Prepared by:
U.S. Department of Energy - National Energy Technology Laboratory

Pursuant to:
Office of Manufacturing and Energy Supply Chains and Office of Energy Efficiency and Renewable
Energy Grant Opportunity - Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing (DE-FOA-0002678)

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Date: December 2024

Draft Environmental Assessment

ICL Specialty Products Inc. Commercial-scale Domestic Battery Cathode Manufacturing, St. Louis, Missouri

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ICL SPECIALTY PRODUCTS INC. COMMERCIAL-SCALE DOMESTIC BATTERY CATHODE MANUFACTURING

DRAFT ENVIRONMENTAL ASSESSMENT

St. Louis, Missouri

Prepared By:

U.S. Department of Energy
National Energy Technology Laboratory

Recipient:

ICL Specialty Products Inc.

December 2024

NATIONAL ENVRONMENTAL POLICY ACT (NEPA) COMPLIANCE COVER SHEET

Proposed Action

ICL Specialty Inc. (ICL) proposes to construct a 272,000-square-foot plant on approximately 19 acres of undeveloped but previously disturbed land at 401 Adelaide Avenue in St. Louis, Missouri. The manufacturing plant would have two production lines (built simultaneously) under a single roof. Each production line would be capable of producing 15,000 metric tons of lithium iron phosphate (LFP) cathode active material per year. At the 30,000 metric tons per year level of production, the plant will enable 12-15 gigawatt hours per year of LFP battery production.

The overall purpose and need for U.S. Department of Energy (DOE) action pursuant to the Office of Manufacturing and Energy Supply Chains in collaboration with the Office of Energy Efficiency and Renewable Energy program and the funding opportunity under the Bipartisan Infrastructure Law (BIL) is to accelerate the development of a resilient supply chain for high-capacity batteries by increasing investments in battery materials processing and battery manufacturing projects. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States. If approved, DOE proposes to provide $197,338,492 of the project's $494,364,477 total cost. ICL's private cost share would be $297,025,985.

Type of Statement: Draft Environmental Assessment

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

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Abstract

Construction of the proposed manufacturing plant would begin in 2025. ICL Specialty Products Inc.'s (ICL's) manufacturing plant would have two production lines (built simultaneously) under a single roof. Each production line would be capable of producing 15,000 metric tons of lithium iron phosphate cathode active material per year. At the 30,000 metric tons per year level of production, the plant will enable 12-15 gigawatt hours per year of lithium iron phosphate battery production.

The environmental analysis identified that the most notable changes to result from the Proposed Action would occur in the following areas: soils, surface water, air quality, transportation and traffic, utilities and energy use, and public and occupational safety and health. No significant impacts were identified, and thus, no mitigation is required. Beneficial impacts of the Proposed Action include a decrease in greenhouse gases and an increase in employment opportunities in a disadvantaged community.

Public Participation

The U.S. Department of Energy (DOE) encourages public participation in the National Environmental Policy Act (NEPA) process. This Draft Environmental Assessment (EA) is being released for public review and comment. The public is invited to provide oral, written, or e-mail comments on this Draft EA to DOE by the close of the comment period on January 11, 2025. Cognizant federal and state agencies and Tribal Nations were notified of the availability of the Draft EA. Comments received by the close of the comment period will be considered in preparing a final EA for the proposed ICL action. Comments received after the end of the comment period will be addressed to the extent practicable. It is important to clearly articulate comments and include commenter's name, address, organization, with the reference "ICL Draft EA Comments". Individual names and addresses (including e-mail) received as part of comment documents normally are considered part of the public record.

Persons wishing to withhold names, addresses, or other identifying information from the public record must state this request prominently at the beginning of their submitted comments. DOE will honor this request to the extent allowed by law. All submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be included in the public record and open to public inspection in their entirety. The Draft EA will also be available at the local library and on the National Energy Technology Laboratory (NETL) website at https://netl.doe.gov/node/6939.

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
AADT	average annual daily traffic
AOI	area of interest
APE	area of potential effect
BGEPA	Bald and Golden Eagle Protection Act
BIDA	Business/Industrial Development Area
BIL	Bipartisan Infrastructure Law
BIPA	Business/Industrial Preservation Area
BMP	best management practice
B.P.	before present
ca.	circa
CAA	Clean Air Act
CAM	cathode active material
CEJST	Climate and Economic Justice Screening Tool
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CID	Community Improvement District
CWA	Clean Water Act
DAC	disadvantaged community
dBA	A-weighted decibel(s)
DEIA	Diversity, Equity, Inclusion, and Accessibility
DOE	United States Department of Energy
EA	Environmental Assessment
EDR	Environmental Data Resources, Inc.
EO	Executive Order
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
ESH&S	Environment, Safety, Health, and Security
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FOA	Funding Opportunity Announcement
FTE	full time equivalent
GHG	greenhouse gas
GWh	gigawatt hours

ICL	ICL Specialty Products Inc.
ISO	International Organization for Standardization
LFP	lithium iron phosphate
MBTA	Migratory Bird Treaty Act
MDNR	Missouri Department of Natural Resources
MRBCA	Missouri Risk-Based Corrective Action
MSD	Metropolitan St. Louis Sewer District
mtCO2e	metric tons of carbon dioxide equivalent
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NETL	National Energy Technology Laboratory
NHPA	National Historic Preservation Act
NSR	New Source Review
OMB	Office of Management and Budget
OSHA	Occupational Safety and Health Administration
P&G	Proctor & Gamble
PM	particulate matter
PM2.5	particulate matter with a diameter of less than 2.5 micrometers
PM10	particulate matter with a diameter of less than 10 micrometers
POTW	publicly owned treatment works
RBTL	risk-based target level
RCRA	Resource Conservation and Recovery Act
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Officer
SS	supersack
SVOC	semi-volatile organic compound
SWPPP	stormwater pollution prevention plan
TSD	treatment, storage and disposal
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WH	warehouse
WIP	work-in-process packaging
YOY	year-on-year

CHAPTER 1. INTRODUCTION & PURPOSE AND NEED

1.1 Introduction

The National Energy Technology Laboratory (NETL) of the United States Department of Energy (DOE) prepared this Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to examine potential environmental impacts associated with ICL Specialty Products Inc.'s (ICL's) construction and operation of a proposed lithium iron phosphate (LFP) cathode active material (CAM) manufacturing plant at 401 Adelaide Avenue in St. Louis, Missouri. This EA provides site-specific details of the Proposed Action and addresses potential impacts of proposed construction and operations across numerous resource areas.

The Biden Administration has presented an agenda to upgrade and modernize infrastructure, address climate change, and build a clean and equitable energy economy, putting the United States on a path to achieve net-zero emissions economy-wide by no later than 2050 (Executive Order [EO] 14008, 2021). This agenda is being funded, in whole or in part, with funds appropriated by the Infrastructure Investment and Jobs Act (USA 2021), also more commonly known as the Bipartisan Infrastructure Law (BIL). The DOE is committed to advancing frontiers of science and engineering, catalyzing clean energy jobs through research, development, demonstration, and deployment, and supporting environmental justice and inclusion of disadvantaged communities (DACs).

Batteries are a critical element of the ongoing transition to an energy economy, particularly for electric vehicle (EV) production. The U.S. Bureau of Labor Statistics (2023) notes that EVs have already increased to 4.6% of the U.S. vehicle market as of 2021, with an additional increase of up to 50% forecast by 2030. Growing demand for EVs and stationary storage alone are projected to increase the size of the lithium battery market five to ten-fold by the end of the decade. The National Blueprint for Lithium Batteries, a report developed by the Federal Consortium for Advanced Batteries, lays out five critical goals and key actions to guide federal agency collaboration to secure the nation's long-term economic competitiveness and create good-paying jobs for American workers, while supporting the Biden Administration's decarbonization goals (FCAB 2021).

The high-capacity battery supply chain consists of five main steps including: (1) raw material production, (2) materials processing including material refinement and processing, (3) battery material /component manufacturing and cell fabrication, (4) battery pack and end use product manufacturing, and (5) battery end-of-life and recycling. Figure 1 shows how these five steps relate to the BIL investments in the battery supply chain. DOE issued a Funding Opportunity Announcement (FOA) to fund selected battery supply chain projects within these five categories.

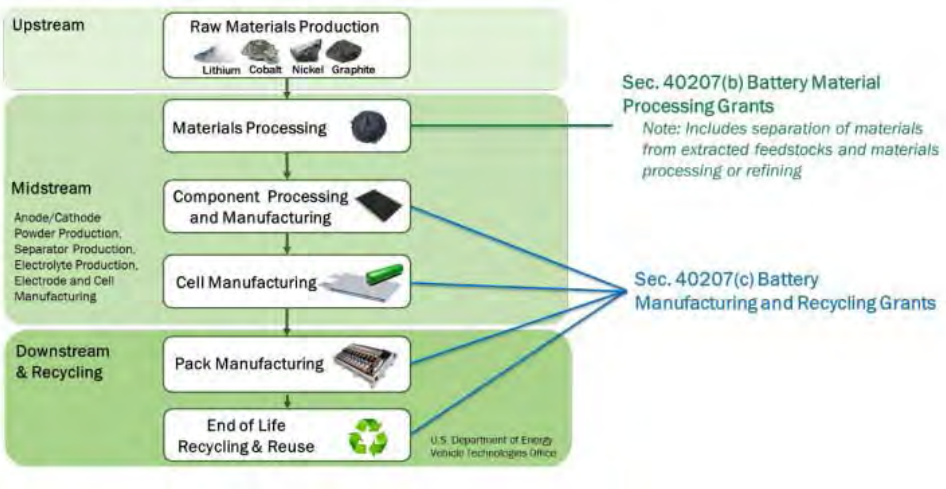

Figure 1. High-Capacity Battery Supply Chain Steps

1.2 Background

The Office of Manufacturing and Energy Supply Chains, in collaboration with the Office of Energy Efficiency and Renewable Energy, issued FOA DE-FOA-0002678. Projects awarded under the FOA will be funded, in whole or in part, with funds appropriated by the BIL.

DOE prepared an environmental synopsis to evaluate and compare potential environmental impacts for each proposal it deemed to be within the competitive range from proposals received in response to the FOA. The Department used the synopsis to evaluate appreciable differences in potential environmental impacts from those proposals. The synopsis included: (1) a brief description of background information for the funding opportunity area of interest (AOI), (2) a general description of the proposals DOE received in response to the FOA and deemed to be within the competitive range, (3) a summary of the assessment approach DOE used in the initial environmental review to evaluate potential environmental impacts associated with the proposals, and (4) a summary of environmental impacts that focused on potential differences among the proposals. Appendix 1 contains a copy of the environmental synopsis for this project developed for DE-FOA-0002678.

DOE initially selected 21 projects under 12 AOIs and provided cost-shared funding for project definition activities; all of the projects are subject to the completion of project-specific NEPA reviews. DE-FOA-0002678 supports new, retrofitted, and expanded commercial-scale domestic facilities to produce battery materials, processing, and battery recycling and manufacturing demonstrations.

The applications reviewed under this FOA were selected for negotiations in October 2022. Twelve AOIs (Table 1) were included in the FOA and each AOI outlined project objectives that were specific to that AOI. The twelve AOIs were separated according to the BIL sections 40207(b)(3)(A) and 40207(c)(3)(A); AOIs 1–3 and 6–11 were directed to commercial level projects. AOIs 4, 5, and 12 were directed to demonstration level projects.

Table 1. Areas of Interest under DE-FOA-0002678

Area of Interest	Battery Material Processing Grants pursuant to Section 40207(b)(3)(A)
1	Commercial-scale Production Plants for Domestic Separation of Critical Cathode Battery Materials from Domestic Feedstocks
2	Commercial-scale Domestic Production of Battery-Grade Graphite from Synthetic and Natural Feedstocks
3	Commercial-scale Domestic Separation and Production of Battery-grade Precursor Materials (Open Topic)
4	Demonstrations of Domestic Separation and Production of Battery-grade Materials from Unconventional Domestic Sources
5	Demonstrations of Innovative Separation Processing of Battery Materials Open Topic
Area of Interest	**Battery Component Manufacturing and Recycling Grants pursuant to Section 40207(c)(3)(A)**
6	Commercial-scale Domestic Battery Cell Manufacturing
7	Commercial-scale Domestic Battery Cathode Manufacturing
8	Commercial-scale Domestic Battery Separator Manufacturing
9	Commercial-scale Domestic Next Generation Silicon Anode Active Materials and Electrodes
10	Commercial-scale Domestic Battery Component Manufacturing Open Topic
11	Commercial-scale Domestic Battery Recycling and End-of Life Infrastructure
12	Domestic Battery Cell and Component Manufacturing Demonstration Topic

DOE selected one project proposed by ICL under DE-FOA-0002678. DOE proposes to provide $197,338,492 of the project's $494,364,477 total costs selected under AOI 7, Commercial-scale Domestic Battery Cathode Manufacturing.

1.3 Purpose and Need for Department of Energy Action

The overall purpose and need for DOE action pursuant to the Office of Manufacturing and Energy Supply Chains in collaboration with the Office of Energy Efficiency and Renewable Energy program and the funding opportunity under the BIL is to accelerate the development of a resilient supply chain for high-capacity batteries by increasing investments in battery materials processing and battery manufacturing projects. The BIL investments in the battery supply chain will include the five main steps shown in Figure 1.

DOE considers ICL's proposed project and location to be one that can meet the focus of the BIL sections: a) creating and retaining good-paying jobs; b) advocating inclusive and supportive workforce development efforts to strengthen America's competitive advantage; c) ensuring that the United States has a viable battery materials processing industry to supply the North American battery supply chain; d) expanding the capabilities of the United States in advanced battery manufacturing; e) enhancing national security by reducing the reliance of the United States on foreign competitors for critical materials and technologies; f) enhancing the domestic processing capacity of minerals necessary for battery materials and advanced batteries; and g) ensuring that the United States has a viable domestic manufacturing and recycling capability to support and sustain a North American battery supply chain. The project site was selected due to its location in an area characterized by mixed heavy industrial, commercial, and residential use, and its location

within the emerging "Battery Belt" of EV and battery manufacturing sites in the southeastern and midwestern United States. The site has exceptional access to transportation infrastructure, public utilities, including rail service, and has potential to have a positive economic impact on the regional and local community.

DOE intends to further this purpose and satisfy this need by providing financial assistance under cost-sharing arrangements to this and the other 20 projects selected under DE-FOA-0002678. This and the other selected projects are needed to maximize the benefits of the clean energy transition as the nation works to curb the climate crisis. This project would meet the objective of recruiting, training, and retaining a skilled workforce in communities that have lost jobs due to the displacements of energy jobs in the fossil fuels industry. This project would also meaningfully assist in the nation's economic recovery by creating manufacturing jobs in the United States in accordance with the objectives of the BIL.

1.4 National Environmental Policy Act and Related Procedures

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

- Assess the environmental impacts of its proposed action;
- Identify any adverse environmental effects that cannot be avoided, should the proposed action be implemented;
- Propose mitigation measures for adverse environmental effects, if appropriate;
- Evaluate alternatives to the proposed action, including a no action alternative; and
- Describe the cumulative impacts of the proposed action together with other past, present, and reasonably foreseeable future actions.

These provisions must be addressed before a final decision is made to proceed with a proposed federal action that has the potential to cause impacts to the human environment, including providing federal funding to a project. This EA is intended to meet DOE's regulatory requirements under NEPA and provide DOE with the information needed to make an informed decision about providing financial assistance. In accordance with the above regulations, this EA allows for public input into the federal decision-making process; provides federal decision-makers with an understanding of potential environmental effects of their decisions before making these decisions; and documents the NEPA process.

1.5 Laws, Regulations, and Executive Orders

- Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (EO 13985)
- Bald and Golden Eagle Protection Act (BGEPA)
- Clean Air Act (CAA)

- Clean Water Act (CWA)
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Endangered Species Act (ESA)
- Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (EO 13690)
- Executive Order on America's Supply Chains (EO 14017)
- Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations (EO 12898)
- Floodplain Management (EO 11988)
- Migratory Bird Treaty Act (MBTA)
- Pollution Prevention Act of 1990
- Protection of Wetlands (EO 11990)
- Resource Conservation and Recovery Act (RCRA)
- Revitalizing Our Nation's Commitment to Environmental Justice for All (EO 14097)
- Tackling the Climate Crisis at Home and Abroad (EO 14008)
- The Noise Control Act of 1972, as amended

1.6 Agency Consultation

DOE initiated consultations with the United States Fish and Wildlife Service (USFWS) under the ESA and with the Missouri State Historic Preservation Officer (SHPO) under Section 106 of the National Historic Preservation Act (NHPA). DOE's letters and response letters are included in Appendix 2 of this EA.

1.7 Consultation with Tribal Nations

DOE initiated consultations with the Apache Tribe of Oklahoma, the Miami Tribe of Oklahoma, the Osage Nation, the Peoria Tribe of Indians of Oklahoma, the Quapaw Nation, and the Seneca-Cayuga Nation, through each Tribal Nation's Tribal Historic Preservation Office. DOE's letters and response letters, if received, are included in Appendix 2 of this EA.

1.8 Prior DOE Actions Within the Area of Potential Effect

DOE has had no previous actions within the area.

CHAPTER 2. PROPOSED ACTION AND ALTERNATIVES

2.1 Department of Energy's Proposed Action

DOE proposes, through a grant awarded to ICL, to partially fund a new LFP CAM manufacturing plant on approximately 19 acres at 401 Adelaide Avenue in St. Louis, Missouri. The new plant would fill a critical role in the high-capacity battery supply chain required for EV production and is expected to be the first large-scale LFP material manufacturing plant in the United States. If approved, DOE proposes to provide $197,338,492 of the project's $494,364,477 total costs selected under AOI 7, Commercial-scale Domestic Battery Cathode Manufacturing. ICL's private cost share would be $297,025,985.

2.2 ICL's Proposed Project

ICL's project site is located at 401 Adelaide Avenue (also identified with the following addresses: 460 East Carrie Avenue, 420 East Carrie Avenue, and 5410 West 3rd Street) in St. Louis, Missouri (Figure 2). The project site is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use within the City of St. Louis. Thus, the site has direct access to: electricity from the local electricity provider, natural gas pipeline from the local gas provider, city supplied potable water, and a publicly owned treatment works (POTW) to handle its wastewater. The facility is currently serviced by Norfolk Southern Railway Company and Terminal Railroad Association of St. Louis, and has easy access to major U.S. interstate highways.

The proposed project would include construction of a 272,000-square-foot, single-story plant on approximately 19 acres of undeveloped but previously disturbed land, as shown on Figure 3. It would have two production lines (built simultaneously) under a single roof. Each production line would be capable of producing 15,000 metric tons of LFP CAM per year. At the 30,000 metric tons per year level of production, the plant would enable 12-15 gigawatt hours (GWh) per year of LFP battery production.

The final product of the proposed project is high quality LFP CAM for safe, long-life, high capacity, and commercial LFP batteries. The final product would be packaged in a flexible intermediate bulk container for shipping.

The applicant is currently compliant to International Organization for Standardization (ISO) 14001 (environmental) and ISO 9001 (quality) and RC14001 (Environment, Health and Safety & Sustainability). For self-certification of the CAM, the quality control lab needs to be compliant with ISO/IEC 17025. Although not part of the proposed project, ICL is planning to construct a Customer Innovation and Qualification Center at a nearby location to test LFP production methods prior to construction and operation of the main facility.

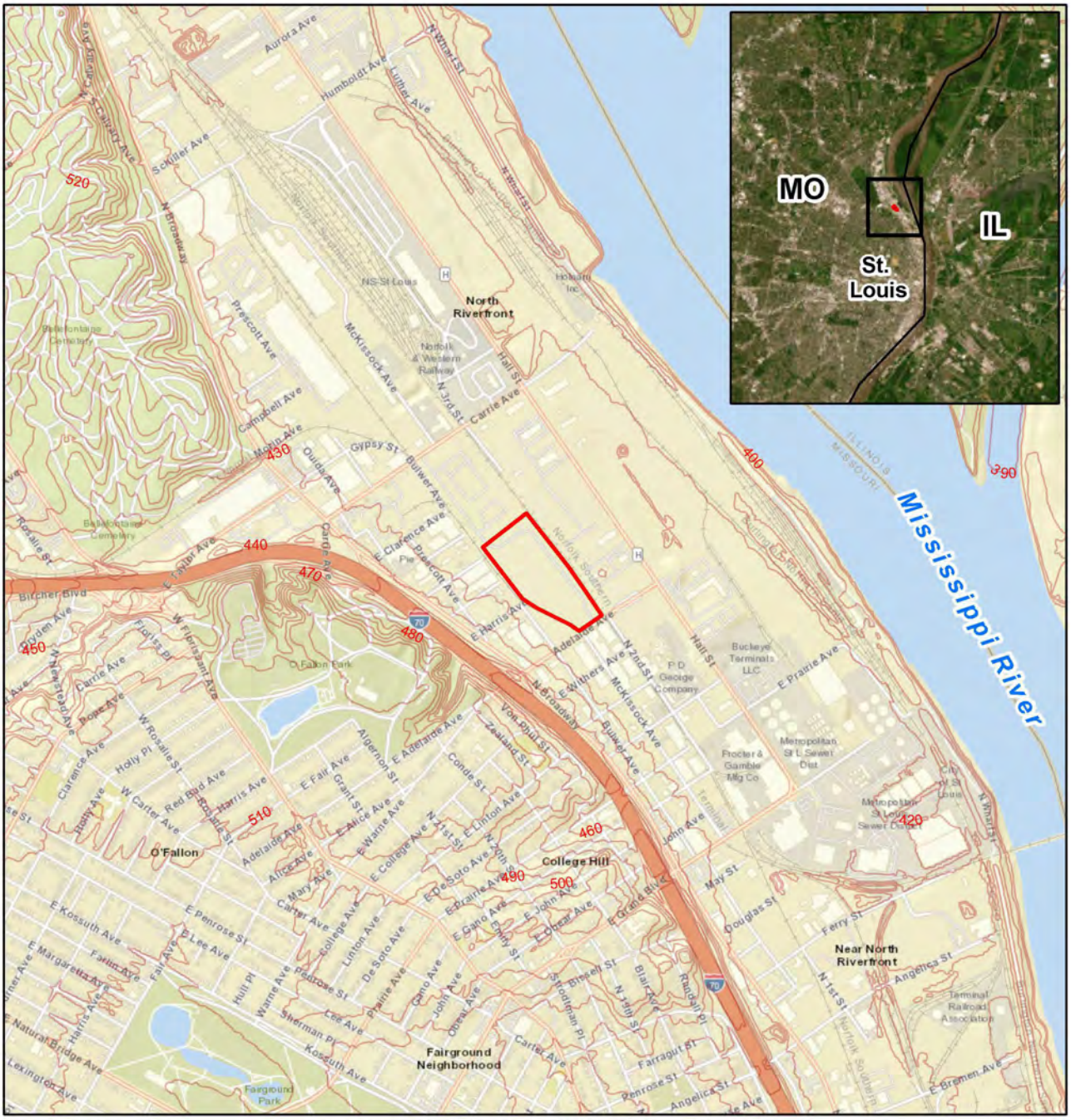

Figure 2. Regional Location Map

Figure 3. Aerial View of Project Site

Railroads

Site Boundary

0 400 800

Feet

N

2.2.1 Construction of the Proposed Project

Once building approval and construction and installation permits have been obtained, ICL's contractors would initiate site preparation for construction of the new 272,000-square-foot plant, including installation of temporary facilities such as dirt access roads for construction equipment and staging areas, and also sourcing of construction materials. Early site preparation would be followed by grading, placement and compaction of fill, foundation work, and development of (buried) electrical and water infrastructure for the new plant. Site civil engineering work would precede building construction. Construction at the project site would require debris clean-up, grading to accommodate planned building foundations and paved roadways, and excavation for a stormwater detention pond. A drone survey was conducted to determine the volume of mounded material on-site that would need to be removed to return the property back to its assumed original grade. Approximately 47,190 cubic yards of mounded material would either be processed as construction fill and reused on-site or disposed of off-site at a landfill (ERM 2024b). ICL plans to use as much of that material on-site as possible. Other ground disturbing activities would include the installation of concrete footing and grading. The building would be approximately 35 feet tall, covering about 60% of the 19-acre site.

Construction within the new manufacturing plant would include:

- Warehouses for incoming raw materials and outgoing finished products
- Conditioned water plant, nitrogen plant, and compressed air generator
- Wastewater treatment, electrical systems, and control room
- Reaction and dispersion tanks
- Ball and jet milling machines
- Spray drying and kiln systems
- Air delivery and exhaust systems integration

Installation of mechanical systems and process equipment would be the final construction step before instrumentation testing and commissioning are undertaken. Construction would also include construction of utilities, including a nitrogen plant, electrical substation, cooling towers, water retention pond, bioretention areas, and a parking lot (Figure 4). Bioretention areas are landscaped depressions that treat on-site stormwater discharge from impervious surfaces by collecting stormwater and filtering it through a mixture of soil, sand, and /or gravel. Construction of the LFP CAM manufacturing plant is anticipated begin in 2025 and to take approximately 2 years. The project would create at least 500 temporary union construction jobs.

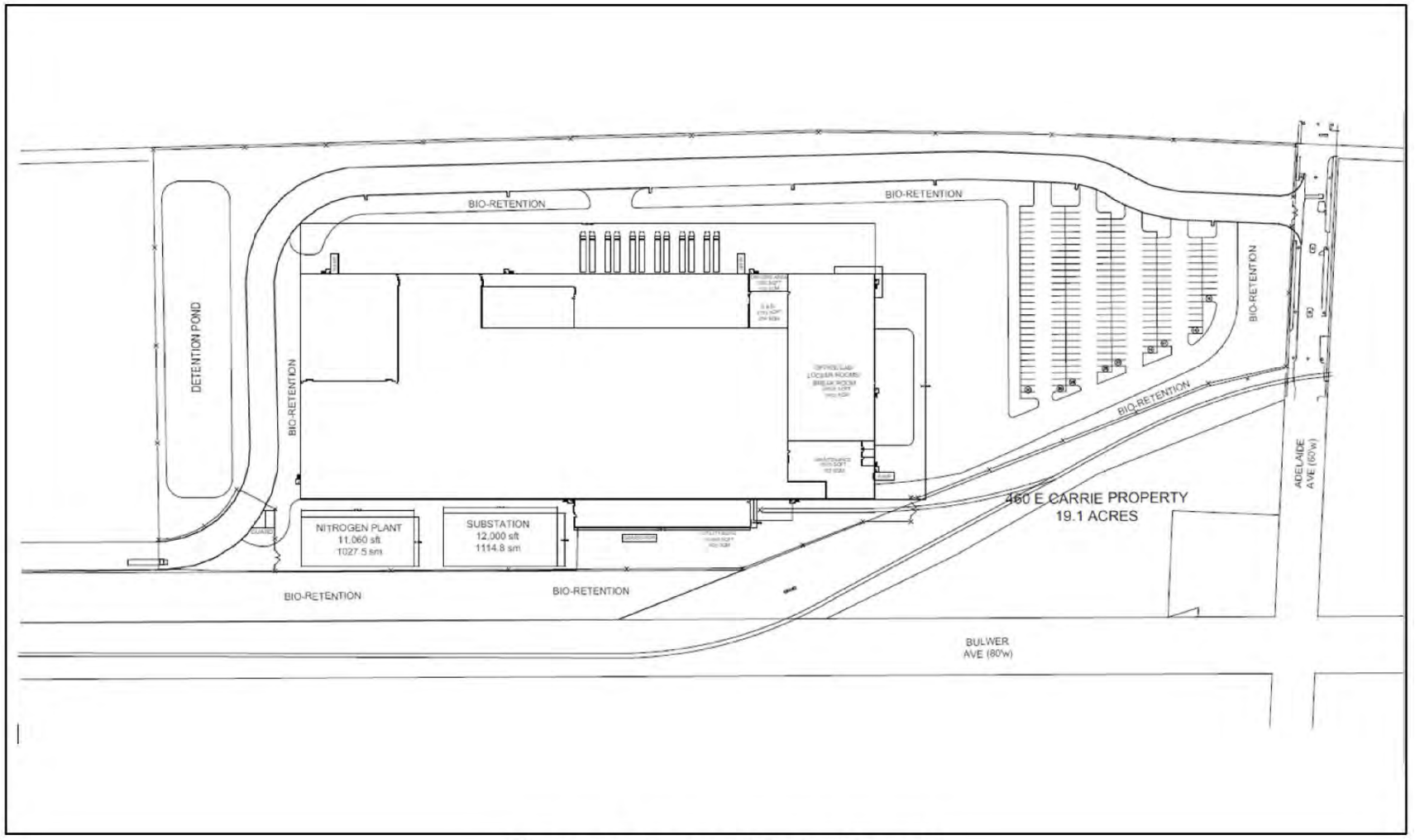

Figure 4. Proposed Project Layout

2.2.2 Operation of the Proposed Project

Once the plant is operational, ICL would add approximately 150 new, full time equivalent (FTE), high-paying union and professional jobs with benefits such as healthcare, workforce training, and other employer-funded benefits. The plant would operate in four shifts, 7 days per week, 24 hours per day. The planned operating life of the plant is approximately 50 years.

Raw materials needed for LFP production would be delivered to the site through truck and existing rail service. The final product would be packaged in flexible intermediate bulk containers (industrial containers made of flexible fabric) and would be shipped using trucks. Table 2 shows the projected annual usage of precursor materials for the LFP plant at full production of 30,000 metric tons per year.

Table 2. Projected Annual Raw Material Usage under the Proposed Action

Precursor	Annual Usage (metric tons)
Phosphoric acid	25,000
Iron powder	12,000
Lithium hydroxide	7,500
Fructose	3,000
Lithium carbonate	1,500

Note: Annual usage for 30,000 metric tons per year production.

Table 3 shows the projected usage of water, energy, and nitrogen. Nitrogen would be generated on-site to minimize environmental impact of transporting liquid nitrogen.

Table 3. Projected Annual Water, Electricity, and Nitrogen Usage under the Proposed Action

Material	Annual Usage
Water	161,000 cubic meters
Electricity	219 gigawatt hours
Nitrogen	67 million normal cubic meters

Note: Annual usage for 30,00 metric tons per year production.

The LFP manufacturing process would begin with metering raw materials into a reaction vessel to make a 35% slurry of LFP in water. The reaction emits hydrogen gas as a by-product. Once the reaction is complete, the batch would be milled to ensure reaction completion. The batch would be pumped to a dispersion system where the LFP slurry would be wet milled to reduce the particle size of LFP. Once the desired particle size is obtained in the dispersion, the batch would be pumped to the spray dryer feed tank. The LFP slurry in the feed tank would then be pumped into the top of the spray dryer to come in contact with hot air for drying. The spray dryer would be fueled by natural gas with a rate maximum gross heat input of 1.5 million British thermal units per hour. The dry LFP would be filtered from the air stream in a product collector to feed the kiln system. Spray dryer exhaust air would be emitted to the atmosphere.

The roller hearth kiln would utilize the spray dried LFP as feed product for the sintering process carried out in the kilns. Kilns would be operated under a nitrogen atmosphere and be heated electrically. Kilns would exhaust through a post-thermal combustor. The combustor would burn natural gas to oxidize carbon monoxide and any organic material. Approximately 25% of the mass of the spray dried LFP would off-gas and would consist of 71% water, 28% carbon monoxide, and trace amounts of organic material (approximately 1%). All sintered product would be transferred to a jet milling system through a screen to eliminate any foreign objects. The material would then be milled in the jet mill to the desired size and the milled product would be collected in a product collector. The milled product would be screened and filtered in an electromagnetic separator to remove any metal contaminants.

Waste generated by LFP production would be minimal. Air emissions would be water vapor and LFP dust from the spray dryer and the roller hearth kiln. The dust would be collected in bag houses. Dust collector efficiency of 99.9% is expected to collect 230 kilograms of dust per day. Approximately 10 kilograms of LFP waste powder would be produced per day or less than 4 tons per year. These wastes along with any waste generated through cleaning processes would likely be recycled to the cement industry as filler for construction concretes as non-hazardous materials. Any potential off-spec materials would also likely be recycled through the cement industry. Process water from heating/cooling tanks would be circulated in closed loop systems to minimize usage. Water that needs to be discharged along with water used for cleaning would be collected in the facility's wastewater system, that would be permitted by the Metropolitan St. Louis Sewer District (MSD). The vast majority of the water used would be emitted as steam during the spray drying process.

2.2.3 Interim Actions

Certain activities were authorized under an Interim Action memorandum prior to completion of this EA, as documented in a memorandum titled, "RE: Interim Action(s) within the scope of an ongoing Environmental Assessment prior to issuance of a Finding of No Significant Impact (FONSI) for the Commercial Production of Lithium Iron Phosphate Cathode Powder for the Global Lithium Battery Industry Project" (Appendix 3). DOE has determined that completing the tasks as outlined in the Interim Action Memorandum would not have an adverse environmental impact; nor would it limit the choice of reasonable alternatives for the project. Elements of the proposed project, such as project management and planning, construction procurement, design, permitting, laboratory work, and equipment procurement were examined and then determined by DOE to have no significant effect on the environment or limit the range of reasonable alternatives for the project.

2.3 Alternatives

DOE's alternatives to this project consist of the numerous technically acceptable applications received in response to FOA DE-FOA-0002678. Before selection, DOE made preliminary determinations about the level of review under NEPA based on potentially significant impacts it identified during review of technically acceptable applications. DOE conducted these preliminary reviews pursuant to 10 CFR 1021.216 and prepared a synopsis for projects under the FOA. These preliminary NEPA determinations and environmental reviews were provided to the selection official, who considered them during the selection process.

