, including those related to employee training, the use of proper protective equipment, engineering controls, monitoring, and internal assessments. Additional policies and procedures will be implemented as necessary as new health and safety risks are identified. This will help ensure compliance with applicable health and safety regulations and minimize health and safety risks to employees and the public.

3. ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

In the following sections, a specific resource area is addressed with both qualitative and, where applicable, quantitative information to concisely describe the nature and characteristics of the resource that may be affected by the project, as well as the potential direct and indirect impacts on that resource from the project, given proposed controls. A conclusion regarding the significance of impacts is provided for each resource area.

Section 3.13, *Cumulative Impacts*, reviews present and reasonably foreseeable federal and nonfederal actions that may contribute to a cumulative impact when added to the impacts of the Proposed Action. The impacts of past actions were reviewed and included as part of the affected environment to establish the current condition of the resource (i.e., baseline condition) that may be affected by the Proposed Action.

3.2 Cultural Resources

3.2.1 Historic Properties

Historic property reports were completed in May and August 2023 for the project area (Kopf and Boot 2023a and 2023b). Aboveground resources within the project's area of potential effects (APE) were identified and evaluated in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and the regulations implementing Section 106 (36 CFR Part 800).

The APE encompasses the entire project site, including all locations where the project may result in ground disturbance; all areas from which the project may be visible or audible; all locations where the project may result in changes in traffic patterns, land use, or public access; and all areas where direct or indirect effects may occur as a result of project construction or operations.

The APE was investigated for the presence of any properties, structures, objects, or districts listed in or eligible for listing on the National Register of Historic Places (NRHP). Within the project APE, the historians identified resources that would be at least 50 years of age at the proposed start date (i.e., 2023). During fieldwork, historians identified 11 aboveground properties within the APE that meet the 50-year age criterion. Of these 11 resources, none are listed on the NRHP, nor are any recommended as eligible for listing on the NRHP. Within the APE, four newly identified, but no previously surveyed, properties received a "contributing" rating because they failed to exhibit the criteria necessary for NRHP eligibility. The four contributing resources within the APE are as follows:

- House at 93 Dallas Drive, RQAW #1
- House at 8928 Carlisle Street, RQAW #2
- Pfizer/IFF Industrial Complex, RQAW #3
- House at 1201 E. Dallas Drive, RQAW #4

The seven remaining resources within the APE that meet the age requirement were all rated as "non-contributing" because of their loss of integrity.

As a result of identification and evaluation efforts for this project, it was determined that the APE contains no properties listed on the NRHP, and no properties are recommended as eligible for listing on the NRHP.

The Indiana Department of Natural Resources (IDNR) reviewed the May 2023 *Historic Property Report* (Kopf and Boot 2023a). The IDNR stated in a letter dated June 13, 2023, that, based on the documentation available to the staff of the Indiana State Historic Preservation Office (SHPO), the IDNR did not identify any historic buildings, structures, districts, or objects that are listed on or eligible for inclusion on the NRHP within the probable APE.

The IDNR reviewed the August 2023 *Addendum to the Historic Property Report* (Kopf and Boot 2023b). The IDNR stated in a letter dated September 29, 2023, that, based on the documentation available to the staff of the Indiana SHPO, they did not identify any historic buildings, structures, districts, or objects listed on or eligible for inclusion on the NRHP within the probable APE.

3.2.2 Archeological Resources

A Phase IA archaeological survey (Rusche and Kelley 2023) was completed on April 27, 2023, for 148 acres in the project area (Archaeology APE). An addendum to a Phase IA archaeological survey (Harth and Kelley 2023) for the remaining project area (342 acres) was completed in August 2023. These studies were conducted to comply with Section 106 of the NHPA. For purposes of this assessment, a *site* is defined as "a place where past human occupation, habitations, or activities occurred, indicated by the presence of one or more artifacts," including "non-portable evidence of past human behavior or activity found on or in the ground" (Rusche and Kelley 2023).

Prior to conducting the surveys, an archaeological records review was completed using the Indiana Division of Historic Preservation and Archaeology's State Historic Architectural and Archaeological Research Database for the project area. The records review revealed that no previously recorded archaeological sites or surveys were within or adjacent to the project area. The records review also indicated that 13 previously recorded archaeological sites (12VI441, 12VI695–12VI702, 12VI761, 12VI767, 12VI777, 12VI920, 12VI921, and 12VI1873) are within 1 mile of the project area. However, none of the sites are within, or adjacent to, the current project area. No cemeteries were identified within, or adjacent to, the project area.

Two previously unrecorded archaeological sites (12VI1873 and 12VI1875) were documented during the surveys. Site 12VI1873 is a low-density historic artifact scatter, dating to the twentieth century; the site lacks the potential to provide important information. No further archaeological work is recommended because the sites are not considered eligible for listing on the NRHP.

The IDNR reviewed the April 2023 Phase IA archaeological survey and stated in a letter dated June 13, 2023, that the department concurred with the report (i.e., that site 12Vi1873 was not eligible for inclusion on the NRHP). Therefore, no further archaeological investigations appear to be necessary.

The IDNR reviewed the August 2023 addendum to a Phase IA archaeological survey. The IDNR stated in a letter dated September 29, 2023, that the department concurred with the report (i.e., that site 12Vi1875 did not appear eligible for inclusion on the NRHP). Therefore, no further archaeological investigations appear necessary.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, the discovery would be reported to the IDNR within 2 business days, in accordance with state law (Indiana Code [IC] 14-21-1-27 and 14-21-1-29). If any human remains are encountered, work would cease in the immediate area, and the remains would be left undisturbed. In addition, the county coroner and law enforcement officials would be contacted immediately. The discovery would be treated in accordance with IC 14-21-1 and 312 Indiana Administrative Code (IAC) 22. If the remains are determined to be Native American, then appropriate federally recognized Indiana Native American tribes would be notified. Work at the site would not resume until a plan for treatment of the human remains was developed and approved in consultation with the SHPO and any appropriate consulting parties. The plan would comply with IC 14-21-1 and 312 IAC 22, the current *Guidebook for Indiana Historic Site and Structures Inventory – Archaeological Sites* (State of Indiana 2022a), and all other appropriate federal and state guidelines, statutes, rules, and regulations.

On November 9, 2023, DOE sent a consultation letter to the Indiana SHPO for Section 106 consultation, requesting concurrence regarding the archaeological and architectural APEs as well as the DOE review and finding of "no historic properties affected." On November 11, 2023, SHPO concurred that no architectural or archaeological resources in the APE were eligible for listing on the NRHP.

Because of the absence of eligible architectural and archaeological resources within the APE, the controls that are in place to address an unanticipated discovery, and the SHPO's concurrence on the archaeological and architectural findings, impacts on cultural resources as a result the Project would not be significant.

3.2.3 Native American Interests

In conjunction with the 2023 EA and NHPA Section 106 historic and archeological review process, DOE sent a letter in September 2023 to seven federally recognized tribes, requesting information about nearby cultural resources as well as comments or concerns the tribes had about the potential for those resources to be affected by construction at the site. The contacted tribes are listed below.

- Alabama–Coushatta Tribe of Texas
- Alabama–Quassarte Tribal Town
- Cherokee Nation
- Chickasaw Nation
- Coushatta Tribe of Louisiana
- Eastern Bend of Cherokee Indians
- Muscogee (Creek) Nation

A sample request letter has been included in Appendix B, *Consultation with Agencies and Tribal Correspondence*. The Cherokee Nation and the Chickasaw Nation responded, stating that they had no interest in commenting on the project. No other responses or comments were received.

