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DOE/EA-2272

FINAL Environmental Assessment

Southern Virginia Megasite at Berry Hill: Development of Lots 1 and 2
(3304 Berry Hill Road); Danville, Virginia

Microporous Assets – Project Stellar



Fed95, LLC

October 2025



U.S. DEPARTMENT
of ENERGY



National Environmental Policy Act (NEPA) Compliance Cover Sheet

Proposed Project and DOE's Proposed Action:

The Proposed Action under review in this Environmental Assessment (EA) under NEPA involves the Department of Energy (DOE) providing cost-shared funding toward the Proposed Project, which consists of the construction and operation of a facility for Microporous, LLC (referred to as Microporous, a subsidiary of MP Assets Corporation). The Proposed Action applies to only Phase I of the overall development planned by Microporous at this location, although a total of four Phases are anticipated to be completed. The operations at the proposed Microporous facility include the development of a coated lithium-ion (Li-ion) battery separator plant at the property located at Lots 1 & 2 in Danville, VA (the Project Area) within the Southern Virginia Megasite (Megasite), also known as 3304 Berry Hill Road, for Li-ion batteries integral to electric vehicle (EV) supply chains. This project would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF, PMMA) coating, complete with slurry mixing and slitting equipment. Within the DOE grant's 3-year performance period, Microporous would expect to create approximately 282 permanent jobs based on a three-year performance period of Phase I. To achieve its purpose, the plant would consist of manufacturing buildings, an administrative building, a utility building, and storage silos. The Project Area is located at 3304 Berry Hill Road, Danville, Virginia (Pittsylvania County) and comprises approximately 212-acres. The Microporous development would occur entirely within Lots 1 and 2, located on the eastern edge of the Megasite.

The Megasite is 3,528-acres in total and is publicly owned, zoned for industrial use. Utilities including water, sanitary sewer, natural gas, fiber optic, and electricity, and Class 1 railway and Expressway (US 58/US 29) access have already been or are otherwise planned to be installed across the Megasite, including for applicable portions of Lots 1 and 2. It is the goal of the Virginia Economic Development Partnership (VEDP) and Danville-Pittsylvania County that the Megasite would be fully utilized for industrial purposes.

DOE's Proposed Action is to provide \$100 million in funding toward the total project costs of \$525 million. Microporous' private cost share would be \$425 million. Microporous has planned multiple phases of construction (Phases I - IV). However, DOE's Proposed Action is limited to providing funding for Phase I of Microporous' proposed project. Phases II – IV are not funded under DOE's Proposed Action and are still in unconfirmed conceptual stages. While Phases II – IV are not funded under DOE's Proposed Action, the potential impacts of all project phases (including Phases II – IV) were evaluated in this EA to the extent possible and/or otherwise feasible.

This EA considers the Proposed Action (DOE providing cost-shared funding towards the construction and operation of portions of 3304 Berry Hill Road (Lots 1 & 2) by Microporous) and the No Action Alternative for the Project Area. Under the No Action Alternative, it is assumed that the development will not occur. **However, Microporous has indicated that it would likely proceed with the development and operation of the Project Area in the absence of DOE funding.**

Type of Statement: Final Environmental Assessment

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Abstract:

The Proposed Project would occur on Lots 1 and 2, south of McGuff Creek, of the Megasite in Danville, VA (Project Area), also known as 3304 Berry Hill Road, Danville. **“Megsites” are industrial properties that are 1,000 acres or more (with 800 contiguous acres) that have robust utility infrastructure, heavy transportation infrastructure in close proximity, and a workforce population to support a large project (Quest Site Solutions, 2025).** The Proposed Project includes the construction and operation of the Microporous facility which would consist of manufacturing buildings, an administrative building, a utility building, and storage silos. This project would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF, PMMA) coating, complete with slurry mixing and slitting equipment. Within the DOE’s grant, Microporous would expect to create approximately 282 permanent jobs based on a three-year performance period of Phase I. There is potential that the facility may be expanded in the future, and the facility’s expansion/addition (Phases II through IV) has also been analyzed in this EA to the extent feasible, including as part of the **reasonably foreseeable** effects of DOE’s Proposed Action. Construction and operation of the Microporous facility would be conducted in accordance with standard industry practices and applicable state and federal regulations, including local ordinances, as applicable.

Currently, no activities are conducted at 3304 Berry Hill Road, Danville, although it is the intent of VEDP and Danville-Pittsylvania County that the Megasite will be fully utilized for industrial purposes. As demonstrated in this EA, the Proposed Project has the potential for minor **reasonably foreseeable** effects which require consideration related to the overall effect on the environmental conditions of the Megasite as a whole. Reasonable efforts have been made in this EA to anticipate potential contributions to site environmental or cultural conditions that may affect the campus in its entirety.

1 **Public Participation:**

2 **The Draft EA was released for public review and comment during a 30-day comment period**
3 **from December 3, 2024, through January 3, 2025. The comment period was announced**
4 **through publication of a Notice of Availability in the Danville Register on December 3rd,**
5 **December 5th, and December 7th, 2024, and the Chatham Star Tribune on Wednesday,**
6 **December 4th. DOE invited public participation through the solicitation of comments on the**
7 **proposed construction and operation of the facility and the Draft EA detailing the results of the**
8 **comprehensive evaluation of the action. The public was invited to provide oral, written, or e-**
9 rd,
10 **2025. Copies of the Draft EA were also distributed to federal and state agencies, and Tribal**
11 **Nations that have jurisdictions or interests in the project area. A hard copy of the Draft EA was**
12 **made available at the Ruby B. Archie Public Library in Danville, VA. Within this Final EA,**
13 **bolded text (except for chapter and section headings) indicates verbiage or punctuation that**
14 **was revised following the publication of the Draft EA to easily identify revised material. This**
15 **Final EA is available on the NETL website at <https://netl.doe.gov/node/6939> and DOE's NEPA -**
16 **EA website at <https://www.energy.gov/nepa/doe-environmental-assessments>.**
17