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

2.4 No Action Alternative

Under the No Action Alternative, DOE would not provide funds to the proposed project. Without DOE funding for the project to be completed as proposed, the applicant would need to identify, obtain, and use an alternative source of funds equal to the amount of funding that the applicant would have received from DOE under the above-listed funding opportunity. As a result, this project would be de-scoped or delayed while the applicant seeks other funding sources and may be modified if sufficient funding is not obtained. Furthermore, acceleration of the development of industrial scale U.S. production capacity of high quality LFP CAM for safe, long-life, high capacity, and commercial LFP batteries would be delayed or perhaps not occur. DOE's ability to achieve its objectives under the Infrastructure Investment and Jobs Act would be reduced.

It is ICL's intent to proceed in the absence of DOE funding, and DOE recognizes that this project might proceed if DOE decides not to provide financial assistance. If the project does proceed without DOE's financial assistance, the potential impacts would be similar to those under DOE's action alternative (i.e., providing financial assistance that allows the project to proceed) or incrementally reduced. To allow a comparison between the potential impacts of the project as implemented and the impacts of not proceeding with the project, for purposes of this environmental analysis, DOE assumes that the proposed project would not likely proceed without DOE assistance.

2.5 Alternatives Considered by ICL But Not Carried Forward

ICL currently operates a 265,924-square-foot manufacturing plant on a 20-acre property along the River Des Peres at Germania Avenue and Primm Street (8201 Idaho Ave.) in the Carondelet neighborhood of St. Louis, Missouri. The existing facility is composed of a number of buildings and other paved surfaces and stormwater management features, and the plant uses a number of the same materials that the new LFP CAM would require. ICL considered locating the new plant on 3.5 acres of vacant land within their 20-acre property. Ultimately, this alternative was not carried forward due to the following environmental constraints, which would have been costly to mitigate:

- Due to the location of the new plant within the 100-year floodplain, substantial fill material would be needed to elevate the site out of the floodplain. Approximately 60,000 cubic yards of fill would be required to elevate the site out of the 500-year floodplain.
- To accommodate this site, engineering plans called for the plant to be built on an approximate 12-foot hill with a 12-foot-high retaining wall.
- The scale and massing of the proposed building would be larger than existing buildings on the ICL property due to the construction on fill to elevate it out of the floodplain. The majority of the building would be 80 feet in height from the first floor with portions of the

building approximately 125 feet in height. Two emission stacks would be needed on the building. The building would create shadows across Primm Street, the adjacent parking lot, and portions of the apartment buildings especially during the winter months.

- During the construction period at least 500 jobs would be generated, with no contractor parking available on-site.

2.6 Summary of Environmental Consequences

Table 4 provides a summary of the environmental, cultural, and socioeconomic impacts of the No Action Alternative and the proposed project.

Table 4. Summary of Environmental, Cultural, and Socioeconomic Impacts

Impact Area	No Action Alternative Construction	No Action Alternative Operations	Proposed Project Construction	Proposed Project Operations
Community Services	None	None	Negligible	Negligible
Parks and Recreation	None	None	Negligible	Negligible
Land Use	None	None	Negligible	Negligible
Geology, Topography, and Soils	None	None	Minor	Minor
Surface Water, Floodplains, and Groundwater	None	None	Minor	Minor
Biological Resources	None	None	Minor	Negligible
Cultural Resources	None	None	Negligible	Negligible
Aesthetics and Visual Resources	None	None	Minor	Negligible
Noise and Vibration	None	None	Minor	Negligible
Air Quality	None	None	Minor	Minor
Greenhouse Gases	None	None	Minor	Beneficial
Socioeconomics	None	None	Beneficial	Beneficial
Environmental Justice	None	None	Beneficial	Beneficial
Regulated Wastes (Solid and Hazardous Wastes)	None	None	Negligible	Negligible
Utilities and Energy Use	None	None	Negligible	Minor
Transportation and Traffic	None	None	Moderate	Negligible
Public and Occupational Health and Safety	None	None	Minor	Minor

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Chapter 3 provides a description of the affected environment (existing conditions) at the project site, and a discussion of the environmental consequences of the No Action Alternative and the Proposed Action Alternative. Additionally, cumulative impacts are discussed. The specific resource areas were analyzed using both qualitative and, where applicable, quantitative information to describe the nature and characteristics of the resource that may be affected by the proposed project as well as the potential direct and indirect impacts on that resource from the proposed project.

3.1 Resource Areas Dismissed from Further Consideration

DOE determined that various resources would either not be affected or would sustain negligible impacts from the proposed project and did not require further evaluation. They include community services and parks and recreation; therefore, these resource areas are briefly discussed in this section and will not be evaluated further.

Community Services:

Community services pertinent to the proposed project include police, fire, and emergency medical support, all of which are provided by the City of St. Louis for the area of the proposed project. Construction crews as well as permanent operational employees are anticipated to be drawn from local and regional residents and not constitute a notable permanent migration of workers and their families to the region. Additional operational staff would not exert an undue burden on existing community services. In addition, road closures or other impacts that would restrict or impede the movement of emergency personnel through the region are not anticipated as part of construction and operations activities associated with the proposed project (see Section 3.2.14 for a discussion of transportation and traffic related impacts). The increased burden on existing police, fire, emergency medical, and other community services during construction and operations of the proposed project is expected to be negligible.

Parks and Recreation:

The City of St. Louis' O'Fallon Park lies about one-half mile to the southwest of the project location. The 126-acre park contains a lake, boathouse, walking path, tennis courts, football field, basketball courts, picnic tables, playground, and a spray pool. The park also contains the O'Fallon Recreation Complex, providing fitness opportunities 7 days per week. The entire park and recreation complex are located across the busy Interstate 70 from the project site, which is industrial in nature as described in Section 3.2.1. The impact upon recreation and parks from the proposed project is anticipated to be negligible.

3.2 Resource Areas Considered Further

Environmental resource areas carried through for further consideration of the potential impacts of ICL's proposed project include: land use; geology, topography, and soils; surface water, floodplains, and groundwater; biological resources; cultural resources; aesthetics and visual resources; noise and vibration; air quality; greenhouse gases (GHGs); socioeconomics;

environmental justice; regulated wastes (solid and hazardous wastes); utilities and energy use; transportation and traffic; and public and occupational health and safety.

3.2.1 Land Use

3.2.1.1 Affected Environment

The project site is located on the north side of Adelaide Avenue, about 5 miles north of downtown St. Louis. ICL has plans to acquire the property which is located in an area of mixed heavy industrial, commercial, and residential use. Although the site has been residentially, commercially, and industrially developed since at least 1908, it is currently vacant and zoned K, Unrestricted District. Several debris piles and trash are present throughout the site, apparently as a result of illegal dumping (ERM 2024a).

Historical maps indicate that the site was originally developed for a mix of residential, commercial, and industrial purposes beginning in the early 1900s. Past commercial and industrial occupants have included a ballpark with a grandstand, railyard housing a roundhouse, machine shop, water tower, office, and a trailer/trucking parking and/or staging lot. Chicago, Rock Island, and Pacific Railroad occupied the site as early as 1931 to as late as 2000. By 2014, the concrete pavement for truck staging had been removed. The site has been in a similar condition (vacant, vegetated parcel) since the 2010s (ERM 2024a).

Surrounding land uses include a transportation services company to the north; a warehouse store and several vacant buildings to the south; a trucking company to the east across the railroad tracks; and several facilities to the west including a lot for sale, a truck equipment company, construction companies, St. Louis Fire Department Engine House No. 20, and several vacant and brownfield lands.

The project site is designated as a Business/Industrial Development Area (BIDA) in the Strategic Land Use Plan of the St. Louis Comprehensive Plan (City of St. Louis 2023a). All adjacent properties are also designated as BIDA. BIDA are areas where new business/industrial uses or campuses will be encouraged. The area to the southeast, south of Adelaide Avenue and between N. 2nd Street and the river, is identified as Business/Industrial Preservation Area (BIPA). BIPA are areas where stable businesses currently exist and are encouraged to remain. This designation includes industrial and non-retail commercial uses where the location, condition of buildings, and the low level of vacancy warrant preservation and infill industrial development where possible.

The North Riverfront Commerce Corridor Land Use Plan was adopted by the St. Louis Planning Commission in 2013. The plan undertakes to promote existing and attract new businesses to the North Riverfront (SLDC 2012). The project site is within the area of study of this plan.

3.2.1.2 Environmental Consequences

3.2.1.2.1 Proposed Action Alternative

Construction and Operations

Potential impacts to land use from the proposed project are considered negligible. Construction and operation of the proposed manufacturing plant would change the land use of the site from a vacant lot to use as a manufacturing site. However, land use of surrounding properties would not

change and the proposed project would not conflict with surrounding land use, land use plans, or zoning.

3.2.1.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to land use would occur as existing conditions would remain unchanged.

3.2.2 Geology, Topography, and Soils

3.2.2.1 Affected Environment

The project site is located at an elevation of approximately 423 feet above mean sea level, is generally flat, and slopes slightly to the north.

According to the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey data for the St. Louis County area, surface soils at the site vicinity are described as generally composed of Urban land and Fishpot silt loam soils, with 0 to 3 percent slope. Fishpot soils are generally described as Class C soils that are somewhat poorly drained with slow infiltration rates. The Fishpot soil type is not hydric and has a moderate corrosion potential to uncoated steel. Soil surface texture, hydrologic group, drainage class, and corrosion potential are not reported for Urban land soils. Native soil at the site is comprised of silt and/or clay with occasional layers of gravel and sand to 20 feet below ground surface (Aton 2017). The bedrock stratigraphic unit beneath the project site is of the Paleozoic era, and of the Mississippian system and Meramecian series, which has a stratified sequence.

The project site contains several debris piles, strewn trash, and a large area of elevated soil (i.e., a mound). Surface and subsurface soils at the site are known to contain contaminants, including benzo(a)pyrene, lead, heavy metals, and semi-volatile organic compounds (SVOCs). Contamination from historical uses of the site is discussed in Section 3.2.12.

The St. Louis area has experienced minor earthquake damage at least 12 times in the past 205 years. The St. Louis metropolitan area faces earthquake hazard from distant large earthquakes in the New Madrid and Wabash Valley seismic zones, as well as a closer region of diffuse historical and prehistoric seismicity to its south and east (USGS 2023). It is expected that structures located along lowland river valleys, such as the Mississippi River floodplain, and sitting on soft sediments will likely experience stronger ground shaking and a greater likelihood of liquefaction. While the proposed project is located in an area identified as being at potential risk from seismically induced liquefaction and associated ground deformation, there has not been any evidence of such damage over the long period of industrial use in the area.

3.2.2.2 Environmental Consequences

3.2.2.2.1 Proposed Action Alternative

Construction and Operations

Impacts to geology, topography, and soils are anticipated to be direct, long term, and minor. Proposed construction is limited to surface and near-surface activity that is not anticipated to affect minerals and deeper geological strata.

Construction at the site would require debris cleanup, grading to accommodate planned building foundations and paved roadways, and excavation for a stormwater detention pond. Approximately 47,190 cubic yards of mounded material would either be processed on-site as construction fill and reused on-site or disposed of off-site at a landfill (ERM 2024b). ICL plans to use as much of that material on-site as possible. Approximately 75% of the 19-acre site would be covered with impervious surfaces, such as buildings, parking lots, and roadways.

ICL would obtain a General Permit for Stormwater Discharges Associated with Construction Activities from the Missouri Department of Natural Resources (MDNR) and develop a stormwater pollution prevention plan (SWPPP) that includes site-specific best management practices (BMPs) to minimize soil exposure, soil erosion, and pollutant discharge. During site preparation work, it is anticipated that soil with low levels of contaminants would be encountered. The Contractor should take necessary precautions for potential exposure to construction personnel and should verify that other Occupational Safety and Health Administration (OSHA)-related health and safety requirements for their on-site personnel would be met. The soil would be characterized and disposed at a permitted facility.

During construction, the Contractor would be required to implement sufficient BMPs to minimize erosion and the risk of sediment or construction-related contaminants, such as accidental spills or leaks of petrochemicals (e.g., gasoline, hydraulic fluid) from entering soils and surface waters. Specific construction BMPs could include: installing silt fencing, wattles and/or berms, and replanting areas of ground disturbance post construction. Stockpiles would be covered if they are unworked. These BMPs would be site-specific and adapted as necessary over time, to ensure they are performing effectively to reduce erosion and sedimentation. Once construction is complete, landscaped and paved surfaces would not be an ongoing source of sedimentation and erosion. However, since about three-quarters of the 19 acres would be converted from a permeable area to an impermeable surface, stormwater runoff is expected to increase as discussed in Section 3.2.3.

Seismic activity in this region would be adequately addressed through compliance with local building codes.

3.2.2.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to geology, topography, and soils would occur as existing conditions would remain unchanged.

3.2.3 Surface Water, Floodplains, and Groundwater

3.2.3.1 Affected Environment

3.2.3.1.1 Surface Water and Floodplains

There is no surface water at the project site. Precipitation that falls on the site percolates into the ground or flows offsite, apparently towards the north. The nearest water body is the Mississippi River located about 0.5 mile east of the property. The property does contain two stormwater catch basins along the northern edge of the boundary with a drainage ditch running along a "L"-shaped road that begins on Adelaide Avenue, runs north along the eastern boundary of the property and then turns west along the northern boundary of the property.

Floodplains are defined as any land area susceptible to being inundated by waters from any source (44 CFR 59.1) and are often associated with surface waters and wetlands. The Federal Emergency Management Agency (FEMA) develops Flood Insurance Rate Maps (FIRMs) on which the Special Flood Hazard Areas (SFHAs) are delineated for regulatory purposes under the National Flood Insurance Program. SFHAs are also known as 100-year floodplains, or areas that have a 1 percent annual chance of flooding. A review of FEMA FIRM number 2903850062C, effective 24 May 2011 indicates the property lies outside of both the 100-year and 500-year floodplain (areas that have a 0.2% annual chance of flooding) in a classification of Zone X (shaded) "reduced flood risk due to levee" (FEMA 2024) as shown on Figure 5.

3.2.3.1.2 Groundwater

The project site is situated approximately 2,660 feet southwest of the Mississippi River. Based on the topographic map, general topography of the site slopes to the east-northeast. It is expected that unconfined groundwater in the area of the site flows in an easterly-northeasterly direction toward the Mississippi River. The extensive fill in the area could alter the expected flow of unconfined groundwater. First groundwater was observed in the site investigation borings at depths of 7 to 11 feet below ground surface (Aton 2017). The Phase II Environmental Site Assessment (ERM 2024b) noted groundwater depth between 2.51 and 5.40 feet below ground surface.

According to the Environmental Data Resources, Inc. (EDR) report provided in the 2024 Phase I Environmental Site Assessment (ERM 2024a), one federal groundwater well and two state groundwater wells are present within a 1-mile radius of the site. No public water supply wells are reportedly present within a 1-mile radius of the site. However, based on surface topography, it is expected that surface runoff and, possibly, shallow groundwater, flows to the north-northeast towards the stormwater catch basins. Deeper groundwater is likely influenced by the Mississippi River which flows north to south, potentially resulting in a general groundwater flow in the area from west to east.

Several investigations have reported low level contamination in the groundwater, and the potential for groundwater contamination at the site is considered a recognized environmental condition (ERM 2024a). Contamination from historical uses of the site is discussed in Section 3.2.12.

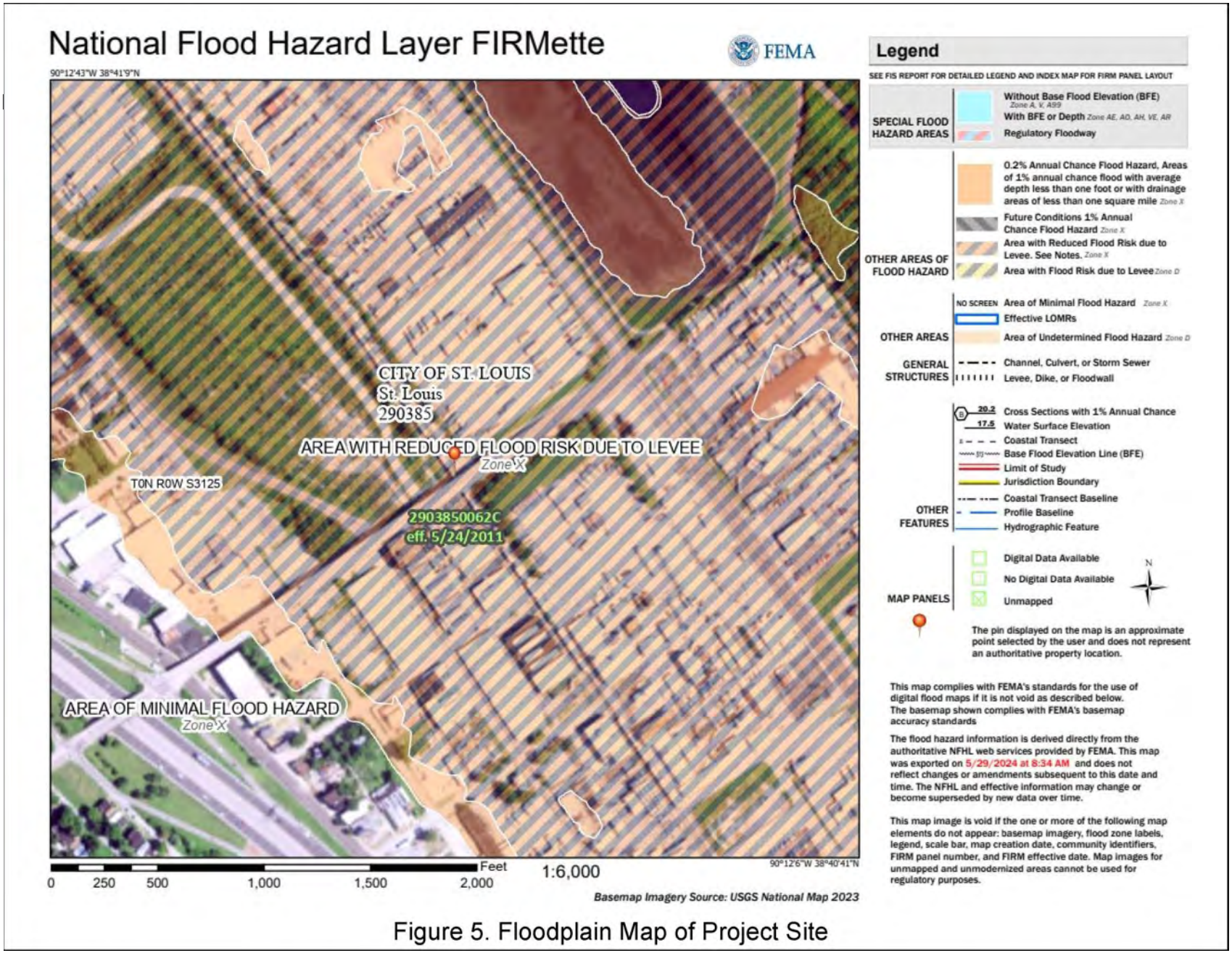

Figure 5. Floodplain Map of Project Site

3.2.3.2 Environmental Consequences

3.2.3.2.1 Proposed Action Alternative

Surface Water and Floodplains

Construction

Construction of the proposed project would have a direct, temporary, and minor impact on surface water and, possibly an indirect impact on floodplains, from direct run-off during rain events. General construction activities, such as grading and excavation, could cause erosion and transport of sediment/fill as well as mobilize low level of contaminants found at the site, potentially resulting in localized water quality degradation. Sediment deposition into surface waters can increase turbidity and negatively impact water quality and may adversely affect fish, invertebrates, or aquatic vegetation (USEPA 2023a). Potential impacts to surface waters from direct runoff would be minimized through implementation of a SWPPP and BMPs, required by the MDNR General Permit for Stormwater Discharges Associated with Construction Activities under which ICL would obtain coverage prior to ground disturbance activities associated with construction.

Additionally, the use of construction equipment could result in accidental spills or leaks of petrochemicals (e.g., gasoline, hydraulic fluid) that could potentially reach surface waters if not contained and cleaned up. The project-specific SWPPP, described above, would contain site-specific measures to avoid and minimize erosion and sediment transport to surface waters as well as measures to contain and clean up accidental petrochemical spills. Potential impacts to the Mississippi River would be minimized using BMPs identified in the SWPPP. The purpose of the SWPPP would be to protect and maintain the quality of the receiving surface water in accordance with federal and state CWA regulations. All construction stormwater runoff which directly or indirectly impacts surface waters would be controlled to minimize impacts by establishing a plan to manage the quality of stormwater runoff from the site. All attempts would be made to prevent contamination of water from construction activities, such as fuel spills, lubricants, and chemicals, by following safe handling and storage procedures. Stormwater runoff would be managed to minimize sediment and silt movement and other potential pollutants. All stormwater runoff from the property would be directed to the MSD.

Operations

Operation of the proposed project would have direct, long-term, minor impacts on surface water and floodplains. Potential for future impacts to surface waters and floodplains would be addressed throughout the life of the proposed project through the implementation of stormwater management procedures and a facility monitoring and inspection program. A stormwater detention pond and bioretention areas are proposed to management stormwater. Further discussion of stormwater management during the operational phase is discussed in Section 3.2.13. Following construction but prior to operation, ICL would file a Notice of Intent for authorization under the Missouri National Pollutant Discharge Elimination System Permit for Stormwater Discharges Associated with Industrial Activities. This permit prohibits unauthorized discharges to surface water during operations and incorporates the requirements of a facility-specific SWPPP and erosion control measures, as well as other sitewide BMPs.

Groundwater

Construction and Operations

The impact of proposed project construction and operations on groundwater would be negligible. No discharges to land are anticipated during construction, and stormwater discharges would comply with the requirements of the MDNR General Permit for Stormwater Discharges Associated with Construction Activities under which ICL intends to apply for coverage. Finally, ICL would develop a spill prevention and response plan designed to prevent any constituents that might be spilled from infiltrating the soil and reaching groundwater.

Groundwater at the site has been impacted from previous activities. If groundwater from the site is encountered during construction, proper personal protective equipment should be used and the Contractor should verify that other OSHA-related health and safety requirements for their on-site personnel would be met. Any impacted groundwater that is generated during construction may require characterization and disposal at a permitted facility.

3.2.3.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to surface water, floodplains, or groundwater would occur as existing conditions would remain unchanged.

3.2.4 Biological Resources

3.2.4.1 Affected Environment

3.2.4.1.1 Vegetation and Wildlife

The project site, located within an industrial area, consists of undeveloped, previously disturbed land. Vegetation in the area is highly disturbed and is predominantly composed of ruderal grasses and weeds. The most notable natural vegetation occurs on the western edge of property along the railroad tracks consisting of a shrubbery hedge with deciduous trees interspersed. The site also contains a large gravel area at the southern end of the property.

Since naturally occurring vegetation is limited at the site, most wildlife species are transients through the area. Wildlife in the area are likely those adapted to disturbed environments and human activity. American robin (*Turdus migratorius*), common grackle (*Quiscalus quiscula*), European starling (*Sturnus vulgaris*), and house sparrow (*Passer domesticus*) are avian species common to these disturbed habitats. Other opportunistic species likely to exist in this disturbed and urban environment include raccoons (*Procyon lotor*), skunks (*Mephitis mephitis*), and Virginia opossums (*Didelphis virginiana*).

3.2.4.1.2 Special Status Species

Federal status as a threatened or endangered species is derived from the ESA of 1973 (16 U.S.C. § 1531 et seq.), as amended, and administered by the USFWS and the National Marine Fisheries Service, depending on the species. Under the ESA, species may be listed as federally endangered or federally threatened depending on the likelihood of the species becoming extinct throughout all or a significant portion of its range. The status of candidate species can also be

applied under the ESA. Candidate species receive no statutory protection under the ESA, but the USFWS encourages conservation efforts for these species because they may warrant future protection under the ESA. In addition to federal protection, certain species are given protection under state law. Migratory birds are protected under the MBTA (16 U.S.C. § 703).

A search for protected species and critical habitat was conducted using the USFWS Information for Planning and Consultation website. Table 5 lists all federally listed threatened, endangered, or candidate species which potentially occur in the project area (USFWS 2024a). One additional state listed species, the American bittern (*Botaurus lentiginosus*), was listed by Missouri Department of Conservation as potentially occurring in St. Louis County.

Table 5. Federal and State Threatened, Endangered, and Candidate Species Potentially Occurring in the Project Area

Common Name	Scientific Name	Status	Preferred Habitat
American bittern	*Botaurus lentiginosus*	SE	Wetlands
Indiana bat	*Myotis sodalis*	FE, SE	Forested and riparian habitat for foraging in summer; caves for hibernation
Monarch butterfly	*Danaus plexippus*	C	Fields and grasslands with milkweed and flowering plants
Northern long-eared bat	*Myotis septentrionalis*	FE, SE	Forested and riparian habitat for foraging in summer; caves for hibernation
Tricolored bat	*Perimyotis subflavus*	PE	Forested and riparian habitat for foraging in summer; caves for hibernation

Source: USFWS 2024a; MDC 2024
FE = federally endangered; PE = proposed endangered; C = candidate; SE = state endangered

3.2.4.1.3 Wetlands

Wetlands are classified by the U.S. Army Corp of Engineers based on three criteria: hydrology, soil type, and vegetation. Specifically, wetlands are defined as those areas that are saturated or inundated by water that is sufficient to support vegetation typically adapted to saturated soils (USACE 1987). Wetlands are important landscape features that provide many benefits for people, fish, and wildlife. Some of these benefits or functions include protecting and improving water quality, providing fish and wildlife habitats, storing floodwaters, producing aesthetic value, ensuring biological productivity, filtering pollutant loads, and maintaining surface water flow during dry periods (USEPA 2022). Functions are the result of the inherent and unique natural characteristics of wetlands.

The proposed project site includes approximately 19 acres of undeveloped land, approximately 0.5 mile west of the Mississippi River. The National Wetlands Inventory indicates that the proposed project site contains no mapped streams, wetlands, or other aquatic features (USFWS 2024b).

3.2.4.2 Environmental Consequences

3.2.4.2.1 Proposed Action Alternative

Vegetation

Construction and Operations

Impacts to vegetation from construction are anticipated to be direct, long term, and minor. Construction would include the permanent conversion of approximately 14.3 acres to impervious surface which offer limited ecological value for native plants and wildlife. Grading and site development during construction would reduce the extent of vegetation at the site; however, the site is located within an industrial area and has previously been disturbed. Removal of the native vegetation along the western border of the property would also occur for the installation of the bioretention ponds. Naturally occurring habitat is limited on the site as well as the surrounding area. Implementation of BMPs during construction would help minimize impacts from invasive species in compliance with EO 13751, *Safeguarding the Nation from the Impacts of Invasive Species*. ICL would re-seed any unpaved portions of the site that have been disturbed during construction and plant vegetation around the perimeter of parking areas. Operations of the proposed project are not anticipated to create any additional impacts to vegetation.

Wildlife

Construction and Operations

Impacts to wildlife due to increased noise, fugitive dust, and human presence associated with construction activities would be direct, short term, and minimal. Species using the site are likely transient in nature and wildlife currently using the grassland for forage would find forage elsewhere. Wildlife species using the area are already adapted to noise and human presence.

Operations of the proposed project are not anticipated to have any impacts to local wildlife species. There is little potential for migratory bird species to occur within the project area given the current conditions and lack of vegetation communities at the project site. Despite the site not containing suitable nesting or foraging habitat for several migratory bird species, there is the possibility of other migratory species, which do not breed in the area, to pass through the area during spring or fall migration. To minimize the number of birds killed by window collisions, ICL could utilize bird-friendly building and window designs. These may include reducing exterior lighting at night, down-shield exterior lighting to eliminate light directed upward and horizontal glare, and creating patterns on reflective glass surfaces spaced 2 to 4 inches apart (National Audubon Society n.d.).

Special Status Species

Construction and Operations

Impacts to listed threatened or endangered species or designated critical habitat from the proposed project are anticipated to be negligible. Due to the absence of native plant communities, trees large enough to support roosting or foraging requirements of the bat species, and the absence of unmaintained or unmowed areas to support habitat for the candidate monarch butterfly, limited suitable habitat is available for listed species on the project site. Although critical

habitat has been designated for the Indiana bat (*Myotis sodalis*), designated critical habitat does not overlap the project area. The proposed project would not cause adverse impacts to any federally listed threatened or endangered species, for no such species are known to occur on the site.

DOE initiated consultation with the USFWS, Missouri Ecological Services Field Office via letter on 25 April 2024 and the USFWS responded to DOE's request for informal consultation stating "the USFWS has reviewed this project and does not have any concerns about impacts to species listed under the Endangered Species Act" (USFWS 2024c). Copies of the correspondence between DOE and the USFWS are provided in Appendix 2.

Wetlands

Construction and Operations

The project site includes 19 acres of undeveloped, previously disturbed land which does not contain mapped streams, wetlands, or other water features. Due to the absence of wetlands within the proposed project site, construction and operations are anticipated to have no impact on wetlands.

3.2.4.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to biological resources would occur as existing conditions would remain unchanged.

3.2.5 Cultural Resources

This section describes the existing cultural resource conditions in the vicinity of the project site. The area of potential effect (APE) for cultural resources includes the area within and immediately adjacent to the project site that could be affected by the action, either during construction or permanently. Cultural resources include archaeological sites, historic structures and objects, and traditional cultural properties. Several federal laws and regulations have been established to manage cultural resources, including the NHPA of 1966; the Archaeological and Historic Preservation Act of 1974; the American Indian Religious Freedom Act of 1978; the Archaeological Resource Protection Act of 1979; and the Native American Graves Protection and Repatriation Act of 1990. In addition, EO 13175, *Consultation and Coordination with Indian Tribal Governments*, charges federal departments and agencies with regular and meaningful consultation with Native American Tribal officials in the development of policies that have Tribal implications. Historic properties are cultural resources that are listed in or eligible for listing in the National Register of Historic Places because they meet one or more criteria and retain integrity (36 CFR 60.4). Section 106 of the NHPA (16 U.S.C. 470 et seq.) and its implementing regulations at 36 CFR Part 800 requires that federal agencies take into account the effects of their actions on historic properties. As part of the Section 106 process, agencies are required to consult with the SHPO on their determinations and decisions.

3.2.5.1 Affected Environment

The Missouri archaeological record dates back over 13,000 years. Findings in St. Louis County date back to the Paleoindian Period (circa [ca.] 11,500-10,500 before present [B.P.]) when small bands of nomadic hunters settled near the Mississippi River. During the Mississippian Period (ca. 950-350 B.P.) increased food production coincided with complex political, economic, and social structure for native people. The indigenous people of what now is St Louis included the Illini Confederacy, a group of 12-13 Native American tribes in the upper Mississippi River Valley (City of St. Louis 2024). Residential earthwork mounds and numerous empales were constructed by the indigenous people in the area. Cahokia, near the confluences of the Mississippi, Missouri, and Illinois rivers, was the greatest cultural center in North America (Missouri Archaeological Society 2024).

In 1764, St. Louis was chosen for a fur trading post from a land grant from the King of France. The land transferred to the Spanish in 1770 and then back to the French before becoming a part of the United States under the Louisiana Purchase in 1803 (City of St. Louis 2024). St. Louis grew into an important center of commerce and trade, during the 19th century, attracting large numbers of immigrants. Rapid growth of the city continued after the Civil War, and by 1900 St. Louis was a major manufacturing center due to its dominance in water and rail transportation (City of St. Louis 2024).

The project site is located in the North Riverfront community where industry, commerce, and teeming residential neighborhoods coexisted along the Mississippi River in the 1870s. The site was originally developed for a mix of residential, commercial, and industrial purposes beginning in the early 1900s. As early as 1908, the project site served as a ballpark with a grandstand along the western edge of the boundary and included a major rail line, Belt Terminal Railroad, through the site. By the 1930s, the area was used by Chicago, Rock Island, and Pacific Railroad and housed several rail lines, a roundhouse, machine shop, water tower, and office, and a trailer/trucking parking and/or staging lot. By 1954, the roundhouse, machine shop, and office buildings had been removed from the property, and the area consisted of multiple rail lines, an engine house, and an apparent rail house. In the 1980s, although still owned by Chicago, Rock Island, and Pacific Railroad, trailer/truck parking and/or staging also occurred at the site. Chicago, Rock Island, and Pacific Railroad occupied the property as late as 2000, when all the rail lines and structures were removed from the site (ERM 2024a).

The project site lies within the cultural area of six federally recognized tribes including the Apache Tribe of Oklahoma, Miami Tribe of Oklahoma, Osage Nation, Peoria Tribe of Indians of Oklahoma, Quapaw Nation, and Seneca-Cayuga Nation. A Phase I literature review was conducted for the site. Within a 1-mile radius of the APE for the proposed manufacturing facility, there are six National Park Service registered buildings, two National Register districts, and six undetermined eligibility archaeological sites listed in the Missouri State Historic Preservation Office database. Also included in the APE are two undetermined eligibility assessments. None of the previously recorded structures or sites are contiguous with or are near the proposed construction area. The project site does not contain any historic or cultural places within its boundaries, nor any known archaeological sites.

3.2.5.2 Environmental Consequences

3.2.5.2.1 Proposed Action Alternative

Construction and Operations

Due to extensive ground disturbance and usage of the property since 1908, cultural resources are not likely to be present in the project area. Therefore, it is expected that construction and operations of the proposed project will have no effect to historic properties.

DOE initiated consultation with the Missouri SHPO on 22 April 2024, and initiated Tribal consultation with the Apache Tribe of Oklahoma, Miami Tribe of Oklahoma, Osage Nation, Peoria Tribe of Indians of Oklahoma, Quapaw Nation, and Seneca-Cayuga Nation by formal letters in April 2024. The Missouri SHPO concluded that the proposed project would have no effect on properties listed in or eligible for listing in the National Register of Historic Places, and that no future coordination would be required with Missouri SHPO unless the proposed project changes or if archaeological remains are discovered during the course of the proposed project (SHPO project number 003-SLC-24). Appendix 2 contains the correspondence with the SHPO and tribes.