Because of the low likelihood for traditional cultural properties within the project site, as evidenced by current DOE tribal correspondence; assessments of the project site, with SHPO concurrence (Appendix B); and the controls that are in place to address an unanticipated discovery of cultural resource materials, impacts on cultural resources, including Native American interests, as a result of the project would not be significant.

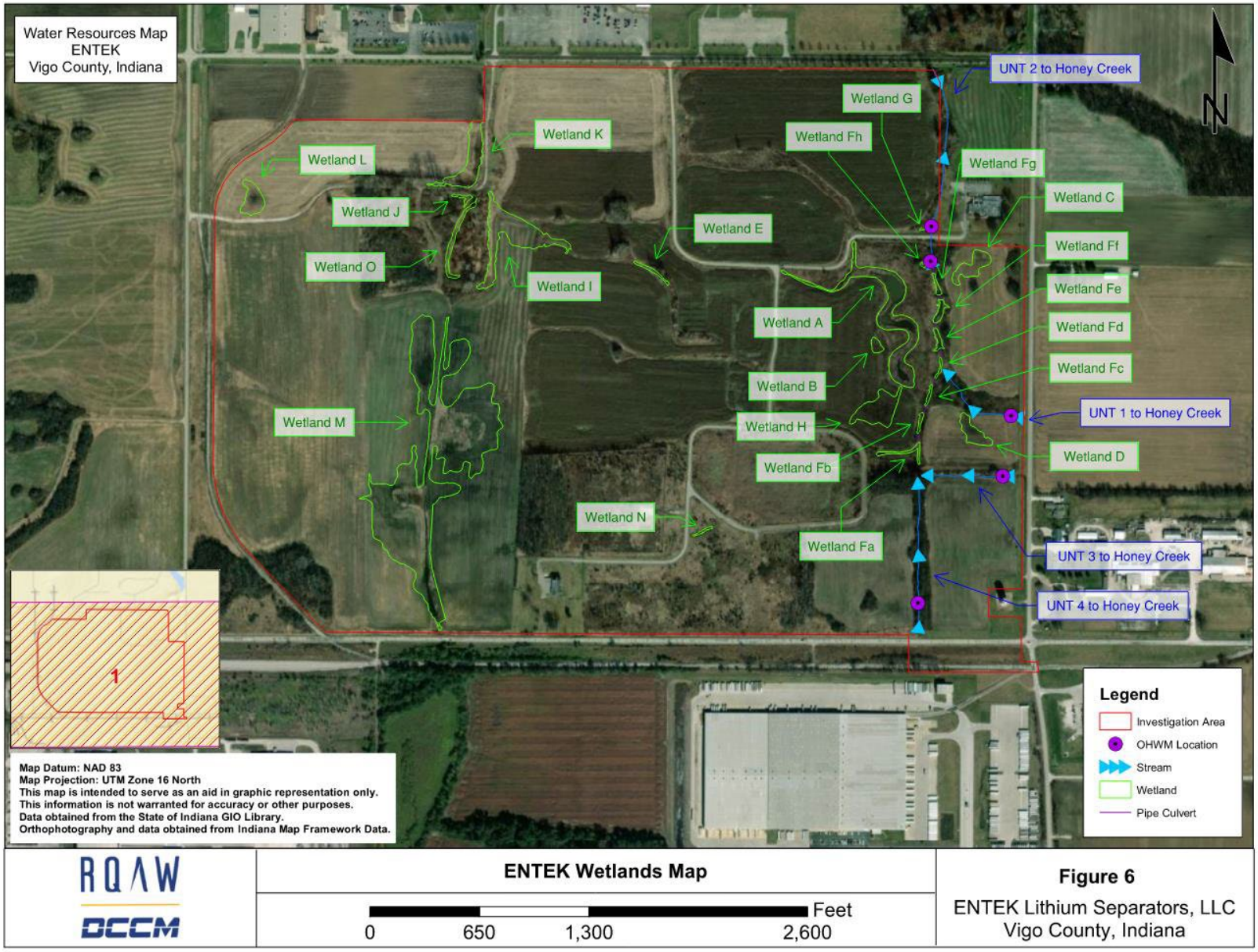
3.3 Water Resources

3.3.1 Wetlands

A Waters of the United States Determination and Wetland Delineation Report (Appendix D) was completed for the project area in accordance with USACE's 1987 Wetland Delineation Manual (U.S. Army Corps of Engineers 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (U.S. Army Corps of Engineers 2010). The field assessment identified approximately 32.20 acres of wetlands and 3,086 linear feet of streams within the project area (Figure 6). All wetlands identified, with the exception of Wetland N (0.056 acre), were assumed to be USACE jurisdictional wetlands; however, on August 25, 2023, the USACE issued a jurisdictional determination letter (see Appendix D) and reported that Wetland N was determined to be a drainage ditch that had been excavated from dry land; it is therefore excluded from regulation under the CWA. On August 7, 2024, the USACE issued a preliminary jurisdictional delineation assuming jurisdiction of the rest of the water resources within the Project area.

Some of the USACE-jurisdictional wetlands and streams would be affected by the Project during construction. Potential impacts on the wetlands and streams would consist of discharge into the wetland (filling) or wetland alterations resulting from clean earthen fill from grading, construction of roads/parking facilities, construction of buildings and utilities, replacement of existing culverts, and placement of riprap for scour protection. Impacts on wetlands and streams would be avoided and minimized to the greatest extent practicable. Sections of the site where Phase 1 construction activities have begun were reviewed by the USACE for wetlands and streams and determined to not be USACE jurisdictional wetlands and streams and therefore would not impact the jurisdictional wetlands. The overall footprint of Phase 1 would impact three (3) emergent wetlands (Wetlands A, Fa, and H) however, the impacts would not occur until appropriate permits are obtained and associated mitigation measures have been established (e.g. barrier fencing and notes on the construction plans (see Appendix E). During the development of Phase 2, Wetland M would be impacted by grading for the potential future expansion of Phase 3, however, the impacts would not occur until the appropriate permits are obtained and associated mitigation measures have been established (e.g. barrier fencing and notes on the construction plans (see Appendix E)).

Figure 6: Wetland Map



All jurisdictional wetland impacts are subject to review and permitting to include the establishment of compensatory mitigation measures by USACE. Wetlands A, Fa, H and M are the subject of a permit application submitted on August 16, 2024, to the USACE. The permit application is under review by USACE, and the issuance of the permit is anticipated in quarter four of 2024, which will include applicable compensatory mitigation measures (see Appendices D and E). Wetlands B, C, D, E, Fb, Fc, Fd, Fe, Ff, Fg, G, I, J, K L, N, O would not be impacted by any phase of the project, and are not the subject of the permit application under review by USACE. Impacts to these wetlands would not occur due to project designs that avoid the wetlands and the use of barrier fencing and notes on the construction plans.

The impacts on jurisdictional wetlands and streams would be mitigated through the IDNR Stream and Wetland Mitigation program, a statewide in-lieu fee program that allows permittee applicants (i.e., developers) the option of purchasing stream and/or wetland mitigation credits to fulfill compensatory-mitigation requirements for permitted impacts authorized under Sections 404 and 401 of the CWA, Section 10 of the Rivers and Harbors Act, and Indiana's State Isolated Wetlands law. IDNR's program sells advance credits to permit applicants who purchase these credits in lieu of performing mitigation themselves. The legal obligation to provide compensatory mitigation is then transferred to the sponsor of the in-lieu fee program (IDNR) on receipt of associated credit fees. IDNR's program is regulated by USACE under the 2008 Federal Rule (33 CFR Part 332), Compensatory Mitigation for Losses of Aquatic Resources, as published in the *Federal Register* by the USACE and the U.S. Environmental Protection Agency (EPA) on April 10, 2008.