18 **Comments Received:**

19
20 **No comments on the Draft EA were received from the public. DOE received comments on**
21 **the Draft EA from the state of Virginia Department of Environmental Quality, Department**
22 **of Wildlife Resources, Department of Conservation and Recreation, and Department of**
23 **Health. Through consultations, comments were also received from the Virginia**
24 **Department of Historic Resources and the U.S. Fish and Wildlife Service - Virginia**
25 **Ecological Services Field Office. DOE acknowledges receipt of these comments, and all**
26 **comments received are included in Appendix B and addressed throughout this Final EA.**

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LIST OF ACRONYMS/ABBREVIATIONS

1		
2		
3	amsl	Above Mean Sea Level
4		
5	BCC	Birds of Conservation Concern
6		
7	bgs	Below Ground Surface
8	BMP	Best Management Practices
9		
10	CAA	Clean Air Act
11	CEQ	Council on Environmental Quality
12	CERCLA	Comprehensive Emergency Response Compensation and Liability Act
13	CFR	Code of Federal Regulations
14	CH ₄	Methane
15	CO	Carbon Monoxide
16	CO ₂	Carbon Dioxide
17	CVSZ	Central Virginia Seismic Zone
18	CWA	Clean Water Act
19		
20	dB	Decibels
21	dB(A)	Decibels A
22	DOE	Department of Energy
23		
24	EA	Environmental Assessment
25	ECOS	Environmental Conservation Online System
26	EH&S	Environmental Health and Safety
27	EA/CM	Emergency Action/Crisis Management
28	EO	Executive Order
29	EPA	Emergency Planning and Community Right-to-Know Act
30	EPA	Environmental Protection Agency
31	ESA	Endangered Species Act
32	ETSC	Eastern Tennessee Seismic Zone
33	EV	Electric Vehicle
34		
35	FEMA	Federal Emergency Management Agency
36	FIRM	Flood Insurance Rate Map
37	FOA	Funding Opportunity Announcement
38	FPPA	Farmland Protection Policy Act
39	ft	Feet or Foot
40	GCSZ	Giles County Seismic Zone
41	GHG	Greenhouse Gas
42	GSA	General Services Administration
43	GV	Gasoline-Fueled Vehicle
44		
45	HAP	Hazardous air pollutants
46	hr	Hour
47		

1	IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
2	IPaC	Information for Planning and Consultation
3	IRA	Inflation Reduction Act
4		
5	kV	Kilovolt
6		
7	lbs	Pounds
8		
9	m ²	Square Meters
10	m ³	cubic meters
11	mg	milligrams
12	mg/L	milligrams per liter
13	MGD	Million gallons per day
14	MMBTU	Million British Thermal Units
15	MMcf	Million cubic feet
16	MVA	Megavolt ampere
17	MW	Megawatt
18	MWh/yr	Megawatt hours per year
19		
20	NAS	National Academy of Sciences
21	NAAQS	National Ambient Air Quality Standards
22	NEPA	National Environmental Policy Act
23	NETL	National Energy Technology Laboratory
24	NOA	Notice of Availability
25	N ₂ O	Nitrous Oxide
26	NO _x	Nitrogen Oxide
27	NO ₂	Nitrogen Dioxide
28	NPDES	National Pollutant Discharge Elimination System
29	NPS	National Park Service
30	NRCS	Natural Resources Conservation Service
31	NRHP	National Register of Historic Places
32	NSR	New Source Review
33	NWI	National Wetlands Inventory
34		
35	ORD	Original Equipment Manufacturer
36	OMB	Office Management and Budget
37	ORD	Ordinance
38	OSHA	Occupational Safety and Health Administration
39	O ₃	Ozone
40		
41	PCB	polychlorinated biphenyls
42	pCi/L	Picocuries per liter
43	PM	Particulate Matter
44	POTW	Publicly Owned Treatment Work
45	PPE	Personal Protective Equipment
46	ppm	Parts per Million

1	PSIG	Pounds per Square Inch Gauge
2	PVdF	Polyvinylidene fluoride or polyvinylidene difluoride
3	PMMA	Polymethyl methacrylate
4	RCRA	Resource Recovery and Conservation Act
5		
6	SC-GHG	Social Cost Estimating Tool
7	SDWA	Safe Drinking Water Act
8	sf	Square Feet
9	SF ₆	Sulfur Hexafluoride
10	SHPO	State Historical Preservation Office
11	SIP	State Implementation Plan
12	SO ₂	Sulfur Dioxide
13	SQG	Small Quantity Generator
14	SSA	Sole Source Aquifer
15	SWPPP	Stormwater Pollution Prevention Plan
16		
17	TES	Threatened and Endangered Species
18		
19	U.S.	United States
20	USDA	U.S. Department of Agriculture
21	USEPA	U.S. Environmental Protection Agency
22	USFAA	U.S. Federal Aviation Administration
23	USFWS	U.S. Fish & Wildlife Service
24	USGS	U.S. Geological Survey
25	USTA	Underground Storage Tank Act
26		
27	VAC	Virginia Administrative Code
28	VEDP	Virginia Economic Development Partnership
29	VESCL&R	Virginia Erosion and Stormwater Management Regulations
30	VDEQ	Virginia Department of Environmental Quality
31	VDHR	Virginia Department of Historic Resources
32	VDOE-GMR	Virginia Department of Energy, General Mineral Resources
33	VDOLI	Virginia's Department of Labor and Industry
34	VDWR	Virginia Department of Wildlife Resources
35	VOC	Volatile Organic Compound
36	VOSH	Virginia Occupational Safety and Health Administration
37	VPDES	Virginia Pollutant Discharge Elimination System
38	VSWML&R	Virginia Stormwater Management Law and Regulations
39	VWP	Virginia Water Protection
40		
41	WPCF	Water Pollution Control Facility
42	WSS	Web Soil Survey