In the event of an inadvertent discovery of possible cultural materials during construction, standard procedure is for all work to stop immediately in the vicinity of the find. A 100-meter buffer would be placed around the discovery with work being able to proceed outside of this buffered area unless additional cultural materials were encountered. The area would be secured and protected, the unanticipated discoveries of cultural/archaeological materials would be evaluated and, if needed, mitigated in accordance with consultation with the SHPO. Appendix 4 contains the Inadvertent Discovery Plan.

3.2.5.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to cultural resources would occur as existing conditions would remain unchanged.

3.2.6 Aesthetics and Visual Resources

3.2.6.1 Affected Environment

The project site includes a 19-acre property in a mixed industrial, commercial, and residential area. The site is currently undeveloped, covered with grass and some trees and shrubs along the western and eastern edges. There is a roadway on the site that connects to Adelaide Avenue and the adjacent property to the north. The topography of the project site and surrounding properties ranges from gentle sloping to relatively flat and therefore the site does not offer notable vistas or views. The site is bordered on the western and eastern sides by railroad tracks and power lines; commercial and industrial properties are adjacent on all sides.

3.2.6.2 Environmental Consequences

3.2.6.2.1 Proposed Action Alternative

Construction

The impact upon aesthetics and visual resources from construction of the proposed project is anticipated to be direct, long term, and minor. The proposed project construction would alter the visual appearance of the site in the short term due to ground disturbance; the presence of workers, vehicles, equipment (including a crane), and security lighting; and the generation of dust and vehicle exhaust, and in the long term by the addition of facility structures.

Impacts to identified views and vistas were determined based on an analysis of the existing quality of the landscape views, the sensitivity of the view, and the anticipated relationship of the proposed buildings to the existing visual environment. The new construction would be visible from the immediately surrounding landscape and would be consistent with the existing industrial and commercial surroundings. The new plant would be 35 feet high with the spray dryer corner and packing tower approximately 90 feet high. Cooling towers would be approximately 35 feet high. No residential areas are immediately adjacent to the property and no sensitive viewers were identified.

Operations

Impacts on aesthetics and visual resources during operations are expected to be negligible. Some steam emissions would be visible from the new manufacturing plant but would be compatible with existing surroundings as the adjacent areas are a mix of industrial and commercial properties. No odors are anticipated. Exterior and perimeter lighting would be installed for security and visibility across the site.

3.2.6.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to aesthetics and visual resources would occur as existing conditions would remain unchanged.

3.2.7 Noise and Vibration

3.2.7.1 Affected Environment

As described above, the project site is bordered on all sides by industrial and commercial properties. Existing noise and vibration sources within the site vicinity include the rail lines, local transportation on primary and secondary roads, and various commercial/industrial activities surrounding the site. Interstate 70 is located approximately 1,100 feet to the west of the site. The nearest sensitive receptors are residents on the other side of Interstate 70 at Adelaide Avenue and Von Phul Street, approximately 1,300 feet southwest.

The City of St. Louis Code of Ordinances, Title VI Public Health and Welfare, Chapter 625 Noise Control Code contains provisions related to allowable noise thresholds for various land use categories. The code lists exceptions to the provisions of the code including the operations of

construction devices, with sound control devices equivalent or better than the original equipment, used in construction activities during daytime hours (Section 625.070).

3.2.7.2 Environmental Consequences

3.2.7.2.1 Proposed Action Alternative

Construction

Direct, short-term but measurable adverse minor impacts to noise levels would occur during the construction phase of the proposed project, associated with site grading and leveling, building construction, installation of facility equipment, and use of heavy machinery during construction. Typical noise levels from comparable construction sites would be expected to be within the range of 80 to 90 dBA decibels, at a distance of 50 feet (Table 6), which is consistent with current proposed project plans.

Table 6. Typical Noise Emission Levels for Construction Equipment

Equipment	Typical Noise Level (dBA) 50 Feet from Source
Backhoe	80
Concrete Pump and Mixer	82-85
Grader	85
Loader	85
Mobile Crane	83
Paver	89
Truck	88

Source: Hansen et al. 2006
dBA A-weighted decibels

Construction noise and vibration would primarily be limited to the immediate vicinity of the project site and would be short term and intermittent. The location of construction is at a distance from the nearest sensitive receptors such that noise and vibration impacts are not anticipated to residential areas. Construction activities that typically generate the most severe vibrations are blasting and impact pile driving. While blasting would not be required, the proposed project would involve the need for piles. Construction is expected to last for approximately 24 months.

To minimize construction-related noise, contractors would limit construction to occur primarily on Monday through Friday from 7:00 a.m. to 3:30 p.m. and would properly maintain construction equipment mufflers. Some construction work may occur on Saturdays if needed to make up missed work due to bad weather. The effects on construction personnel would be limited by requiring all personnel to wear adequate personal hearing protection. Limiting worker exposure and providing adequate personal hearing protection would promote compliance with federal health and safety regulations.

Operations

The proposed project would result in a negligible, long-term increase in noise from an increase in traffic to the site. Primary noise sources during operations are anticipated from industrial activities

within enclosed facility structures which would have limited impacts on sensitive receptors due to strict internal facility compliance with OSHA standards for employees, and from rail, truck, and employee-vehicle traffic accessing the facility. The operations would be conducted indoors and additional enclosures are part of the design for equipment with higher noise levels such as air compressors and jet mills. Noise levels would be monitored and handled per ICL's standard operating procedure related to noise and vibration. Employees would initially be required to wear hearing protection until a noise survey is conducted to determine whether hearing protection is required. ICL's approach is to put controls in place to minimize the use of hearing protection where possible.

The proposed project would employ a full-time workforce at the project site of approximately 150 new full-time employees and would cause an increase in commuter vehicle noise near the site. The increase would be spread throughout four shifts with 60 employees on day shift and 30 each of the other three shifts. At maximum capacity, approximately 20 additional trucks per day would access the site with incoming raw materials or outgoing shipments. One train per day would access the site on existing rail lines. Due to the proposed project site's proximity to Interstate 70 and existing adjacent transportation companies, it is not anticipated that traffic to the project site would measurably increase ambient noise levels at the site.

3.2.7.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. Noise sources and levels at the site would not change from existing conditions.

3.2.8 Air Quality

3.2.8.1 Affected Environment

Pursuant to the CAA, the United States Environmental Protection Agency (USEPA) established National Ambient Air Quality Standards (NAAQS) to control a limited number of widely occurring criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, particulate matter (PM) with a diameter of less than 2.5 micrometers (PM2.5), PM with a diameter of less than 10 micrometers (PM10), and sulfur dioxide. Primary air quality standards were developed for these pollutants to protect public health, including sensitive populations such as children, the elderly, and people with asthma, and secondary standards were developed to protect the nation's welfare, including protection against decreased visibility and damage to animals, crops, and vegetation.

USEPA has concluded that the current NAAQS protect public health, including at-risk older adults, children, and people with asthma, with an adequate margin of safety. The airshed that contains the project site in St. Louis County, Missouri is in attainment for all the NAAQS, except ozone, meaning none of the ambient concentrations of criteria pollutants except ozone exceed the air quality standards (USEPA 2023b).

The St. Louis ozone monitoring network (10 stations throughout the metropolitan area) shows that the regional airshed is in nonattainment for the ozone NAAQS of 70 parts per billion over an 8-hour average (East-West Gateway Council of Governments 2022). Ozone is formed when hydrocarbons and nitrogen oxides from vehicle exhaust and other industrial processes have a

chemical reaction with oxygen in the lower atmosphere. Exceedance is when an 8-hour average for a monitor in a nonattainment area is greater than 70 parts per billion; attainment is when the 3-year average of the 4th highest annual average for each monitor in a non-attainment area is less than 70 parts per billion. In 2022, the City of St. Louis and St. Louis County area was classified as a moderate nonattainment area, because it did not meet the NAAQS by August 2021. The states of Missouri and Illinois are implementing plans to address this nonattainment.

To protect air quality, several permitting programs under the CAA regulate point-source air emissions. The MDNR administers these permitting programs. Under the New Source Review (NSR) permitting program, construction permits, also called New Source Review permits, are required for the construction of a new air pollution source, or modification of an existing source. Construction permits are required prior to commencing construction of an emission source.

Three basic types of operating permits are required under the CAA for a stationary source. Under the NSR permitting program, a major stationary source is one of 28 listed facility types that has the potential to emit 100 tons per year or more of a regulated NSR pollutant or is an unlisted facility that has the potential to emit 250 tons per year or more of a regulated NSR pollutant. A Prevention of Significant Deterioration permit is required for new major sources or a major source making a major modification in areas that are in attainment for all the NAAQS (note, St. Louis is not in attainment for all the NAAQS). Minor sources are facilities with the potential to emit less than: 10 tons per year of any hazardous air pollutant, 25 tons per year of any combination of hazardous air pollutants, and 100 tons per year of any regulated air pollutant (PM, sulfur dioxide, volatile organic compounds, carbon monoxide, nitrogen oxides, and lead). “Synthetic minor source” means a source that otherwise has the potential to emit regulated NSR pollutants in amounts that are at or above the thresholds for major sources in 40 CFR 49.167, 40 CFR 52.21, or 40 CFR 71.2, as applicable, but has taken a restriction so that its potential to emit is less than such amounts for major sources. Permits are issued under Title V of the CAA by the MDNR.

3.2.8.2 Environmental Consequences

3.2.8.2.1 Proposed Action Alternative

Construction

Project construction may result in direct, temporary adverse air quality impacts at the project site; however, these impacts would be minor and would occur only during active construction. Because emissions during construction would not overlap with emissions during operation, and because of the controls that would be implemented during project construction as required by the NSR permit, impacts on air quality as a result of construction of the project would be temporary and minor.

ICL would apply to MDNR to receive a permit to construct the emission sources proposed for the new facility. During construction, air emissions and dust would be generated from mobile sources (e.g., trucks, machinery) as well as on-site ground-disruptive operations. Construction activity would temporarily increase airborne dust particles and engine emissions. Emissions from workers’ vehicles and construction equipment would be temporary and transient in nature, and various BMPs, such as limiting vehicle idling, watering to suppress dust (if/as necessary), and the use of temporary construction entrances would be implemented to reduce potential impacts.

Operations

Because of the location of the project site, existing air quality conditions, the magnitude of anticipated air emissions, the permitting of such emissions, the controls that would be implemented during operations, and compliance with applicable emission standards, impacts on air quality as a result of operations of the proposed project would be direct, long term, and minor.

The proposed facility is not considered a new major stationary source, because it is not one of the 28 listed facility types, nor does it have the potential to emit 250 tons per year of a regulated NSR pollutant. ICL would apply for a minor or synthetic minor operating permit from the MDNR. The operation of the proposed facility would result in the estimated total emissions presented in Table 7. The proposed facility is designed to make LFP CAM as discussed in Chapter 2. The operating production steps of the product would result in off-gases and PM. Controls that would be implemented during project operations to minimize potential air quality impacts include:

- High efficiency particulate air filters/dust collectors
- Central vacuum and filter system
- Post-thermal combustion chamber

Table 7. Potential Estimated Emissions from the Proposed Project

Air Pollutant	Potential Emissions (tons per year)
Nitrogen oxides	15.7
Carbon monoxide	31.7
Volatile organic compounds	1.5
PM	4.7
PM10	3.7
Carbon monoxide	31.7
Total hazardous air pollutants	0.3

PM particulate matter
PM10 particulate matter of a diameter of less than 10 micrometers
NOTE: The totals in the table above represent the total potential to emit from the site (permitted and permit exempt units); actual emissions are expected to be under these totals. All regulated sources of emissions (e.g., facility boilers) are subject to specific permitted emission levels.

3.2.8.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to air quality would occur as existing conditions would remain unchanged.

3.2.9 Greenhouse Gases

GHGs play a pivotal role in the Earth's atmospheric dynamics, effectively trapping heat and contributing to the phenomenon of global climate change (USEPA 2023c). The Intergovernmental Panel on Climate Change states that multiple lines of evidence point to continued climate change. These lines of evidence collectively indicate that human activities, particularly those resulting in

increasing levels of GHGs, are a significant contributing factor to this change (IPCC 2021). The key GHGs are carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. The burning of fossil fuels, including diesel, gasoline, and natural gas, emits carbon dioxide and methane.

The CEQ issued interim guidance on January 9, 2023, relevant to the consideration of GHGs and climate change effects of proposed actions under NEPA (CEQ 2023). The guidance advises federal agencies to consider "(1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts."

3.2.9.1 Affected Environment

The City of St. Louis has collected GHG inventories for the years 2005, 2010, 2013, 2015, and 2018, with 2005 serving as the baseline year. The inventories identify GHG sources associated with activities of St. Louis residents, businesses, and institutions. In 2018, the City of St. Louis community was responsible for the GHG emissions of nearly 6.6 million metric tons of carbon dioxide equivalent (mtCO2e). Between 2005 and 2018, total community GHG emissions decreased by 1,506,516 mtCO2e (19% reduction), while the City experienced an overall decrease in population of nearly 7%. As a result, per capita GHG emissions decreased from an average of 24.9 mtCO2e per capita to 21.7 mtCO2e per capita (City of St. Louis 2019).

Although overall emissions have decreased, the proportion of GHG sources has not changed much since 2005. In 2018, the Commercial sector accounted for the largest portion of emissions (41%), followed by the Residential sector (24%), Transportation sector (17%), and the Industrial sector (15%). Roughly 79% of community GHG emissions came from buildings within the City's footprint, while 17% came from various modes of transportation. The consumption of electricity remains the largest community emission source, accounting for approximately 59% of emissions, followed by transportation fuels (gasoline and diesel) at 17%, and natural gas use at 23% (City of St. Louis 2019).

ICL's current Environment, Safety, Health, and Security (ESH&S) Policy is correlated with ICL's sustainability vision for 2030, which includes ambitious environmental targets, designated to enhance ICL's contribution to global sustainable development. These targets include (among else): a 3% year-on-year (YOY) reduction in ICL's global GHG emissions; a 20% YOY increase in total renewable energy consumption (replacing direct and indirect fossil fuel usage); and a 30% YOY increase in global circular economy initiatives focused on re-usage of main waste streams. Site-specific targets are determined based on materiality analysis of the company's global operations footprint, with each site acting to reduce its relevant impacts.

3.2.9.2 Environmental Consequences

3.2.9.2.1 Proposed Action Alternative

Construction

Construction of the proposed project would result in direct, temporary, minor impacts by temporary GHG emissions from sources including the transportation of equipment and materials, use of vehicles and construction machinery, and curing of concrete. Current online resources allow for

very general estimates for order of magnitude of GHG emissions for construction projects, based on input of known project parameters. One of these websites, http://buildcarbonneutral.org, provides these rough estimates using basic input parameters: building size (above and below ground), primary structural materials, ecoregion within the United States, prior land use, and current and planned vegetation type (or unvegetated). With this information, this tool estimates the embodied energy and subsequent carbon amounts released during construction. The measurements account for building materials, processes, and carbon released due to ecosystem degradation or sequestered through landscape installation or restoration. Based on a 272,000-square-foot building footprint, constructed entirely above ground, comprised of concrete and steel, along the border of the Great Plains and the eastern temperate forest ecoregion, where 827,640 square feet of existing soil/debris would be replaced with about 206,910 square feet of landscaping (25% of the site) and the remainder being impervious surface, this tool estimates net emissions of 6,898 mtCO2e from the construction of the proposed project.

Operations

Overall, GHG emission reductions would be realized through the manufacturing of LFP within the United States rather than importing it from another country. Additionally, market displacement of gasoline and diesel-powered vehicles through battery production for U.S. EV manufacture is expected to realize GHG emissions reductions greater than GHG emissions from facility operations. Therefore, the impact to GHG emissions from the proposed project is considered indirect, long term, and net-positive.

LFP production is an energy intensive process due to the particle isolation technique and the sintering process. During operations (once at full capacity), the proposed project would use approximately 219 GWh annually, with a peak usage of 22 megawatt hours. A new, electrical substation would be constructed on-site to support the electrical needs as discussed in Section 3.2.13.

Using the USEPA Greenhouse Gas Equivalencies Calculator (USEPA 2023c), the approximate carbon dioxide emissions from electricity use for project operations, assuming 75% of the electricity is generated from fossil fuel sources (as is now in St. Louis), would be 71,054 mtCO2e (156,646,405 pounds) per year.

When operational, the traffic to/from the project site would include about 150 cars per day (not including up to 20 trucks per day either bringing in raw materials or loading finished goods). The approximate GHG emissions from 150 gasoline-powered passenger vehicles driven for one year (assuming no EVs), would be 672 mtCO2e (1,481,107 pounds) per year (USEPA 2023c).

3.2.9.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to GHGs would occur as existing conditions would remain unchanged.

3.2.10 Socioeconomics

3.2.10.1 Affected Environment

The project site is located in the City of St. Louis, St. Louis County, MO at the eastern border of Missouri. It is located near the confluence of the Mississippi and the Missouri rivers. In 2020, the city proper had a population of 301,578, while St. Louis County had a population of 1,000,000 people (U.S. Census Bureau 2020).

The project site is located within Census Tract 1096, a Low-Income Community Opportunity Zone, one of 27 in St. Louis (Opportunity Zones Database 2024). As of the 2020 census, the census tract covers 1.1 square miles and has a population of 3,185. The site is also located in the Carrie Avenue Community Improvement District (CID). CIDs are local special taxing districts that collect revenue within their designated boundaries to pay for special public facilities, improvements, or services. They are nonprofit, public-private partnerships. Although approved by the local municipality, a CID is a separate political subdivision with the power to govern itself and impose and collect special assessments or additional property and sales taxes. It may also generate funds by fees, rents, or charges for district property or services and through grants, gifts, or donations. The City of St. Louis shows the project site belonging to a neighborhood called North Riverfront and shows only five housing units associated with this neighborhood (City of St. Louis 2020).

In 2020, the population of Census Tract 1096 was 3% White, 94% Black, 2% multi-racial, and 1% Hispanic or Latino (Census Reporter 2024). Comparison with St. Louis County is shown in Table 9.

Table 8. Racial Composition of St. Louis County and Census Tract 1096

Race	St. Louis County (Percent)	Census Tract 1096 (Percent)
White (Non-Hispanic)	64.3	3
Black	25.2	94
Native American	0.2	0
Asian	5.0	0
Multi-Racial	2.5	2
Hispanic or Latino	3.3	1

Source: City of St. Louis 2020; Census Reporter 2024

The economy of St. Louis County employs 502,000 people. The largest industries are Health Care & Social Assistance (78,722 people), Retail Trade (51,339 people), and Educational Services (50,719 people) (Federal Reserve Bank of St. Louis 2023). The median household income was $72,562 in 2020, with an unemployment rate of 3.2% in 2023. However, about 10.5% of the county population lives in poverty (U.S. Census Bureau 2020). In comparison, median household income of Census Tract 1096 was $32,000. The census tract falls within the definition of a DAC with higher than regional rates of unemployment and poverty.

3.2.10.2 Environmental Consequences

3.2.10.2.1 Proposed Action Alternative

Construction and Operations

The proposed project would have direct, short- and long-term, beneficial impacts on employment opportunities within the St. Louis region, especially the Census Tract 1096 area. Construction of the LFP CAM manufacturing plant is anticipated to take approximately 2 years. The project would create at least 500 temporary union construction jobs.

ICL is a major employer in this region and the proposed project would expand its workforce by 150 positions that would be production union jobs with benefits such as healthcare, workforce training, and other employer-funded benefits.

A large opportunity exists to improve the labor utilization rate by providing good paying manufacturing jobs within the local community. It is anticipated that all construction would be performed by local firms in the community including major participation by underrepresented groups.

3.2.10.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No socioeconomic impacts would occur as existing conditions would remain unchanged. New employment opportunities would not be created.

3.2.11 Environmental Justice

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, supported by EO 14008, *Tackling the Climate Crisis at Home and Abroad*, EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, and supplemental and accompanying guidance, directs federal agencies to identify and address disproportionately high and adverse environmental and human health conditions in minority and low-income communities.

President Biden established the Justice40 Initiative in EO 14008. Building on EO 12898, the Justice40 Initiative established a goal that at least 40% of the benefits of certain federal investments, including investments in clean energy, energy efficiency, and clean transit, flow to DACs. To assist agencies with identifying DACs, the CEQ developed the Climate and Economic Justice Screening Tool (CEJST), which identifies census tracts as disadvantaged based on consideration of environmental and socioeconomic burdens (CEQ 2024).

DOE concurrently published a list of the Department's programs covered by the Justice40 Initiative because the programs incorporate investments that can benefit DACs (Office of Management and Budget [OMB] Memorandum 21-28 [M-21-28]). Within the Manufacturing and Energy Supply Chains Office, DOE identified the Battery Manufacturing and Recycling Grants and the Battery Material Processing Grants programs as Justice40 covered programs (Section IIAii Clean Energy and Energy Efficiency within OMB M-21-28).

Additionally, DOE developed a DAC Reporter to define and identify DACs for the purposes of Department programs. The DAC Reporter identifies DACs based on the cumulative burden the community faces from 36 burden indicators. The top 20% of communities within a state are designated as disadvantaged and interested parties can use the DAC Reporter to generate community specific reports that include the results for each of the 36 burden indicators. Nationwide, 13,581 communities have been identified as disadvantaged by the DAC Reporter.

3.2.11.1 Affected Environment

The proposed project is located within a census tract that has been designated as disadvantaged in the DAC Reporter (DOE 2024) and the CEJST (CEQ 2024).

The DAC Reporter ranked the cumulative burden faced by the census tract as being in the top 96% of communities in the State of Missouri, well above the 80% threshold required for a community to be designated as disadvantaged. Adjacent census tracts in Missouri, as well as across the Mississippi River in Illinois are also designated as disadvantaged by the DAC Reporter (DOE 2024). Indicators for the census tract include, but are not limited to the following: single parent, homes built before 1960, no internet access, no vehicle, disabled population, low-income population, housing costs, climate hazards loss of life estimates, housing costs, cancer risk, and energy burden (DOE 2024).

The CEJST also identified the census tract occupied by the project site as disadvantaged because it meets more than one burden threshold as well as the associated socioeconomic threshold. The burden thresholds that are currently met by the census tract occupied by the project site include those related to climate change (expected population loss rate), energy (energy costs), human health conditions (asthma and diabetes), housing conditions (housing costs and lead paint), legacy pollution (proximity to risk management plan facilities), water and wastewater (underground storage tanks and releases and wastewater discharge), and workforce development (low median income) (CEQ 2024).

3.2.11.2 Environmental Consequences

3.2.11.2.1 Proposed Action Alternative

Construction and Operations

The proposed project would have a direct, beneficial long-term impact on environmental justice and equity. During the environmental justice evaluation, potential high and adverse impacts from the proposed project's programs, policies, and activities must be identified and addressed in order to prevent minority and low-income populations within the affected area from being disproportionately affected. ICL will adhere to EOs 12898, 14008, 14096 and their accompanying and supplemental guidance. Plans to comply are detailed below.

DOE's selection of the proposed project is consistent with the provisions of EO 12898 and EO 14008, aligns with DOE's eight policy priorities, and advances the DOE's progress toward the goal established by the Justice40 Initiative that at least 40% of the benefits of certain types of federal investment flow to DACs. The proposed project supports DOE's stated environmental justice policy priority to increase clean energy jobs, the job pipeline, and job training for individuals from DACs. ICL strives to increase environmental justice efforts by facilitating disadvantaged and

marginalized communities' involvement in environmental decision making through incorporation of elements in EO 14008. ICL aspires to attract and maintain a diverse workforce that reflects St. Louis County. Goals include increased awareness and access to environmental careers in the sciences and engineering in minority and underserved communities to promote diversity in the labor workforce.

As discussed in Section 3.2.10, ICL expects to create approximately 150 permanent high paying union professional positions along with at least 500 temporary union construction positions. ICL is committed to continuing to promote benefits for communities in the greater St. Louis area, including that 40% of those benefits flow to local DACs. To facilitate that process, ICL developed an Equity Plan (ICL 2023; Appendix 5) in which they have detailed how the Justice40 initiative would be implemented in both the construction and operations portions of the proposed project. The Equity Plan is detailed with milestones/measurables for each budget period regarding quality jobs and community benefits. Highlights of the plan include the following:

- Quality jobs with attractive full benefit package including insurance, life and disability, paid vacation, and many other components
- Flexibility to employees desiring day, evening, or night positions as per ICL's shift work policy
- Recruitment and retention of a significant number of employees from communities of need
- Commitment to minimize harm to the environment
- Commitment to job retention
- History of Diversity, Equity, Inclusion, and Accessibility (DEIA) leader in the local community; ICL is committed to match or exceed its current DEIA demographics for future positions created by the proposed project. Over 35% of ICL's employees are from traditionally underrepresented groups, which is a higher percentage than the percent employed by other employers in the St. Louis region.
- Partnering with ConstructReach (constructreach.com) through a grant of $75,000 as an outreach to the local community. As part of the partnership, ConstructReach is assisting ICL in the following ways:
  - Developing a formalized Paraprofessional and Manufacturing Internship/Co-Op program with Professional Development curriculum in St. Louis
  - Developing program metrics
  - Creating social media content for jobs
  - Evaluating ICL's current recruitment and onboarding process
  - Assisting with education outreach
  - Creating a framework to execute Diversity, Equity, Inclusion, and Belonging initiatives
  - Providing Internal Manager training
  - Consulting and assisting with developing internal framework to assess individual and team performance regarding workforce development and diversity
  - Preparing an annual social responsibility report

In summary, the proposed project would not result in adverse and disproportionate impacts to minority or low-income communities. The proposed project is located in an existing industrial area. Further, from the initial stages of site selection to present, ICL has and will continue to comply with all aforementioned executive orders directing environmental justice concerns in NEPA analysis. Considering ICL's history of being a DEIA leader in the community, partnership with ConstructReach, and their Equity Plan for implementing the Government's required Justice40 Initiative, it can be concluded that the proposed project would result in beneficial short- and long-term benefits to DACs in the local area.

3.2.11.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No beneficial environmental justice impacts would occur as existing conditions would remain unchanged.

3.2.12 Regulated Waste (Solid and Hazardous Wastes)

3.2.12.1 Affected Environment

Solid and hazardous wastes are regulated under RCRA. The MDNR has been authorized by the USEPA to implement and regulate a RCRA solid and hazardous waste management program. The project site has been designated a Hazardous Waste Treatment, Storage and Disposal (TSD) Long-Term Stewardship site regulated by MDNR.

According to the EDR report provided in the Phase I Environmental Site Assessment (ERM 2024a), the site was identified on the Missouri Voluntary Cleanup Program, Missouri Access Use Limitation, and the Missouri Site Management and Reporting System databases. The site was enrolled into the Voluntary Cleanup Program on 23 January 2009 following the results of a preliminary assessment that identified petroleum, heavy metal, volatile organic compound, and polycyclic aromatic hydrocarbon impacts to both subsurface soils and groundwater above the lowest risk-based target levels (RBTLs) in the Missouri Risk-Based Corrective Action (MRBCA) guidance. According to limited available public information, impacted soil was reportedly removed from two locations while an underground storage tank and associated impacted soil were removed from another location. A risk assessment in accordance with the 2006 MRBCA guidance was performed, and it was determined that lead and benzo(a)pyrene remain present in soils above residential RBTLs. The Phase I Environmental Site Assessment (ERM 2024a) also documents the potential of environmental contamination migrating onto the site from the surrounding properties. Groundwater flow is anticipated to be generally from west to east, which would indicate that the property is possibly hydrogeologically downgradient of multiple historic manufacturing facilities. Given the long industrial history of the surrounding area, it cannot be ruled out that potential impacts to subsurface soils and groundwater have occurred at these locations, which has the potential to have migrated onto the project site.

On 18 June 2018, an environmental covenant between North Riverfront Investors, LLC (Owner) and MDNR was issued and on 1 August 2018, a Certificate of Completion was issued by MDNR with no further actions required under the condition that the site use remain for industrial/commercial purposes. It should be noted that according to the Missouri E-START database, contaminants of concern still present on-site include benzo(a)pyrene, lead, heavy

metals, and SVOCs in subsurface soils and benzo(a)pyrene in surface soils. Thus, the site is identified with a Long-Term Stewardship status. It is currently listed as the "Carrie Avenue Rail Yard Lot 2" site, a Long-Term Stewardship site, under MDNR oversight. There is an Environmental Covenant on the property, restricting its use to non-residential use only.

Additionally, there are multiple piles of debris and refuse at the project site. This is likely due to illegal dumping. Demolition debris at the site may contain associated environmentally-related material (i.e., asbestos-containing material, lead-based paint) from undocumented activities that have occurred at the site.

3.2.12.2 Environmental Consequences

3.2.12.2.1 Proposed Action Alternative

Construction

The construction phase of the proposed project is expected to generate negligible direct, temporary impacts from solid waste and construction debris. Solid waste and sanitary waste generated during construction activities would generally be limited to common construction-related waste streams. RCRA Subtitle D non-hazardous solid waste generated by ICL would be collected and disposed of offsite by private waste management contractors. In state or out-of-state RCRA Subtitle D non-hazardous solid waste landfills or recycling facilities would have the capability and capacity to accept these wastes, and therefore, there would be no impact associated with the disposal of these materials. In addition, ICL and its hired contractors would implement BMPs to minimize the quantity of non-hazardous solid waste generated, as appropriate, during construction and to ensure proper handling of materials.

Due to low-level contamination found in site soils and groundwater at the project site, any excavated soils or purged groundwater would be characterized and disposed at a permitted facility.

Operations

Operations are expected to generate negligible direct, long-term impacts from regulated solid and hazardous waste. Additional RCRA Subtitle D non-hazardous solid waste generated by ICL would be minimal and would continue to be collected and disposed of off-site in permitted facilities by private waste management contractors. Waste generated by LFP production would include approximately 22 pounds per day or less than 4 tons per year of LFP waste powder. Wastes generated during the operation of the LFP plant would include sludge (semisolid material reclaimed from spray driers) and dust collected during the milling process. The solid material would be LFP and the liquid component would be water. Both sludge and dust have historically been recycled by utilization as additives in cement manufacturing. ICL plans to engage with local concrete mixers about utilizing both the sludge and dust materials within their process. It is expected the sludge will be no more than 1% of total volume produced and the dust to be significantly less than 1%. Lithium, iron, and phosphate are currently used within concrete operations and would not require any permitting or regulation changes to use. Hazardous wastes generated would be handled under a new RCRA Subtitle C permit. ICL would apply through MDNR for a Small Quantity Generator permit for the new facility.

3.2.12.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No waste management impacts would occur as existing conditions would remain unchanged.

3.2.13 Utilities and Energy Use

3.2.13.1 Affected Environment

The proposed project is located within the service area of the City of St. Louis public services, which provides the City of St. Louis' residents with water, wastewater treatment, stormwater management, and refuse collection. AmerenUE provides gas and electricity in the area. AmerenUE currently has a 10,000-megawatt (MW) capacity, with about 75% of electricity originating from fossil fuels (AmerenUE 2023).

The City of St. Louis Water Division provides current water and wastewater services to the project site. MSD serves the wastewater and stormwater needs of St. Louis City and 87% of St. Louis County. MSD owns and operates seven wastewater treatment facilities treating an average flow of 350+ million gallons of wastewater per day. The City of St. Louis Ordinance #66777 prohibits the use of groundwater beneath the City of St. Louis as a potable water supply and prohibits the installation of potable water supply wells. The ordinance acknowledges that many commercial and industrial properties within the City are underlain by groundwater of poor quality, and that is often infeasible to restore groundwater below the City to drinking water standards. This ordinance applies to the project site.

The City of St. Louis Water Division maintains two water treatment plants that draw water from the area's two main rivers. The Chain of Rocks Plant is located on the Mississippi River about 11 miles north of the center of the City and about 5 miles south of the confluence of the Missouri and Mississippi rivers. The Howard Bend Treatment Facility is located on the Missouri River, 37 miles above the confluence of the Missouri and Mississippi rivers and 15 miles west of the City limits. Combined, these two plants have the capacity to treat and distribute 380 million gallons of water per day (City of St. Louis 2023b).

3.2.13.2 Environmental Consequences

3.2.13.2.1 Proposed Action Alternative

Construction

Construction of the proposed project would have direct, short-term, negligible impacts on utilities, including electricity, water, gas, and sewer. During the construction period, contractors would rely on portable generators, water tanks, and portable bathrooms to accommodate increases in the demand for water, electricity, and sewer from workers and equipment at the project site. Once grading is completed, contractors would build utility lines from the new structures to existing services onsite. Construction of new utilities would include the installation of a new electrical substation and stormwater detention system as shown on Figure 4. Sewers would experience negligible impacts during construction as per previous discussions of BMPs in Sections 3.2.2.2 and 3.2.3.2.

Operations

Proposed project operations would have direct, long-term minor adverse impacts on local utilities and energy use, as the industrial processes involved would increase the demand for electricity, water, and gas at the project site. Electrical usage at the new plant would be about 219 GWh per year. Increased demand for electricity would be met by a new electrical substation proposed for the new plant. The substation would be located adjacent to the new plant, would occupy about 12,000 square feet, and have a capacity of 45 MW. Water usage would be about 161,000 cubic meters per year and would be provided by the City of St. Louis.

Process water from heating/cooling tanks would be circulated in closed loop systems to minimize usage. Wastewater that needs to be discharged would be permitted for discharge to the MSD (POTW). The vast majority of the water used would be emitted as steam during the spray drying process.

However, since about 75% of the 19 acres would be converted from a permeable (soil and fill) area to an impermeable surface, stormwater runoff is expected to increase. A stormwater detention pond would be constructed as shown on Figure 4, with other areas around the plant constructed to minimize stormwater runoff as well. Stormwater from the ICL facility would be routed through the existing combined sewer systems to the MSD POTW. With the use of the stormwater detention system, storm sewers would experience minor impacts once the plant becomes operational.

3.2.13.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to utilities or energy use would occur as existing conditions would remain unchanged.