To minimize erosion and reduce pollutants in stormwater runoff, a Construction Stormwater General Permit (CSGP) and Stormwater Pollution Prevention Permit (SWPPP) have been completed for the project. The CSGP was approved by the Vigo County Soil and Water Conservation District on September 28, 2023. The permit is valid for 5 years, with an expiration date of September 28, 2028. The controls that would be implemented to prevent erosion and sedimentation include the installation of silt fences, placement of riprap, the use of erosion control blankets, and temporary seeding.

Because the Applicant has submitted a permit application to USACE to address jurisdictional wetland impacts and of the ability to use compensatory mitigation to offset project wetland and stream impacts, LPO has developed a mitigation action plan (see Appendix E). Due to the Mitigation Action Plan, to track and ensure future wetland impacts are addressed, and the use of the controls that are proposed to minimize erosion and reduce pollutants in stormwater runoff, impacts on wetlands and streams as a result of the project would not be significant.

3.3.2 Groundwater and Surface Water

The facility would obtain its potable water from Indiana American Water, which utilizes groundwater obtained from three vertical wells and a horizontal radial-collector well on property adjacent to the Wabash River. ENTEK proposes to install new water wells on the project site to obtain non potable water. The new wells would need to meet the demand of 1.85 million gallons per day for use as industrial cooling for the equipment. This will occur in three phases (Phase 1, Phase 2 and Phase 3) and the water usage for Phase 1 (Buildings 1 and 2) will equal 620,000 gallons of water a day. Phase 2 (Buildings 3 and 4) will equal 620,000 gallons of water a day for a total of 1.23 million gallons a day. Phase 3 (Buildings 5 and 6) will equal 620,000 gallons of water a day for a total of 1.85 million gallons a day for all three phases. Roughly half of the water would be evaporated, whereas the excess would be discharged into the sanitary sewer in three phases as well. The total amount of site wastewater for all three phases would be approximately 1 million gallons a day in total or 333,000 gallons per day, per phase, all of which would be directed to the Wastewater Treatment Facility in Terre Haute via the sanitary sewer. An Industrial Wastewater Permit with the City of Terre Haute Wastewater Utility will be completed and submitted by the end of September of 2024 with an anticipated approval by November of 2024 for the discharge of wastewater into the sanitary sewer. No discharges are permitted until the appropriate permit is obtained (See Appendix E). The application will be submitted based on all three phases of the site development and the Industrial Wastewater Permit with the City of Terre Haute Wastewater Utility is to be resubmitted and renewed every 5 years. The proposed facility would not include any discharges that could adversely affect groundwater.

During operations, the cooling tower will use potable water supplied by Indiana American Water, sourced from local wells in Vigo County. All sanitary sewer water and industrial wastewater will flow into a common collection pipe, which will transport the wastewater by gravity to a Sanitary Sewer Lift Station. At this lift station, the wastewater will be pumped through an on-site measuring station with a flume, then continue by gravity for several miles to the Wastewater Treatment Facility in Terre Haute.

The cooling tower will be maintained with potable water, and the blowdown (reject water), which contains residual minerals like calcium, magnesium, and silica from the evaporative process, will overflow into the common collection sanitary sewer system. The water volume associated with Cooling Tower Reject water (blowdown water) is 24 gallons per minute, per building or 34,600 gallons per day. For two buildings (Phase 1) that would be 69,200 gallons per day, four buildings (Phase 1 and 2) 138,400 gallons per day, and six buildings (Phase 1, 2 and 3) would be 207,600 gallons per day. The chemicals used to treat the cooling tower water are in low dosages and are safe for wastewater treatment facilities. These include polyacrylates or phosphonates for scale control, and low phosphate additions for corrosion control. Occasionally, bromine or chlorides may be used for bacterial control. Additionally, the cooling tower water sump will have a temperature probe to monitor and optimize its performance. The on-site wastewater measurement station will also be equipped with a temperature probe to measure and monitor wastewater flow as needed. The expected temperature of Cooling Tower Reject water would be less than 85 degrees Fahrenheit and the City of Terre Haute has a maximum acceptable temperature of 140 degrees Fahrenheit.

All wastewater containing solids will flow to a dedicated wastewater solids sump in each building. This will be continuously pumped to a Wastewater Thickener (a type of clarifier), where clear water will be directed to the sanitary sewer collection pipe and then to the sanitary sewer lift station. The concentrated solids from the Wastewater Thickener will be pumped as a slurry to a filtering device, which will separate the solids. The dry solids will then be collected in a roll-off dumpster for delivery to the Vigo County Sycamore Ridge Landfill. In Phase 1, with one building and two production lines operational, approximately 685 pounds of waste process solids per day will be captured. With two buildings and four production lines in Phase 2, this amount will increase to 1,350 pounds per day. In Phase 3, with six production buildings operational, up to 4,100 pounds of process waste solids will be removed daily.

The City of Terre Haute Wastewater Utility monitors the following industrial wastewater parameters:

#	WW Parameter	Range/Measure and Limit	ENTEK Estimated Measure
1	Temperature	< 140 deg F	< 85 deg F
2	pH	5.0–10.0	6.8–7.2
3	TSS	No Limits – *Extra Fees for Amounts* > 300mg/L	< 40 mg / L
4	Heavy Metals	< 0.6–1.0 mg/L *(Metal Dependent)*	—

According to the IDNR floodplain analysis and regulatory assessment reports from the Indiana Floodplain Information Portal (State of Indiana 2022b), the project area is not within a mapped floodplain. In addition, according to the U.S. Geological Survey's National Hydrography Dataset (U.S. Geological Survey n.d.) and IndianaMap (IndianaMap n.d.), five flowline segments are within the project area, one associated with a canal ditch and four associated with perennial streams. The four perennial streams were verified during field investigation.

The project site is in the Thompson Ditch–Honey Creek (Hydrologic Unit Code 051201110704) and Crooked Creek (Hydrologic Unit Code 051201110904) watersheds. Project construction would be performed under terms of a National Pollutant Discharge Elimination System permit for construction stormwater discharges as well as an IDEM CSGP and SWPPP. The CSGP and SWPPP have been approved and would be implemented for the project (Appendix A).

The project would cause an additional 85 acres of the site to be covered by impervious surfaces, including new buildings, paved parking areas, driveways, and sidewalk areas. However, the effect on stormwater infiltration in the vicinity would not be significant because of the remaining open space throughout the site and the stormwater detention ponds, which would be sized to accommodate the proposed new facility.

A Material Handling and Spill Prevention Plan, included in the project CSGP, would be implemented to in the event of a spill. The plan would include coordinating and monitoring the spill until the situation has been stabilized and the spill has been eliminated.

Because of current plans for municipal water use and obtaining the necessary discharge permits, the absence of floodplains, and the anticipated stormwater control and treatment during construction and operation, impacts on groundwater or surface water as a result of the project would not be significant.

3.4 Air Quality

The project would be located in Vigo County, Indiana, which is in attainment for all criteria air pollutants per the National Ambient Air Quality Standards (NAAQS) set by EPA in accordance with the Clean Air Act (CAA). The NAAQS specify allowable concentrations and exposure limits for six criteria air pollutants, as determined by EPA. These criteria pollutants are carbon monoxide (CO), nitrogen oxides (NO_X), O_3, particulate matter less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$), sulfur oxides (SO_X), and lead (Pb). The CAA also regulates the emission of certain volatile organic compounds (VOCs) and hazardous air pollutants (HAPs), as determined by EPA.