1.0 INTRODUCTION

The United States Department of Energy (DOE) – National Energy Technology Laboratory (NETL) prepared this Final Environmental Assessment (EA) to evaluate the potential environmental impacts associated with its Proposed Action of providing cost-shared funding for the construction and operation of a facility for Microporous, LLC (referred to as Microporous, a subsidiary of MP Assets Corporation). The activities at the proposed Microporous facility include the construction and assembly of coated lithium-ion (Li-ion) battery separator plant at Lots 1 and 2 (south of McGuff Creek) of the Southern Virginia Megasite (Megasite) in Danville, VA (the Project Area) for Li-ion batteries integral to electric vehicle (EV) supply chains. To achieve its purpose, the plant would consist of manufacturing buildings, an administrative building, a utility building, and storage silos. The project area is located at 3304 Berry Hill Road (also known as U.S. 311), Danville, Virginia (Pittsylvania County) and comprises approximately 212 acres. The Proposed Project would occur entirely within Lots 1 and 2 which is located on the eastern edge of the Megasite. This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [U.S.C.] 4321, et seq.). **The DOE Office of Manufacturing Energy Supply Chains (MESC) and NETL is aware that the Council on Environmental Quality (CEQ), on February 25, 2025, issued an interim final rule to remove its NEPA implementing regulations at 40 C.F.R. Parts 1500–1508. The NEPA review and this EA was initiated and prepared throughout 2024 - relying on the CEQ NEPA implementing regulations. Based on CEQ guidance, and to promote completion of its NEPA review in a timely manner, MESC and NETL relied on the CEQ regulations, in addition to DOE’s own regulations implementing NEPA at 10 C.F.R. Part 1021, to satisfy the legal requirements imposed by NEPA, 42 U.S.C. §§ 4321 *et seq.* In addition, DOE certifies it has considered factors mandated by NEPA, that this EA represents DOE’s good-faith effort to prioritize documentation of the most important considerations required by the statute within Congressionally mandated page limits - and that this prioritization reflects DOE’s expert judgment – and that considerations addressed briefly or left unaddressed were, in DOE’s judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental effects and the resulting decision. DOE certifies that this EA represents its good-faith effort to fulfill NEPA’s requirements within the one-year Congressional timeline, that this effort is substantially complete, and in DOE’s expert opinion, the analysis contained herein is adequate to inform and reasonably explain DOE’s final decision regarding the Proposed Action.**

1.1 Purpose and Need for Agency Action

DOE’s Proposed Action would provide cost-shared funding for the construction and operation of a facility for Microporous. The project was selected under the Funding Opportunity Announcement (FOA) “Advanced Energy Manufacturing and Recycling Grant Program (Section 40209).” Microporous’ project was selected due to its advantageous site location, potential to create hundreds of permanent jobs, and its project plan to produce world-class separators for lithium-ion batteries and secure domestic manufacturing of a market currently dominated by China.

1.2 National Environmental Policy Act and Related Procedures

This EA is prepared in accordance with NEPA, as amended (42 U.S.C. 4321). This EA allows for public input into the federal decision-making process; informs federal decision-makers of potential environmental effects of their decisions before making these decisions; and documents the NEPA process.

1.3 Laws, Regulations, and Executive Orders

- Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (Executive Order [EO] 13985) (**Rescinded by EO 14148, 1/20/2025**)
- Bald and Golden Eagle Protection Act
- Clean Air Act (CAA)
- Clean Water Act (CWA)
- Comprehensive Environmental Response, Compensation, and Liability Act (**CERCLA**)
- Endangered Species Act (ESA)
- **Ending Illegal Discrimination and Restoring Merit Based Opportunity (EO 14173)**
- Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (EO 13690) (**Rescinded by EO 14148, 1/20/2025**)
- Executive Order on America's Supply Chains (EO 14017)
- Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations (EO 12898) (**Rescinded by EO 14173, 1/21/2025**)
- Floodplain Management (EO 11988)
- **Initial Rescissions of Harmful Executive Orders and Actions (EO 14148)**
- Migratory Bird Treaty Act
- Pollution Prevention Act of 1990
- Protection of Wetlands (EO 11990)
- Resource Conservation and Recovery Act
- Revitalizing Our Nation's Commitment to Environmental Justice for All (EO 14096) (**Rescinded by EO 14148, 1/20/2025**)
- Tackling the Climate Crisis at Home and Abroad (EO 14008) (**Rescinded by EO 14148, 1/20/2025**)
- The Noise Control Act of 1972, as amended.
- **Unleashing American Energy (EO 14154)**

1.4 Location of the Proposed Project

The Project Area is generally located at Lots 1 and 2, south of McGuff Creek, of the Megasite at Berry Hill with the street address of 3304 Berry Hill (US-311), Danville, Pittsylvania County, Virginia (**Figure 1-1**). Two potential layouts of the Proposed Project (inclusive of Phases I – IV) are provided in **Figure 1.2**. Lots 1 and 2 comprises a total of 240-acres of the 3,528-total acres of the Megasite, although the Proposed Project would utilize approximately 212-acres. The Proposed Project would occur entirely within Lots 1 and 2 on the eastern edge of the Megasite. Lots within this Megasite are zoned for this type of proposed project.