3.2.14 Transportation and Traffic

3.2.14.1 Affected Environment

The project site is located within an existing commercial/industrial area, approximately 1,100 feet east of Interstate 70. Freight rail lines run along the western (Bulwer Avenue) and eastern (E. 3rd Street) boundaries of the property (Figure 3). The nearest airport is a regional airport, the St. Louis Downtown Airport, located approximately 7.5 miles to the south. The St. Louis Lambert International Airport is located approximately 8 miles northwest.

Traffic volume measured in 2023 on Adelaide Avenue adjacent to the project site includes a westbound average annual daily traffic (AADT) of 5,726 and an eastbound AADT of 5,726 (MODOT 2023). The traffic counts include a total of 458 single-unit trucks and 110 combination semi-trailer trucks. Traffic volume measured in 2023 on Interstate 70 at the Adelaide Avenue exit totals 93,938 (AADT) for both directions, including 2,536 single-unit trucks and 14,486 combination semi-trailer trucks (MODOT 2023).

There are three rail lines that cross Adelaide Avenue at the project site; two along E. 3rd Street and one along Bulwer Avenue. Existing train count data from the U.S. Department of

Transportation crossing inventories for the three crossings of Adelaide Avenue identify 12 total day (6 a.m. to 6 p.m.) trains and 14 total night (6 p.m. to 6 a.m.) trains (USDOT 2019 and 2023).

3.2.14.2 Environmental Consequences

3.2.14.2.1 Proposed Action Alternative

Construction

Direct, short-term, moderate adverse impacts to traffic and transportation are expected during the construction phase of the proposed project. Construction of the facility is anticipated to last for up to 24 months including installation of temporary facilities such as dirt access roads and staging areas for construction equipment. During the construction period at least 500 jobs would be generated, and construction vehicles and construction workers' vehicles would add to existing local traffic.

Construction is anticipated to require an average of approximately 20 to 50 truck trips per day for deliveries and shipments. During concrete pours for the mat foundation system, 80 to 100 concrete trucks per day would be required. Most of the trucks would access the site from Adelaide Avenue. If road closures are necessary, they would be temporary and ICL would minimize closures as much as possible.

Operations

The proposed project would generate a negligible long-term impact to traffic and transportation from anticipated daily rail, truck, and personal-vehicle traffic into and out of the industrial site. One additional train would access the project site; however, in comparison to the existing train traffic, this increase would be negligible. Operations are expected to require approximately 20 truck trips per day for deliveries and outgoing shipments. Trucks would use the established road network to access the industrial site, and these roadways are designed for and currently accommodate industrial truck traffic. Once fully operational, the facility would add approximately 150 new employees, and therefore would increase the number of personal vehicles at the site each day. Personal vehicles accessing the project site are expected to be distributed throughout the day in four shifts with 60 employees on day shift and 30 each of the other three shifts. Due to the existing level of vehicle and truck traffic in the vicinity of the site, the increases due to the proposed project would be negligible.

3.2.14.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to transportation or traffic would occur as existing conditions would remain unchanged.

3.2.15 Public and Occupational Health and Safety

3.2.15.1 Affected Environment

ICL operates an active industrial plant approximately 13 miles south of the site considered for this proposed project. The current facility operates 24 hours per day, 7 days per week, employing a unionized workforce of 140 employees, producing 200+ million pounds of phosphorus-based

chemicals, such as monocalcium phosphate, sodium aluminum phosphate, and sodium phosphate since 2005. The major raw materials currently used at the operational plant are the same or similar to those required at the proposed facility and include phosphoric acid, and various alkali and alkaline earth hydroxides and phosphates.

ICL reports materials onsite at their current plant annually through the Federal Emergency Planning and Community Right-to-Know Act (EPCRA). MDNR is authorized by USEPA to administer EPCRA in Missouri; the EPCRA Report is available to the public upon request.

Public and occupational health and safety considerations are managed at their current facility following ICL's internal ESH&S Policy, consistent with numerous regulatory permitting requirements addressing factors relevant to public and occupational health and safety.

ICL maintains internal guidance documents and training for the following topics, within its ESH&S Program: bloodborne pathogens, confined spaces, electrical safety, lockout/tagout, contractor safety, fire prevention, hazard assessment, welding cutting and brazing, personal protective equipment, hearing conservation, hazard communications, carbon monoxide monitoring, fall protection and working at heights, medical surveillance, hot work, extreme temperature, and machine guarding.

ICL requires all employees to participate in the company's established health, safety, and security training, which includes specialized training for individuals handling hazardous materials and wastes. ICL maintains a visible emergency contact list and close coordination with local first responders (e.g., fire department and law enforcement), and the facility maintains compliance with local, state, and federal regulatory requirements including OSHA, EPCRA, Tier II reporting, and RCRA. Under their current RCRA permit, ICL maintains a current Contingency Plan for implementation in the event of an unintended release.

3.2.15.2 Environmental Consequences

3.2.15.2.1 Proposed Action Alternative

Construction and Operations

Risks to public and occupational health and safety from proposed project construction and operations are expected to be minor, direct and indirect, and temporary (construction) and long term (operations). Prior to construction, ICL would provide for site security, with fencing, cameras, and access control, as appropriate. ICL would enact the same ESH&S Policy, as described above, implemented at their current facility for the proposed plant.

Numerous regulatory permitting requirements and BMPs governing proposed project construction and operations address factors relevant to public and occupational health and safety. These include air quality (Section 3.2.8), GHGs (Section 3.2.9), water quality (Section 3.2.3), noise and vibration (Section 3.2.7), regulated waste (Section 3.2.12), and transportation and traffic (Section 3.2.14).

Existing ICL corporate policies and future updates thereof, would further address relevant health and safety risk factors and would be followed throughout construction and operations, as discussed above under Affected Environment. ICL anticipates minor differences in potential hazards during construction versus operation of the plant. Construction workers could be exposed

to low level chemicals of concern from contaminated soil and groundwater as described in Section 3.2.12.1. The Contractor would take necessary precautions for potential exposure to construction personnel and should verify that other OSHA-related health and safety requirements for their on-site personnel would be met.

During operations, raw materials would include lithium carbonate, lithium hydroxide, and iron powder. Process safety review would occur as per current standard operating procedures. All processes would be evaluated by process safety hazard review prior to plant commissioning. Materials used on-site would be subject to EPCRA and Tier II reporting. Under ICL's new RCRA permit for the new plant, ICL would update its current Contingency Plan for implementation in the event of an unintended release. ICL plans to use these raw materials in a process not yet utilized in the United States. USEPA is reviewing the process under the Toxic Control and Substances Act Section 5(a), Significant New Use Rules.

Table 9 shows raw materials that would be stored and utilized in the plant processes and Table 10 shows the planned finished good storage. Quantities are best estimates at the time of writing.

Table 9. Raw Materials Required for Proposed Project

Chemical Name	Anticipated Location (Maximum Weight in pounds)	Anticipated Days on Hand Target	Average Daily Amount (Weight Range in pounds)
Phosphoric acid	Storage tank (400,000) Rail cars (520,000) WIP (290,000)	2	200,000-1,210,000
Iron powder	SSs in WH (180,000) Silos (3,000) WIP (93,000)	2	80,000-303,000
Lithium hydroxide	SSs in WH (135,000) Silos (51,000) WIP (29,000)	2	52,000-215,000
Fructose	SSs in WH (45,000) WIP (19,000)	2	20,000-64,000
Lithium carbonate	SSs in WH (45,000) Silos (51,000) WIP (10,000)	2	52,000-215,000

SS supersack; these hold from 500 to 4,000 pounds of material and are made of woven polypropylene fabric which is durable and moisture resistant.
WH warehouse
WIP work-in-process packaging

Table 10. Planned Finished Good Storage

Flexible Intermediate Bulk Container	Total Quantity (pounds)
SSs in WH	Maximum 260,000; Target 0
SSs on trailers on-site	Maximum 220,000; Expected 130-220
WIP	Maximum 150,000; Expected 75

SS supersack; these hold from 500 to 4,000 pounds of material and are made of woven polypropylene fabric which is durable and moisture resistant.
WH warehouse
WIP work-in-process packaging

The projected water, energy, and nitrogen usage is detailed in Table 3. Nitrogen would be generated on-site to minimize environmental impact of transporting liquid nitrogen.

Accidents and Intentional Destructive Acts

During proposed project construction and operations, ICL would implement security procedures to protect the site's personnel, environment, and infrastructure from reasonably foreseeable accidental and intentional destructive acts, which may be possible but are considered very unlikely to occur. Procedures would focus on both prevention and emergency response, predicated on existing environmental, health, and safety protocols in place at ICL's existing facility. Procedures and protocols would also include those previously discussed as part of operations and regulatory compliance. The project site would be surrounded by a perimeter security fence that is monitored by dedicated 24-hour security staff and trained first responders. In addition, the facility would have closed-circuit cameras with focus on critical ingress and egress routes. Security badges would regulate access to the facility, and facility management staff would work in full and immediate cooperation with emergency responders and managers from outside the facility, as appropriate.

3.2.15.2.2 No Action Alternative

Under the No Action Alternative, the DOE would not provide funding to ICL for the purpose of implementing the proposed project. No impacts to health and safety would occur as existing conditions would remain unchanged.

3.2.16 Cumulative Impacts

Cumulative impacts are potential effects on the environment from the incremental impact of the proposed project when added to other past, present, and reasonably foreseeable future actions undertaken by other agencies (federal or nonfederal) or persons (40 CFR Part 1508.1 (g)). The existing setting, as presented for the proposed project takes into account past actions, while the present and future actions that may contribute to a cumulative effect were identified through a review of active project lists and planning documents from the Missouri Department of Transportation, City of St. Louis, and additional information from ICL. The review identified two present and reasonably foreseeable future projects in the vicinity of the project location:

- Route H Pavement Resurfacing – The Missouri Department of Transportation has a resurfacing project set for Route H (Hall Street) in the city of St. Louis from Adelaide Avenue to where Route H becomes Riverview. The project is set to start in 2024 and

should be complete by summer 2025. The Missouri Department of Transportation is working with the city of St. Louis to include some methods to reduce speed and increase safety along the corridor. These include reducing the number of lanes through this section of Route H, adding dedicated left turn lanes at several intersections along the corridor, and placing concrete medians between traffic going north and heading south. Designated left turn lanes are included in the design to allow traffic turning left to pull out of the main flow, while waiting for space to cross the lanes. Through traffic can still continue along the corridor. This lane reduction also makes room for better drainage, which can reduce standing water on the roadway, which happens frequently, even during moderate rainfalls (MODOT 2022).

- Proctor & Gamble (P&G) Company expansion - P&G, a global leader in the manufacturing of a wide variety of consumer goods products, will expand their current operations in St. Louis North Riverfront area. P&G is currently located at 169 E. Grand Avenue, about 1 mile southeast of ICL's proposed project site. The company's expansion includes the construction of a new warehouse, addition of new equipment, the conversion of an existing warehouse to a manufacturing facility and will create 100 new jobs (Missouri Department of Economic Development 2024).

There are no additional known plans for development in the vicinity of the proposed project. The areas adjacent to the proposed project site are designated as BIDA in the Strategic Land Use Plan of the St. Louis Comprehensive Plan (City of St. Louis 2023b). BIDA are areas where new business/industrial uses or campuses will be encouraged. Industrial properties are available for development nearby; however, no reasonably foreseeable projects were identified.

DOE 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 Proposed Action and identified resources that may be affected by both the Proposed Action and other projects in the region. Based on this review, the following resources were evaluated for cumulative impacts:

- Geology, Topography, and Soils
- Surface Water and Groundwater
- Aesthetics and Visual Resources
- Noise and Vibration
- Air Quality
- GHGs
- Socioeconomics
- Environmental Justice
- Regulated Wastes
- Utilities and Energy Use
- Traffic and Transportation
- Public and Occupational Health

3.2.16.1 Geology, Topography, and Soils

Cumulative impacts from the proposed project to geology, topography, and soils are not expected. The Route H Resurfacing and the P&G expansion projects may require some land disturbance and grading, but it would likely be minimal.

3.2.16.2 Surface Water, Floodplains, and Groundwater

Cumulative impacts to floodplains would not occur as the proposed project and the reasonably foreseeable projects are not located in floodplains. Cumulative impacts from the proposed project to surface water and groundwater are not expected. It is possible, that the construction of the proposed project, the Route H Resurfacing, and the P&G expansion projects could overlap temporally; however, the projects would require a project-specific SWPPP to protect surface water during construction.

3.2.16.3 Aesthetics and Visual Resources

Cumulative impacts to aesthetics and visual resources are not expected as the proposed project would likely improve the aesthetics of the site and surrounding area, by removing trash and debris and constructing a state-of-the-art facility.

3.2.16.4 Noise and Vibration

The proposed project could overlap temporally with the Route H Resurfacing and the P&G expansion projects and some cumulative noise impacts during construction could occur. Construction noise and vibration would primarily be limited to the immediate vicinity of the projects and would be short term and intermittent. No residential areas are adjacent to the projects and cumulative impacts to sensitive receptors are not anticipated.

3.2.16.5 Air Quality

The proposed project could overlap temporally with the Route H Resurfacing and the P&G expansion projects and some cumulative air impacts during construction could occur. Air quality impacts from construction would primarily be limited to the immediate vicinity of the projects and would be short term and intermittent. BMPs would be implemented to minimize dust and particulate matter. No residential areas are adjacent to the projects and cumulative impacts to sensitive receptors are not anticipated.

3.2.16.6 Greenhouse Gases

In addition to direct and indirect sources of atmospheric emissions, cumulative emissions associated with the proposed facility are reasonably foreseeable from offsite combustion associated with electrical generation, mobile-source and rail fuel combustion, and stationary source emissions associated with regional suppliers, manufacturers, and vendors near the facility. Although the extent of cumulative GHG emissions cannot be accurately quantified, for each of the cumulative-source emissions categories, regulatory requirements, including the CAA and Missouri State Statute, constrain emissions sources, based on public health considerations.

Again, the proposed project would foster the expansion of EV adoption, effectively counterbalancing emissions produced by gasoline- and diesel-powered vehicles' exhaust and leading to a substantial reduction in nationwide GHG emissions—a significant driver of climate change.

3.2.16.7 Socioeconomics

As stated in Section 3.2.10.2, the proposed project would have a positive environmental impact on socioeconomics. Therefore, it is concluded that impacts from the proposed project when combined with other past, present, and reasonably foreseeable future actions, would have no new or increased negative impacts on socioeconomics within the project boundary or surrounding area beyond what has already been experienced.

3.2.16.8 Environmental Justice

Construction and operation of the proposed LFP CAM plant would result in beneficial impacts to environmental justice in the form of quality jobs and community benefits as discussed in Section 3.2.11.2 and Appendix 5. The Route H Resurfacing project would also benefit the area by improving infrastructure and increasing safety. The P&G expansion project would also benefit the area by creating additional jobs. Adjacent areas are designated as areas where new business/industrial uses or campuses will be encouraged by the City (City of St. Louis 2023b). If additional economic growth were to occur, cumulative beneficial impacts to environmental justice could be realized.

3.2.16.9 Regulated Wastes

Construction and operation of the proposed LFP CAM plant would result in additional nonhazardous wastes when combined with the nonhazardous wastes from the other projects considered in this section; however, after the construction phase, the volume of nonhazardous wastes would decrease. Wastes would be handled in accordance with RCRA Subtitle D and disposed of off-site. Capacity of RCRA Subtitle D landfills in the area is sufficient (USEPA 2023d) such that a cumulative impact from nonhazardous wastes from the proposed project is not expected.

Hazardous waste generated at the new ICL plant would be regulated under RCRA Subtitle C as a Small Quantity Generator. Capacity of RCRA Subtitle C hazardous waste management contractors and disposal sites in the area are sufficient such that a cumulative impact from hazardous wastes from the proposed project is not expected.

3.2.16.10 Utilities and Energy Use

The proposed project is anticipated to contribute incrementally to cumulative impacts affecting utility infrastructure and services. As described in Section 3.2.13.2, the proposed project would increase demand for electricity, the production of wastewater discharged to the MSD, and the demand for treated water from the City of St. Louis Water Division.

The proposed project would convert a permeable (soil and fill) area to an impermeable surface, and stormwater runoff is expected to increase. A stormwater detention pond, as well as other areas around the plant, would be constructed to minimize stormwater runoff. The Route H Resurfacing project is expected to improve stormwater drainage in its immediate vicinity, as lane reductions would allow for better drainage.

3.2.16.11 Traffic and Transportation

As described in Section 3.2.14.2.1, construction and operation of the proposed project would cause a negligible increase in existing traffic in the vicinity. Some construction traffic could overlap temporally with construction traffic for the Route H resurfacing and P&G expansion projects. However, in the long term, the Route H project would provide beneficial impacts to traffic and transportation by increasing safety and stormwater drainage. Employment traffic from operations of the proposed project, combined with the additional employment expected from the P&G expansion project, would not be significant.

3.2.16.12 Public and Occupational Health

Construction and operation of the proposed LFP CAM plant would result in additional public and occupational health hazards; additional hazardous materials would be used and stored onsite. However, with ICL's internal ESH&S Policy, consistent with numerous regulatory permitting requirements addressing factors relevant to public and occupational health and safety such as air quality, GHGs, water quality, noise and vibration, regulated waste, and transportation and traffic, cumulative impacts to public and occupational health from the proposed project are not expected. The Route H Resurfacing project would likely increase public safety as that is the intended purpose of the project.

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CHAPTER 6. LIST OF AGENCIES CONTACTED

DOE coordinated with the following agencies, Tribal Nations, and stakeholders through consultation letters and/or notification of the availability of this EA.

- State Historic Preservation Officer, Missouri Department of Natural Resources
- U.S. Fish and Wildlife Service, Missouri Ecological Services Field Office
- Apache Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Osage Nation
- Peoria Tribe of Indians of Oklahoma
- Quapaw Nation
- Seneca-Cayuga Nation

Appendix 1

Environmental Synopsis

ENVIRONMENTAL SYNOPSIS
Bipartisan Infrastructure Law Battery (BIL) Materials Processing and Battery Manufacturing
DE-FOA-0002678

April 2023

National Energy Technology Laboratory
U.S. Department of Energy
Pittsburgh, PA
Morgantown, WV
Albany, OR

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CONTENTS

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INTRODUCTION

The United States Department of Energy (DOE or the Department) prepared this Environmental Synopsis pursuant to the Department's responsibilities under Section 216 of the DOE's National Environmental Policy Act (NEPA) Implementing Procedures set forth in 10 CFR Part 1021. This synopsis summarizes the consideration given to environmental factors and records that the relevant environmental consequences of reasonable alternatives were evaluated in the process of selecting awardees seeking financial assistance under The Office of Manufacturing and Energy Supply Chains and the Office of Energy Efficiency and Renewable Energy, which jointly issued the Funding Opportunity Announcement (FOA) DE-FOA-0002678 Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing. Projects awarded under FOA-0002678 to be funded, in whole or in part, with funds appropriated by the Infrastructure Investment and Jobs Act[1], also more commonly known as the BIL. The BIL is a once-in-a-generation investment in infrastructure, which will grow a more sustainable, resilient, and equitable economy through enhancing U.S. competitiveness in the world, creating good jobs, and ensuring stronger access to these economic benefits for disadvantaged communities (DAC's). The BIL appropriates more than $62 billion to the DOE[2] to deliver a more equitable clean energy future for the American people by investing in American manufacturing and workers; expanding access to energy efficiency and clean energy for families, communities, and businesses; delivering reliable, clean, and affordable power to more Americans; and building the technologies of tomorrow through clean energy demonstrations.

The BIL will invest more than $7 billion in the batteries supply chain over the five-year period encompassing fiscal years (FYs) 2022 through 2026. This includes sustainable sourcing of critical minerals from secondary and unconventional sources, reducing the need for new extraction and mining; sustainable processing of critical minerals; and end-of-life battery collection and recycling. The activities to be funded under this FOA support BIL Sections 40207 (b) & (c) and the broader government-wide approach to upgrading and modernizing infrastructure, including by strengthening critical domestic manufacturing and supply chains to maximize the benefits of the clean energy transition as the nation works to curb the climate crisis and advance environmental justice. These BIL Sections are focused on:

- Creating and retaining good-paying jobs, where workers are properly classified as employees, free from discrimination and harassment, with a free and fair choice to join, form, or assist a union;
- Supporting inclusive and supportive workforce development efforts to strengthen America's competitive advantage based on innovation, efficiency, and a skilled and diverse workforce up and down the supply chain;
- Ensuring that the U.S. has a viable battery materials processing industry to supply the North American battery supply chain;

1. Infrastructure Investment and Jobs Act, Public Law 117-58 (November 15, 2021).

2. U.S. Department of Energy. November 2021. "DOE Fact Sheet: The Bipartisan Infrastructure Deal Will Deliver For American Workers, Families and Usher in the Clean Energy Future." https://www.energy.gov/articles/doe-fact-sheet-bipartisan-infrastructure-deal-will-deliver-american-workers-families-and-0

- Expanding the capabilities of the U.S. in advanced battery manufacturing;
- Enhancing national security by reducing the reliance of the U.S. on foreign competitors for critical materials and technologies;
- Enhancing the domestic processing capacity of minerals necessary for battery materials and advanced batteries; and
- Ensuring that the U.S. has a viable domestic manufacturing and recycling capability to support and sustain a North American battery supply chain.

The DOE initially selected 21 projects under twelve topic areas of interest (AOI's) and provided cost-shared funding for project definition activities; all of the projects are subject to the completion of project-specific NEPA reviews. FOA-0002678 supports new, retrofitted, and expanded commercial-scale domestic facilities to produce battery materials, processing, and battery recycling and manufacturing demonstrations. As required by section 216, this synopsis does not contain business sensitive, confidential, trade secret or other information that statues or regulations would prohibit the DOE from disclosing. It also does not contain data or other information that may reveal the identity of the offerors.

BACKGROUND

The projects that will result from this FOA are cost-shared collaborations between the government and industry to increase investment in battery materials processing and battery manufacturing projects. In contrast to other federally funded activities, these projects are not federal projects; instead, they are private projects seeking federal financial assistance. Under the FOA, industry proposes projects that meet their needs and those of their customers while furthering the national goals and objectives of DOE. The successful development of battery materials processing and battery manufacturing projects is a key objective of the nation's effort to help mitigate the effects of climate change, gain energy independence, and bolster the domestic supply chain.

Awardees under this FOA would receive assistance using funds appropriated by the Infrastructure Investment and Jobs Act, Public Law 117-58 (November 15, 2021) also known as the Bipartisan Infrastructure Law (BIL). The activities to be funded under this FOA support BIL Sections 40207(b) & (c) and the broader government-wide approach to upgrading and modernizing infrastructure, including by strengthening critical domestic manufacturing and supply chains to maximize the benefits of the clean energy transition as the nation works to curb the climate crisis and advance environmental justice.

The applications reviewed under this FOA were selected for negotiations in October 2022. Twelve topic areas of interest (AOI's) were included in the FOA and each AOI outlined project objectives that were specific to that AOI. The twelve AOI's were separated according to the BIL sections 40207(b)(3)(A) and 40207(c)(3)(A):

Areas of Interest	Title
Battery Material Processing Grants pursuant to Section 40207(b)(3)(A)	
1	Commercial-scale Production Plants for Domestic Separation of Critical Cathode Battery Materials from Domestic Feedstocks
2	Commercial-scale Domestic Production of Battery-Grade Graphite from Synthetic and Natural Feedstocks
3	Commercial-scale Domestic Separation and Production of Battery-grade Precursor Materials (Open Topic)
4	Demonstrations of Domestic Separation and Production of Battery-grade Materials from Unconventional Domestic Sources
5	Demonstrations of Innovative Separation Processing of Battery Materials Open Topic
Battery Component Manufacturing and Recycling Grants pursuant to Section 40207(c)(3)(A)	
6	Commercial-scale Domestic Battery Cell Manufacturing
7	Commercial-scale Domestic Battery Cathode Manufacturing
8	Commercial-scale Domestic Battery Separator Manufacturing
9	Commercial-scale Domestic Next Generation Silicon Anode Active Materials and Electrodes
10	Commercial-scale Domestic Battery Component Manufacturing Open Topic
11	Commercial-scale Domestic Battery Recycling and End-of Life Infrastructure
12	Domestic Battery Cell and Component Manufacturing Demonstration Topic

AOI's 1–3 and 6–11 were directed to commercial level projects. AOI's 4, 5, and 12 were directed to demonstration level projects. Each level had different evaluation criteria and each application was evaluated against the criteria as outlined below:

A. Technical Review Criteria AOI's 1–3, 6–11 (commercial)

Criterion 1: Technical Merit, Project Management, and Impact (30%)

Criterion 2: Commercialization and Market Acceptance (30%)

Criterion 3: Cost Share (10%)

Criterion 4: Qualifications and Resources (10%)

Criterion 5: Equity Plan: Quality Jobs & Community Benefits (20%)

B. Technical Review Criteria AOI's 4, 5, and 12 (demonstration)

Criterion 1: Technical Merit, Project Management, and Impact (40%)

Criterion 2: Commercialization and Market Acceptance (20%)

Criterion 3: Cost Share (10%)

Criterion 4: Qualifications and Resources (10%)

Criterion 5: Equity Plan: Quality Jobs & Community Benefits (20%)

These criteria represented the total evaluation scoring. However, the selection official also considered program policy factors, in making final selections.

As a federal agency, DOE must comply with NEPA (42 U.S.C. §§ 4321 *et seq.)* by considering potential environmental issues associated with its actions prior to deciding whether to undertake these actions. The environmental review of applications received in response to FOA-0002678 was conducted pursuant to Council on Environmental Quality Regulations (40 Code of Federal Regulations (CFR) Parts 1500–1508) and DOE's NEPA Implementing Procedures (10 CFR Part 1021), which provide directions specific to NEPA in the context of procurement and financial assistance actions.

PURPOSE AND NEED

The overall purpose and need for DOE action pursuant to the Office of Manufacturing and Energy Supply Chains in collaboration with the Office of Energy Efficiency and Renewable Energy program and the funding opportunity under the BIL is to accelerate the development of a resilient supply chain for high-capacity batteries by increasing investments in battery materials processing and battery manufacturing projects. The BIL investments in the battery supply chain will include five main steps including: (1) raw material production, (2) materials processing including material refinement and processing, (3) battery material /component manufacturing and cell fabrication, (4) battery pack and end use product manufacturing, and (5) battery end-of-life and recycling. Projects selected are needed to meet the focus of the BIL sections: a) creating and retaining good-paying jobs; b) supporting inclusive and supportive workforce development efforts to strengthen America's competitive advantage; c) ensuring that the United States has a viable battery materials processing industry to supply the North American battery supply chain; d) expanding the capabilities of the United States in advanced battery manufacturing; e) enhancing national security by reducing the reliance of the United States on foreign competitors for critical materials and technologies; f) enhancing the domestic processing capacity of minerals necessary for battery materials and advanced batteries; and g) ensuring that the United States has a viable domestic manufacturing and recycling capability to support and sustain a North American battery supply chain.

DOE intends to further this purpose and satisfy this need by providing financial assistance under cost-sharing arrangements to this project and the other 20 projects selected under this FOA. This project and the other selected projects are needed to maximize the benefits of the clean energy transition as the nation works to curb the climate crisis. These projects would meet the objective.

ALTERNATIVES

The DOE received numerous eligible applications in twelve AOI's. AOI's 1 through 5 are under Battery Material Processing Grants pursuant to Section 40207(b)(3)(A); AOI's 6 through 12 are under Battery Component Manufacturing and Recycling Grants pursuant to Section 40207(c)(3)(A).

Detailed requirements for each AOI are listed in the FOA. Applications were accepted, reviewed, and initial selections were made; all of the projects are subject to the completion of project specific NEPA reviews. AOI's and number of initial selections are listed in the table below:

AOI	AOI Title	Number of initial Selections
1	Commercial-scale Production Plants for Domestic Separation of Critical Cathode Battery Materials from Domestic Feedstocks	4
2	Commercial-scale Domestic Production of Battery-Grade Graphite from Synthetic and Natural Feedstocks	3
3	Commercial-scale Domestic Separation and Production of Battery-grade Precursor Materials (Open Topic)	2
4	Demonstrations of Domestic Separation and Production of Battery-grade Materials from Unconventional Domestic Sources	1
5	Demonstrations of Innovative Separation Processing of Battery Materials Open Topic	1
6	Commercial-scale Domestic Battery Cell Manufacturing	0
7	Commercial-scale Domestic Battery Cathode Manufacturing	2
8	Commercial-scale Domestic Battery Separator Manufacturing	2
9	Commercial-scale Domestic Next Generation Silicon Anode Active Materials and Electrodes	2
10	Commercial-scale Domestic Battery Component Manufacturing Open Topic	1
11	Commercial-scale Domestic Battery Recycling and End-of Life Infrastructure	1
12	Domestic Battery Cell and Component Manufacturing Demonstration Topic	2

ENVIRONMENTAL REVIEW

DOE assembled environmental review teams to assess all applications that met the mandatory requirements. The review teams considered 20 resource areas that could potentially be impacted by the technologies and sites proposed for each project that was selected for negotiations. These resource areas consisted of:

- Aesthetics
- Air Quality
- Biological Resources
- Climate
- Community Services
- Cultural Resources
- Environmental Justice
- Floodplains
- Geology
- Ground Water
- Human Health and Safety
- Land Use
- Noise
- Socioeconomics
- Soils
- Surface Water
- Transportation and Traffic
- Utilities
- Wastes and Materials
- Wetlands

The review teams were composed of environmental professionals having expertise in the resource areas considered by the DOE and with experience evaluating the impacts of industrial facilities and energy-related projects. The review teams considered the information provided as part of each application, which included narrative text, worksheets, and the environmental information volumes for the sites proposed by the applicant. Reviewers conducted preliminary analyses to identify the potential range of impacts that would be associated with each application. In addition, reviewers identified both direct and indirect potential impacts to the resource areas mentioned above, as well as short-term impacts that might occur during construction and start-up, and long-term impacts that might occur over the expected operational life of the proposed project and beyond. The reviewers also considered any mitigation measures proposed by the applicant, and any reasonably available mitigation measures that may not have been proposed.

Reviewers assessed the potential for environmental issues and impacts using the following characterizations:

- **Beneficial** – Expected to have a net beneficial effect on the resource in comparison to baseline conditions.
- **None (negligible)** – Immeasurable or negligible in consequence (not expected to change baseline conditions).
- **Low** – Measurable or noticeable but of minimal consequence (barely discernable change in baseline conditions).
- **Moderate** – Adverse and considerable in consequence but moderate and not expected to reach a level of significance (discernable, but not drastic, alteration of baseline conditions).
- **High** – Adverse and potentially significant in severity (anticipated substantial changes or effects on baseline conditions that might not be mitigable).

For cases in which an application failed to provide sufficient information to support a determination among the above characterizations, the reviewers assigned one of the following characterizations:

- **Limited Concern** – The potential for substantial adverse impacts would be negligible to low based on background information about the resource area with respect to the geographic location of the project.
- **Elevated Concern** – The potential for substantial adverse impacts would be moderate to high based on background information about the resource area with respect to the geographic location of the project.

Applications in Response to the FOA

Based on the technologies and sites proposed, the applications for the FOA were preliminarily evaluated and reviewed by the NEPA compliance team. There were several applications that were deemed to not have sufficient information for assessment, and also site selections for some projects have not been finalized. Therefore, the summary in the below section is based on the information that was available. The following impacts by resource area were considered in the selection of candidates for award:

Aesthetics – Low to moderate impact would be expected as construction would primarily be conducted on existing industrial sites. Five projects were assessed to have a visual resource impact. Visual viewpoint changes are expected to occur at the sites as a result of project implementation and construction of the facilities. One project has overhead transmission lines.

Air Quality – Moderate impact would be expected as many facilities would have air controls and permitting in place, and new facilities will be putting controls in place as required by any obtained air permits. Fifteen projects had impacts, with several pollutants listed including: greenhouse gases (GHGs), particulate matter (PM), hazardous air pollutants (HAPs), volatile organic compounds (VOCs), nitrogen oxides (NOx), cadmium, nickel, lead, and combustion products. One project mentioned that BACT (best available control technology) would be installed, and one project mentioned MACT (maximum achievable control technology) to be installed (an iron-pellet gas purification and polishing system). One project stated that a Synthetic Minor Construction and Operations Air Permit would be required. Other impacts may be expected from transportation-related emissions or fugitive dust from construction activities.

Biological Resources – Low to moderate impact would be expected for three projects, with one project being located on the eastern edge of Great Salt Lake, and two projects being sited on greenfield sites. An additional three projects mention sites that were previously used for agriculture or grazing lands. The project located on one of the greenfield sites mentions that the site is pastureland, strands of forest, and wetlands/streams. The other greenfield site is located on farmland. Projects will be assessed for agricultural or natural habitat concerns, if any are identified.

Climate – Beneficial impacts would occur for all projects as batteries are critical to decarbonizing the economy through grid storage, resilience for powering homes and businesses, and electrification of the transportation sector, as noted in the FOA. GHG emissions from the projects would be minimal compared to these decarbonization efforts.

Community Services – Low impacts would be expected for the projects, though no impacts were specified in the review. Generally, projects anticipating a larger temporary workforce during construction would be expected to place a higher demand on community services – particularly in smaller, more rural communities where currently existing community services are more limited.

Cultural Resources – Moderate impacts would be expected for five projects, with several being sited next to railways or on greenfield sites. One project noted that Tribal Nations, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers consultations will all be needed. It is expected that Section 106 regulations will be followed on all projects. Bureau of Land Management (BLM) and Department of Defense (DOD) cooperating agencies will be needed for one other project. One project is in proximity to an airport, and another project is located near a major railyard. BLM permitting is expected for two projects.