Fugitive-dust emissions during project construction may temporarily affect air quality at the site and in the surrounding area; however, these impacts would be minor and temporary. Per the CSGP, controls would be implemented to minimize fugitive dust emissions during construction (e.g., seeding all disturbed land that is left inactive for 14 days and using temporary construction entrances).

Project operations would involve the use of equipment and materials that have the potential to emit (PTE) air pollutants regulated by the CAA. Such operations may include the use of natural gas–fired boilers, material handling and mixing, material storage, or various surface-coating operations. The annual PTE of regulated air pollutants at the facility is anticipated to meet the major-source threshold under Title V of the CAA for criteria pollutants and the minor-, or area-, source threshold for HAPs under Section 112 of the CAA (see Table 3). Therefore, the project would require an IDEM Part 70 Operating Permit, which would incorporate the requirements of an EPA Title V permit. A New Source Construction and Part 70 Operating Permit was issued by the IDEM Office of Air Quality for the project on October 2, 2023.

The controls that would be implemented during project operation to minimize potential air quality impacts include the following:

- **Dust collectors**: Particulate emissions from mixing operations would be controlled by dedicated baghouse dust collectors.
- **Smoke-collection system**: Smoke generated during the extrusion process would be controlled by a smoke-collection system.
- **Carbon-absorption system**: Emissions from the extraction/drying process would be routed through an integral condenser; emissions from the condenser would be controlled by a carbon-absorption system. When using VOC solvents, emissions from the coating process and associated dryer would be routed through an integral condenser; emissions from the condenser would be controlled by a carbon-adsorption system.

Carbon dioxide (CO_2), which is considered a GHG, is not regulated in the same manner as the criteria pollutants shown in Table 1. The Indiana Environmental Rules Board adopted the GHG regulations required by EPA at 326 IAC 2-2-1(zz), pursuant to IC 13-14-9-8(h) (Section 8, Rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Therefore, IDEM's Office of Air Quality cannot consider GHG emissions when determining operating-permit applicability or prevention of significant deterioration applicability to a source or modification.

Table 3: Project Potential to Emit Air Pollutants

Constituent	Source-Wide Potential Emission (ton/year)								
	PM[a]	PM_{10}[a]	$PM_{2.5}$[a,b]	SO_2[b]	NO_X	VOC	CO	Single HAP[c]	Total HAPs
Unrestricted[d]									
Total PTE of Entire Source[e,f]	576.47	560.11	560.11	2.38	160.02	10,354.38	162.08	6.30	6.92
Title V Major-Source Thresholds	–	100	100	100	100	100	100	10	25
After Issuance[g]									
Total PTE of Entire Source[e,f]	218.95	202.59	202.59	2.38	138.15	246.01	139.60	6.30	6.92

[a] *Under the Part 70 permit program (40 CFR 70), both PM_{10} and $PM_{2.5}$, not particulate matter, are considered a "regulated air pollutant."*
[b] *$PM_{2.5}$ listed is direct $PM_{2.5}$.*
[c] *Highest source-wide HAP is hexane.*
[d] *Unrestricted emissions include PTE after consideration of integral control devices only.*
[e] *Includes fugitive and non-fugitive sources. Fugitive HAP emissions are always included in source-wide emissions.*
[f] *Includes both nested and non-nested sources.*
[g] *After issuance emissions include PTE after consideration of all applicable control devices and throughput limits.*
CO = carbon monoxide; HAP = hazardous air pollutant; NO_X = nitrogen oxides; PM = particulate matter; PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than less than 2.5 microns in diameter; PTE = potential to emit; SO_X = sulfur oxides; VOC = volatile organic compound.

Because of the location of the project site and existing air quality conditions, the amount of anticipated air emissions, and the controls that would be implemented during project construction and operations, to include the conditions associated with the New Source Construction and Part 70 Operating Permit, impacts on air quality as a result of the project would not be significant.

3.5 Noise

Project facilities would be within the Vigo County Industrial Park, which is in an area with substantial industrial development. The adjacent properties to the north and south are large industrial facilities; these include a steel distributor, a distribution center, and food manufacturing facilities. A rail line runs parallel to E. Harlan Drive, and agricultural properties are east and west of the project area. Existing sources of noise in the project area include vehicular traffic, including heavy trucks; railcars; and farm machinery. The project would generate temporary noise during construction from the use of heavy machinery (e.g., bulldozers, graders, excavators, dump trucks, cement trucks) as well as small tools (e.g., jack hammers, nail guns). Noise and sound levels would be typical of construction activities, intermittent, and temporary.

Eight residences are within 0.25 mile of the project area, all on S. Carlisle Street. These residences could experience minor, short-term adverse impacts from noise generated during construction of the proposed facility. They could also experience permanent increases in traffic noise from commuting workers and trucks traveling to and from the facility. Three of these residences are adjacent to a recycling center; it is likely that they already experience noise from this facility.

Noise impacts from construction would be temporary (i.e., limited to the construction phase). In addition, the project would adhere to the Vigo County Noise Ordinance, which restricts construction noise between 10:00 p.m. and 6:00 a.m.

Facility operations would not result in adverse, long-term noise impacts, other than those associated with increased vehicular traffic from commuting workers and trucks receiving and shipping materials. Industrial processes performed at the facility would not add to ambient noise levels because the project would be within an existing industrial park, and all manufacturing processes would be conducted within an enclosed building.

Because of the controls that would be implemented during construction and the nature of the area surrounding the project site (i.e., an existing industrial park adjacent to an existing manufacturing facility), impacts from noise as a result of the project would not be significant.

3.6 Transportation

The project site would be accessed from the east, from S. Carlisle Street. The two entrances from S. Carlisle Street would be a car entrance (leading to Innovation Drive) and a car/truck entrance (leading to Entek Drive). Drivers would most likely access S. Carlisle Street from E. Harlan Drive, which is adjacent to and south of the project site, connecting to U.S. Route 41. E. Harlan Drive is programmed in the Terre Haute Area MPO's 2045 Bridging Metropolitan Transportation Plan. Currently, a date for completion of the design or construction schedule has not been determined. Reconstruction of E. Harlan Drive would support both the Vigo County Industrial Park and the project by improving access for trucks. According to the Terre Haute Economic Development Corporation, Harlan Road is a heavy-duty road; it would be designated as a truck route to the project site.

During construction, the traffic flow along E. Harlan Drive and S. Carlisle Street would be temporarily affected by the additional 500 to 600 workers on the site and deliveries of construction materials and equipment. As such, two temporary construction entrances are planned on Harlan Road to mitigate these temporary impacts. These two entrances would be used primarily by construction trucks and delivery vehicles. The two entrances would also make navigating/turning easier and provide an opportunity for a dual-gate entry/exit system.

An existing asphalt road from Litesse Drive would be used primarily by workers and office personnel when accessing the site or drivers when making deliveries to the trailers. No heavy trucks would use this entrance. When its operations begin, ENTEK would use primarily the new truck entrance (Entek Drive) from Carlisle Street. Other entrances (as noted above) may be used as needed by field management personnel or for facilitating equipment installations. Another proposed entrance to the site would be at Innovation Drive. This access point would be gated but could be used if needed in the future; this existing asphalt path leads to the north side of the site. In addition, all of the traffic associated with the Nucor steel plant and the other businesses just south of the ENTEK site use an access road just off U.S. Route 41 and Harlan Road. None of their employees or heavy trucks would use the road network around the ENTEK site; therefore, the project would not have any impact on those businesses. Finally, the facility to the north (Saturn Petcare) does not use the road network, except for Litesse Drive. All of its heavy truck traffic comes in from the north, with only a few employee vehicles from the south. The project would not have a significant impact on this business or impede its primary routes for traffic.