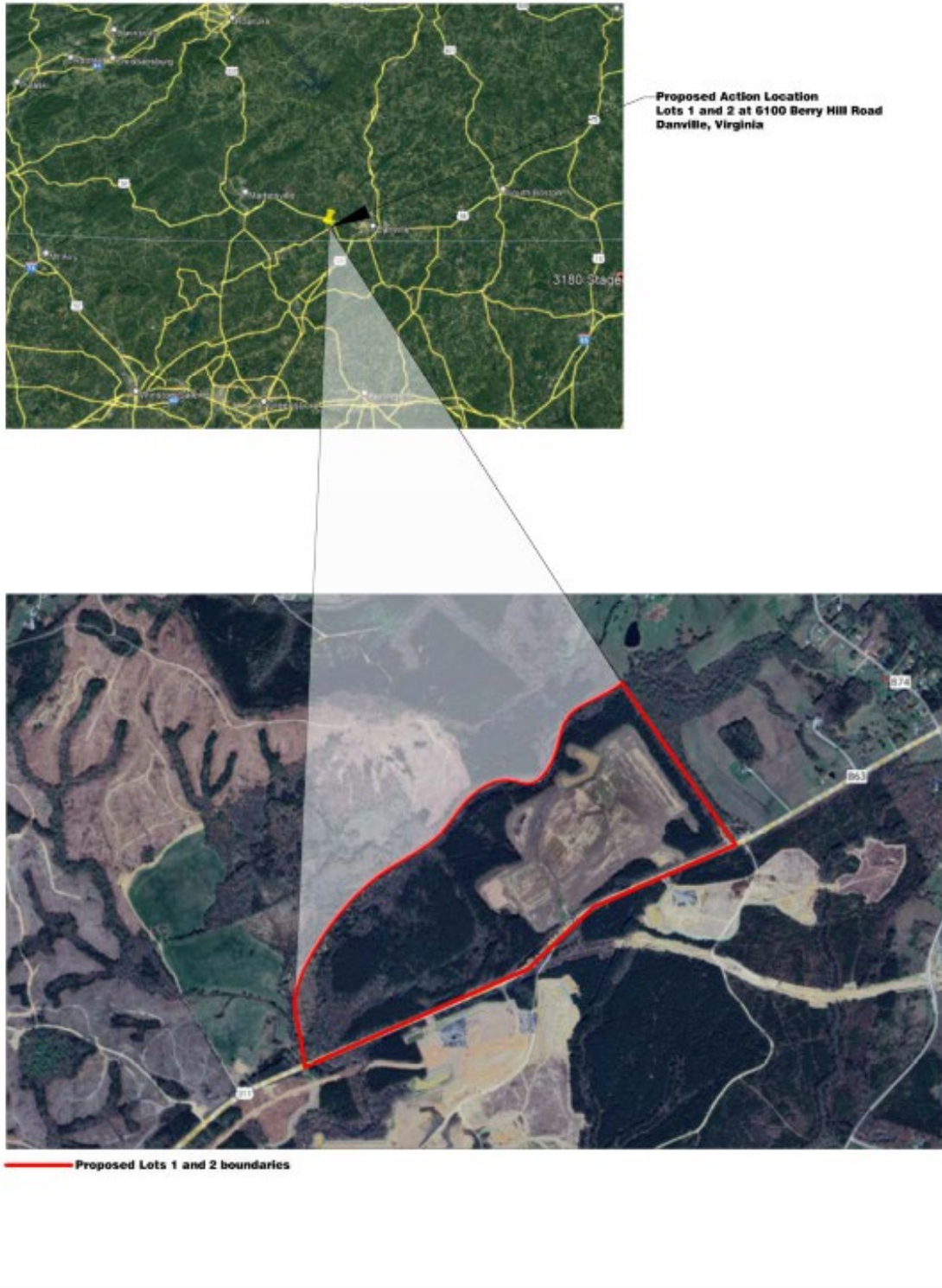


Figure 1-1: Proposed Project Location Map: Lots 1 and 2 at 3304 Berry Hill Road, Danville, Virginia

Notes: Images not scaled to size; images sourced from Google Earth Pro, November 2023; April 20

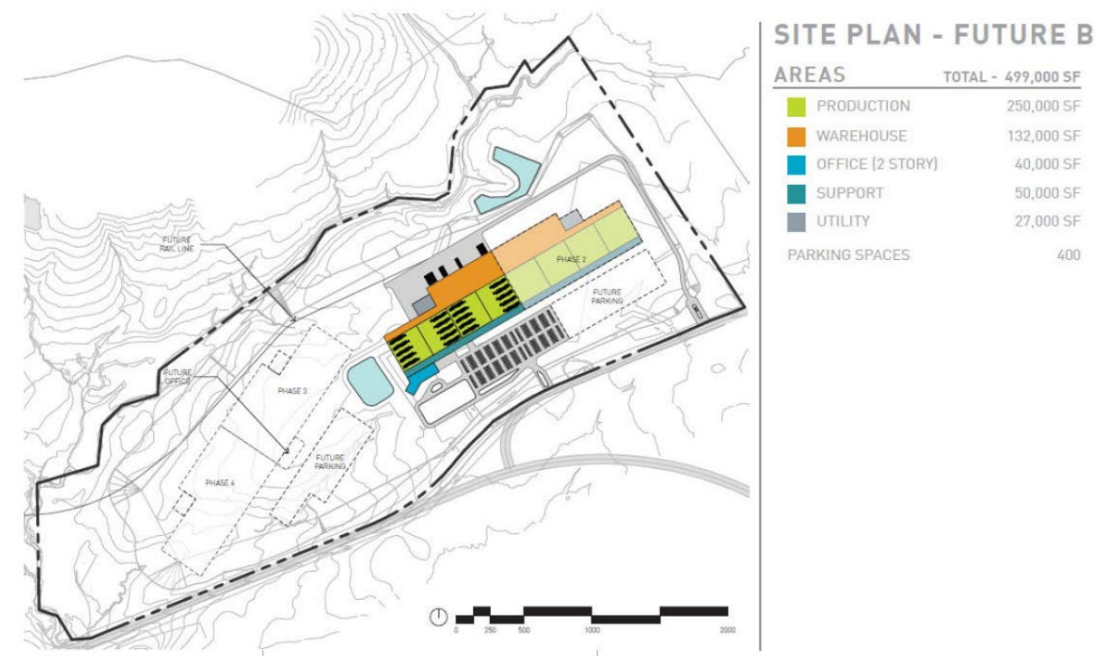
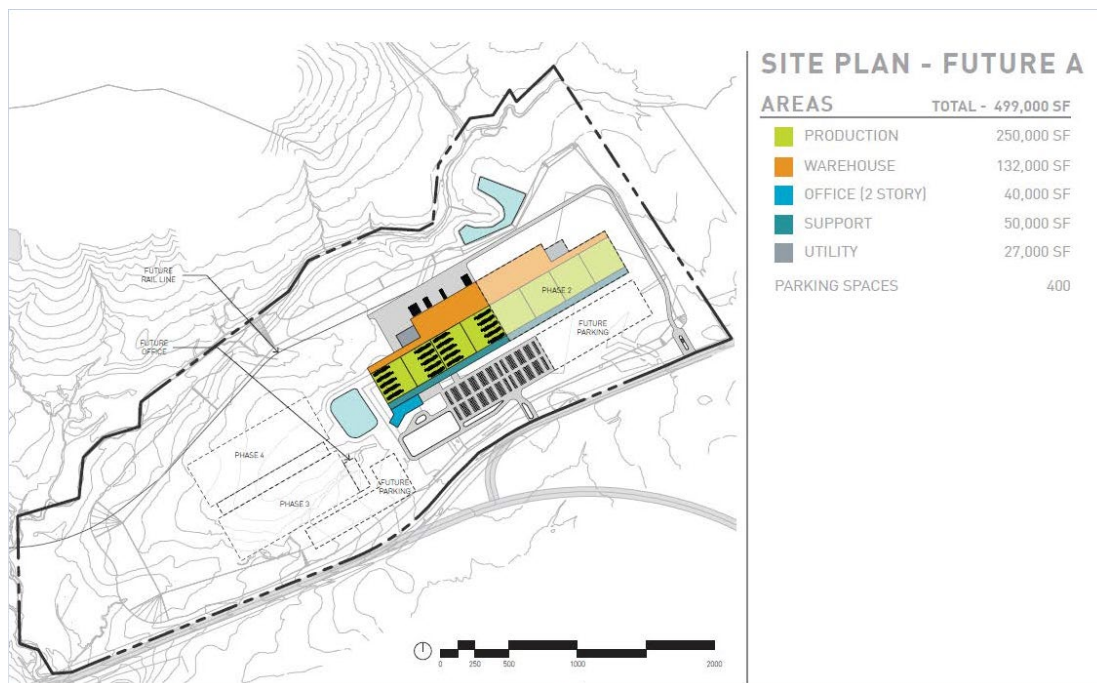