Environmental Justice (EJ) – The EJ impacts should be beneficial for the projects. Through the Administration's Justice40 Initiative, 40 percent of the overall benefits of this FOA should flow to DAC's, as listed in the Justice40 guidance document and the FOA[3]. EJ impacts were expected for four of the projects, yet EJ benefits will be considered for all projects under the Juctice40 initiative. Under Justice40 the benefits include (but are not limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in DAC's: (1) a decrease in energy burden; (2) a decrease in environmental exposure and burdens; (3) an increase in access to low-cost capital; (4) an increase in job creation, the clean energy job pipeline, and job training for individuals; (5) increases in clean energy enterprise creation and contracting (e.g., minority-owned or diverse business enterprises); (6) increases in energy democracy, including community ownership; (7) increased parity in clean energy technology access and adoption; and (8) an increase in energy resilience. Environmental and human health of the DAC's will be considered under Executive Order 12898 — Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, as required for projects.

Floodplains – Floodplains impact for the projects are low. There are four projects with Floodplains concerns, with one of the projects below the 500 Year Flood Plain (0.2-percent-annual-chance).

Geology – Geology impacts would be low to moderate for the projects. The possibility of extraction of economic minerals for battery manufacturer should be considered for relevant projects. One project has backfilled coal mine pits and spoil piles. One project is located on an old mine site. If geology is undisturbed, no additional impacts would be expected.

Ground Water – Ground Water impacts for the projects would be low. One project has a groundwater concern. Ground water impact from metals/chemicals or wastes could be of note for the projects, though containment measures would be in place as required for permitting. It is unknown if projects own any groundwater supply wells. Stormwater runoff will be managed in accordance with all relevant requirements, if required by projects.

Human Health and Safety – Impacts will be moderate. Five projects cited a concern. One project has a sensitive receptor (daycare) 2,500 feet from the corner of the lot. One project is upgrading its fire safety equipment, and fire safety and coordination with local fire departments is likely to be considered for all projects. Low to moderate impacts may also be considered during both construction and operations of the facilities. The level of risk is generally related to the size and

[3] The Justice40 initiative, created by E.O. 14008, establishes a goal that 40percent of the overall benefits of certain federal investments flow to (DAC's). The Justice40 Interim Guidance provides a broad definition of DAC's (Page 2): https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf. The DOE, Office of Management and Budget (OMB), and/or the Federal Council for Environmental Quality (CEQ) may issue additional and subsequent guidance regarding the designation of DAC's and recognized benefits under the Justice40 Initiative.

complexity of the planned construction. Of note would be any concerns for handling of chemicals and metals, including minimizing exposure and prevention of spills. Safe operating practices will be implemented for all projects, and compliance with federal, state, and local regulations and standards as well.

Land Use – Low to moderate impacts would be expected for all projects due to construction within existing facilities or on a compatible nearby site. Two sites are greenfield sites, but many are already existing industrial sites. Three sites have not yet been selected. BLM permits are needed for two projects (three sites), with one BLM site also consulting with the DOD. One project is consulting with Tribal Nations, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers. Clearance of land, stormwater runoff best management practices, utility line installations, and rail lines will be considered as needed.

Noise – Noise impacts would be low to moderate. One project specifically cited noise impact. During the project construction phases, noise levels will increase, but would be temporary and ending after construction. All project facilities conducting manufacturing and/or recycling activities may have noise, but much will occur within closed buildings. Any projects located near neighboring buildings may have noise impacts to consider for those near the site if outdoor noise continues past construction phases.

Socioeconomics – Beneficial impacts would be expected for all projects. Seven projects cited socioeconomic and/or EJ concerns. All projects would provide some additional employment during construction and operations, with most opportunities occurring within the local area DAC's. Tax revenue generation and direct and indirect spending in the local economy is expected for the projects.

Soils – Low impacts would be expected for projects requiring land disturbance, including two greenfield sites. Five projects have sites that are adjacent to agricultural activity, with one converting existing pastureland, and one possibly converting farmland. Construction activities could result in a potential for soil erosion, but appropriate mitigation would be implemented as necessary, such as run-off control, silt fences, and stormwater detention facilities.

Surface Water – Impacts would be low to moderate. Battery Manufacturing and recycling facilities would potentially have water influent and wastewater effluent requirements to minimize the impacts with municipalities treating water. One project noted an effluent line along an existing roadway with a connect to the Mississippi River levee and River. Stormwater controls could be used during construction and operation. Controls could be used on hazardous liquids, if any, to minimize impacts.

Transportation and Traffic – Moderate impacts are expected with eight projects citing impacts. Five projects noted that they are cited near railways, railway right of way, or may need to recommission/use railway. Transportation of construction workforce to the site would be temporary. Construction access roads may be considered for projects. Transportation of operations workforce would be considered. Recycling and manufacturing facilities would also require trucking or railcar transport of materials and wastes in and out of the facility.

Utilities – Moderate impacts would be expected for greenfield sited projects resulting from the need for new energy infrastructure for manufacturing and recycling. Recycling and manufacturing facilities may have need for water, electricity, steam, wastewater, industrial gases and/or natural

gas, or other for the processes and facilities. Availability and capacity of utilities and anticipated infrastructure needs will be evaluated for projects.

Wastes and Materials – Impacts would be moderate to high. Sixteen projects have waste streams impact and hazardous material storage and use impacts. Three projects have a Resource Conservation and Recovery Act (RCRA) designation, and several others have hazardous chemicals. One project is a large quantity generator (LQG). The nature of the manufacturing and/or recycling for Batteries Materials and Processing Manufacturing and Recycling will require diligence in hazardous/non-hazardous waste management practices and applicable permitting. Transportation of waste to landfills to be considered, if applicable, to projects.

Wetlands – Wetlands impacts would be low to moderate. Four projects noted wetlands concerns, which could be avoided, or controls used to minimize impacts resulting from project construction. The extent and the conditions of the wetlands on each site will be addressed during construction and/or operations as required. One project noted that wetlands will be avoided. One project has wetlands and streams on site. Appropriate wetland mitigation measures will be implemented for unavoidable impacts.

CONCLUSION

The alternatives available to DOE from applications received in response to the FOA provided reasonable alternatives for accomplishing the Department's purpose and need to satisfy the responsibility imposed on the Department to carry out a program to bolster the nation's battery material production and battery production.

An environmental review was part of the evaluation process of these applications. DOE prepared a critique containing information from this environmental review. That critique, summarized here, contained summary as well as project-specific environmental information. The critique was made available to, and considered by, the selection official before selections for financial assistance were made.

DOE determined that selecting twenty-one applications in response to the FOA would meet the Department’s purpose and need. DOE selected twenty-one projects for awards of financial assistance:

- Project Recipient (City, State) project located in City, State. Construct a new, commercial-scale U.S.-based lithium materials processing plant, sited next to existing facility, that uses sustainably extracted spodumene minerals from the site’s lithium mine to produce battery grade lithium hydroxide for domestic manufacturing of lithium-ion batteries for 750,000 vehicles in the U.S. market. The DOE has determined that an environmental assessment (EA) is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Construct a battery minerals processing facility to process nickel ore in concentrate (nickel/iron and copper) from economically viable sources in support of a new domestic cathode supply chain. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;

- Project Recipient (City, State) project located in City, State. Plan, design, and construct a cathode active materials (CAM) plant including a manufacturing building and the processing equipment necessary to convert precursor materials into CAM, the highest value component in a lithium-ion battery. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Design a sustainable lithium hydroxide facility to produce 30,000 metric tons per year of lithium hydroxide for the domestic battery and electric vehicle (EV) market, doubling the lithium hydroxide production capacity currently available in the U.S. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Design, construct and commission a graphite anode powder plant over a five-year period. Testing of a pilot manufacturing plant will occur site I in City, State, and graphitization at site II City, State, during the first 3 years of the project. Approximately 35,000 tons per annum of new synthetic graphite anode material capacity for lithium-ion batteries will be used in electric vehicles and critical energy storage applications. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Expand the production capacity of the integrated milling, purification, coating, and surface treatment operation producing on-specification active anode material (AAM), using natural graphite from an overseas graphite operation. Construction of a new 11,250 metric tons per annum (tpa) AAM facility is underway to serve as the only vertically integrated and large-scale natural graphite AAM producer outside China and the first large-scale natural graphite AAM producer in the U.S. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Building its first mass production site in the U.S., which will produce 10,000 metric tons per year of battery grade synthetic graphite. The project will build a new plant near City to produce 30,000 metric tons per year of graphite targeted at the EV industry. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Will build a new battery-grade polyvinylidene fluoride (PVDF) facility in City, State, to supply the needs of the North American EV and stationary energy storage market. Potential to provide enough PVDF to supply more than 5 million EV batteries per year at full capacity. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to build the first U.S. manufacturing plant for lithium hexafluorophosphate (LiPF6) on the grounds of the company's existing fluorochemical production site and produce up to 10,000 metric tonnes (MT) of LiPF6 per year, which is sufficient to support domestic production of more than a million full EVs. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to build and operate a commercial-scale facility to implement its novel process for manufacturing battery

cathode grade lithium hydroxide (LiOH) (5,000 MT (metric tonnes) LiOH/year, with capacity for 30,000 MT LiOH/year) commercial processing plant from unconventional Nevada-based lithium-bearing sedimentary resources (10,000 acres). The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;

- Project Recipient (City, State) project located in City, State. Proposes to demonstrate production of lithium at commercially relevant scales using a proprietary technology (using ion-exchange beads) for lithium extraction from domestic brine resources at commercially relevant scales. The project would include 4 pilot units in State and State. Each site would require 5–7 acres for demonstrations lasting 10 months to 3 years before demobilization. Additional work would be manufacturing ceramic beads at 2 existing facilities, one of which will require modification and equipment to support the new production. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to establish industrial scale U.S. production capacity of sustainable, low-cost precursor cathode materials by integrating the separation of critical cathode materials from spent lithium-ion batteries (LIBs) with the production of both precursor cathode active materials (pCAM) and metal salts to support domestic production of cathode active material (CAM). CAM can then be used in new LIBs for EVs and energy storage systems (ESS). It will produce enough material to supply over 250,000 EVs annually. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to build a plant to produce high quality lithium iron phosphate (LFP) cathode powder for the global lithium battery industry using primarily a domestic supply chain. Using its own process technology and by acquiring licenses for certain other commercially proven processes, the plant will have two production lines built in dual phases, with each line capable of producing 15,000 tonnes per year of LFP powder. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project
- Project Recipient (City, State) project located in City, State. Proposes to build a separator facility capable of supplying 19 gigawatt-hour (GWh) of electrovoltaic batteries, including their existing 2 GWh battery plant. The project would construct new buildings, tanks, and associated equipment. The area is a greenfield site that was previously used for agriculture and is currently being developed as an industrial park. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. The proposed project would construct new separator plants with capacity of 1-1.8 billion m^2 per year, enough material for ~1.4 million EVs. The separator plants would include the installation of high-capacity battery separator lines. Finalized site selection is still underway. The DOE has not determined the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Build-out of a 600,000-square-foot factory that will produce breakthrough lithium-ion anode materials. The project is expected to begin production of Recipient's proprietary silicon anode material in

2025, with full production of 20 GWh equivalent of material at the project's conclusion in 2026. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;

- Project Recipient (City, State) project located in City, State. Proposes to design and construct two 2,000 tonnes/year silicon-carbon anode material factories, also known as "modules." The proposed project plans to construct these modules as part of an expansion of a previously planned project. The proposed project will involve design and construction of two modules. The proposed project will also involve the construction of support facilities for all modules. These two modules and support facilities will be constructed on a planned, but undeveloped portion of the proposed project site. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to set up an advanced prelithiation and lithium anode manufacturing facility to accelerate the transition to next-generation lithium-ion (Li-ion) batteries and enable the development of a robust U.S. battery component supply chain. The proposed facility will support industrial-scale production of advanced lithiated anodes for multiple battery cell makers and automobile manufacturers. Finalized site selection is still underway. The DOE has not determined the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to expand and upgrade recipient's existing lithium-ion recycling facility. Collect, disassemble, shred, and upgrade the critical minerals present from tens-of-thousands of tons of lithium-ion batteries for reuse in new lithium-ion batteries. The project requires the physical modification of existing buildings, new construction, and ground-disturbing activities on a portion of the project site. The DOE has determined that an EA is the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to demonstrate the manufacturing of silicon nanowire anode technology at the component and cell level on multi-megawatt-hour-scale manufacturing lines that are comparable to those used in multi-GWh factories. Plans are to construct a new facility of about 120,000 square feet. Finalized site selection is still underway. The DOE has not determined the appropriate level of environmental review for the proposed project;
- Project Recipient (City, State) project located in City, State. Proposes to demonstrate the ability to domestically produce multiple battery chemistries namely NMC811 and LFP in a plant with the capacity of 3,000 tpa ready for production in 2025 scaling to 10,000 tpa in 2026. The demonstration plant will produce NMC811 generating zero waste and 70 percent less GHGs by using only 10 percent of the water and 30 percent of the energy versus traditional battery material production methods. The proposed new facility will be approximately 120,000 square feet in a zoned industrial park. Finalized site selection is still underway. The DOE has not determined the appropriate level of environmental review for the proposed project.

Appendix 2

Consultation with Agencies and Tribal Nations

April 25, 2024

John Weber
Field Supervisor
U.S. Fish and Wildlife Service
Missouri Ecological Services Field Office
101 Park Deville Drive, Suite A
Columbia, MO 65203

SUBJECT: Section 7 Consultation for Proposed Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri – New Site

Dear Mr. Weber:

U.S. Department of Energy (DOE) requests informal consultation with the U.S. Fish and Wildlife Service (USFWS) for the proposed funding for construction and operation of a lithium iron phosphate (LFP) cathode active material (CAM) manufacturing plant pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 as amended (16 U.S.C. 1531 *et seq.*), the Bald and Golden Eagle Protection Act (BGEPA), and the Migratory Bird Treaty Act (MBTA).

DOE is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States.

DOE previously contacted you in October 2023 about this project. However, a new location for the plant has been selected.

ICL's proposed project site is located at 401 Adelaide Avenue in St. Louis Missouri (also identified by the following addresses: 460 East Carrie Avenue, 420 East Carrie Avenue, and 5410 West 3rd Street) (Figure 1). The proposed project site is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use within the City of St. Louis. It is zoned Commercial (Unrestricted). The proposed project would include construction of a 272,000-square-foot (2.53 hectares) plant and associated utilities, covering about 8 to 9 acres (3 to 3.5 hectares) on approximately 19 acres (7.7 hectares) of undeveloped but previously disturbed land, as shown on Figure 2. Figure 3 shows the proposed project layout. Site photographs are also attached.

Threatened, Endangered, and Candidate Species and Critical Habitat

DOE accessed the USFWS Information for Planning and Consultation online system (http://ecos.fws.gov/ipac/) on 3 April 2024 to determine if any federally listed species potentially occur in the vicinity of the Proposed Action. The following species are federally listed in St. Louis County and were identified to potentially occur in the project area (Table 1). No wetlands occur in the project area; however, the Mississippi River is about 3,500 feet (1 kilometer) northwest of the project area.

3610 Collins Ferry Road, Building 26, Room 102, MS 107, Morgantown, WV 26505
Harry.taylor@netl.doe.gov Phone (304)285-5091 www.netl.doe.gov

Table 1. Federally Listed, Proposed, and Candidate Species Known to or that May Occur in the Project Vicinity in St. Louis County, Missouri

Common Name	Scientific Name	Federal Listing	Habitat Preference
Invertebrates			
Monarch butterfly	*Danaus Plexippus*	C	A variety of open habitats such as fields, roadsides, or gardens. Adults require diversity of blooming nectar resources and milkweed (*Asclepias* spp.) for egg-laying and larval feeding.
Mammals			
Indiana bat	*Myotis sodalis*	E	Summer habitat includes semi-open to closed forested habitats, forest edges, and riparian areas with a variety of dead, deciduous trees with loose bark. Winter hibernacula include caves or mines.
Northern long-eared bat	*Myotis septentrionalis*	E	In the summer, habitat includes wooded areas with live or dead trees with loose bark, cavities, or crevices in which they can roost. Winter hibernacula include caves and mines.
Tricolored bat	*Perimyotis subflavus*	PE	Summer habitat consists of forested areas with live or dead deciduous hardwood trees. Winter hibernacula include caves and mines.

C = Candidate E = Endangered PE = Proposed Endangered

Existing Conditions for Listed Species

The monarch butterfly (*Danaus plexippus*), a candidate species for federal listing, inhabits open areas such as grasslands, meadows, fields, or roadside areas. This species requires milkweed (*Asclepias* spp.) for egg-laying and as a food source for larvae. Although the proposed project site is open and undeveloped, it is previously disturbed and regularly maintained (e.g., mowed), preventing the growth of potential food sources such as milkweed. Therefore, no impacts to the monarch butterfly are expected from the Proposed Action.

The Indiana bat (*Myotis sodalis*) is listed as an endangered species. Indiana bats during the summer inhabit forested areas, forest edges, or riparian areas with tree species such as oaks (*Quercus*), bitternut hickory (*Carya cordiformis*), elms (*Ulmus*), pines (*Pinus*), American sycamore (*Platanus occidentalis*), or eastern cottonwood (*Populus deltoides*). Primary roost trees are typically large (greater than 9.0 inches [23 centimeters] diameter at breast height) with loose, exfoliating bark and a high degree of solar exposure. Indiana bats feed on aquatic and terrestrial insects while foraging in forested stream corridors, upland and bottomland forests and wooded edges, forested wetlands, and impounded bodies of water at night. In the winter, Indiana bats primarily hibernate in caves. Critical habitat for the Indiana bat does not occur within the proposed project site. The proposed project site does not contain any forest habitat. No impacts to Indiana bat are expected from the Proposed Action.

The northern long-eared bat (*Myotis septentrionalis*) is listed as an endangered species. In the summer, northern long-eared bats roost in live or dead trees under loose bark, in cavities, or crevices in both live trees and snags (typically greater than or equal to 3.0 inches [7.6 centimeters] diameter at breast height), as well as in buildings. Northern long-eared bats hibernate in large caves or mines in the winter with constant temperatures, high humidity, and no air currents. No critical habitat has been designated for this

species. The proposed project site does not contain any forest habitat. Therefore, no impacts to northern long-eared bat are expected from the proposed action.

The tricolored bat (*Perimyotis subflavus*) is a proposed endangered species. Summer habitat consists of forested areas with live or dead deciduous hardwood trees. This species inhabits open woods near water, they are not usually found in deep forests or open fields. During the summer tricolored bats roost in rock crevices, caves, buildings, or under tree foliage. Winter hibernacula include caves and mines. The proposed project site does not contain any forest habitat. Therefore, no impacts to northern long-eared bat are expected from the Proposed Action.

Bald eagles (*Haliaeetus leucocephalus*), protected under the BGEPA and the MBTA, and migratory bird species, also protected under the MBTA, are likely found within St. Louis County, Missouri. Due to the location of the proposed development on an industrial property, surrounded by commercial development, and located adjacent to the Mississippi River, adverse impacts to these species are not expected.

Determination of the Effects from the Proposed Action

No federally listed, proposed, or candidate species are expected to be impacted by the Proposed Action. The development would occur on the 19-acre (7.7-hectare) property that is previously disturbed and regularly maintained. The industrial property is surrounded by industrial and commercial development. The nearest surface water feature is the Mississippi River northeast of the project area.

For these reasons, DOE has concluded that providing ICL funding to construct the LFP CAM manufacturing plant *will not affect* any of the federally listed species. If any threatened or endangered species is found alive, dead, injured, or hibernating within the project area, the USFWS will be contacted immediately at (573) 234-2132.

DOE respectfully requests concurrence on this determination in compliance with Section 7 of the ESA.

If you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc: E. Pherigo

Attachments
Figure 1. Regional Location Map
Figure 2. Aerial View of Proposed Project Site
Figure 3. Proposed Project Layout Map
Site Photographs

Figure 1. Regional Location Map

Figure 2. Aerial View of Proposed Project Site

Railroads

Site Boundary

0 400 800

Feet

N

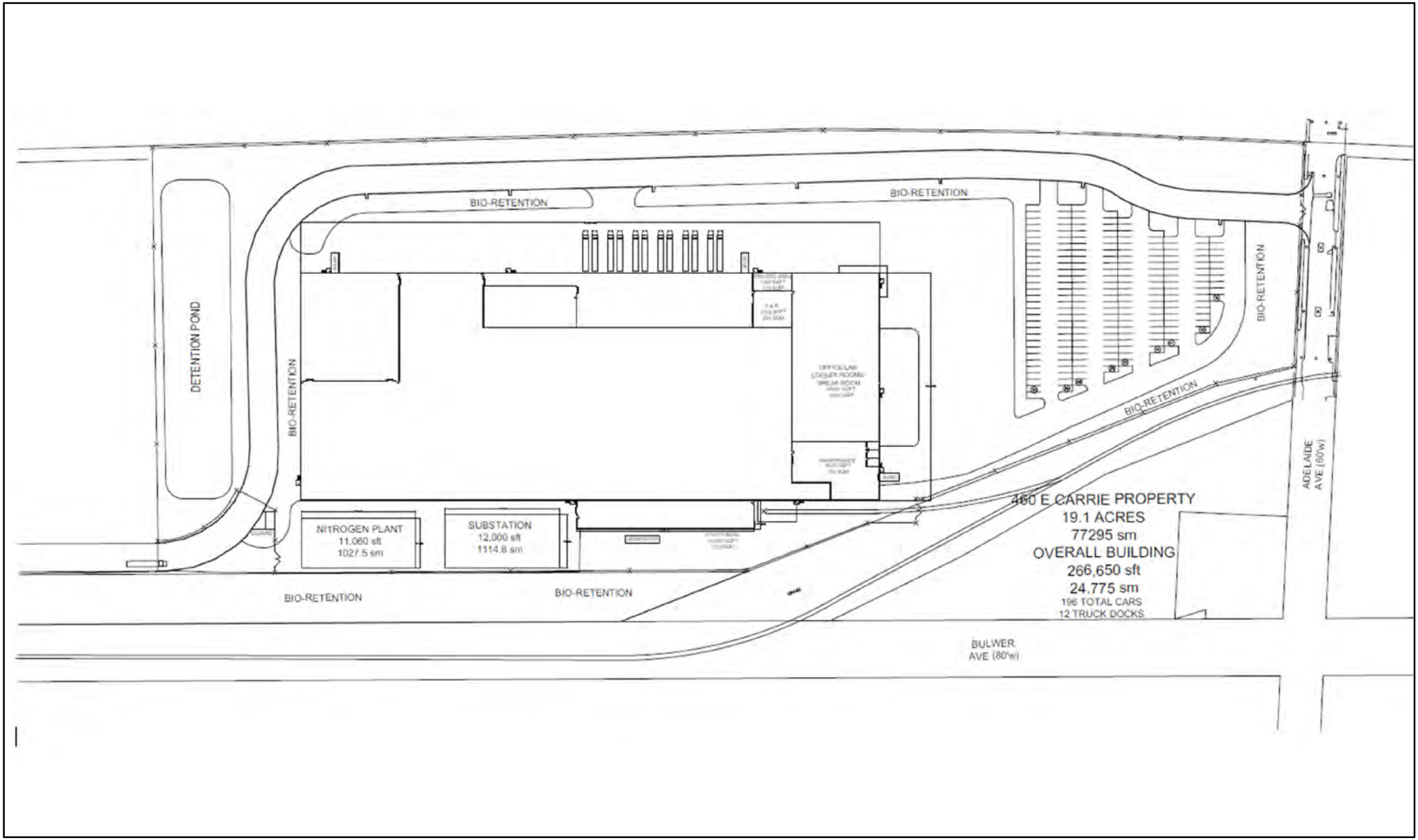
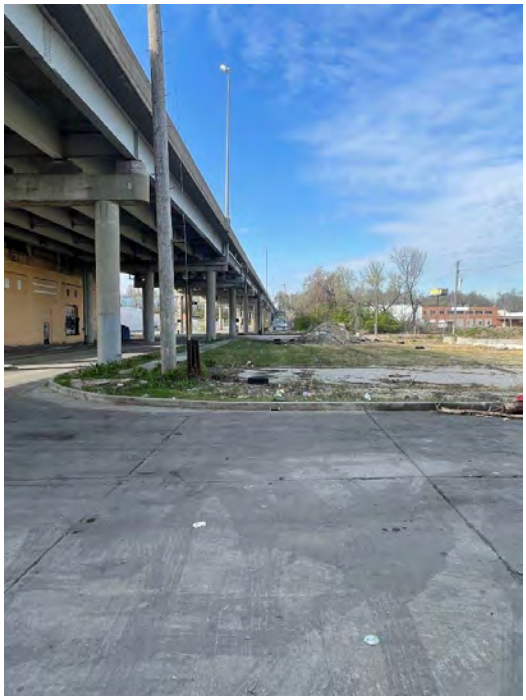


Figure 3. Proposed Project Layout

0 400 800 Feet

Site Photographs



View of southern entrance to proposed project site from Adelaide Avenue.

View of gravel lot, located on the southern side of the proposed project site. Solid waste observed due to illegal dumping.

View of one of the many debris piles, containing tires and concrete, located on the southern side of the proposed project site.

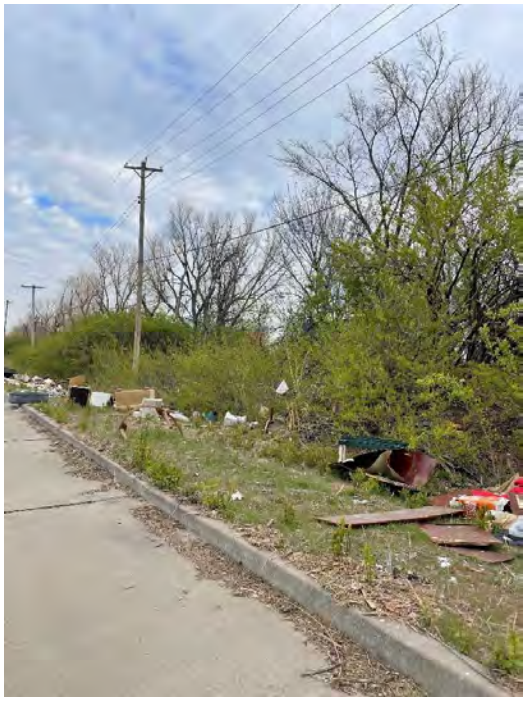
View of proposed project site looking north-northeast.

View of one of the two pits, located near the center of the proposed project site.

View of rusted metal stick-ups located in the pit located near the center of the proposed project site.

View of one of the several debris piles, containing concrete, asphalt, gravel, and rebar, located near the center of the proposed project site.

View of the tree line, looking north, on the western side of the proposed project site.



View of the tree line and overhead power lines along railroad tracks looking north along the eastern boundary of the proposed project site.

View of the mound of higher elevation, located on the northern side of the proposed project site.

View of the catch basin, located north of the mound along the “L” shaped road.

View of the stormwater basin with one inlet, located on the northern edge of the proposed project site.

From: Weber, John S <John_S_Weber@fws.gov>
Sent: Thursday, April 25, 2024 5:02 PM
To: Taylor, Harry E. <Harry.Taylor@netl.doe.gov>
Cc: Pherigo, Emily K <emily_pherigo@fws.gov>; Melissa Russ <melissar@ageiss-inc.com>; Sorensen, Troy D <Troy.Sorensen@icl-group.com>; George, Shawn <shawn.george@hq.doe.gov>; Pozzuto, Fred <Fred.Pozzuto@NETL.DOE.GOV>
Subject: Re: [EXTERNAL] IPaC Concurrence DOE Project for ICL

Hello Sir,

We will be happy to review your EA. At this point, I do not anticipate any effects to listed species at this site, as it is heavily disturbed.

Best,

John Weber
Field Supervisor
Missouri Field Office
U.S. Fish & Wildlife Service
Cell: 573-825-6048

April 22, 2024

Dr. Toni Prawl, Director and Deputy
State Historic Preservation Officer
Lewis & Clark Building
1101 Riverside Drive
P.O. Box 176
Jefferson City, MO 65102-0176

SUBJECT: Section 106 Compliance for Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri

Dear Dr. Prawl:

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale lithium iron phosphate (LFP) material manufacturing plant in the United States.

ICL project site, originally located at 8201 Idaho Avenue, was determined unsuitable (003-SLC-24). ICL's proposed new project site is located at 401 Adelaide Avenue in St. Louis Missouri (also identified by the following addresses: 460 East Carrie Avenue, 420 East Carrie Avenue, and 5410 West 3rd Street). The Area of Potential Effect (APE) is a rectangular-shaped polygon of approximately 19 acres. (Figure 1). The proposed project site is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use within the City of St. Louis. The proposed project would include construction of a 272,000-square-foot plant and associated utilities (about 8 to 9 acres) on approximately 19 acres of undeveloped but previously disturbed land, as shown on Figure 2. Figure 3 shows the proposed project layout. Site photographs are also attached.

Historical maps indicate that the project APE was originally developed for a mix of residential, commercial, and industrial purposes beginning in the early 1900s. The project APE was initially developed as a rail yard in 1908 and remained in operation as such until the early 1990s. The project APE was enrolled into the Missouri Volunteer Clean-Up Program in 2009 in order to obtain closure with identified polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and heavy metals. There have been several environmental investigations from 2008-2016 that included soil borings, surface soil sampling, groundwater sampling, soil removal, and removal of an underground storage tank. While the project APE was issued a No Further Action determination letter on 1 August 2018 under the condition that land use is restricted to industrial/commercial, there is still known contamination present on-site, which includes benzo(a)pyrene, lead, heavy metals, and semi-volatile organic compounds (SVOCs) in subsurface soils and benzo(a)pyrene in surface soils.

AGEISS Inc. (AGEISS), conducted on behalf of the DOE, a Class I review, and is requesting concurrence from the Missouri State Historic Preservation Officer that the effects of funding the construction of ICL's proposed battery manufacturing facility will result in **No Historic Properties Affected.** As requested, the State Historic Preservation Office Review and Compliance Information Form is being submitted with this letter.

In 2004 a survey (SL-490) was conducted by the City of St. Louis for the "North Riverfront Industrial Corridor Adelaide Campus Area Determination of Eligibility Documentation" which included the project APE. There were no archaeological sites documented, nor were there any historic structures in the area of

SL-490. Within a 1-mile radius of the APE for the proposed manufacturing facility, there are six National Park Service registered buildings, two National Register districts, and six undetermined eligibility archaeological sites listed in the Missouri State Historic Preservation Office database. Also included in the APE are two undetermined eligibility assessments. None of the previously recorded structures or sites are contiguous with or are near the proposed new construction area. Previously recorded sites and cultural resource surveys are listed in Table 1. The site survey information for SL877, located in the Bellefontaine Cemetery was not available. Sites SL891, SL892, SL893, SL894, and SL7 are located in O'Fallon Park and information was not available for these sites.