During operations, truck and employee traffic would increase, as shown in Table 4.

Table 4: Project Operation Traffic Impacts

Traffic Type	Vehicles per Day
Employee Vehicles	150
Trucks	13

ENTEK would schedule four shifts during production so that the worker traffic would be split during the day and not occur at one time. No overlapping traffic between shifts would occur because all incoming workers would be at the facility before the shift hour begins, and all outgoing workers would leave the facility after the shift hour ends.

Because of planned road improvements in the project area, use of an existing entrance off Litesse Drive, construction of two separate entrance/exit roads to allow workers to enter the site from E. Harlan Road, and the mitigation measures that are already in place to reduce traffic congestion during shift changes and construction, impacts on transportation as a result of the project would not be significant.

3.7 Aesthetic and Visual Resources

The project site within the Vigo County Industrial Park, which comprises 2,435 acres of land intended for industrial development. The properties north, south, and west of the project site are all within the Vigo County Industrial Park. Views to the north and south are of industrial properties, views to the west are of agricultural land, and views to the east are of agricultural land, residences, and an industrial property.

Construction of the project would result in permanent visual changes to the project area. However, the facility would be located within an industrial area and on a site that formerly housed industrial buildings. The facility would be consistent with the surrounding industrial area. Operations at the facility would result in only minor increases in nighttime light, which should not adversely affect residents. As a result, impacts related to aesthetic and visual resources resulting from the project would not be significant.

3.8 Biological Resources and Threatened and Endangered Species

The majority of the project area consists of open fields that are dominated by soybeans (*Glycine max*), barnyard grass (*Echinochloa crus-galli*), yellow nutsedge (*Cyperus esculentus*), Japanese bristle grass (*Seteria faberi*), brome sedge (*Andropogon virginicus*), common teasel (*Dipsacus fullonum*), thistle (*Cisium arvense*), Johnson grass (*Sorghum halepense*), tall fescue (*Schedonorus arundinacea*), poison ivy, deer-tongue grass (*Dichanthelium clandestinum*), Queen Anne's lace (*Daucus carota*), dogbane (*Apocynum cannabinum*), Canada goldenrod (*Solidago canadensis*), Callery pear (*Pyrus calleryana*), Amur honeysuckle (*Lonicera maackii*), and Pennsylvania blackberry (*Rubus pennsylvanica*).

A threatened and endangered species habitat assessment of the project area was conducted in July 2022 to determine the presence of potential habitat for federally listed threatened and endangered species. No potential habitat was observed.

The U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System, Information for Planning and Consultation (IPaC), was reviewed to determine which federally listed threatened or endangered species may occur in the project area (U.S. Fish and Wildlife Service February 2024). According to the IPaC database, five federally listed threatened, endangered, or candidate species—Indiana bat (*Myotis sodalist*), northern long-eared bat (*Myotis septentrionalis*), tricolored bat (*Perimyotis subflavus*), whooping crane (*Grus americana*), and monarch butterfly (*Danaus plexippus*)—may occur in the project area and vicinity. With respect to Indiana bat and northern long-eared bat, the project received a finding of "may affect, not likely to adversely affect" (U.S. Fish and Wildlife Service. n.d.). No critical habitats were identified in the project area. The DOE reviewed the effect finding and requested USFWS review on February 2, 2024. FWS concurred with DOE's finding on August 29, 2024.

The project would remove approximately 26.4 acres of trees from the 340-acre parcel. Four of the trees could be considered suitable onsite habitat (i.e., dead trees with exfoliating bark) for the threatened and endangered Indiana bat, northern long-eared bat, or tricolored bat. The remainder of the trees to be removed are young cottonwood (*Populus deltoids*), Bradford pear (*Pyrus calleryana*), mulberry (*Morus* spp.), hackberry (*Celtis occidentalis*), red cedar (*Juniperus virginiana*), and maple varieties (*Acer* spp.), which are not suitable bat habitat. Where larger trees are present, Amur honeysuckle (*Lonicera maackii*) and underbrush are found. These areas are typically impassable for bats and thus afford no opportunities for roosting and/or foraging. Therefore, this cluster of trees would be considered a low-capture area for threatened and endangered bats. Furthermore, when trees are removed, ENTEK has indicated that such activities would comply with time-of-year tree clearing restrictions (i.e., between October 1 and March 31). As such, given the industrial setting, the lack of critical habitat, and time-of-year tree clearing restrictions, impacts as a result of the project on threatened and endangered species, or any other biological resources, would not be significant.

3.9 Socioeconomics and Environmental Justice

3.9.1 Socioeconomics

The project site is in Vigo County, Indiana, approximately 4 miles south of the city of Terre Haute. According to the 2020 census, Vigo County has a population of 106,153, and Terre Haute has a population of 58,389 (U.S. Census Bureau. n.d.). The project site is in an industrial park and adjacent to

other buildings in the industrial park on the north, south, and west. The nearest school, Dixie Bee Elementary School, is 1.3 miles northeast of the project site; the nearest hospital, Union Hospital, is 8.9 miles north of the project site.

Beneficial socioeconomic impacts would occur from increased employment opportunities, tax-revenue generation, and direct and indirect spending in the local economy. The project would lead to the creation of approximately 500 to 600 indirect construction jobs and more than 650 full-time, high-quality clean-energy jobs. If the potential Phase 3 is completed in the future, then the project would increase full-time employment by approximately 300, for a total of 950 jobs. Approximately 400 of those jobs would be in production; 220 jobs would be in human resources or environmental, safety, maintenance, supply chain, or quality control positions; and 34 jobs would be in management. The hiring strategy would focus on local labor as well as workers who have been displaced from fossil-fuel and manufacturing industries.

Vigo County and the city of Terre Haute are currently experiencing a decline in population as well as per capita personal income. Terre Haute is actively working to reverse these trends through a variety of methods, including economic development. The city's lack of housing is being addressed through the use of funds from Indiana's Regional Economic Acceleration and Development Initiative and the American Rescue Plan Act (ARPA). To date, Vigo County and Terre Haute have come together and budgeted $10 million in ARPA money to build 225 housing units over the next few years; 170 units are expected to be built in Vigo County. The project would align with *See You in Terre Haute*, the city's 2025 community plan (City of Terre Haute and Vigo County, Indiana 2019), and support goals related to halting declines in population and personal income growth.

The impact of the project on local infrastructure and services, such as schools and health care, would not be significant because of the availability of existing local infrastructure and services. Furthermore, given the jobs that would be created during construction and operation of the project, as well as Terre Haute's plans for additional housing, significant adverse socioeconomic impacts would not be expected.

3.9.2 Environmental Justice

LPO's review of environmental justice (EJ) issues focused on Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations; the National-Scale Air Toxics Assessment (NATA) cancer risk and respiratory hazard index (U.S. Environmental Protection Agency 2024), as defined in EPA's Environmental Justice Screening and Mapping Tool (EJScreen) (U.S. Environmental Protection Agency n.d.); and site-specific population centers (e.g., schools, day-care centers) near the project site.