Figure 1-2: Proposed Project – Potential Site Layouts of Phases I – IV.

Notes: Images not scaled to size; images provided by BHDP+Microporous, Developed June 2024. Phases II through IV are shown on this site layout map as proposed locations.

1.5 Scope of the Environmental Assessment

The scope of analysis presented in this EA is defined by the potential range of environmental impacts that may result from implementation of the Proposed Action (DOE partially funding the development and operation of applicable portions of Lots 1 and 2 of the Megasite at Berry Hill by Microporous). Lots 1 and 2 would be developed in four phases (Phase I through IV); however, Phase I will be the focus of this document, and will be funded from implementation of the Proposed Action. Phases II through IV will be analyzed in this EA to the extent feasible, including as part of the **reasonably foreseeable** effects of DOE's Proposed Action. The proposed developments of Phase I, along with potential developments of Phases II – IV, are provided on **Figure 1-1**, shown above. This document is prepared such that it is focused on those resources that may be affected by implementation of the Proposed Action and Microporous' Proposed Project.

Resources that have a potential for impact were considered in detail to determine if implementing the Proposed Project would have a significant impact on environmental resources. Resources analyzed in detail include socioeconomics, noise, soils and geology, regulated waste (including solid and hazardous materials), hydrologic conditions and water quality, biological resources, cultural resources, utilities and energy use, transportation and traffic, air quality and greenhouse gasses, and public and occupational health and safety. The affected environment and potential environmental consequences relative to these resources are described in **Section 3.0**.

1.6 Coordination, Consultation, and Public Involvement

DOE consulted with the Virginia Department of Historic Resources (DHR), Delaware Nation of Oklahoma, Monacan Indian Nation, and U.S. Army Corps of Engineers, Norfolk District regarding Microporous' Proposed Project prior to the publication of this Final EA, and has also provided copies of the EA to those agencies and tribal nations (along with state and local agencies identified in **Section 5.0**) as part of the 30-day public comment period **prior to the issuance of this Final EA**. A Notice of Availability for this Draft EA was published in the Legal Notices sections of the Danville Register & Bee on December 3rd, December 5th, and December 7th, 2024, and the Chatham Star-Tribune on December 4th, 2024, to announce the beginning of the 30-day public comment period, which occurred from December 3rd, 2024, to January 3rd, 2025. The Final EA is also posted on the NETL NEPA Environmental Assessments webpage (<https://netl.doe.gov/node/6939>) and DOE NEPA webpage (<https://www.energy.gov/nepa/listings/latest-documents-and-notice>). **All comments received have been considered and addressed in development of this Final EA for DOE's Proposed Action and Microporous' Proposed Project and are available in Appendix B.**

2.0 PROPOSED ACTION AND ALTERNATIVES

This Section describes details of the Proposed Action and No Action Alternative considered to meet the project objectives, along with details of Microporous' Proposed Project. Relative impacts associated with each alternative have been considered and are provided in the sections below.

2.1 Introduction

The Southern Virginia Megasite at Berry Hill is a result of collaboration between multiple jurisdictions across state lines and is certified as a Tier 4-Infrastructure Ready site by the VEDP¹. Jurisdictions involved include the City of Danville and Pittsylvania County, and also has the involvement of the Southern Virginia Regional Alliance (SVRA). The Megasite has been divided up into 12 “lots” and is over 3,000-acres in size. Utilities including water, sanitary sewer, natural gas, fiber optic, and electricity, and Class 1 railway and Expressway access (US 58/US 29) have already been or are otherwise planned to be installed across the Megasite, including for Lots 1 and 2, regardless of the Proposed Action. It is the intent of VEDP and Danville-Pittsylvania County that the Megasite would be fully utilized for industrial purposes and zoned accordingly. The Proposed Action involves the partial funding of construction and operation of a facility for Microporous, LLC at Lots 1 and 2 of the Megasite (street/mailling address of 3304 Berry Hill Road). The activities at the proposed Microporous facility include the construction and assembly of coated lithium-ion (Li-ion) battery separator plant at the Project Area for Li-ion batteries integral to EV supply chains. This project would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF, PMMA) coating, complete with slurry mixing and slitting equipment. The Project Area is located at 3304 Berry Hill, Danville, Virginia (Pittsylvania County) and comprises a total of approximately 212-acres. The Proposed Project would occur entirely within Lots 1 and 2 (south of McGuff Creek), located on the eastern edge of the Megasite.

The option of no action is also considered in this EA. The Proposed Action and No Action Alternative are described in **Sections 2.2 and 2.3**, respectively.