Table 1. Previously Recorded Sites and Reports Located within Zone 15

Site Number, Historic Assessment Number, or NPS Number	Site Type	Location		NRHP Eligibility	Contractor/Report
		Address	UTMs		
NRHP# 02000467	Kulage House	1904 E. College Ave, St. Louis, MO 63107	Zone: 15 E:742480 N:4284520	Certified by National Parks Service 05/10/2002	Landmarks Association of St. Louis/ Stacy Sone
NRHP# 09000890	Our Lady of Perpetual Help Parish Hall, School, Convent, and Rectory	5217 N. 21st. (Parish Hall), 2017 Linton Ave., (School & Convent), and 2011 Linton Ave. (Rectory), St. Louis, MO 63107	Zone:15 E:742450 N:4284370	Certified by National Parks Service 11/05/2009	Lafser & Associates Julie Ann LaMouria
NRHP# 07000464	Lowell School	1409 E. Linton St. Louis, MO 63107	Zone:15 E:742797 N:4284444	Certified by National Parks Service 05/24/2007	Lafser & Associates Julie Wooldridge & Melinda Winchester
NRHP# 07000704	Holly Place Historic District	4500 Block of Holly Place St. Louis MO 63115	a) Zone:15 E:738860 N:4269790 b) Zone:15 E:741480 N:4284870 c)Zone:15 E:741330 N:4284610 d)Zone:15 E:741540 N:4284780	Certified by National Parks Service 07/18/2007	Landmarks Association of St. Louis/ Michael Allen
NHRP# 70000907	Wainwright Tomb	Bellefontaine Cemetery, 4947 W. Florissant Ave.	UTM Not Available 38° 41’ 20” 90° 13’ 28”	Certified by National Parks Service 06/15/1970	Missouri State Park Board State Historical Survey and Planning Office

Site Number, Historic Assessment Number, or NPS Number	Site Type	Location		NRHP Eligibility	Contractor/Report
		Address	UTMs		
NHRP# 14000378	Bellefontaine Cemetery	4947 W. Florissant Ave	UTM Not Available 38° 41’ 20” 90° 13’ 28”	Certified by National Parks Service 07/03/2014	Rural Cemetery Association of St. Louis
Eligibility Ref #078-SLC-17	1900 E Adelaide Ave	1900 E Adelaide Ave	UTM Unavailable	Information Unavailable	Information Unavailable
Eligibility Ref #141-SLC-12	2033 East Fair Ave	2033 East Fair Ave	UTM Unavailable	Information Unavailable	Information Unavailable
Archaeological Site # SL887	Bellefontaine Cemetery	4947 W. Florissant Ave, St. Louis, MO 63115	Information Unavailable	Information Unavailable	Information Unavailable
Archaeological Site # SL891	St. Louis O’Fallon Park	1955 Adelaide Ave, St. Louis, MO 63147	Information Unavailable	Information Unavailable	Information Unavailable
Archaeological Site # SL892	St. Louis O’Fallon Park	1955 Adelaide Ave, St. Louis, MO 63147	Information Unavailable	Information Unavailable	Information Unavailable
Archaeological Site # SL893	St. Louis O’Fallon Park	1955 Adelaide Ave, St. Louis, MO 63147	Information Unavailable	Information Unavailable	Information Unavailable
Archaeological Site # SL894	St. Louis O’Fallon Park	1955 Adelaide Ave, St. Louis, MO 63147	Information Unavailable	Information Unavailable	Information Unavailable
Archaeological Site # SL7	St. Louis O’Fallon Park	1955 Adelaide Ave, St. Louis, MO 63147	Information Unavailable	Information Unavailable	Information Unavailable

DOE respectfully requests your review and concurrence with these findings. If you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road, Building 26, Room 102, MS 107
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc: Dr. Jeffrey Alvey
MOSection106@dnr.mo.gov
Melissa Russ

Attachments: Maps and Site Photographs
Prior Letter from Missouri SHPO (SHPO Project Number: 003-SLC-24
Submitted with this letter: Review and Compliance Information Form

Figure 1. Area of Potential Effect

Area of Potential Effect

0 2,500 5,000

Feet

N

Figure 2. Aerial View of Proposed Project Site

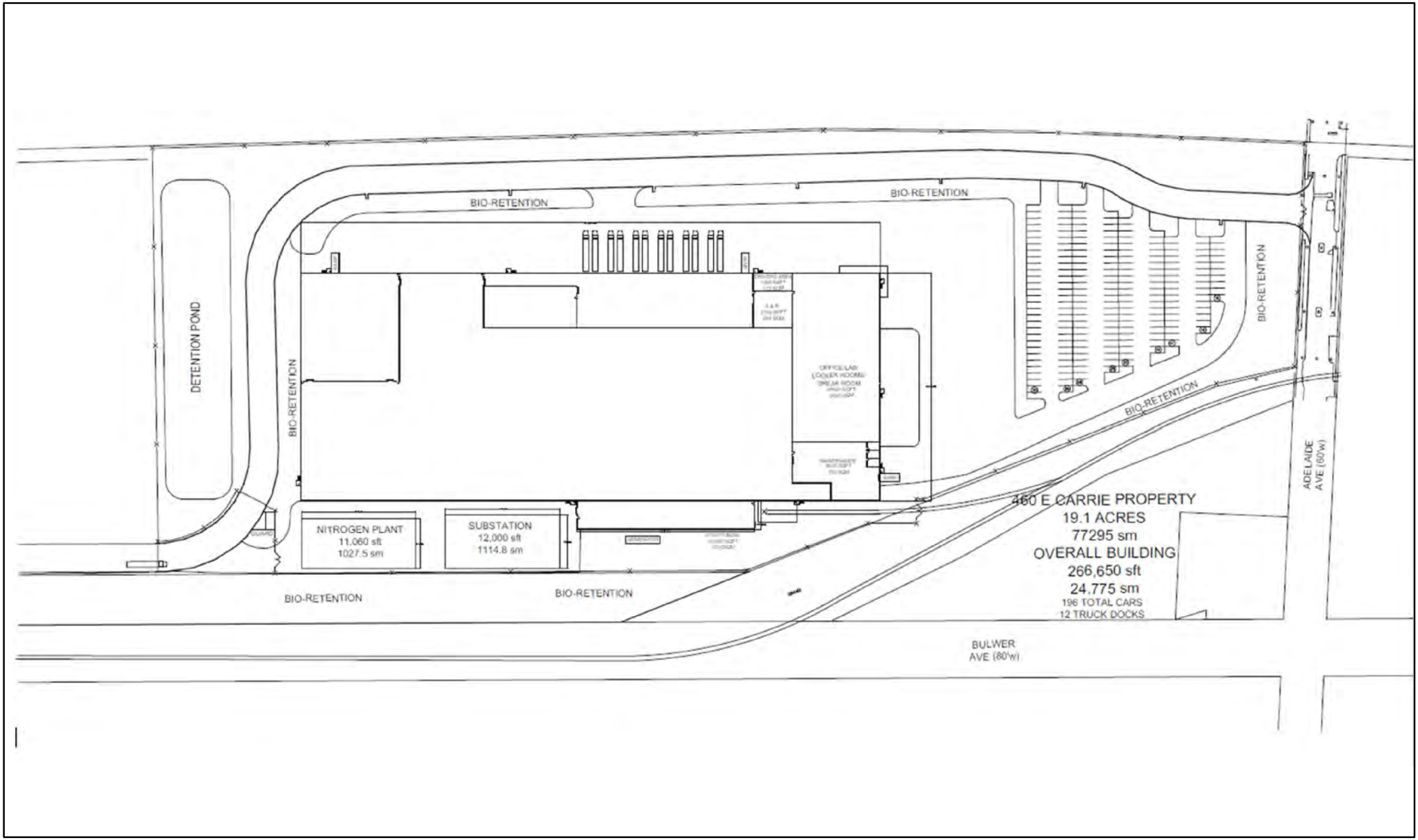


Figure 3. Proposed Project Layout

0 400 800 Feet

Site Photographs

View of southern entrance to proposed project site from Adelaide Avenue.

View of gravel lot, located on the southern side of the proposed project site. Solid waste observed due to illegal dumping.

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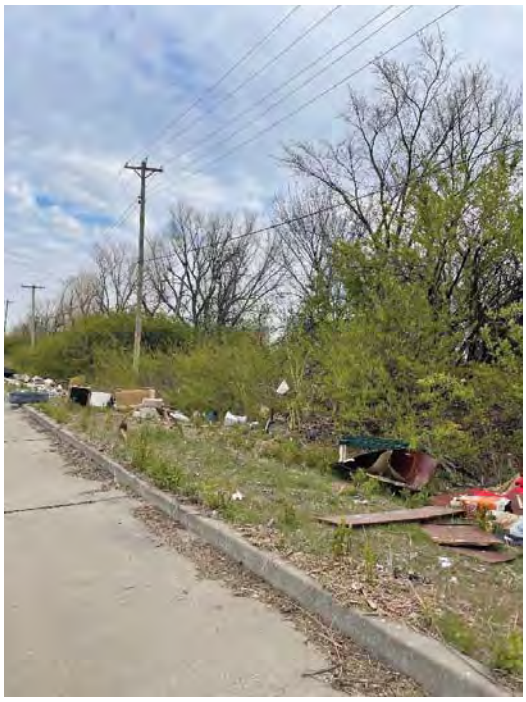

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View of the catch basin, located north of the mound along the “L” shaped road.

View of the stormwater basin with one inlet, located on the northern edge of the proposed project site.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF STATE PARKS

STATE HISTORIC PRESERVATION OFFICE REVIEW AND COMPLIANCE INFORMATION FORM (PAGE 1 OF 3)

FOR SHPO USE ONLY	
SHPO PROJECT NUMBER	SHPO LOG NUMBER

Have you ever served on active duty in the Armed Forces of the United States and separated from such service under conditions other than dishonorable? ☐ YES ■ NO

Submit one application for each project for which comment is requested. Consult the *Instructions for Completion of the Review and Compliance Information Form* when completing this application. Submission of a completed Review and Compliance Information Form with adequate information and attachments constitutes a request for review pursuant to Section 106 or 110 of the National Historic Preservation Act of 1966 (as amended). We reserve the right to request more information. **Please refer to the CHECKLIST on Page 3 to ensure that all basic information relevant to the project has been included.** For further information, refer to our website at *http://mostateparks.com/shpo* and follow the links to Section 106 Review.

NOTE: Section 106 regulations provide for a 30-day response time by the Missouri State Historic Preservation Office from the date of receipt.

I. REVIEW TYPE

■ Section 106 ☐ Section 110 ☐ Courtesy Review

II. SUBMISSION TYPE

☐ New Submission ■ Existing Project (Provide Existing Project Number) 003-SLC-24

Does this submission include a cultural resource investigation report? ☐ YES ■ NO
(If yes, you must include a *Cultural Resource Investigation Report Form*)

Does this submission include architectural plans and/or construction documents (If yes, include them in your submission)? ☐ YES ■ NO

Is this submission related to a programmatic agreement (PA) or memorandum of agreement (MOA)? ☐ YES ■ NO

If yes, provide PA or MOA Draft number _____ or MOA or PA Mitigation Stipulation number _____

III. PROJECT INFORMATION

PROJECT NAME (include any agency assigned project numbers and please do not include applicants' names)
Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant, St. Louis, MO

PROJECT DESCRIPTION (additional information may be provided in separate sheets)
The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant to ICL Specialty Products Inc. to construct and operate a new plant expected to be the first large-scale lithium iron phosphate (LFP) material manufacturing plant in the United States and would fill a critical role in the high-capacity battery supply chain required for electric vehicle production. On December 15, 2023 the SHPO concurred with our determination of no historic properties affected. However, the proposed project location has been moved to 401 Adelaide Avenue, St. Louis, MO. Additional information is included.

IV. PROJECT LOCATION

STREET ADDRESS				
401 Adelaide Avenue (also identified as 460 East Carrie Avenue, 420 East Carrie Avenue, and 5410 West 3rd Street)				
CITY		STATE	ZIP	
St Louis		MO	63147	
COUNTY	LATITUDE/LONGITUDE	SECTION	TOWNSHIP	RANGE
St Louis	38.6833930/90.2096930	None	None	None

V. PROJECT CONTACT INFORMATION

PROJECT CONTACT NAME	PROJECT CONTACT ORGANIZATION
Harry Taylor, PE	U.S. Department of Energy
PROJECT CONTACT EMAIL	PHONE (EXT.)
harry.taylor@netl.doe.gov	304-285-5091

STREET ADDRESS		
3610 Collins Ferry Road		
CITY	STATE	ZIP
Morgantown	WV	26505

VI. FEDERAL INVOLVEMENT

Does this project involve approval, funding, permit, or license from a federal agency or involve federal land or property? ■ YES (Please complete this section) ☐ NO (Skip to next section)

FEDERAL AGENCY	FEDERAL PROGRAM, FUNDING, OR PERMIT TYPE
Department of Energy (DOE)	Funding

FEDERAL AGENCY CONTACT PERSON	EMAIL	PHONE
Harry Taylor	harry.taylor@netl.doe.gov	(304) 285-5091

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF STATE PARKS

STATE HISTORIC PRESERVATION OFFICE
REVIEW AND COMPLIANCE INFORMATION FORM (PAGE 2 OF 3)

VII. CONTACTS FOR CC (please indicate all individuals to Cc for SHPO response letter)

CONTACT NAME	ORGANIZATION	EMAIL
Melissa Russ	AGEISS Inc.	melissar@ageiss-inc.com
CONTACT NAME	ORGANIZATION	EMAIL
Troy Sorensen	ICL	Troy.Sorensen@icl-group.com
CONTACT NAME	ORGANIZATION	EMAIL
Wendy Arjo	AGEISS Inc.	wendya@ageiss-inc.com

VIII. IDENTIFICATION OF HISTORIC PROPERTIES: ARCHAEOLOGY

Does this project involve ground-disturbing activity (including staging and borrow areas)? ■ YES (Please complete this section) ❑ NO ❑ WILL SUBMIT LATER

DESCRIBE THE NATURE OF GROUND-DISTURBING ACTIVITY, INCLUDING BUT NOT LIMITED TO DEPTH, WIDTH, AND LENGTH

The 19-acre vacant property would be used to build the new plant. Typical construction ground-disturbing activity is expected, such as grading, foundation work, asphalting parking lots, etc.

DESCRIBE THE PREVIOUS AND CURRENT LAND USE, CONDITIONS, AND DISTURBANCES

The proposed project site is currently vacant and is in an area characterized by mixed heavy industrial, commercial, and residential use within the City of St. Louis. The site has previously been disturbed and used by the transportation industry, including rail roads and truck parking, for over 100 years.

Will the project require fill material? ❑ YES (If yes, indicate borrow areas on project area map) ■ NO

Are you aware of archaeological sites on or adjacent to the project area? ❑ YES (If yes, indicate all archaeological sites on project area map) ■ NO

IX. IDENTIFICATION OF HISTORIC PROPERTIES: BUILDINGS AND STRUCTURES

Does the project area or APE include buildings, structures, objects, or designed landscape features (such as parks or cemeteries)? ❑ YES (Please complete this section and provide a map showing resource locations) ■ NO (Skip to next section)

ADDRESS AND RESOURCE NAME OR NUMBER	DATE OF CONSTRUCTION	DATES OF ADDITIONS

If there are more resources include a separate page identifying this information.

Is the project area or APE within or adjacent to a property or district that is listed in or eligible for listing in the National Register of Historic Places? ❑ YES _____ ■ NO ❑ UNKNOWN

X. DETERMINATION OF EFFECT

■ No Historic Properties Affected

❑ Historic Properties Will Be Affected and the Project Will (Check One):

❑ Have **NO ADVERSE EFFECT** on Historic Properties within the area of potential effects (APE).

❑ Have an **ADVERSE EFFECT** on One or More Historic Properties in the APE and the Federal Agency, or Federally Authorized Representative, will Consult with the SHPO and Other Parties to Resolve the Adverse Effect Under CFR 800.6.

BASIS FOR DETERMINATION OF EFFECT

Based on the Class I review and the historical disturbance of the site, it is unlikely that cultural resources are present or intact within the APE.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF STATE PARKS

STATE HISTORIC PRESERVATION OFFICE
REVIEW AND COMPLIANCE INFORMATION FORM (PAGE 3 OF 3)

XI. ADDITIONAL REQUIREMENTS

Map Requirements: Attach a map depicting the project area, and, if necessary, a large scale project map. If project involves ground disturbance, the project footprint must be clearly delineated on the map. Please do not send an individual map with each structure or site. While a topographic map is preferred, other styles of maps are acceptable.

Photography requirements: Recent photographs of the complete exterior elevations of the building(s). **Good quality photographs are important for expeditious project review.** Our office does not accept images from online image servers (e.g., Google Earth or Maps) due to the time elapsed between the image capture and the project date. Photographs of neighboring or nearby buildings should also be submitted. All photographs should be labeled and keyed to a map of the project area. Images should be at a minimum of 300 pixels per inch or 1200 x 1800 pixels. Please provide clear recent photographs to aid in the assessment of effects for this project.

CHECKLIST: DID YOU PROVIDE THE FOLLOWING INFORMATION?

- ■ Project area map (per project, not structure)
- ■ Thorough project description detailing all aspects of project
- ■ Photographs of all structures and overview photographs for archaeology (Note: all photographs should be labeled and keyed to one map of the project area)
- ❑ Other supporting documents (if necessary to explain the document)
- ❑ For new construction, rehabilitations, etc., attach work write-ups, plans, drawings, etc.
- ❑ Dates of construction of structures in project area

Return this form and attachments to: MOSection106@dnr.mo.gov with the following subject heading format: "Review Request – (SHPO Project Number (if previously assigned), Project Title and/or Address)." Please note that our system cannot receive emails exceeding 10 MB in size. If your submission contains large files, you may provide this information to our office via a large-file transfer service such as your organization's FTP system, Dropbox, Google Drive, etc. If your organization does not have access to a large-file transfer service you may request that SHPO sends you an FTP upload request from the State of Missouri system by checking the box below:

❑ APPLICANT IS REQUESTING AN FTP UPLOAD LINK BE SENT TO THE FOLLOWING EMAIL ADDRESS

FOR SHPO USE ONLY

REVIEWER 1 NAME	DATE

REVIEWER 2 NAME	DATE

SURVEY ACREAGE

NUMBER OF ELIGIBLE PROPERTIES

NUMBER OF NOT ELIGIBLE PROPERTIES

ARCHAEOLOGY REVIEW DETERMINATION

❑ NHPA	❑ More Info	❑ Survey	❑ PA	❑ Other:
❑ NAE	❑ NRN	❑ Monitor	❑ ATF	
❑ AE	❑ Email	❑ MOA	❑ Continue to Consult	

ARCHITECTURE REVIEW DETERMINATION:

❑ NHPA	❑ More Info	❑ Survey	❑ PA	❑ Other:
❑ NAE	❑ NRN	❑ Monitor	❑ ATF	
❑ AE	❑ Email	❑ MOA	❑ Continue to Consult	

STAFF COMMENTS

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Michael L. Parson
Governor

Dru Buntin
Director

April 30, 2024

Harry Taylor
U.S. Department of Energy
3610 Collins Ferry Road
Morgantown, WV 26505

Re: **SHPO Project Number: 003-SLC-24** — Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant, 401 Adelaide Avenue, St. Louis, MO (DOE)

Dear Harry Taylor:

Thank you for submitting information to the State Historic Preservation Office (SHPO) regarding the above-referenced project for review pursuant to Section 106 of the National Historic Preservation Act, P.L. 89-665, as amended (NHPA), and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which require identification and evaluation of historic properties.

We have reviewed the information regarding the above-referenced project and have included our comments on the following page(s). Please retain this documentation as evidence of consultation with the Missouri SHPO under Section 106 of the NHPA. SHPO concurrence does not complete the Section 106 process as federal agencies will need to conduct consultation with all interested parties. **Please be advised that, if the current project area or scope of work changes, such as a borrow area being added, or cultural materials are encountered during construction, appropriate information must be provided to this office for further review and comment.**

If you have questions, please contact the SHPO at (573)751-7858 or call/email Jeffrey Alvey, (573) 751-7862, jeffrey.alvey@dnr.mo.gov. If additional information is required, please submit the information via email to MOSection106@dnr.mo.gov.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

Brian Stith
Deputy Director Division of State Parks
Deputy Missouri State Historic Preservation Officer

c: Melissa Russ, AGEISS Inc.
Wendy Arjo, AGEISS Inc.
Troy Sorensen, ICL

SHPO Project Number: 003-SLC-24 — Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant, 401 Adelaide Avenue, St. Louis, MO (DOE)

COMMENTS:

Adequate documentation has been provided as outlined in 36 CFR Section 800.11. After review of the initial submission, the project area has no known historic properties present and a low potential for the occurrence of cultural resources. SHPO concurs with your determination of **no historic properties affected** and have no objection to the initiation of project activities.

SHPO Reviewer: Jeffrey Alvey, (573) 751-7862, jeffrey.alvey@dnr.mo.gov

18 April 2024

Durell Cooper
Chairman
Apache Tribe of Oklahoma
P.O. Box 1330
Anadarko, OK 73005

SUBJECT: Tribal Consultation and Section 106 Compliance for U.S. Department of Energy Proposed Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri – New Site

Dear Mr. Cooper:

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States.

DOE previously contacted you in October 2023 about this project. However, a new location for the plant has been selected.

ICL's proposed project site is located at 401 Adelaide Avenue in St. Louis Missouri (also identified by the following addresses: 460 East Carrie Avenue, 420 East Carrie Avenue, and 5410 West 3rd Street) (Figure 1). The proposed project site is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use within the City of St. Louis. Historical maps indicate that the proposed project site was originally developed for a mix of residential, commercial, and industrial purposes beginning in the early 1900s. Past commercial and industrial occupants have included a ballpark with a grandstand, railyard housing a roundhouse, machine shop, water tower, and office, and a trailer/trucking parking and/or staging lot. Chicago, Rock Island, and Pacific Railroad occupied as early as 1931 to as late as 2000. By 2014, the concrete pavement for truck staging has been removed. The proposed project site has been in a similar configuration to the current site configuration since the 2010s, with an overall configuration relatively consistent with vacant, vegetated parcel (Figure 2). It is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use; it is zoned Commercial (Unrestricted).

The site was enrolled into the Missouri Volunteer Clean-Up Program in 2009 in order to obtain closure with identified polycyclic aromatic hydrocarbons, volatile organic compounds, and heavy metal impacts. There have been several environmental investigations from 2008-2016 that included soil borings, surface soil sampling, groundwater sampling, soil removal, and removal of an underground storage tank. While the site was issued a No Further Action determination letter on 1 August 2018 under the condition that land-use is restricted to industrial/commercial, there is still known contaminant present on-site, which includes benzo(a)pyrene, lead, heavy metals, and semi-volatile organics in subsurface soils and benzo(a)pyrene in surface soils.

The proposed project would include construction of a 272,000-square-foot plant and associated utilities (about 8 to 9 acres) on approximately 19 acres of undeveloped but previously disturbed land, as shown on Figure 3. Site photographs are attached.

This letter is to announce the Department's intent to use the *National Environmental Policy Act* process to comply with the provisions pursuant to the National Environmental Policy Act (42 U.S. Code § 4321 et seq.); and implementing regulations issued by the President's Council on Environmental Quality 40 Code of Federal Regulations (CFR) Parts 1500-1508. An environmental assessment currently is being prepared for this project by the Department's National Energy Technology Laboratory to meet the requirements of the National Environmental Policy Act. A copy of that environmental assessment will be sent to your office later in the year.

DOE does not have any reason to believe the project would cause any effects to tribal resources or artifacts since the site has previously been disturbed by industrial and transportation activities as well as by environmental investigation. DOE is initiating consultation and requesting information your tribe may have on properties of traditional religious and cultural significance within the vicinity of the proposed ICL facility and any comments or concerns you have on the potential for this project to affect those properties. This information is being requested to aid in the preparation of the environmental assessment and to meet our obligations under Section 106 of the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act of 1990. If you have any such information, require additional information, or have any questions or comments about that project, please contact Harry Taylor of the National Energy Technology Laboratory as soon as possible at the address below.

If you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc: Sterling Chalepah

Attachments:
Maps and Site Photographs

Figure 1. Regional Location Map

Figure 2. Aerial View of Proposed Project Site

Railroads

Site Boundary

0 400 800

Feet

N

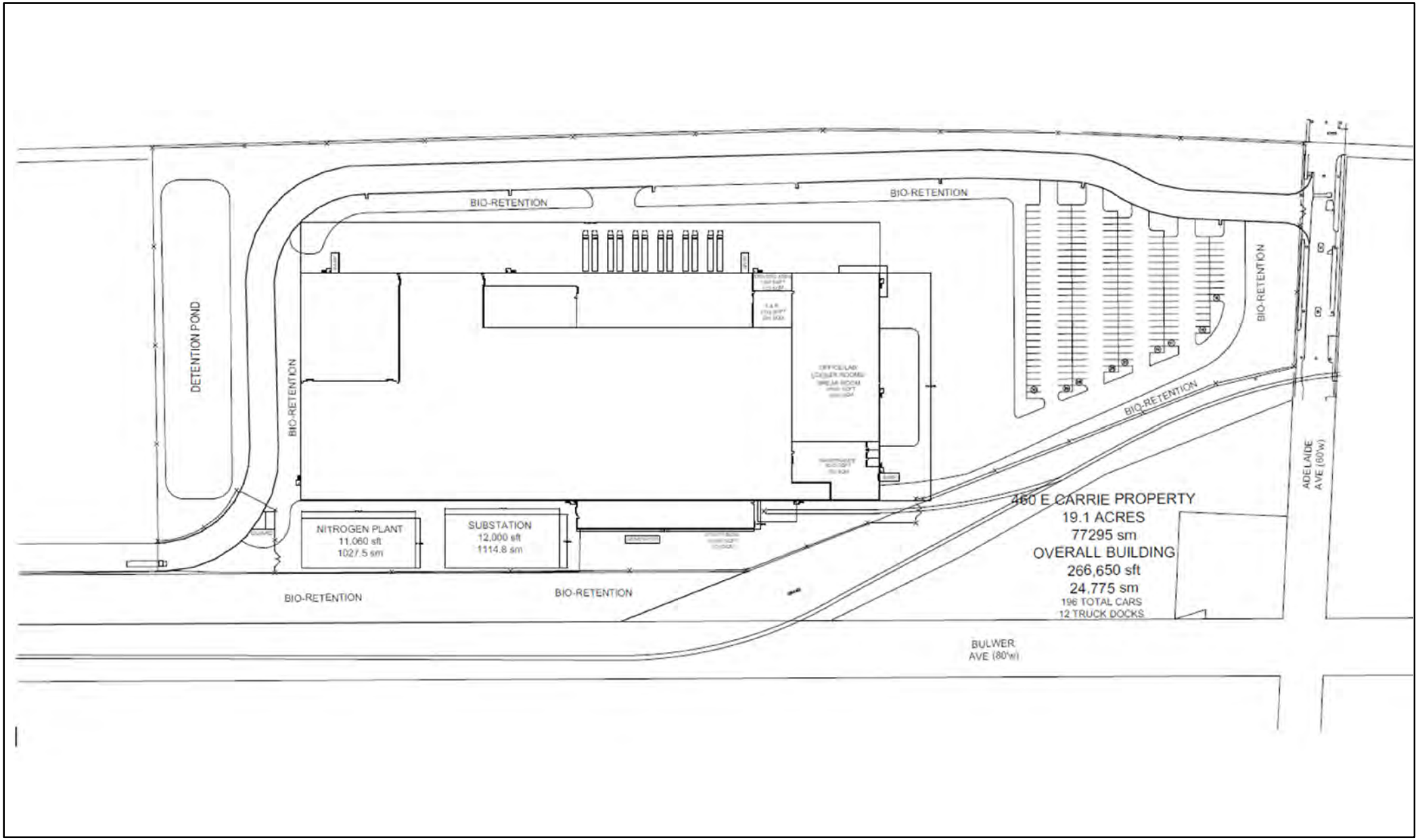
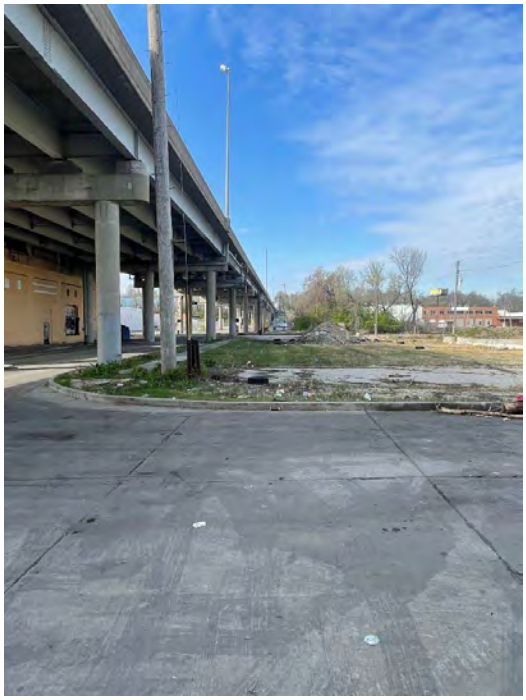


Figure 3. Proposed Project Layout

0 400 800 Feet

Site Photographs



View of southern entrance to proposed project site from Adelaide Avenue.

View of gravel lot, located on the southern side of the proposed project site. Solid waste observed due to illegal dumping.

View of one of the many debris piles, containing tires and concrete, located on the southern side of the proposed project site.

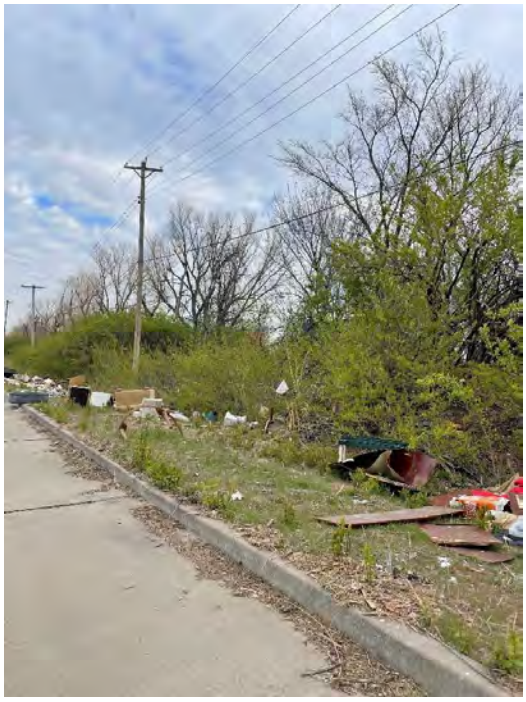
View of proposed project site looking north-northeast.

View of one of the two pits, located near the center of the proposed project site.

View of rusted metal stick-ups located in the pit located near the center of the proposed project site.

View of one of the several debris piles, containing concrete, asphalt, gravel, and rebar, located near the center of the proposed project site.

View of the tree line, looking north, on the western side of the proposed project site.



View of the tree line and overhead power lines along railroad tracks looking north along the eastern boundary of the proposed project site.

View of the mound of higher elevation, located on the northern side of the proposed project site.

View of the catch basin, located north of the mound along the “L” shaped road.

View of the stormwater basin with one inlet, located on the northern edge of the proposed project site.

18 April 2024

Logan York
Tribal Historic Preservation Officer
Miami Tribe of Oklahoma
P.O. Box 1326
Miami, OK 74355

SUBJECT: Tribal Consultation and Section 106 Compliance for U.S. Department of Energy Proposed Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri – New Site

Dear Mr. York:

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States.

DOE previously contacted you in October 2023 about this project. However, a new location for the plant has been selected.

ICL's proposed project site is located at 401 Adelaide Avenue in St. Louis Missouri (also identified by the following addresses: 460 East Carrie Avenue, 420 East Carrie Avenue, and 5410 West 3rd Street) (Figure 1). The proposed project site is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use within the City of St. Louis. Historical maps indicate that the proposed project site was originally developed for a mix of residential, commercial, and industrial purposes beginning in the early 1900s. Past commercial and industrial occupants have included a ballpark with a grandstand, railyard housing a roundhouse, machine shop, water tower, and office, and a trailer/trucking parking and/or staging lot. Chicago, Rock Island, and Pacific Railroad occupied as early as 1931 to as late as 2000. By 2014, the concrete pavement for truck staging has been removed. The proposed project site has been in a similar configuration to the current site configuration since the 2010s, with an overall configuration relatively consistent with vacant, vegetated parcel (Figure 2). It is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use; it is zoned Commercial (Unrestricted).

The site was enrolled into the Missouri Volunteer Clean-Up Program in 2009 in order to obtain closure with identified polycyclic aromatic hydrocarbons, volatile organic compounds, and heavy metal impacts. There have been several environmental investigations from 2008-2016 that included soil borings, surface soil sampling, groundwater sampling, soil removal, and removal of an underground storage tank. While the site was issued a No Further Action determination letter on 1 August 2018 under the condition that land-use is restricted to industrial/commercial, there is still known contaminant present on-site, which includes benzo(a)pyrene, lead, heavy metals, and semi-volatile organics in subsurface soils and benzo(a)pyrene in surface soils.

3610 Collins Ferry Road, Building 26, Room 102, MS 107, Morgantown, WV 26505
Harry.taylor@netl.doe.gov Phone (304)285-5091 www.netl.doe.gov

The proposed project would include construction of a 272,000-square-foot plant and associated utilities (about 8 to 9 acres) on approximately 19 acres of undeveloped but previously disturbed land, as shown on Figure 3. Site photographs are attached.

This letter is to announce the Department's intent to use the *National Environmental Policy Act* process to comply with the provisions pursuant to the National Environmental Policy Act (42 U.S. Code § 4321 et seq.); and implementing regulations issued by the President's Council on Environmental Quality 40 Code of Federal Regulations (CFR) Parts 1500-1508. An environmental assessment currently is being prepared for this project by the Department's National Energy Technology Laboratory to meet the requirements of the National Environmental Policy Act. A copy of that environmental assessment will be sent to your office later in the year.

DOE does not have any reason to believe the project would cause any effects to tribal resources or artifacts since the site has previously been disturbed by industrial and transportation activities as well as by environmental investigation. DOE is initiating consultation and requesting information your tribe may have on properties of traditional religious and cultural significance within the vicinity of the proposed ICL facility and any comments or concerns you have on the potential for this project to affect those properties. This information is being requested to aid in the preparation of the environmental assessment and to meet our obligations under Section 106 of the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act of 1990. If you have any such information, require additional information, or have any questions or comments about that project, please contact Harry Taylor of the National Energy Technology Laboratory as soon as possible at the address below.

If you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc:

Chief Douglas Lankford
Attachments:
Maps and Site Photographs

18 April 2024

Andrea A. Hunter
Director/Tribal Historic Preservation Officer
Osage Nation
627 Grandview Avenue
Powhuska, OK 74056

SUBJECT: Tribal Consultation and Section 106 Compliance for U.S. Department of Energy Proposed Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri – New Site

Dear Ms. Hunter:

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States.

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If you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc: Colline Bell, Assistant Tribal Historic Preservation Officer

Attachments:
Maps and Site Photographs

18 April 2024

Craig Harper
Chief
Peoria Tribe of Indians of Oklahoma
118 South Eight Tribes Trail
Miami, OK 74355

SUBJECT: Tribal Consultation and Section 106 Compliance for U.S. Department of Energy Proposed Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri – New Site

Dear Mr. Harper:

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States.

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If you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc:

Attachments:
Maps and Site Photographs

April 23, 2024

Everett Bandy
Tribal Historic Preservation Officer
Quapaw Nation
P.O. Box 765
Quapaw, OK 74363

SUBJECT: Tribal Consultation and Section 106 Compliance for U.S. Department of Energy Proposed Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri – New Site

Dear Mr. Bandy:

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States.

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you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc: Wena Supernaw, Chairperson

Attachments:
Maps and Site Photographs

April 23, 2024

William Tarrant
Tribal Historic Preservation Officer
Seneca Cayuga Nation
P.O. Box 453220
Grove, OK 74345

SUBJECT: Tribal Consultation and Section 106 Compliance for U.S. Department of Energy Proposed Funding for Construction and Operation of a Lithium Iron Phosphate Cathode Active Material Manufacturing Plant in St. Louis, Missouri – New Site

Dear Mr. Tarrant:

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to ICL Specialty Products Inc. (ICL) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing," with funds appropriated by the Infrastructure Investment and Jobs Act. The new plant would fill a critical role in the high-capacity battery supply chain required for electric vehicle production and is expected to be the first large-scale LFP material manufacturing plant in the United States.

DOE previously contacted you in October 2023 about this project. However, a new location for the plant has been selected.