Executive Order 12898 directs federal agencies to address environmental and human health conditions in minority and low-income communities. The evaluation of EJ is dependent on determining whether high and adverse impacts from the project would disproportionately affect minority or low-income populations in the affected community.

In accordance with EPA's EJ guidelines, minority populations should be identified when either (1) the minority population of the affected area exceeds 50 percent or (2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

The project site is in Census Tract 110, Terre Haute, Vigo County, Indiana. The ethnic composition of Census Tract 110, as well as the city, the county, and the state, is presented in Table 5. Minorities in Census Tract 110, Terre Haute, and Vigo County make up less than 50 percent of the population, which is not meaningfully different from the minority population percentage for the state. At the census tract level, people of color make up 8 percent of the population where the project site is located (see Table 5).

The percentage of persons in poverty is 3 percent lower in Census Tract 110 (10 percent) than in the rest of the state (13 percent). The percentage of persons in poverty is 7 percent higher in Vigo County (20 percent) and 13 percent higher in Terre Haute (26 percent) than in the rest of the state. According to EPA's EJScreen tool (Table 6), the low-income population is 21 percent for Census Tract 110, which is lower than the state average of 31 percent (i.e., 32nd percentile) and lower than the U.S. average of 30 percent (i.e., 38th percentile).

Table 5: Population, Ethnicity, and Poverty

Population Type	Census Tract 110	Terre Haute	Vigo County	Indiana
Total Population (2020 census)	3,174	58,389	106,153	6,785,528
Ethnicity				
White Alone	*94%*	*77%*	*83%*	*75%*
Black or African American	*0.4%*	*11%*	*7%*	*9%*
Hispanic or Latino	*2%*	*4%*	*3%*	*8%*
American Indian and Alaska Native	*0.2%*	*0%*	*0%*	*0%*
Asian Alone	*1.2%*	*2%*	*2%*	*2%*
Native Hawaiian and Other Pacific Islander	*0.03%*	*0%*	*0%*	*0%*
Some Other Ethnicity	*0.4%*	*1%*	*1%*	*0%*
Population of Two or More Ethnicities	*3.6%*	*5%*	*4%*	*4%*
Total Minority	8%	23%	17%	25%
Total Population (ACS 2021 5-year estimate)	3,098	51,304	98,399	6,550,921
Poverty	10%	26%	20%	13%

Source: U.S. Census Bureau. 2020. American Community Survey (ACS). Available: https://data.census.gov/. The ACS provides detailed population and housing information data on a yearly basis. The 5-year estimates from the ACS are "period" estimates that represent data collected over a period of time—in this case, a 5-year period.

Table 6: U.S. Environmental Protection Agency's EJScreen Report

	Value	Indiana Average	Indiana Percentile	U.S. Average	U.S. Percentile
NATA[a] Cancer Risk (lifetime risk per million)	20	23	0	28	< 50th
NATA[a] Respiratory Hazard Index	0.3	0.29	86	0.36	< 50th
People-of-Color Population	5%	22%	32	40%	15
Low-Income Population	21%	31%	32	30%	38

Source: U.S. Environmental Protection Agency. 2024. National Air Toxics Assessment. March 27, 2024. Available: https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results.
[a]. More information on the NATA can be found at https://www.epa.gov/national-air-toxics-assessment.
Note: Selected Variables Census Tract 18167011000, Environmental Protection Agency Region 5, approximate population: 3,365.
NATA = National-Scale Air Toxics Assessment

The NATA cancer risk index and the NATA respiratory hazard index are tools for determining how local residents compare to everyone else in the state as well as the entire United States. For the NATA cancer risk index (i.e., lifetime risk per million) and the NATA respiratory hazard index, the project area comes in at less than the 50th percentile compared with the United States and the 0 (cancer) and 86th (respiratory) percentiles compared with Indiana. Although Vigo County is designated as an attainment area for all criteria air pollutants per the NAAQS, compliance measures would be implemented to ensure that the project follows all enforceable emissions limitations and standards for criteria pollutants and HAPs, as outlined in the IDEM Part 70 Operating Permit. Compliance determination requirements include recordkeeping through daily, monthly, quarterly, and annual reports regarding the monitoring and testing of equipment and air control devices. These requirements would ensure ongoing compliance with all relevant federal and state ambient air quality standards in Vigo County and in the vicinity of the project site. The permitted levels of criteria pollutants and HAPs are considered to be protective of human health and the environment.

The facility is anticipated to have a positive impact on the regional economy through opportunities for employment; therefore, disproportionate impacts would not affect minority or low-income populations in the project area.

3.10 Health and Safety

The materials to be used and produced at the new separator plant are listed in Table 7. ENTEK would extrude a polyethene base sheet, using mineral oil to solvate the polyethene. A solvent (i.e., naphtha oil) would be used to remove the mineral oil from the sheet. The separator sheet would then be passed through an air dryer to evaporate the solvent from the sheet. Removing the oil from the sheet causes the sheet to become microporous, which is required for the separator to function in the battery. Chemical usage at the new plant is estimated to total about 39 tons per year.

Table 7: Project Annual Chemical/Materials Usage

Chemical/Material	Use
Cast Film (product)	1,400,000,000 square meters
Coated Cast Film (product)	1,400,000,000 square meters
Polymer (raw material)	28,300 metric tonnes
Antioxidant (raw material)	423 metric tonnes
Lubricant (raw material)	423 metric tonnes
Oil (raw material)	1 metric tonne
Extraction Solvent (raw material)	39 metric tonnes
Alumina or Boehmite (raw material)	10,461 metric tonnes
Binder (raw material)	669 metric tonnes
PVDF-HFP (raw material)	3,290 metric tonnes

PVDF-HFP = poly(vinylidene fluoride-hexafluoropropylene)

In order to maximize solvent capture, ENTEK would design areas in the buildings where extraction solvent would be used under negative pressure to ensure capture. In order to keep the areas under negative pressure, a large volume of solvent-laden air (SLA) would be pulled from the plant and dryers and funneled to recovery systems. The SLA pulled from the plant and dryers would be routed through carbon beds to collect the solvent vapor, as shown below in Exhibit 3. The carbon beds would be filled with activated carbon to adsorb the solvent vapor, from can be recovered and reused.

Exhibit 3: ENTEK Solvent Vapor Recovery System

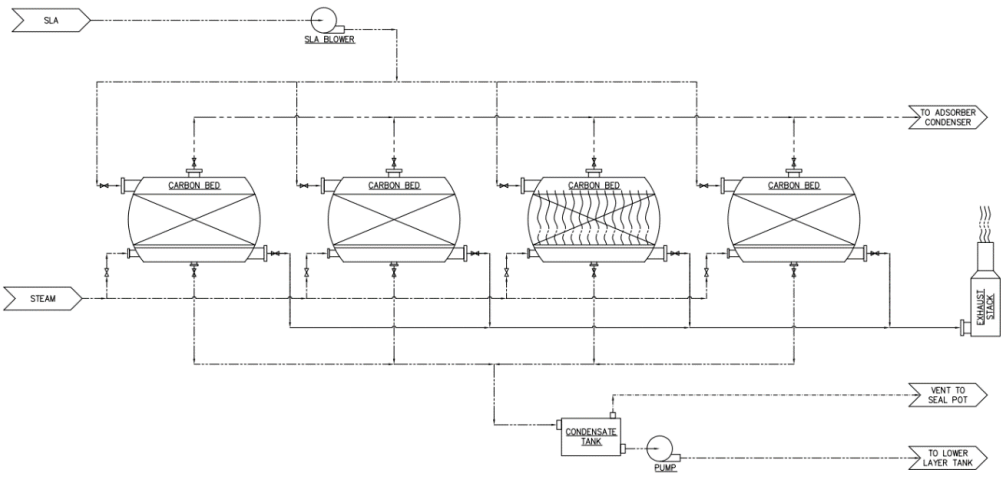


Table 8 describes the additional storage tanks that are anticipated as part of the project.