2.2 Microporous' Proposed Project

Microporous' Proposed Project would consist of only Phase I of IV of Microporous Project Stellar (which includes Lots 1 and 2) at this time. There are a total of four Phases (Phase I through Phase IV) throughout Microporous Project Stellar, although Phases II – IV are in preliminary, unconfirmed stages. Phase II would consist of an eastern expansion of Phase I, and Phases III-IV would consist of western additions to Phase II. Phases II through IV will not be discussed in detail throughout this **Final** Environmental Assessment but will be analyzed in this EA to the extent feasible, including as part of the **reasonably foreseeable** effects of DOE's Proposed Action. Refer to **Figure 1-1** for a site layout of Phases I - IV. DOE's Proposed Action would support the broader government-wide approach to reinvigorating and reinvesting in the American industrial base; establishing secure, resilient domestic energy supply chains' and revitalizing economies in energy

¹ <https://www.dewberry.com/projects/southern-virginia-mega-site-at-berry-hill>

communities. Proceeding with DOE's Proposed Action and Microporus' Proposed Project would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF, PMMA) coating, complete with slurry mixing and slitting equipment. Microporous would provide 282 permanent jobs post-construction within the DOE grant's three-year performance period and would support double-distressed coal communities by ensuring that at least 85% of full-time employees are from local distressed communities by the completion of the project. Approximately 350 temporary construction jobs would be filled for Phase 1 construction. To achieve its purpose, the plant would consist of manufacturing buildings, an administrative building, a utility building, and storage silos. Note that a 70-acre graded pad has already been constructed at Lot 1 by the Megasite owners in anticipation of future industrial use.

2.3 Description of Alternatives

Selection standards are used to identify alternatives for meeting the purpose of and need for the Proposed Action, where "reasonable alternatives" are defined as those that could be implemented to meet that purpose and need. 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 applicant, 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. A No Action Alternative was considered, which is discussed in **Section 2.3.1**.

2.3.1 No Action Alternative

Under the Proposed Action, Lots 1 and 2 would continue to exist in their current condition without development and operations by Microporous. Additionally, it is the goal of the owners of the Megasite to fill these locations with industrial operations. However, in the No Action Alternative scenario, as considered for the purpose of this EA, Lots 1 and 2 would remain undeveloped within the Megasite, and the current site conditions **and resource areas** would remain as they are. The No Action Alternative would not meet the purpose and need of the Proposed Action; however, it is analyzed in this EA to establish baseline conditions. **DOE also recognizes that this project may still continue if DOE decides not to provide financial assistance and Microporous acquires funding from alternate sources. If the Proposed Action proceeds without DOE's financial assistance, the potential impacts to each resource area analyzed would be essentially identical to those under DOE's action alternative. To allow a comparison between potential impacts to all resource areas as part of the Proposed Action and the impacts of not proceeding with the project, for purposes of this environmental analysis, DOE assumes that the Proposed Action would likely not proceed without DOE assistance.**

2.4 Summary of Environmental Consequences

Table 2-1 provides a summary of the environmental, cultural, and socioeconomic impacts of the No Action Alternative and the Proposed Action:

1

Table 2-1: Summary of Environmental Consequences

Impact Areas	Proposed Action		No Action Alternative	
	Construction	Operations	Construction	Operations
Land Use	Negligible	Negligible	Negligible	Negligible
Surface Water	Minor	Minor	Negligible	Negligible
Floodplains	Negligible	Negligible	Negligible	Negligible
Sole Source Aquifer	Negligible	Negligible	Negligible	Negligible
Airport Clear Zones and Accident Potential Zones	Negligible	Negligible	Negligible	Negligible
Socioeconomics	Minor (beneficial)	Minor (beneficial)	Negligible	Negligible
Transportation and Traffic	Negligible	Minor	Negligible	Negligible
GHG Emissions	Negligible	Negligible	Negligible	Negligible
Community Services	Negligible	Negligible	Negligible	Negligible
Parks and Recreation	Negligible	Negligible	Negligible	Negligible
Air Quality	Minor	Minor	Negligible	Negligible
Cultural Resources	Negligible	Negligible	Negligible	Negligible
Wetlands	Negligible	Negligible	Negligible	Negligible
Vegetation and Wildlife	Minor	Negligible	Negligible	Negligible
Prime and Unique Farmland	Negligible	Negligible	Negligible	Negligible
Noise and Vibration	Minor	Minor	Negligible	Negligible
Geology, Topography, and Soils	Minor	Negligible	Negligible	Negligible
Groundwater	Negligible	Negligible	Negligible	Negligible
Regulated Wastes (Solid and Hazardous Wastes)	Minor	Minor	Negligible	Negligible
Utilities and Energy Use	Negligible	Minor	Negligible	Negligible
Public and Occupational Health and Safety	Minor	Minor	Negligible	Negligible

2 These areas are discussed in detail in **Sections 2.5 and 3.0** below.

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2.5 Resource Areas Eliminated from Further Consideration

It has been determined that various resources would either not be affected or would sustain negligible impacts from the Proposed Project at the project area and therefore do not require further evaluation. These include land use, floodplains, sole source aquifer, airport clear zones, community services, parks and recreation, and prime and unique farmland. The basis for exclusion of each of these resource areas is briefly discussed in this section of the EA and are not evaluated further within this document.

2.5.1 Land Use

The Project Area proposed on Lots 1 and 2 is within an area currently zoned for heavy industry/M-2 use. A proposed change in land use will not be necessary to perform the Proposed Project. The Megasite is suitable for original equipment manufacturer (OEM) manufacturing operations and other large advanced industrial tenants and is the result of a unique collaboration amongst multiple jurisdictions in both Virginia and North Carolina. This site is designated as a "Super Park" by Quest/McCallum Sweeney and certified under the VEDP Virginia Business Ready Sites Program. Quest has certified the Megasite at Berry Hill as a Certified Mega Site / Super Park. The site is also located in a Foreign Trade Zone, Enterprise Zone, Opportunity Zone, and is Business Ready Site Program Certified. The Proposed Project does not represent a significant change to local or regional land use and no change in land use or zoning would be necessary for implementation of the Proposed Action.