ICL's proposed project site is located at 401 Adelaide Avenue in St. Louis Missouri (also identified by the following addresses: 460 East Carrie Avenue, 420 East Carrie Avenue, and 5410 West 3rd Street) (Figure 1). The proposed project site is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use within the City of St. Louis. Historical maps indicate that the proposed project site was originally developed for a mix of residential, commercial, and industrial purposes beginning in the early 1900s. Past commercial and industrial occupants have included a ballpark with a grandstand, railyard housing a roundhouse, machine shop, water tower, and office, and a trailer/trucking parking and/or staging lot. Chicago, Rock Island, and Pacific Railroad occupied as early as 1931 to as late as 2000. By 2014, the concrete pavement for truck staging has been removed. The proposed project site has been in a similar configuration to the current site configuration since the 2010s, with an overall configuration relatively consistent with vacant, vegetated parcel (Figure 2). It is located in an area that is currently characterized by mixed heavy industrial, commercial, and residential use; it is zoned Commercial (Unrestricted).

The site was enrolled into the Missouri Volunteer Clean-Up Program in 2009 in order to obtain closure with identified polycyclic aromatic hydrocarbons, volatile organic compounds, and heavy metal impacts. There have been several environmental investigations from 2008-2016 that included soil borings, surface soil sampling, groundwater sampling, soil removal, and removal of an underground storage tank. While the site was issued a No Further Action determination letter on 1 August 2018 under the condition that land-use is restricted to industrial/commercial, there is still known contaminant present on-site, which includes benzo(a)pyrene, lead, heavy metals, and semi-volatile organics in subsurface soils and benzo(a)pyrene in surface soils.

3610 Collins Ferry Road, Building 26, Room 102, MS 107, Morgantown, WV 26505
Harry.taylor@netl.doe.gov Phone (304)285-5091 www.netl.doe.gov

The proposed project would include construction of a 272,000-square-foot plant and associated utilities (about 8 to 9 acres) on approximately 19 acres of undeveloped but previously disturbed land, as shown on Figure 3. Site photographs are attached.

This letter is to announce the Department's intent to use the *National Environmental Policy Act* process to comply with the provisions pursuant to the National Environmental Policy Act (42 U.S. Code § 4321 et seq.); and implementing regulations issued by the President's Council on Environmental Quality 40 Code of Federal Regulations (CFR) Parts 1500-1508. An environmental assessment currently is being prepared for this project by the Department's National Energy Technology Laboratory to meet the requirements of the National Environmental Policy Act. A copy of that environmental assessment will be sent to your office later in the year.

DOE does not have any reason to believe the project would cause any effects to tribal resources or artifacts since the site has previously been disturbed by industrial and transportation activities as well as by environmental investigation. DOE is initiating consultation and requesting information your tribe may have on properties of traditional religious and cultural significance within the vicinity of the proposed ICL facility and any comments or concerns you have on the potential for this project to affect those properties. This information is being requested to aid in the preparation of the environmental assessment and to meet our obligations under Section 106 of the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act of 1990. If you have any such information, require additional information, or have any questions or comments about that project, please contact Harry Taylor of the National Energy Technology Laboratory as soon as possible at the address below.

If you have any questions concerning the project, please contact me. I look forward to working with you.

Sincerely,

Harry E. Taylor, P.E.
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26505
304.285.5091
harry.taylor@netl.doe.gov

cc: Charles Diebold, Chief

Attachments:
Maps and Site Photographs

Appendix 3

Interim Actions

May 9, 2023

Thomas Murray
Project Manager
ICL Specialty Products, Inc.
622 Emerson Road
Saint Louis, MO 63141-6742

RE: Interim Action(s) within the scope of an ongoing Environmental Assessment prior to issuance of a Finding of No Significant Impact (FONSI) for the Commercial Production of Lithium Iron Phosphate Cathode Powder for the Global Lithium Battery Industry Project

Dear Mr. Murray,

In accordance with criteria established by the Council on Environmental Quality in its regulations implementing the procedural provisions of the National Environmental Policy Act (NEPA)(40 CFR Parts 1500-1508), DOE's NEPA implementing regulations (10 CFR Part 1021), which rely on those criteria, and DOE Order 451.1B, *National Environmental Policy Act Compliance Program*, our office has reviewed the Environmental Questionnaire submitted and found it acceptable to proceed with the following project tasks and subtasks from the enclosed Statement of Project Objectives:

Task Number	Task Title	Nature of Task Activities
0.0	Project Management and Planning	Desktop analysis, planning
0.1	Kick-Off Meeting	Meeting
1.1	Plant Design	Desktop analysis, planning
Subtask 1.2.1	The Recipient will prepare the building steel and foundations package and release it to prospective vendors for competitive bids.	Planning, bidding
Subtask 1.2.2	The Recipient will evaluate all competitive bids, including the cost of self-performed construction and then select the vendors and approve the construction projects.	Planning, bidding
Subtask 1.2.3	The Recipient will apply for and work with the city & state regulators for provisional permit	Planning, permitting

	and full permit for plant construction and utilities.	
Task Number	**Task Title**	**Nature of Task Activities**
Subtask 1.2.5	The Recipient will initiate laboratory work to familiarize with LFP reaction chemistry and conversion. This will include synthesis work and characterization.	Laboratory work
1.3	Equipment Ordering for Phase-I and II Lines	Equipment procurement

These tasks include administrative work, paper studies, analysis, permitting, planning, and laboratory-scale work at existing facilities. Subtask 1.2.4 ("The Recipient will initiate the facility shell construction and bring in the utility connections, namely, power connection & distribution, water, sewage, natural gas, and basic lighting.") is not authorized under this interim action memorandum. Any tasks or portions of tasks not noted above are not considered to be interim actions, and potential environmental impacts of these activities must be evaluated with the Environmental Assessment (EA) planned for this project. No construction, groundbreaking, land disturbances, or other related activities are authorized under this interim action memorandum. Proceeding with any tasks not noted above prior to the issuance of a FONSI will put federal funding for this award at risk, and such costs may not be recognized as allowable cost share.

Although the tasks discussed in the above paragraph would take place prior to DOE's completion of the EA for the entire project (*wherein a more thorough and extensive review will be conducted)*, DOE has determined that completing these tasks would not have an adverse environmental impact; nor would it limit the choice of reasonable alternatives for the project. It is therefore acceptable for you to proceed with these tasks.

The activities detailed within this interim action will need to be further documented and included in the upcoming EA. This interim action memorandum will be included as an Appendix in the upcoming EA and become part of the official record. Please contact Harry Taylor at 304-285-5091, or Fred Pozzuto at 304-285-5219 if you have questions concerning this interim action memorandum.

Sincerely,

Harry Taylor
NEPA Compliance Officer

Fred Pozzuto
Director, NETL NEPA Division

Enclosure: MS0000012 ICL Specialty Products SOPO

cc:
Shawn George, MESC HQ
Hank Hinkle, MESC HQ
Lani Nishimura, NETL

Appendix 4

Inadvertent Discovery Plan

Inadvertent Discovery Plan

This Inadvertent Discovery Plan (IDP) is offered to assist the Department of Energy (DOE) and ICL in implementing best management practices with regard to the discovery of unexpected archaeological finds and to ensure proper communication between the State Historic Preservation Officer (SHPO) (and Tribal Historic Preservation Officer(s) (THPOs), if applicable), DOE, and project proponents in the event of inadvertent discovery.

ICL is committed to working with the DOE, the Missouri Historical Commission at the State Historic Preservation Office, and Tribal Nations to identify and document any historic or cultural resources that exist at the Project site. As a supplement to that work, ICL has adopted the following process for responding to any unanticipated discoveries of, or effects on, historic or cultural resources during implementation of the Project. This IDP establishes a standard course of action to follow in the event of the inadvertent discovery of archaeological remains during activities considered an undertaking as defined by the National Historic Preservation Act (NHPA).

Cultural resources accidentally discovered during operations shall be recorded and evaluated by a SHPO/THPO qualified archaeological consultant. If the find is determined to be potentially significant and cannot be avoided by project design, the archaeological consultant, in cooperation with DOE SHPO/THPO, and ICL, will develop a treatment plan outlining recovery of the resource, analysis, and reporting of the find.

I. Procedures for Unanticipated Historic Resources or Unanticipated Adverse Effects

In the event of an inadvertent discovery of possible historic properties or cultural materials, including human remains, ICL will implement the following procedures:

1. In the event that any project personnel discover archaeological deposits during ground-breaking activities, **stop work** in the immediate area of the find and immediately notify the ICL Project Manager, who in turn will notify DOE and the SHPO/THPO. The area will be secured and protected.

   Note that construction activity must stop until discussions with the SHPO/THPO are complete. Failure to cease activities that intentionally destroy archaeological deposits prior to evaluation and determination of significance (in accordance with 36 Code of Federal Regulations [CFR] 800) may result in fines and penalties under Archaeological Resource Protection Act (ARPA) and other cultural resource protection laws and implementing regulations.

2. Within 24 hours of discovery:

   a. The attached “ICL Unanticipated Discovery of Cultural or Historic Resources During Construction Form” will be completed.

   b. ICL will contact the DOE and the SHPO, using the contact information contained in Section III, along with any additional information relevant to the discovery.

   c. When appropriate, ICL will initiate a third party that possesses the appropriate qualifications to assess the potential eligibility of the unanticipated historic resource for listing on the National Register or the potential for the unanticipated adverse effect to impact the qualifying characteristics of a known historic or cultural resource.

3. Within three business days after the date of an unanticipated discovery, or as soon as appropriate thereafter, and taking into account any consultation conducted under Paragraph 2 above, ICL will inform the DOE and SHPO of the potential eligibility of the unanticipated historic resource for listing on the National Register or the potential for the unanticipated adverse effect to impact the qualifying characteristics of a known historic or cultural resource, along with a determination as to whether any additional evaluation of the unanticipated historic resource or unanticipated adverse effect on a known resource is planned.

   If the SHPO/THPO, Archaeological Consultant, and Responsible Entity (DOE) agree that the discovered archaeological deposit is not eligible for nomination to the National Register of Historic Places (NRHP), the discussion will be summarized in a Memorandum of Record to be included as part of the site documentation. The Archaeological Consultant may then advise ICL to proceed with project activities. The Archaeological Consultant will monitor the remainder of immediate construction activities in case additional archaeological deposits are discovered.

4. In addition to the notifications described above, to the extent an unanticipated historic resource or unanticipated adverse effect on a known resource has the potential to adversely affect sites of religious or cultural significance to a Tribal Nation, ICL will also inform the Tribal Nations and THPO when notifying the DOE and the SHPO in the same timeframes noted above, using the contact information contained in Section III, or as soon as possible thereafter.

5. In response to receiving such information, the SHPO or THPO representing the State Agency or the Tribal Nation (respectively) who received the information may request consultation regarding ICL's determination as to whether any additional evaluation of the unanticipated historic resource or unanticipated adverse effect on a known resource is planned.

6. Any consultation requested under Paragraph 5 will be conducted after such consultation is requested. Construction may continue at the discovery location only after the process outlined in this plan is followed and SHPO/THPO, Archaeological Consultant, and Responsible Entity (DOE) determine that compliance with state and federal laws is complete.

II. Special Procedures for the Treatment of Human Remains and Sacred Objects

The discovery of human remains should be treated initially as a crime scene (*e.g.*, a possible homicide, an Archaeological Resource Protection Act (ARPA) violation, or illegal trafficking under 18 U.S. Code Section 1170 (USC §1170)) with cultural resource professionals and the appropriate law enforcement authorities being brought in to assist in the determination of antiquity and manner of death (i.e., homicide, suicide, natural, accidental, or undetermined). To the maximum extent possible, the human remains should be protected from further damage by natural elements. If practical and if the remains are not from a clearly modern context, they should be permanently protected in place. Any human skeletal remains will at all times be treated with dignity and respect.

The purpose of these special procedures is to establish a clear plan of response in the event of an inadvertent discovery of human remains and/or artifacts at the Project site that could potentially be Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony. These procedures incorporate protective measures contained in the ARPA [(16 USC

§470aa-470mm), and Native American Graves Protection and Repatriation Act (NAGPRA) (P.L. Law 101-601; U.S.C. 3001- 3013; 104 STAT. 3048-3059, Section 3) and implementing regulations (43 CFR Part 10, Section 10.6(a)), which govern such discoveries on federal or Tribal lands. The special procedures are consistent with the principle that any human remains encountered during the undertaking will be given sensitive and respectful treatment.

If human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during implementation of the Project, ICL will follow the procedures described above, as supplemented by these additional procedures.

1. Immediately stop all work within thirty (30) meters of the area of the discovery.

   a. The "area" is defined as any ground surrounding the discovery that is needed to ensure the protection of the human remains, funerary objects, sacred objects, or objects of cultural patrimony.

2. If the discovery is of skeletal remains, contact the appropriate law enforcement office and coroner as soon as practicable after discovery, but no later than the same day as the date of discovery. **Do not call 911.** Notify the ICL Project Manager and engage an Archaeologist, as needed. Do not engage with media.

3. If skeletal material discovered cannot be reasonably identified as non-human, do not disturb the find.

   b. Only the Sheriff/Coroner has the authority to remove the skeletal material to make a final determination as to its origin.

   c. Under no circumstances will any unauthorized ICL personnel or contractors use potentially destructive means (trowels, probes, shovels etc.) to determine if the remains are human or remove the skeletal material.

4. Secure the area of discovery.

   a. Human remains must be provided with security at all times until removed.

      i. Upon discovery, post a guard at the area of discovery until at least the time the proper authorities are notified.

      ii. An alternative security plan can be utilized after notification if the alternative plan is developed after consultation with the proper authorities.

5. Protect the discovery.

   a. At a minimum, protecting the discovery will include flagging off the area of discovery.

   b. Human remains will be carefully covered and secured to protect them from any degradation, inappropriate observation, or inappropriate photography.

6. Consult with Tribal Nations and the Tennessee SHPO, using the contact information contained in Section III. Within 5 working days of the discovery, the Archaeological Consultant for ICL will send a written documentation of the discovery with copies of any correspondence to the SHPO/THPO and Bureau of Indian Affairs (when appropriate).

   For Native American human remains that are not the subject of criminal cases, disposition shall be in accordance with the implementing regulations of NAGPRA, 43 CFR Part 10.6(a). A good faith attempt shall be made to identify the descendants of all Non-Native

American human remains with disposition going to the appropriate lineal descendants. When descendants are not found and the human remains are not the subject of a criminal investigation, then disposition shall be according to applicable tribal or state law.

III. Contact Information

ICL will use the following when completing notifications or consultations under this Plan.

1. Department of Energy

Harry Taylor
NEPA Compliance Officer
U.S. Department of Energy/NETL
3610 Collins Ferry Road, Building 26, Room 102, MS 107, Morgantown, WV 26505
304.285.5091
Harry.Taylor@netl.doe.gov

2. State Historic Preservation Office

Please quote: "Project#: SHPO Project Number: 003-SLC-24" *in all communications.*
Mr. Jeffery Alvery
Missouri State Historical Preservation Office
Archaeologist and Review, Compliance & Records Section Chief
Lewis & Clark Building
1101 Riverside Drive
P.O. Box 176
Jefferson City, MO 65102-0176
(573)751-7862
Jeffrey.Alvey@dnr.mo.gov

3. Native American Tribes

Apache Tribe of Oklahoma: P.O. Box 1330, Anadarko, OK 73005 (P) 405.247.9493 Durell Cooper, Chairman and Sterling Chalepah. durell.cooper@apachetribe.org

Miami Tribe of Oklahoma: P.O. Box 1326, Miami, OK 74355 (P) 918.541.8966 Logan York, THPO. dlankford@miamination.com; lyork@miamination.com

Osage Nation: 627 Grandview Avenue, Powhuska, OK 74056 (P) 918.287.5376 Andrea A. Hunter, Director/THPO and Colline Bell, Assistant THPO. s106@osagenation-nsn.gov

Peoria Tribe of Indians of Oklahoma: 118 South Eight Tribes Trail, Miami, OK 74355, (P) 918,540,2535 Craig Harper, Chief. bfletcher@peoriatribe.com; Chiefharper@peoriatribe.com

Quapaw Nation: P.O. Box 765, Quapaw, OK 74363 (P) 918.238.3100 Everett Bandy, THPO and Wena Supernaw, Chairperson. ebrandy@quapawnation.com; wena.supernaw@quapawnation.com

Seneca Cayuga Nation: P.O. Box 453220, Grove, OK 74345 (P) 918.791.6061 William Tarrant, THPO and Charles Diebold, Chief. cdiebold@sctribe.com; wtarant@sctribe.com

4. Law Enforcement

St. Louis Police non-emergency dispatch: 314-231-1212

5. ICL

Troy Sorensen
EHS&S | Global HOP Lead and NA Director EHS&S
T 314-983-7808 M 314-315-0534
622 Emerson Rd., Suite 500
St. Louis, MO 63141
Troy.Sorensen@icl-group.com

UNANTICIPATED DISCOVERY OF CULTURAL OR HISTORIC RESOURCES DURING CONSTRUCTION FORM

Project Site: _____

Date and Time of Discovery: _____

Contact Information: Person Who Made the Discovery:

- Name / Company: _____
- Contact Number: _____
- Email: _____

Date and Time this Form being Completed: _____

Contact Information: Person Completing this Form:

- Name / Company: _____
- Contact Number: _____
- Email: _____

Type of Discovery: [Artifact / Structure / Fossil / Skeleton / Burial Site / Other] _____

_____

Location of Discovery: [Description of the location where the discovery was made] _____

_____

Actions Taken: [Briefly describe the actions taken upon discovery including construction halting and measures to safeguard discovery] _____

_____

_____

_____

People Notified: [List the names and positions of individuals or organizations notified] _____

_____

_____

_____

Number and Description of What Was Found:

- Item 1:
    - Description: _____

      _____
    - Material: [e.g., stone, metal, ceramic, bone etc.] _____
    - Quantity: _____
    - Approximate Age [If known] _____
    - Condition [e.g., intact, partially damaged, deteriorated, etc.]. _____

    - Dimensions / measurements, or approx. size of the discovery]: _____
- Item 2:
    - Description: _____

      _____
    - Material: [e.g., stone, metal, ceramic, bone etc.] _____
    - Quantity: _____
    - Approximate Age [If known] / Condition: _____
    - Condition [e.g., intact, partially damaged, deteriorated, etc.]. _____
    - Dimensions / measurements, or approx. size of the discovery]: _____
- [Add more items as necessary below or append another form].

Additional Notes or Comments:

_____

_____

_____

_____

_____

_____

Photos Taken: Yes / No

[Please attach photo(s) to this form].

Map Attached: Yes / No

[Please attach map(s) showing the location of discovery to this form].

Signature of Person Completing this Form:

_____

Signed: [NAME] _____

Date: _____

Appendix 5

Equity Plan

DE-MS0000012

BIL: Commercial Production of Lithium Iron Phosphate Cathode Powder for the Global Lithium Battery Industry

ATTACHMENT 6: EQUITY PLAN

SUMMARY:

Our Equity Plan is detailed with milestones/measurables for each budget period regarding Quality Jobs and Community Benefits. The highlights include the creation of over 150 permanent high paying union and professional positions along with 800-900 union construction positions. The St. Louis Metro area is in high need for investment to offset the auto manufacturing loss from the past decades, which is evident in the data showing the lack of economic growth. The local community will benefit not only through good paying union and professional jobs but also by ICL taking an active role in developing the next generation of ICL employees.

EQUITY PLAN

QUALITY JOBS & COMMUNITY BENEFITS

Primary Submitter: ICL Specialty Products Inc.
Vendor: McCarthy Building Companies, Inc. (Construction) DE-FOA-0002678-1875

ICL has a commitment to always working towards a more sustainable and secure future for our employees and the communities where we are located. The Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing funding opportunity will allow ICL to grow jobs and build wealth in the historically disadvantaged community where we work and live.

The St. Louis metro region has experienced decades of economic underperformance, population stagnation, and racial inequity. ICL has joined with other businesses and civic leaders to commit to creating jobs, diversifying the economy, closing racial and spatial disparities, and demonstrating for others that we can achieve inclusive economic growth.

ICL continues its efforts within the company and the community to make strategic investments to advance these goals. Our proactive approach of past years towards society's sustainable development goals, and our culture of innovation are now fueling our current efforts. The Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing funding opportunity complements our efforts to not only create a more sustainable future but also create over 150 permanent good paying jobs that benefit our community.

ICL seeks to maintain a positive impact on local communities by supporting their economic development, social innovation, and local entrepreneurship. This is done by sharing knowledge and resources to empowering the members of our communities. Our mission is to develop long-term lasting relationships and collaboration with our communities, built on common shared values and trust. A good example is partnering with Black Girls Do STEM, a local community-based organization dedicated to reaching young women of color to encourage them to explore science and engineering careers.

We support social entrepreneurs from all fields to establish their ideas by sponsoring, guiding, and training. We encourage entrepreneurs from different communities to share ideas, cooperate, and expand successful projects to additional communities, hence creating a network of communities. We focus on local needs including empowerment, economic growth, equality, inclusion, and sustainability. ICL is a top 25 finalists for the St. Louis Business Journal's 2022 Corporate Philanthropy and Innovation Awards. The award recognizes the top 75 companies, which provided the most in charitable contributions in 2021 based on total cash and in-kind giving.

As part of the company's commitment to sustainability – including supporting the communities where it operates – ICL proudly made donations to organizations such as the St. Louis Area Foodbank, United Way and the St. Jude Children's Research Hospital in 2021. The St. Louis-based team also volunteered support at local organizations, such as Forest ReLeaf of Missouri and Rebuilding Together St. Louis. Our Equity Plan is detailed below to show our commitment to quality jobs and community benefit.

ICL Employees volunteering at St. Louis Area Foodbank

QUALITY JOBS

MANUFACTURING – WORKFORCE

Our Carondelet facility located in St. Louis, Missouri has been in continuous operation since 1876 as part of Monsanto-Solutia-Astaris and since 2005 as ICL Group, Inc. As an established production facility, handling over 100,000 metric ton of phosphate materials per year, ICL has been integrated into the local community for decades of equitable workforce employment practices.

The Carondelet facility employees have been represented by **United Food &**

Commercial Workers International Union, AFL-CIO/International Chemical Workers Union Council since 1944. This proposal is strongly supported by the largest private sector Union in the nation. Anthony Perrone, International President of the UFCW stated ***"We believe … assistance from the federal government would leverage private sector financing for investment in ICL's lithium iron phosphate cathode active material (CAM) manufacturing facility in St. Louis, Missouri and help grow the region into the epicenter of electric vehicle (EV) battery and ESS manufacturing in the Midwest."***

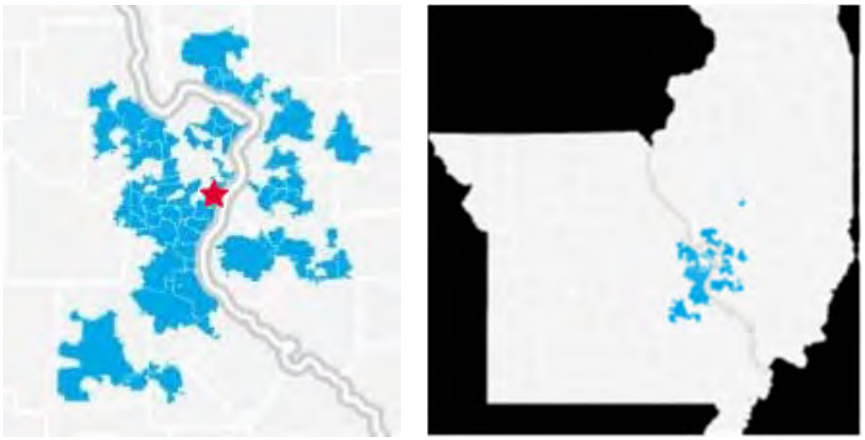
These future jobs all include an attractive full benefit package including health care insurance, life and disability, paid vacation and many other components. Plant operation will be 24/7 so these positions will include flexibility to employees desiring day, evening or night positions as per our shift work policy. Shown in the table below is the expected employment positions created per this proposal. Operator positions are represented by UFCW/ICWUC. In Q4 of 2021 according to JobsEQ®, our employee geographic area salary is only $57,000.

In addition to these manufacturing positions, there are an additional **6 full-time permanent R&D positions (STEM)** created by this program with an expected growth to 12-16 positions. These positions will be distributed between Webster Groves Technical Center and Tarrytown NY.

ICL is committed to providing to all its employees and contractors a working environment that is safe, productive, respectful, and free from discrimination. In keeping with this commitment, harassment of any kind of any employee or contractor will not be tolerated. Any words or actions that create an intimidating, hostile or offensive working environment for any ICL employee or contractor will not be tolerated. We are all responsible for ensuring that harassment does not occur.

Shown in the map below is the Department of Transportation census track designation of Historically Disadvantaged Communities within the St. Louis area. Our Carondelet facility ★ is located in the center of communities in need of significant investment.

Our current plant demographics of employee residences is highlighted in the map below. We recruit and retain a significant number of employees from communities of need and our proposal will provide additional workforce opportunities as well.



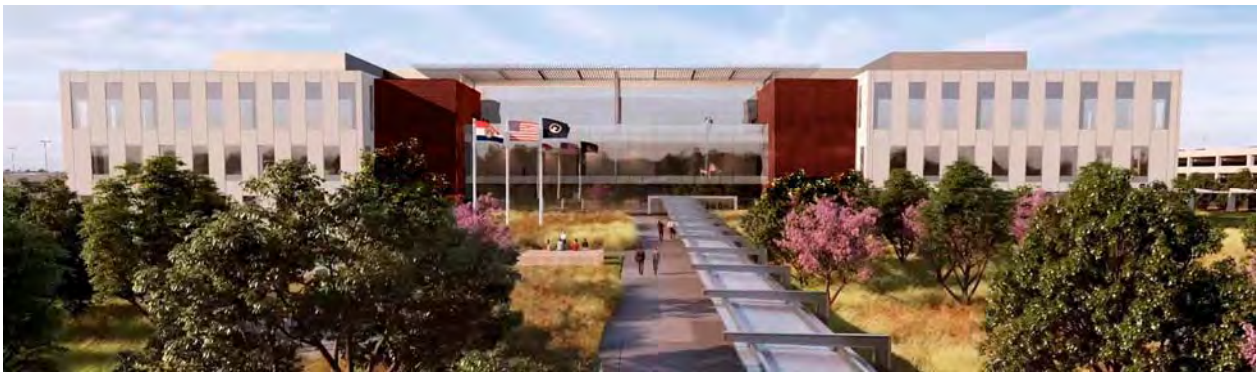
CONSTRUCTION – DIVERSE WORKFORCE PARTICIPATION

McCarthy Building Companies, Inc. is the oldest privately held national construction company in the country – with more than 150 years spent collaborating with partners to solve complex building challenges on behalf of its clients.

Repeatedly honored as a Best Place to Work, McCarthy is ranked the 9th largest domestic builder (Engineering News-Record, May 2020) – and is 100% owned by its employees. In 2019, McCarthy was recognized as a **Forbes Best Employer for Diversity** for the firm's commitment to a diverse and inclusive workplace. In 2020, McCarthy became one of the first large national general contractors to formally commit to the Associated General Contractors of America Culture of Care pledge, which creates a framework for creating a **safe, supportive work environment** for all employees.

As we examine proven strategies for engaging, hiring, retaining, and promoting diverse businesses and workers, we will cite portions of McCarthy's established Diversity, Equity, Inclusion, and Accessibility ("DEIA") Standard Operating Procedures. When we use the term "disadvantaged communities" throughout this Equity Plan, we intend this reference broadly to encompass marginalized, underserved, and minority groups (African American, Native American, Hispanic American, Asian-Pacific American, or Subcontinent-Asian American). We will provide evidence to show how our approach has led to successful results on McCarthy construction projects, and how it will be applied to achieve specific results on this project. In addition to the general usage of the term "disadvantaged communities," we also acknowledge and support the specific requirements of the **Justice40 Initiative Plan** to accrue quantifiable, measurable, and trackable benefits to "DACs" – disadvantaged census tracts where annual median household income ("MHI") is less than eighty percent (80%) of the statewide annual median household income.

In addition to working alongside industry groups such as the Associated General Contractors of Missouri, the St. Louis Council of Construction Consumers (SLC3), and the Construction Forum, **McCarthy collaborates with construction trade unions, union apprenticeship training programs, and employment assistance centers like Better Family Life and Worknet** (for SSDI disability benefit recipients) as we seek businesses and candidates for hiring.



National Geospatial Intelligence Agency West (N2W) campus in St. Louis, MO

Preconstruction directors, project managers, field superintendents, and executive leaders – all lead and participate in outreach events in our efforts toward guiding historically underrepresented diverse workers and business owners to gain exposure, pursue, and succeed in construction jobs and careers.

Let's look at a project where we are employing intentional efforts to expand opportunities to disadvantaged communities to positive effect: the Next National Geospatial Intelligence Agency West ("N2W") campus, an ongoing federal project with a contract value of approximately $740M that McCarthy HITT-A Joint Venture is constructing in north St. Louis City. We will return to this case study throughout this Equity Plan because of its relevance to the proposed ICL project in terms of its location, significant size, lengthy construction duration, and union-based workforce, where a project labor agreement is in effect. Located amidst disadvantaged communities in the zip code 63106, this project is **exceeding goals established for both diverse business enterprise and workforce participation**.

Above – McCarthy hosting outreach events; Below – McCarthy hosting a women in construction event

Prior to our contract award and throughout active ongoing construction to date, McCarthy has sponsored and participated in significant **community engagement** practices that include:

- Expansive bid solicitation through in-person and virtual subcontracting outreach events targeting businesses owned by minorities, women, and veterans, and those located in historically underrepresented business zones
- Federal contracting education events, in collaboration with MO and IL Procurement Technical Assistance Centers ("PTACs") and the Small Business Administration
- Public notices and bid opportunity advertising through civic partner networks including small business development centers, local newspapers including The St. Louis American and the St. Louis Post-Dispatch, and SAM.gov (previously FBO.gov)
- Community round-table discussions with business and civic organization leaders to share project progress, hear from residents, and respond to expressed concerns
- Job fair events held in partnership with the U.S. Army Corps of Engineers and the National Geospatial Agency within majority-minority neighborhoods
- Communication regarding construction progress, workforce metrics, and diverse business subcontracting milestones shared with local, municipal, state, and federal government elected officials and offices (St. Louis Development Corporation, St. Louis City Mayor's and St. Louis County Executive's administrations, Chambers of Commerce, state legislators and congressional representatives for MO and IL)
- Sponsorship and hiring from pre-apprentice construction programs that include the St. Louis Building Union Diversity (BUD) program (part of the Missouri Works Initiative) and MOKAN Construction Contractors Assistance Center
- Participation in extracurricular STEM programming, and paid co-ops and internships for high school and college students, including a focus on St. Louis Public School students

As a point of reference for gauging job creation attributable to our proposed facility expansion, let's use the N2W project again. Field project labor hours have surpassed one million, in addition to the hundreds of salaried design professionals and management staff, and total project hours for craft professionals alone are projected to exceed three million over four years – a significant economic contribution. We anticipate that the battery storage facility construction will contribute between 800-900 construction jobs both on-site and off-site over the 5-year design, construction, and manufacturing project duration. In addition to focusing on spending money with subcontractors and suppliers located in disadvantaged communities, we would also give preference to businesses who employ significant numbers of people residing in DACs, regardless of the company's physical plant location.

Our Equity Plan for this project includes community engagement measures that replicate and build on the actions and practices described above, such as the following commitments:

- Our team will host and participate in quarterly job fairs and interview sessions (a minimum of 4-8 events) during the bid solicitation periods of this ICL facility project. We will continue partnering with secondary and vocational schools, as well as **actively supporting pre-apprenticeship programs** such as St. Louis Building Union Diversity (BUD) program (part of the Missouri Works Initiative); MOKAN Construction Contractors Assistance Center; and individual union pre-apprenticeship programs. We are also exploring ways to provide support services to workers that address gaps in access to reliable transportation and other assistance like identifying dependent care resources.

Taking part in outreach events always forms an integral part of McCarthy's effective subcontracting strategy. Networking and educational presentations related to our contracting process leads to new and strengthening relationships with a wide range of diverse trade partners. Over the past 36 months, McCarthy has participated in numerous outreach events across the St. Louis region.

- Recognizing that accurate recordkeeping is elemental to tracking and improving diverse workforce participation, McCarthy utilizes LCPTracker software for certified payroll on both federal projects (including N2W) and privately funded projects. This product captures on-site labor hours worked by non-salaried craft workers, and it offers numerous reports to facilitate goal setting and workforce composition monitoring for every company performing on the job. We anticipate implementing this method or a similar software for tracking, monitoring, and reporting on the ICL project.
- On the N2W project, McCarthy has engaged an independent, minority-owned, local firm to assist in developing and reviewing **inclusive, detailed workforce hiring plans for individual subcontractors.** We collect data on each prime subcontractor's regional workforce demographics, projected cumulative labor hours, and anticipated peak labor month(s). These data are used to estimate the number of labor hours that must be worked by women, members of minority groups, apprentices, and residents of the City of St. Louis, in order to achieve established project goals. In conjunction with our workforce diversity consultant, we meet regularly with each subcontractor firm to review their monthly trends and offer services to assist in locating and hiring diverse workers. To date, **minority workforce participation stands at 19%** of total labor hours (surpassing the federal goal of 14.7%).
- We would implement similar programming on the ICL project to collect workforce demographics, build workforce hiring plans, and monitor progress for subcontractors on the battery storage project. While we do not currently track labor hours performed by residents of DACs, we will track this metric for this particular project.

MANUFACTURING - SAFETY AND HEALTH

ICL will ensure the safety and health of our employees, protect the environment in which we operate and will ensure compliance with all regulatory requirements, by taking a proactive approach that empowers employees to identify risky conditions and behaviors, learn from them, and subsequently eliminate hazards and minimize risks.

ICL's Environment Health Safety & Security (ESH&S) policy is correlated with ICL's sustainability vision for 2030. Our vision includes ambitious environmental targets, designated to enhance ICL's contribution to global sustainable development. These targets include: a 3% YOY (year-on-year) reduction in ICL's global greenhouse gas emissions; a 20% YOY increase in total renewable energy consumption (replacing direct and indirect fossil fuel usage); and a 30% YOY increase in our global circular economy initiatives focused on re-usage of main waste streams. Site-specific targets are determined based on materiality analysis of the company's global operations footprint, with each site acting to reduce its relevant impacts.