Table 8: Project Storage Tanks

Number of Tanks	Tank Volume (gallons)	Contents
2	22,500	Naphtha oil
1	20,000	Diesel (emergency backup for boilers)
4	4,000	Horizontal absorber water, decant tank for naphtha solvent
4	4,000	Horizontal extractor tank, located inside the building
2	22,500	Naphtha recycle tank
8	30,000	Naphtha solvent tanks, used when draining the extractors for maintenance
16	250	Mixing tank for coating slurry

Chemicals used in the separator manufacturing process would be delivered to the new facility by truck using a variety of packaging methods, including metal drums, fiber drums, supersacks, bulk box trucks, sea bulk containers, gaylords, and pallets; eventually, railcars could be used. These practices are common at ENTEK's site in Lebanon, Oregon.

The new facility would have a robust Spill Prevention Pollution Plan and Pollution Incident Prevention Plan that would cover chemical management, routes for possible spills, and spill prevention measures. ENTEK practices these prevention plans globally.

Standard best management practices (BMPs) and applicable federal, state, and local regulations and standards for construction and operation of the facility would be implemented to ensure the safety of workers and the public. These would include compliance with federal Occupational Safety and Health Administration regulations and state rules under the Indiana Occupational Safety and Health Act. A Health and Safety Plan has been developed specifically for this project to protect workers during construction.

The local fire department has been informed of potential hazards associated the project and would continue to be informed, ensuring that first responders and the public would be protected from exposure to potentially hazardous situations (e.g., toxic smoke or vapors) in the event of a fire or industrial accident.

Because of the measures to address health and safety, including BMPs; compliance with federal, state, and local regulations and standards; and plans for preventing chemical spills and the potential mishandling of hazardous materials, impacts on the health and safety of workers and the public from project construction and operation would not be significant.

3.11 Waste Management

ENTEK will not produce any hazardous waste. Estimated annual waste volumes for the proposed facility are shown in Table 9.

Because all new potentially recyclable waste generated by the project would be recycled, all other waste would be disposed of in a landfill, and hazardous waste would not be produced, impacts related to waste management activities would not be significant.

3.12 Soils and Prime Farmlands

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of characteristics for producing food, feed, forage, fiber, and oilseed crops. Soil on the majority of the project site is classified as prime farmland or prime farmland if drained, even though the site is within the Vigo County Industrial Park. Furthermore, the county has marketed the site for industrial development.

In accordance with the Farmland Protection Policy Act (FPPA), DOE completed a Farmland Conversion Impact Rating Form (U.S. Department of Agriculture Form AD-1006) on November 9, 2023. The results of the review resulted in a rating that is below the threshold for further protection considerations (Appendix A).

Table 9: Project Waste Management

Waste Type	Quantity per Month per Line (pounds)	Total Annual Quantity (pounds)	All Non-Hazardous Waste	Building 1 Line 1 Operating	Building 1 Lines 1–2 Operating	Building 2 Lines 1–3 Operating	Building 2 Lines 1–4 Operating	Building 3 Lines 1–5 Operating	Building 3 Lines 1–6 Operating	Building 4 Lines 1–7 Operating	Building 4 Lines 1–8 Operating
Alumina Slurry Waste	17,200	206,400	Waste	25,800	51,600	77,400	103,200	129,000	154,800	180,600	206,400
Oil-Soaked Absorbents, Oil Filter Drums[a]	16,000	192,000	Waste	24,000	48,000	72,000	96,000	120,000	144,000	168,000	192,000
Filter Bed Fitters (PAQ)	7,360	88,320	Waste	11,040	22,080	33,120	44,160	55,200	66,240	77,280	88,320
Coating Line Trim	108,333	1,300,000	Waste	162,500	325,000	487,500	650,000	812,500	975,000	1,137,500	1,300,000
Oily Sheet (pounds)	96,057	1,152,682	Recycle	144,085	288,170	432,256	576,341	720,426	864,511	1,008,596	1,152,682
Base-Film Trim (pounds)	517,736	6,212,832	Recycle	776,604	1,553,208	2,329,812	3,106,416	3,883,020	4,659,624	5,436,228	6,212,832
Used Oil from Maintenance (pounds)	4,000	48,000	Recycle	6,000	12,000	18,000	24,000	30,000	36,000	42,000	48,000
Cardboard (pounds)	48,000	576,000	Recycle	72,000	144,000	216,000	288,000	360,000	432,000	504,000	576,000

[a] *Includes rags, PIG mat, gloves, boom, oil filters, mesh filters.*

PAQ = *Plant Air Quality*

The project would convert 337 acres of soil classified as prime farmland or prime farmland if drained. Vigo County has more than 119,000 acres of farmland (U.S. Department of Agriculture 2017). Therefore, the project would represent a negligible reduction (less than 0.3 percent) in total farmland for the county.

The CSGP would be followed during construction to control sediment and prevent erosion. Impacts on soil during the operational phase of the project would be limited. ENTEK would monitor and repair any areas of soil erosion or soil instability.

The site is within an industrial park. Although the site was used for agricultural purposes in the past, such use was intended to be a temporary use until Vigo County could find a suitable industrial use for the site. The CSGP would be implemented during construction, and all disturbed areas would be revegetated. Because the project site is within an industrial park and erosion on the site would be minimal, overall project impacts on soil and prime farmland would not be significant.

3.13 Cumulative Impacts

Cumulative impacts are potential effects on the environment from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions undertaken by other agencies (i.e., federal or nonfederal) or persons (40 CFR Part 1508.1 [g]). Projects were identified through a review of active project lists and planning documents from the Terre Haute Area MPO, in coordination with Vigo County, with additional information provided by ENTEK. The review identified the following current and reasonably foreseeable future projects:

- **Harlan Road (from Sullivan Place to Industrial Drive)**: As a rural-to-urban roadway reconstruction with upgrades to facilitate a truck route, this project would be adjacent to and south of the project site. The project is programmed in the projects list from the Terre Haute Area MPO's 2045 Bridging Metropolitan Transportation Plan (Terre Haute Area Metropolitan Planning Organization n.d.). Currently, a date for completion of the design has not been determined, nor has the construction schedule.
- **Duke Energy Power Substation**: Duke Energy would construct a power substation on Indiana Road, between Litesse Drive and Harlan Drive (Figure 3), to supply electricity to the project site and the Vigo County Industrial Park; the an anticipated completion date is June 30, 2026. The exact location for the substation, which would cover approximately 6 to 8 acres, would be finalized at a later date.

LPO reviewed the identified projects in the region to determine the resources that may be subject to a cumulative impact. The review focused on the resources affected by the project and identified resources that may be affected by both the project and other projects in the region. Based on this review, the following resources were evaluated for cumulative impacts:

- Air quality and climate change
- GHG emissions and climate change
- Traffic and transportation
- Water resources

The project, when considered together with the identified projects in the region, does not have the potential to result in significant cumulative impacts on other resources because of the geographic location and separation of the projects and/or the lack of construction or operational overlap that would result in an incremental impact on a particular resource.