2.5.2 Floodplains

The Project Area includes an area within a Federal Emergency Management Agency (FEMA)-designated floodplain, as presented in **Appendix C**. The FEMA Flood Map Service Center database (FEMA, 2010) identifies the land surrounding McGuff Creek as a "Special Flood Hazard Area" on the Flood Insurance Rate Maps (FIRM) numbers 51143C0605E and 51143C0610E, effective September 29, 2010. The boundary of the Project Area is such that McGuff Creek itself is excluded, as described above. However, northwestern portions of the Project Area include the "Special Flood Hazard Area." The Proposed Project does not include plans to develop within these flood areas. **Pittsylvania County's Flood Plan administrator is aware of this proposed project and has been engaged in the development of the overall Megasite.**

2.5.3 Sole Source Aquifer

Based on a review of the United States Environmental Protection Agency (USEPA) Interactive Map of Sole Source Aquifers (SSA) (USEPA, 2024), the project area is not located within an SSA. The nearest SSA's are approximately 200 miles to the east-northeast and 205 miles to the north-northeast of the project area. As there is no reasonable expectation of impact to an SSA from the Proposed Project, this resource is not analyzed further in this EA.

2.5.4 Airport Clear Zones and Accident Potential Zones

An evaluation of civil and military airports in the region of the Project Area to determine compatibility with the Proposed Project was conducted. Based on a review of the United States Federal Aviation Administration (USFAA) Aeronautical Information Services Airport map layer

(USFAA, 2016), the project area is not located within 2,500 feet of civilian airport or 15,000 feet (2.84 miles) of a military airport. The nearest civilian airport is approximately seven miles to the south-southeast and the nearest military airport is approximately 180 miles to the northeast of the project area. Therefore, it has been determined that the Proposed Project is unlikely to impact Airport Clear Zones or Accident Potential Zones and is not analyzed further in this EA.

2.5.5 Community Services

Community services pertinent to the proposed project include schools, police, fire, and emergency medical support, all of which are provided in Danville. Most of these services are located east of the Project Area, across U.S. Highway 58 (US-58). The nearest law enforcement headquarters is the Danville Police Department, located approximately 6.8 miles east of the Project Area. The closest fire station is Bachelors Hall Volunteer Fire Department, located approximately 1.6 miles northeast of the project area. **The Bachelors Hall Volunteer Fire Department is one of 21 Fire Stations in Pittsylvania County. In addition, the County has a reciprocal response agreement with the City of Danville, should additional services be warranted. The level and degree of response is entirely dependent upon a given incident. The County's fire departments have extensive long-term experience dealing with industrial incidents – be it chemical manufacturers, advanced material manufacturers, automotive manufacturers, etc. In addition, the County has a Hazardous Materials team that works in conjunction with the City of Danville's team.** A fire response team would also be present on-site at the Microporous Facility during operations. The nearest emergency medical service provider is Danville Lifesaving Crew, located approximately 10.8 miles east of the site. The nearest hospital with an emergency room is SOVA Health – Danville, located approximately 11.7 miles east of the project area. Several other medical clinics are located in the Danville area, east of the project area. Medical services would also be present on-site at the Microporous Facility during operations as either direct trained employees or contracted services.

The Project Area is located approximately 12 miles from the City of Danville. The City of Danville has two pre-schools, seven public elementary schools, three public middle schools, and three public high schools. The region also supports numerous private elementary and high schools. The closest early learning institution to the Project Area is Grove Park Pre-School located approximately 12.3 miles east of Lots 1 and 2. The City of Danville (population of 42,590 as of the 2020 census) supports higher education opportunities at Danville Community College and at Averett University.

Construction crews, as well as full-time employees of Microporous, are expected to be drawn primarily from local and regional residents and not constitute a notable permanent migration of workers and their families to the region. The additional temporary construction staff **(approximately 350 jobs for Phase 1)** and more permanent full-time operational staff are not anticipated to exert an undue burden on existing community services. **The site is located within the Southern Virginia Megasite, which has been a 20-year process to develop one of the most robust industrial sites in the nation. As part of the site's development, studies and community input were completed that address all potential concerns that would be associated with a Megasite industrial project. The input from studies has since been acted upon which includes: transportation (a new connector road has been completed); housing (over 5,500 dwelling units under development or construction in Danville-Pittsylvania**

County); schools and education (ample capacity in both Pittsylvania County and Danville); and infrastructure (ample water, sewer, power, natural gas capacity that do not restrict capacity needed for future community development). Danville and Pittsylvania County confirm that Microporous will have no negative impact on the community's services and that the project will provide a tremendous positive impact on the said communities. In addition, road closures or other impacts that would restrict or impede the movement of emergency personnel or other traffic through the region are not anticipated as part of construction and operations activities associated with the Proposed Project (see Section 3.10 for a discussion of transportation and traffic related impacts). In the event such restrictions would be temporarily necessary, steps will be taken to minimize the disruption to traffic.

Based on the current capacity of the City of Danville's community services as well as the intent to utilize local residents for jobs, 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.

2.5.6 Parks and Recreation

The City of Danville maintains approximately eight city parks and five recreation facilities, the closest of which to the Project Area is H.B. Moorefield Park, located approximately 5.9 miles northeast of Lots 1 and 2. No public (local, state, federal) or private parks are present within five miles the Project Area. No scenic overlooks, trailheads, or recreations centers are present within five miles of the Project Area. A cemetery is located approximately 3.3 miles southwest of Lots 1 and 2, however, the Proposed Project unlikely to negatively affect cemetery operations or aesthetics. The nearest North Carolina state park is the Mayo River State Park, located approximately 22 miles southwest of the Project Area and the nearest Virginia state park is the Fairy Stone State Park, located approximately 32 miles to the northwest of the Project Area. There appears to be no National Parks within 35 miles of the Project Area. Due to the industrial zoning and existing land use in the vicinity of the Megasite, including heavy industrial, recreational uses in proximity to the Project Area are limited and the development and operation of the Microporous battery plant on Lots 1 and 2 is not expected to alter any existing recreational uses of the immediate area. Therefore, the impact upon parks and recreation from the Proposed Project is anticipated to be negligible.

2.5.7 Prime and Unique Farmland

The United States Department of Agriculture (USDA) defines Prime and Unique Farmlands as land areas including those which have optimal physical and chemical characteristics for producing staple food crops, feed, forage, etc., or those which are uniquely capable of supporting growth of specialty crops such as citrus, olives, nuts, etc. The USDA further defines prime and unique farmlands as being available for these uses and excludes highly developed areas which are not reasonably available for farming. Land areas meeting these characteristics are regulated under the Farmland Protection Policy Act (FPPA), 1981.