It is written in global corporate policy that ICL will maintain and verify compliance with all applicable laws, regulations, regulatory agreements and other ESH&S requirements to which the company subscribes. We will ensure that our operations, products and distribution systems are safe and secure for our employees, our site contractors and guests, distributors, customers and communities. Safety and health performance are a core value of ICL. Culture at ICL involves placing employee safety as the company's top priority and making every effort to achieve top tier safety results. To manage risks, ICL has implemented EHS&S management systems that facilitate and empower learning, in order to drive continual improvement and position ICL as a global leader.

ICL is committed to creating opportunities to facilitate operational learning. All employees are empowered to notify ICL management of anything that is not consistent with this policy so that we can learn and improve by strengthening our safety, health, security and environmental systems.

ICL will keep our operations accessible to our communities and reach out through open communications to identify interested parties, including our employees, and where appropriate, employee representatives. We will work as partners with emergency response and security agencies to protect people, property and information by securing our sites, our operational and IT systems and product value chains.

ICL will follow the Guiding Principles of the Responsible Care® framework and sustainability directives such as GRI & CDP, and will use these as part of the materiality analysis for ESH&S issues. ICL has established 5 Principles to govern the integration of EHS into its business. The 5 Principles are: EHS Management Systems, Risk Management, Learning Organization, Engagement & Commitment, and Organizational Competence. These principles and initiatives will be enabled through management leadership, allocation of necessary resources, corporate standards and establishment of specific targets in our working plans.

Commitment to Minimize Harm to the Environment
ICL applies an overall policy of corporate responsibility and sustainability that integrates social, economic and environmental considerations into all its business activities. This policy includes responsible management and continuous improvement in all sustainability aspects: reducing environmental impact; health and safety; product stewardship throughout the entire product lifecycle; responsible use of natural and land resources; advanced mine reclamation, assuring transparency with all stakeholders.

CONSTRUCTION – SAFETY AND HEALTH

McCarthy's industry-leading safety program creates the foundation for every project that we build. As we do for every project, we will implement a **project-specific site safety plan** that lays out company-wide safety and quality policies for our employees and all trade partners working on our project, while considering any hazards and circumstances related to this project alone. Consistent training, monitoring, and enforcement of safety practices have led to numbers that speak for themselves:

McCarthy Safety Data	2021	2020	Industry Average
Recordable Incident Rate	0.44	0.36	3.00
Lost Time Incident Rate	0.03	0.05	1.20
EMR	0.49	0.45	1.0

As the prime contractor, we control the project site and set requirements for all subcontractors working under us. Our message to our trade partners reflects the value we place on protecting every worker on the job – whether that person works for us directly or for a subcontractor. To underscore this view that every individual contributes to overall team success, **we track a Total Project RIR that includes all subcontractor and self-performed labor hours** worked on the entire job. For 2021, that TPRIR was 0.54.

But safety and health policy extend beyond training in proper technical skills and OSHA policy. We recognize the powerful impact that a **healthy, inclusive, harassment-free environment** plays in building morale and retaining workers of all backgrounds. In 2021, McCarthy worked with a small group of industry peer companies to develop programming for an annual Construction Inclusion Week, whose purpose is:

- To stand united in setting expectations and promoting consistent behavior.
- To champion inclusion that empowers us to reach our full potential, fueling
- innovation and connection with our employees, clients, and communities we serve.
- To harness and leverage the capabilities and global reach of the construction industry and its affiliates, to cultivate and perpetuate diversity, equity, and inclusion.

Construction Inclusion Week activities provide a range of **DEIA engagement strategies** to assist in supporting underrepresented minority groups, including facilitated toolbox talks, project-wide lunches with educational speakers, virtual and in-person discussions, and online tools for expanding awareness and understanding of all team members on subjects related to diversity, equity, inclusion, and accessibility. We will continue developing and evolving our programs for this annual October week-long event, fostering healthy professional relationships and improving communication across diverse backgrounds throughout the project's duration.

MANUFACTURING – JOBRETENTION

The Bi-state (Missouri/Illinois) region saw its economy suffer, when Ford and Chrysler shut down assembly plants in the St. Louis area over the past two decades. It is estimated each automotive manufacturing job creates up to eight ancillary or related supplier or support jobs. As part of the BIL, this proposal supports the region's ability to provide high-paying job opportunities. The auto industry is capital-intensive and constitutes one of the most important market sectors nationwide – historically contributing 3 to 3.5 percent to the overall GDP. The EV market is expected to exceed more than $151.5 billion by 2024 and represent approximately 7 percent of the more than 250 million cars and light trucks expected to be on U.S. roads in 2030.

The Carondelet facility is located in a Missouri designated disadvantaged community. As per the 2017 St. Louis Community Health Assessment, St. Louis has 22% of its families living in poverty compared to the US average of 11%. Of counties with more than 250,000 people, St. Louis City had the 5th highest rate of asset poverty (37.1%) and 14th highest rate of liquid asset poverty (53.1%) in 2016 in the nation. Our Carondelet facility draws our employees from this region as well as Southeastern Missouri, East St. Louis and Southern Illinois region, also considered disadvantaged communities.

Carondelet Demographics	2020 Census
White	43.1%
Black	39.3%
Native American	0.5%
Asian	1.5%
Two or More Races	9.9%
Other Race	5.6%

STAGNANT POPULATION GROWTH

The St. Louis, MO-IL Metropolitan Statistical Area (MSA) has an estimated 2020 population of 2.8 million, making it the 21st largest MSA in the U.S. In 2010 the St. Louis MSA was the 18th largest U.S. metro area. In 1970, St. Louis was the 10th largest metropolis in the nation. The St. Louis MSA has struggled with stagnant population growth for years. Between 2010-20, the St. Louis MSA only added an estimated 15,369 population or 0.55% growth. During the same period the U.S. grew by 6.5% or 13 times faster. The two central counties in the metro area both lost population over the decade with St. Louis County shrinking by 4,826 or 0.48% and the City of St. Louis losing 21,722 or 6.8% of its population. Over the last 24 years, the St. Louis MSA employment has grown at a compound annual growth rate of only 0.24%, approximately one third of the U.S. growth rate of 0.72%.

STAGNANT ECONOMIC GROWTH

The St. Louis MSA was slow to recover from the Great Recession. Gross Domestic Product grew by only 5.2% between 2008-2018 much slower than the U.S. (20%) during that same time period.

ICL works hard to retain our employees. Our yearly employee engagement surveys, performed by external consultants, allow us to monitor areas of concern. Local management then has clear priority to address each area of concern with a Plan of Action that is reviewed by top management yearly. Employee engagement and satisfaction is a Key Performance Indicator for ICL globally and integrated into our ISO policy. The US Bureau of Labor Statistics shows yearly employee turnover rate of 30-40% from 2017-2021 for the manufacturing sector. ICL is proud to have a turnover rate of only 8-10% during the same time period.

Our facility has established policies and procedures regarding recruitment and employee retention. The P&P includes a training matrix which includes job function, length of training, and continued education to keep up with industry standards. ICL in 2021 also partnered with ConstructReach (constructreach.com) to do our part to attract, train and retain skilled workers. Through creating internship programs, and assessing, reimagining, and developing diversity initiatives, ConstructReach has helped organizations across the country position themselves as meaningful advocates for underrepresented populations and build a diverse and talented pipeline to keep our industry moving forward. The cooperation between ConstructReach and ICL is detailed further in the DEIA section below.

CONSTRUCTION – JOBRETENTION

Critical to the construction industry's long-term sustainability is a strong partnership among contractors and trade labor unions, a partnership that promotes careers representing a wide range of job role opportunities. McCarthy self-performs a significant portion of the labor on our projects, and we are signatory to local unions for carpenters, laborers, operators, and ironworkers. We operate in a region with strong construction trade union participation, and because our commitment to attracting top talent leads McCarthy to pay rates above union scale wages, pay for all workers on McCarthy projects exceeds prevailing wage requirements throughout the St. Louis City and County areas.

On the N2W project, our leadership team devoted significant efforts toward negotiating a Project Labor Agreement ("PLA") with multiple trade union organizations, including North America's Building Trades Union, the St. Louis-Kansas City Carpenters Regional Council, and the International Union of Operating Engineers. This PLA encourages maximum utilization of available union labor while preserving flexibility to employ women and members of minority groups for work scopes if union member businesses are unable to provide an adequate labor supply. A PLA creates an environment for construction work to proceed smoothly, without stoppage due to strikes, lockouts, or similar job disruptions; it defines mechanisms for labor-management cooperation that supports dispute resolution

with no or minimal project schedule impact. We have nurtured long-standing professional relationships with local trade union leadership over decades. We will implement a PLA for this project.

Our nationally recognized learning and development programming (inducted into the Training Top 10 Hall of Fame by Training magazine) invests in our entire workforce and includes specialized training for craft professionals. Elements of the dedicated craft training program include a national foremen development program, mentor support, and on-the-job training.

Because McCarthy is an employee-owned company, our corporate culture reflects a team mentality of ownership and collaboration (plus a best-in-class training and benefits package) that leads to high retention rates. We each have a direct stake in the company's success. Compared with a construction industry-wide attrition rate of 15.5%, McCarthy experiences an annual attrition rate of just 9.7%.

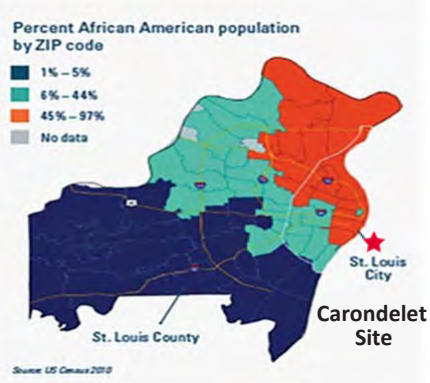
> "[St. Louis Building & Construction Trades Council] has successfully executed multiple Project Labor Agreements (PLA) with McCarthy including PLAs for the $1.7 billion federal NGA West Headquarters and the $75 million GSA Robert A. Young Seismic Retrofit Project."
>
> *– John Stiffler, Executive Secretary-Treasurer St. Louis Building & Construction Trade Council*

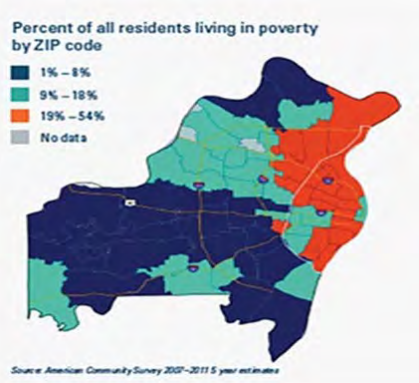
DEIA PLAN:

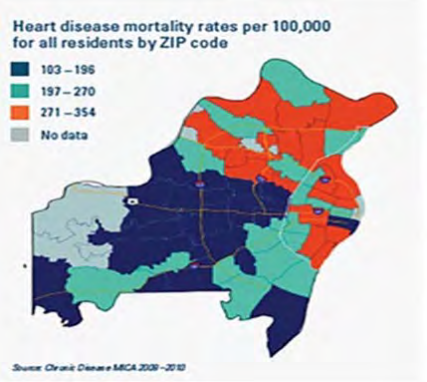
MANUFACTURING

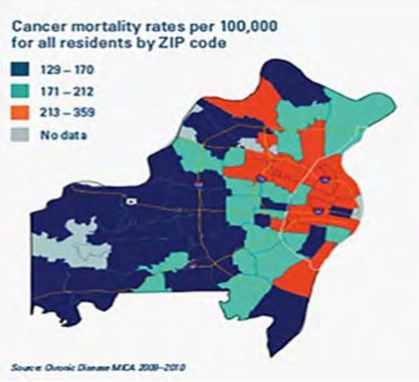
The Carondelet facility is located in a Missouri designated disadvantaged community. The graphics to the right from the 2014 American Community Survey, highlights the needs of the local community.

★ ***= Cardonelet Facility***









PERSISTENT POVERTY

"The St. Louis metro ranks 42nd out of 50 large metropolitan areas on economic mobility, defined as one's ability to improve their economic status by moving up in income. In 2019, the median income was just $37,411 for Black households, compared with $75,089 for white households."

"The City of St. Louis in particular is a site of extreme income inequality along racial lines, with a Black poverty rate of 26.4 percent standing in sharp contrast to a white poverty rate of 7.9 percent." It is clear that the Metro St. Louis area is distressed and in need of economic revitalization.

OUR PLAN

Carondelet Plant Demographics	Count	% Total
Hispanic	5	4%
Black or African American	42	30%
Two or more Races (not Hispanic or Latino)	1	1%
White	92	65%
Grand Total	**140**	**100%**

The 2022 Carondelet Plant employment profile shown in the table below demonstrates that ICL is DEIA leader in the local community and our employees mirror the surrounding community. We are committed to match or exceed our current diversity, equity, inclusion and accessibility demographics shown below for future positions this program will create. ICL has a strong history of progressive employment practices and engagement in the local community. We will continue our successful efforts to recruit, train, and retain our employees in the local community. Over 35% of our employees are from traditionally underrepresented groups, which is higher percentage than the St. Louis region. Our work force is more diverse than the local region.

In 2021, ICL partnered with ConstructReach (constructreach.com) through a grant of $75,000 as an outreach to our local community. Through creating internship programs, and assessing, reimagining, and developing diversity initiatives, ConstructReach has helped organizations across the country position themselves as meaningful advocates for underrepresented populations and build a diverse and talented pipeline to keep industry moving forward. As part of the partnership, ConstructReach is assisting ICL to:

- Develop a formalized Paraprofessional and Manufacturing Internship/Co-Op program w/ Professional Development curriculum in St. Louis
- Develop program metrics
- Social media content creation for jobs
- Evaluation of ICL current recruitment and onboarding process
- Assist with education outreach
- Create framework to execute DEI/B Initiatives
- Internal Manager training
- Consult & assist with developing
- internal framework to assess individual & team performance regarding WFD
- and diversity
- Annual social responsibility report

The objective of the collaboration is defined as:

- Further position ICL Group as an advocate for underrepresented populations
- Enhance communications & goodwill with Educators
- Attract, Develop, Support & Retain a younger diverse demographic for industry
- Increase visibility and demonstrate investment in local community

ConstructReach is one example of our plan to attract and retain employees to this project. The new R&D positions created will also provide opportunities for STEM based employment. Detailed program from ConstructReach is shown at end of this document.

Smart Milestones	Metric	Goal
Budget Period 1		
Underserved community permanent hires	% of total	40%
Permanent employee hires	DAC zip codes	40%
Budget Period 2		
Underserved community permanent hires	% of total	40%
Permanent employee hires	DAC zip codes	40%
Budget Period 3		
Underserved community permanent hires	% of total	40%
Permanent employee hires	DAC zip codes	40%
Budget Period 4		
Underserved community permanent hires	% of total	40%
Permanent employee hires	DAC zip codes	40%
Budget Period 5		
Employee Retention	% Job Retention at 3 yrs	< 20% turnover
Employee training matrix	% Completion	95%
Permanent employee hires	DAC zip codes	40%
Underserved community permanent hires	% of total	40%
Construction Milestones – Across Project Duration (All Budget Periods)		
Construction spend - underserved community business enterprises and DAC trade labor (includes MBE, WBE, & other DBE)	% of total dollars spent (all tiers)	40%

JUSTICE40 INITIATIVE PLAN:

MANUFACTURING

Justice40 is a whole-of-government effort to ensure that Federal agencies work with states and local communities to make good on President Biden's promise to deliver at least 40 percent of the overall benefits from Federal investments in climate and clean energy to disadvantaged communities. This application seeks to comply with the Justice40 initiative as detailed below. Using the interim guidance, our proposal seeks to build a cathode active material plant in St. Louis, MO within a designated disadvantaged community. The workforce at our existing ICL facility already draw significantly from regions listed as DAC. Our intent is to achieve 40% participation from disadvantaged communities. This will be tracked by future employee zip code identification and percentage of total from DAC.

This plant will be an integral part of the government's plan to transition to a clean energy job pipeline. All jobs created by this proposal will be supporting the goal of clean energy and away from fossil fuel economy but another aspect of this proposal will be transitioning the Carondelet facility to carbon neutrality.

Our Lawrence KS plant has already achieved carbon neutrality and by 2050 ICL looks to be carbon neutral globally.

Similar to the whole-of-government approach to Justice40, ICL is committed to tracking and increasing their share of minority/diverse owned vendors they do business with as well as vendors from DAC areas.

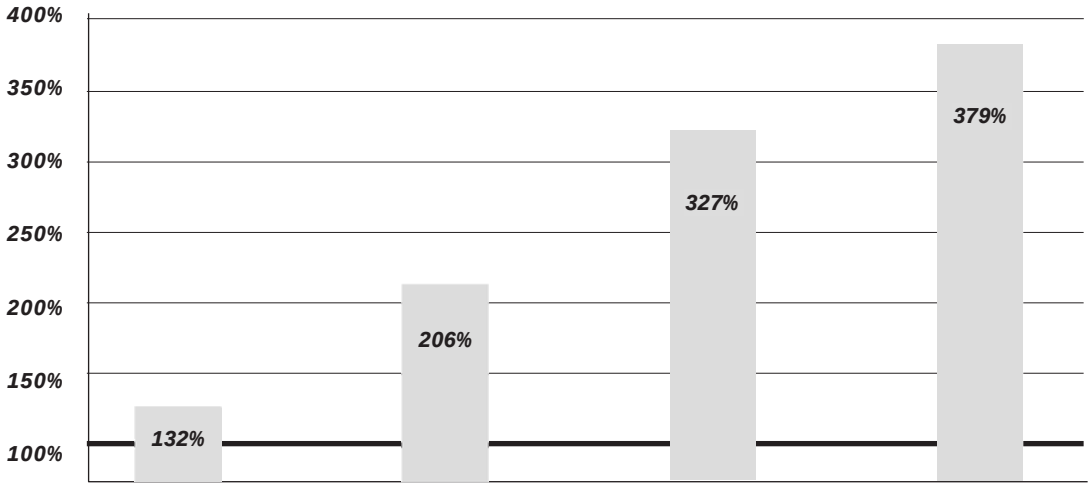
The anticipated negative impact to disadvantaged communities should be minimized. No negative impact to housing in the Carondelet area would be realized. The plant would be constructed within the current Carondelet facility in an unoccupied field in a highly industrialized neighborhood. Plant emissions would be minimal. Anticipated emissions of air, water and hazardous waste should be negligible as documented in our environmental review assessment. Nearly all waste streams are recycled. Incoming raw materials are low hazard or are similar to materials already utilized in the plant. Noise pollution will be mitigated by engineered controls to suppress any large increase in noise to the local community.

ICL Employees volunteering at Rebuilding Together St. Louis

CONSTRUCTION: DIVERSE SUBCONTRACTOR AND SUPPLIER PARTICIPATION

McCarthy takes a comprehensive approach to expanding opportunities for disadvantaged business participation throughout each project's bidding period. We grow our bid solicitation database by focusing on **intentional pre-bid networking and outreach events** designed to attract interest from local minority owned, women owned, and veteran owned businesses. We make concerted efforts to increase participation from disadvantaged businesses throughout the bid and subcontracting award process.

To demonstrate our expertise in conducting effective programs that lead to increased participation from disadvantaged businesses, we share our **proven record in conducting community-based outreach events.** Our team's efforts have yielded the following results on the N2W project:



Yet the NGA project represents just one example of how our outreach efforts translate into higher levels of diverse business participation. Yearlong, consistent presence across numerous regional and national events forms a fundamental part of McCarthy's effective subcontracting strategy. Diversity tracking tools administered by our **national Diversity, Equity, and Inclusion department** require every project to report business enterprise and workforce participation levels.

McCarthy's DEIA standard operating procedures require the creation of a **Project Specific Inclusion Plan ("PSIP")** that outlines projected budgets for each work scope and then projects participation dollars and percentages required to reach PSIP goals. Goals are based on material and labor market research. For this project, we anticipate setting the following goals:

- Construction spend – underserved community business enterprises and DAC trade labor (includes MBE, WBE, & other DBE) – 40% of total dollars spent (all tiers)

In our concerted effort to identify and utilize disadvantaged firms in all possible trades, we rely upon a **proprietary prequalification system** that collects information that helps us assess each organization's leadership credentials, bonding and insurance, relevant experience on similar scope of work, current workload, financial resources, safety and environmental records, and ethical / compliance concerns. Our prequalification database is updated regularly to keep information current and accurate, and we provide guidance on bidding practices to all interested firms. The database is organized by trade so that as a bid package is being developed the capabilities of each firm may be evaluated. We also access a variety of other resources such as:

- In-house and external source lists such as BuildingConnected
- System for Award Management (SAM) Database
- SBA's Dynamic Small Business Search Engine
- U.S. Department of Veteran Affairs– Office of Small and Disadvantaged Business Utilization
- U.S. Small Business Administration Regional Offices and Procurement Technical Assistance Centers
- Regional Small Business Development Centers
- City of St. Louis M/WBE Directory
- Minority Business Development Agency of the U.S. Department of Commerce
- Construction Industry Associations, especially those focused on DE&I efforts
- Historically Underutilized Business Zone (HUBZone) mapping database
- Local Chambers of Commerce and Minority Business Councils
- Missouri Department of Transportation Regional Certification Committee DBE Directory

- Every bidder must provide **detailed commitments outlining their planned disadvantaged business and labor force participation plans** for their bid to be considered complete and responsive.
- Post-bid interviews and bid evaluations are conducted with explicit attention directed to each bidder's contribution(s) toward increasing disadvantaged business and workforce diversity. We may implement **set-aside work scope** for disadvantaged businesses in certain work categories.
- Procurement "bid packages" are designed to permit the maximum practicable participation of disadvantaged businesses by **breaking work into manageable sizes and scopes** that fit the available pool of disadvantaged businesses' capabilities.
- We actively seek out qualified diverse firms as strategic, first-tier partners in all work scopes where their capabilities align with the project requirements.

In addition to making a good faith effort to meet diverse business goals at the first tier, we also commit to **including diverse firms at all tiers of design and construction phases**. We negotiate lower-tier subcontracting plans up front with first tier, large business subcontractors to ensure that they share our commitment to mentor and subcontract with additional small businesses and vendors.

- Every subcontract award that McCarthy negotiates and executes will include contractual language documenting the subcontractor's commitments to achieve diverse participation goals for both enterprise and workforce.
- McCarthy has established procedures to facilitate **timely payments to all subcontractors**, including disadvantaged firms. These policies are flexible, and we regularly work with these entities regarding payment terms within our subcontracts to assist with issues which would keep small businesses from competing on certain scopes of work. We also, from time to time, make special arrangements with small businesses during a project where they may be struggling financially.

In conjunction with the above examples of expanding opportunities for disadvantaged businesses, McCarthy and ICL will apply training and workforce development strategies for individuals, as described in the earlier section related to quality jobs, to ensure at least 40% of overall benefits flow to disadvantaged communities.

> "McCarthy consistently and reliably engages diverse businesses and residents of disadvantaged communities. This company has been at the forefront in creating inclusive policies for our construction industry, and their progressive practices continue to raise the bar for achieving greater diversity, equity, and inclusion across our region."
>
> *– Stephen Lewis, Vice President and Diversity & Inclusion Executive*
> *Associated General Contractors of Missouri*

CONSTRUCTION: ADDITIONAL DETAILS ON APPROACH TO J40 GOAL

Achieving the established goals of the Justice40 Initiative is one of the projects' highest priorities. As such it will be assigned as the direct responsibility of our Project Executive. A J40 Equity Manager role has been established and will report directly to the Project Executive. McCarthy's J40 Equity Manager will ensure that goals are achieved through a four-stage approach: Awareness & Education, Partnering, Contractual Flow-Down and Tracking.

Awareness & Education

It is critical that the underserved and disadvantaged community is aware of the opportunity to participate in the project as a subcontractor, supplier or direct-hired employee of a firm working on the project.

- Partner with the AGC of Missouri, SLC3, Construction Forum, unions, employment assistance centers PTACs and the SBA.
- In -person and virtual subcontracting outreach events and community round table discussions quarterly job fairs and interview sessions in accordance with the included Community Outreach Plan.
- Public notices and bid opportunity advertising.
- Project informational website.

As the J40 Initiative is new and the requirements may be unfamiliar to the underserved and disadvantaged community as well as other businesses it is important that information and education is readily available that clearly communicates the purpose and requirements as well as who qualifies as underserved or disadvantaged.

Partnering

This is a large and complicated design and construction project. If the work is not packaged in a way that maximizes the opportunity for smaller firms to be successful, this could hinder goal achievement. Similarly, if we don't bring together individuals from underserved and disadvantaged communities and firms from outside of these areas that may do work on the project, we may fail to have sufficient workers on site that are the target of the J40 Initiative.

- Sponsorship and hiring from pre-apprentice construction programs.
- Procurement "bid packages" are designed to permit the maximum practicable participation of disadvantaged businesses by breaking work into manageable sizes and scopes that fit the available pool of disadvantaged businesses' capabilities.
- We actively seek out qualified diverse firms as strategic, first-tier partners in all work scopes where their capabilities align with the project requirements.

Contractual Flow-Down

Firms that work on the project that are not located in underserved and disadvantaged communities will be contractually required to provide their individual plan for inclusion of second tier subs and suppliers as well as workers that live in those areas.

- Every bidder must provide detailed commitments outlining their planned disadvantaged business and labor force participation plans for their bid to be considered complete and responsive.
- Post-bid interviews and bid evaluations regarding disadvantaged business and workforce diversity.
- Contractual language documenting the subcontractor's commitments to achieve diverse participation goals for both enterprise and workforce

Tracking

Performance against goal will be tracked and updated monthly, accurate recordkeeping is elemental to tracking and improving performance of the J40 commitments, McCarthy utilizes LCPTracker software to manage certified payroll which captures on-site labor hours worked by non-salaried craft workers. It will also be used to monitor the level of labor hours performed by individuals from underserved and disadvantaged communities. This is used as the basis for tracking total dollars for the same.

In the case that performance against any Smart Milestone metric falls behind, a recovery plan will be developed that outlines the specific actions that will be taken to correct the deficiency.

McCarthy will report progress to ICL on an interim basis at mid-year and will submit final progress at year-end for inclusion in their report to DOE.

CONSTRUCTION: COMMUNITY OUTREACH PLAN

To maximize opportunities related to the construction of the project, McCarthy will host a minimum of 4 – 8 community and subcontractor events, job fairs, and interview sessions based on the following schedule.

Schedule of Commitments - Community Engagement	
Timeline	**Event**
Within 45 days of Grant Award	**Initial Community Information and Outreach Event**
	Establish relationships with community groups and business organizations.
	Disseminate information regarding the contracting process and upcoming opportunities.
	Generate community interest in the project.
	Coordinate the outreach effort with business organizations, community groups, trade and professional associations and chambers of commerce.
Within 90 days of Grant Award	**Project Informational Website Live**
Within 90 days of Grant Award	**Initial Subcontractor Outreach Event**
	Project Awareness, Schedule Overview, Partnering, Networking
	Small Businesses
	Underserved Community and DAC Business Enterprises
	MBE, WBE, DBE Firms
	Large Businesses
	Community Organizations
Within 180 days of Grant Award	**Subcontractor Outreach and Job fair Event**
	Job Fair, Project Awareness, Schedule Overview, Partnering, Networking
	DAC Potential New Hire Individuals
	Small Businesses
	Underserved Community and DAC Business Enterprises
	MBE, WBE, DBE Firms
	Large Businesses
	Community Organizations
As needed to meet participation goal	**Additional Subcontractor Outreach and Job fair Events**

REPORTING METRICS

ICL will report progress towards the Justice40 goals for the following Smart Milestones on an interim basis at mid-year and will submit final progress at year-end.

Reporting Metrics				
Budget Periods 1 through 4				
Smart Milestone	**Firm**	**Metric**	**Goal**	**Project to Date**
Underserved Community Permanent Hires	ICL	% of Total	40%	
Permanent Employee Hires	ICL	DAC Zip Codes	40%	
Construction Spend (All Tiers) - Businesses Located in Underserved Communities and/or DAC Zip Codes; MBE, WBE, DBE firms (Any Zip Code); Small Businesses (All Classifications, Any Zip Code); individuals that reside in underserved communities and/or DAC Zip Codes employed (onsite and offsite) in the construction and management of the project.	McCarthy	% of Dollars Subcontracted to Listed Business Types + Dollar Value of Payroll of Individuals that Reside in Underserved Communities and/or DAC Zip Codes Employed by Non-Listed Business Types.	40%	
Budget Period 5				
Smart Milestone	**Firm**	**Metric**	**Goal**	**Project to Date**
Employee Retention	ICL	% Job Retention at 3 yrs.	< 20% Turnover	
Employee Training Matrix	ICL	% Completion	95%	
Underserved Community Permanent Hires	ICL	% of Total	40%	
Permanent Employee Hires	ICL	DAC Zip Codes	40%	
Construction Spend (All Tiers) - Businesses Located in Underserved Communities and/or DAC Zip Codes; MBE, WBE, DBE firms (Any Zip Code); Small Businesses (All Classifications, Any Zip Code); individuals that reside in underserved communities and/or DAC Zip Codes employed (onsite and offsite) in the construction and management of the project.	McCarthy	% of Dollars Subcontracted to Listed Business Types + Dollar Value of Payroll of Individuals that Reside in Underserved Communities and/or DAC Zip Codes Employed by Non-Listed Business Types.	40%	

COMMUNITY BENEFITS AGREEMENT:

GOOD NEIGHBOR AGREEMENT

Throughout earlier sections of this proposal, we have detailed existing and planned actions to mitigate social risk, here in Carondelet, St. Louis city, and beyond. Our companies both share extensive experience in job creation and implementing safe environmental manufacturing and construction practices; we will employ these proven methods as we ensure at least 40% of project benefits flow to disadvantaged communities. In addition to, and in support of, the approaches we described earlier it is ICL's intention to reach out within our local community (Carondelet Community Betterment Foundation (CCBF) for example) and design a Community Benefits/Good Neighbor Agreement.

This Agreement may incorporate guidance for increasing DBE participation, supporting education and internship programs, complying with Missouri Prevailing Wage Law and collective bargaining agreements, and compliance monitoring and reporting. Some potential agreement areas are:

Black Girls Do STEM is a 501c Non-profit organization based in South St. Louis headed by Cynthia Chapple. Ms. Chapple's organization is community based dedicated to empowering Black/Brown women to enter the STEM workforce through mentoring, training and empowerment by female leaders of color who have excelled in the industry. While Black Girls Do STEM is young and growing, they have already established programs with Boeing and Deloitte in the St. Louis area. Workshops are held at 2 locations in St. Louis underserved areas and an underserved location in North St. Louis County. One proposal is to offer mentoring and shadowing opportunities to BGDSTEM students at our Carondelet plant and Webster Groves Technical Center along with potential financial support.

ConstructReach will offer evaluation of ICL current recruitment and onboarding process so that they strengthen our ability to reach the local underserved community.

ICL will continue to support protection of our workers' right to organize a union in a free and fair process. A minimum wage of $20/hr will be offered for all positions created by this proposal.

We will support CCBF and Carondelet YMCA through employee volunteer service hour donations and financial assistance. We will extend our volunteer efforts toward community organizations such as Forest ReLeaf of Missouri and Rebuilding Together St. Louis.

ICL Employees volunteering at Forest ReLeaf

PHASE 1 - St. Louis Connect Reach

Date	Deliverable	Description
10/23 - 12/23	Create an ICL Group community outreach framework for	CR team to identify workforce development organizations and Highschools with CTE programs with Manufacturing pathway (St. Louis MO)
		CR team to identify Chamber of Commerce recommentations, applicable programs and contacts (St. Louis)
–18 Months Prior to Plant Commissioning	Organize Plan, Host Community outreach event	Community engagement event (i.e. tailored "I built this event")
–18 Months to 6 Months Prior to Plant Commissioning	Social Media Marketing	CR team to create and manage targeted social media posts
		post once / week on up to 3 platforms centered around the following topics: About ICL Group, community engagement, FAQ's
	Recruiting	Create, manage, and optimize 4 Facebook/Instagram ads and 4 LinkedIn ads. for open Mechanical and Operator positions
		CR to provide initial pre-screening of potential candidates and pass onto to ICL & Kelly Services
–9 Months to 3 Months Prior to Plant Commissioning	Formalized Internship / New-hire Program	CR to leverage existing Operator program. CR to implement its professional development curriculum while ICL teaches the job specific skills
		Identify early-adaptor manager to serve a advisor/mentor
		Introductory call between CR & Advisor/Mentor
		Advisor/Mentor Training
		Oversee & manage and track metrics of Program
	week 1	Onboarding Survey
		Communication
	week 2	Teamwork
	week 3	Time Management
	week 4	Facilitating Meetings
	week 5	Leveraging Learning, Working & Communication Styles
	week 6	Financial literacy
	week 7	Working in Diverse Teams
	week 8	Leadership
	week 9	Exit Survey
	Internship / New-Hire Experience Report	CR team to create and present back to leadership the metrics from internship
	Review existing Onboarding Process	ConstructReach to review ICL's current process → make recommendations if needed
	Case Study	CR to create and conduct interviews with applicable mentor/intern
	Video	CR to create and conduct video to capture efforts
	End of Year Report	CR team to compile, create and present a end of year report to summarize efforts and work which contributed to company outlined goals and discuss next steps to scale

Reviewers Comments (Criterion 5)
a) The applicant does not commit explicitly to hiring persons who have been displaced from declining industries.
ICL has detailed in the Construction portion of the Equity plan that they intend to have quarterly job fairs and interview sessions (4-8 events). The St. Louis area recently had the announcement that US Steel will close their Granite City location which will displace 2000 union steelworkers. Both ICL and McCarthy will actively recruit these employees as they transition from a declining industry like steel to the Energy jobs of the future through these job fairs.