3.13.1 Air Quality

Construction of the Duke Energy Power Substation would overlap with construction of the project. Reconstruction of Harlan Road has not been scheduled; it may take place after construction of the project. The Harlan Road project is adjacent to and south of the project site and programmed in the 2045 Terre Haute MPO's 2045 Bridging Metropolitan Transportation Plan as being on a Fiscal Year 2021–2025 projects list. Currently, no date for completion of the design or construction schedule has been determined.

Air emissions resulting from construction would be temporary and minimized through the use of BMPs. The potential emissions associated with operation of the project and the Duke Energy Power Substation have the potential to result in cumulative impacts on regional air quality. As discussed in Section 3.4, *Air Quality*, Vigo County is in attainment for the NAAQS. In accordance with the CAA, Indiana has developed a State Implementation Plan to maintain compliance with the NAAQS. Any new emissions in the airshed, including those of the identified projects in the region, that would be subject to CAA permitting would have to comply with CAA regulations and be reviewed, ensuring that air quality in the region would maintain compliance with the NAAQS. Therefore, cumulative impacts on air quality associated with operation of the project and the other projects in the region would not be significant.

3.13.2 Greenhouse Gas Emissions and Climate Change

The current science and study of Earth's climate now shows with 95 percent certainty that human activity has been the dominant cause of observed global warming since the mid-twentieth century (Intergovernmental Panel on Climate Change 2013). Since the beginning of the industrial era, circa 1750, human activities have increased the concentration of GHGs, primarily CO_2, NO_X, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, in the atmosphere. Rising global temperatures have been accompanied by changes in weather and climate (e.g., changes in rainfall that result in more floods, droughts, intense rain, rising sea levels, Arctic sea-ice decline, more frequent and severe heat waves) (Intergovernmental Panel on Climate Change 2013). It is now well established that rising atmospheric GHG emissions concentrations are significantly affecting Earth's climate (Council on Environmental Quality 2016).

As discussed in Section 2, *Description of the Proposed Action*, the new facility would manufacture approximately 1.4 billion square meters of battery separators, which are used in Li batteries, after Phase 1 and Phase 2 are completed. If the potential Phase 3 occurs in the future, then an additional 700 million square meters would be realized. The quantity of separator created under Phases 1 and 2 (i.e., 1.4 billion square meters) would be enough to supply approximately 1.4 million EVs. If the potential Phase 3 is completed, it would supply an additional 700,000 EVs.

The new manufacturing facility would require electricity and natural gas for operations. Natural gas would be used to create steam for recycling the extraction solvent. Electricity would be provided through construction of the Duke Energy Power Substation, which would serve the ENTEK facilities. The estimated annual amount of CO_2 generated from creating electricity and burning natural gas for recycling would total 2,872,076 million metric tons.

According to EPA, the average internal-combustion vehicle emits about 4.6 metric tons of CO_2 per year. Furthermore, 1.4 million gasoline-powered vehicles create about 6.4 million metric tons of CO_2 per year, and the electricity needed to operate 1.4 million EVs produces about 1.28 million metric tons of CO_2 per year (U.S. Environmental Protection Agency 2023). Replacing 1.4 million internal-combustion vehicles with EVs would reduce emissions of CO_2 by about 4,662,676 metric tons per year. The annual amount of CO_2 emissions avoided was calculated by taking the project's required energy consumption of 2,872,076 million metric tons of CO_2 and subtracting it from the 4,662,676 metric tons of CO_2 emissions avoided by producing EVs, for a net reduction of 1,790,610 metric tons of CO_2 annually for Phase 1 and 2. Phase 3 will include an additional reduction of 895,305 metric tons of GHG emissions, if completed, per year.

In general, the potential benefits associated with reducing CO_2 emissions would lead to reductions in GHG concentrations as well as associated climate change impacts (e.g., increases in atmospheric temperature, changes in precipitation, increases in the frequency and intensity of extreme weather events, rising sea levels).

3.13.3 Traffic and Transportation

As discussed in Section 3.6, *Transportation*, the Project would lead to an incremental increase in truck traffic in the region. However, road improvements and upgrades such as the Harlan Road project, scheduled in the 2045 Terre Haute MPO's 2045 Bridging Metropolitan Transportation Plan for Fiscal Year 2021–2025, would offset those impacts. Transportation improvements and upgrades would be consistent with local and regional transportation guidelines. Therefore, no significant adverse cumulative impacts on the region's overall transportation network are anticipated. s

Duke Energy would construct a substation on Indiana Road, between Litesse Drive and Harlan Drive (Figure 3), to supply electricity to the project site and the Vigo County Industrial Park; the anticipated completion date is June 30, 2026. The exact location for the substation, which would cover approximately 6 to 8 acres, would be finalized at a later date. Construction vehicles would use a private entrance off Indiana Road to access the substation site. Construction of the substation would not result in a significant increase in traffic because only minimal resources would be required. Once constructed, the substation would require a maintenance vehicle to access the site a few times a year for general maintenance. The project, in conjunction with construction and maintenance of the substation, would lead to an incremental increase in overall traffic; however, no significant adverse cumulative effects on the region's overall transportation network are anticipated.

3.13.4 Water Resources

As discussed in 3.3, *Water Resources,* the project would affect jurisdictional wetlands and streams and therefore may require a USACE Individual Permit. All jurisdictional wetland impacts are subject to review and permitting to include the establishment of compensatory mitigation measures by USACE. The wetland permit application submitted on August 16, 2024, is under review by USACE, and the issuance of the permit is anticipated in quarter four of 2024, which will include applicable compensatory mitigation measures (see Appendices D and E). The permit application under review by USACE encompasses the reconstruction work on Harlan Drive and construction of the Duke Energy Power Substation. LPO will monitor this process via the Mitigation Action Plan (see Appendix E). In addition, these projects would require a CSGP and be subject to the erosion control measures and permanent stabilization activities outlined in the permit.

Because the Applicant has submitted a permit application to USACE to address jurisdictional wetland impacts and of the ability to use compensatory mitigation to offset project wetland and stream impacts, LPO has developed a mitigation action plan (see Appendix E). Due to LPO's Mitigation Action Plan, to track and ensure future wetland impacts are addressed, and the use of controls to minimize erosion and reduce pollutants in stormwater runoff, no significant adverse cumulative effects on wetlands and streams are anticipated.

4. MITIGATED FINDING

Based on this EA, DOE has determined that providing a federal loan to ENTEK to construct and operate a Li battery separator manufacturing facility in Terre Haute, Vigo County, Indiana, would not have a significant effect on the human environment, provided that ENTEK follows the permitting process and implements any prescribed mitigation by the US Army Corps of Engineers in coordination with IDEM as described in Section 3.3.1, and by the City of Terre Haute Wastewater Utility regarding wastewater discharges as described in Section 3.3.2. ENTEK will continue coordination with the US Army Corps of Engineers and IDEM and obtain any applicable permits regarding impacts on jurisdictional wetlands, and will coordinate with the City of Terre Haute Wastewater Utility to implement any applicable measures associated with the pending Industrial Wastewater Permit. The status of the permits and mitigation implementation reports provided by ENTEK to LPO, in accordance with the Mitigation Action Plan (see Appendix E), enable LPO to monitor progress and ensure potential impacts to wetlands and surface water will not be significant. As a result, DOE has determined the preparation of an environmental impact statement is therefore not required, and DOE is issuing this Mitigated Finding of No Significant Impact.

TODD STRIBLEY

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Date: 2024.09.10 08:14:50 -06'00'

September 10, 2024

Todd Stribley
NEPA Compliance Officer
DOE Loan Programs Office

Date

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