Although portions of the Project Area are identified by USDA Natural Resource Conservation Service (NRCS) as "prime farmland" in its Soil Data Access table (USDA, n.d.b), the Project Area is not currently used for agricultural purposes, nor is it available for agricultural /farmland purposes

as it is zoned industrial and has been included as part of the Megasite, intended by local government to be utilized for industrial purposes. Further, the area is not considered to be farmland of statewide importance, as defined by USDA due to its current and expected future use and level of development. No agricultural land would be lost or otherwise impacted by the Proposed Project or any of the alternatives considered at the project area. Further, no nearby and/or adjoining properties are utilized for agricultural/farmland purposes. As such, this factor is not considered further in this EA.

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

Microporous Proposed Project located at Lots 1 and 2 of the Megasite at Berry Hill would be developed in four phases (Phases I through IV). Phase I (as shown on **Figure 1-1**) is discussed throughout this Section, and Phases II through IV are analyzed in this EA to the extent feasible, including as part of the **reasonably foreseeable** effects of DOE's Proposed Action. Resources not previously evaluated and dismissed in **Section 2.5** have been reviewed in depth as they pertain to the Proposed Action and each of the previously described alternatives. The results of this evaluation and conclusions regarding potential impacts are provided in this section.

3.1 Socioeconomics

3.1.1 Affected Environment

The Proposed Project that would occur within the boundaries of Lots 1 and 2 of the Southern Virginia Megasite is located in the City of Danville, Pittsylvania County, Virginia with a population of 41,837 residents (US Census Bureau, 2023). The Proposed Project is part of a concerted effort by local government to promote growth and industry in the area by the creation of the Megasite, located along U.S. Route 311, a designated industrial roadway with no weight restrictions, which has been recently improved to handle traffic from the site resulting from an anticipated 3,000 jobs per shift operation. Pittsylvania County is home to 59,571 residents, reflecting a -1.5% change in population since 2020 (US Census Bureau, 2023). The cost of living in the City of Danville, Virginia is 16.2% lower than the U.S. average, with a median household income of \$41,484 (US Census Bureau, 2023). There is a 25.3% poverty rate in Danville, Virginia, compared to a 10.6% poverty rate for Virginia as a whole (US Census Bureau, 2023). The Danville Region has a civilian labor force of 47,535 with a participation rate of 56.4%. Of individuals aged 25 to 64 in the Danville Region, 18.7% have a bachelor's degree or higher which compares with 33.5% in the nation (Chmura Economics & Analytics, 2022). The unemployment rate for Danville, Virginia was 5.0% as of May 2022. The regional unemployment rate was higher than the national rate of 3.4%. The largest sector in Danville, Virginia is Health Care and Social Assistance, employing 5,356 workers. The next largest sectors in the region are Retail Trade (3,922 workers) and Manufacturing (3,830 workers) (Chmura Economics & Analytics, 2022). Pittsylvania County is home to seven industrial parks with potential to accommodate further growth and development.

3.1.2 Environmental Consequences: Socioeconomics

3.1.2.1 Proposed Project

3.1.2.1.1 Construction

During the Proposed Project's construction period, short-term construction workers will be employed. It is anticipated that these jobs will be filled by local and/or nearby residents, aiding the overall household incomes of local residents and providing reliable employment for the duration of the construction. This would benefit residents who may be currently unemployed or underemployed, residing and paying taxes in Pittsylvania County or the surrounding area. Increased sales transactions for the purchase of materials and supplies would generate additional tax revenues for local and state governments, which would have a minor beneficial impact. Secondary jobs related to the increased economic activity stimulated by the Proposed Project may be created including additional retail services and business employment that may result from the Proposed Project through a multiplier effect, yielding additional sales and income tax revenues for local and state governments, also generating minor beneficial impact.

3.1.2.1.2 Operation of the Facility

Operations of the Proposed Project, along with the additional three phases (once completed), would introduce new, full-time jobs in a growing market sector and to engage under-employed Americans in the workforce (approximately 800 new permanent jobs within the first six years of operations and up to 2,015 permanent positions). It is anticipated that the number of jobs will increase as phases of the Proposed Project are completed and as the plant is able to expand. An influx of population is expected in the surrounding area of the Proposed Project, therefore the impact to housing demand and population from the Proposed Project is expected to be minor, although recent announcements have been made regarding the planned development of 1,800 housing units (1,500 townhomes and single-family homes, 300 apartments) which would significantly reduce the impact once complete (Thornton, 2024). **Microporous would work to optimize employment, training, outreach, and ancillary benefits to the community and surrounding areas.**

Environmental Justice (Removed by EO 14154)

3.2 Noise

3.2.1 Affected Environment

The Proposed Project is located in a Quest Site Solutions-certified (**Appendix C**) Megasite designated for industrial use, specifically the area of Lots 1 and 2. Existing noise and vibration sources within the site vicinity include local transportation on primary and secondary roads (such as the adjoining U.S. Route 311), and a Norfolk Southern rail line approximately one mile south of the Project Area. Additionally, it is anticipated by the local government that the Megasite will be utilized for industrial purposes (zoned heavy industrial/M-2), although the Megasite is currently graded/vacant, forested, or vegetated land. The nearest population (sensitive receptor) is rural (farm) residences, the closest of which is adjoining to the Proposed Project, approximately 0.10 miles east from the planned operational area of the Proposed Project. The nearest residential neighborhood to the Proposed Project is roughly 2 miles southwest of the Proposed Project. The Proposed Project is approximately five miles from the nearest school and about 1 mile from the nearest existing community structure (church). Other sensitive receptors, including parks, libraries,

hospitals, and other care facilities, etc. do not occur within a mile or more radius to the Proposed Project. Population density is low in this rural area, with private residences scattered on large-acreage parcels surrounding the entire Megasite. Minor increase in noise and vibration is anticipated temporarily for construction and operations.

A railway is planned to extend from the western extent and continue easterly of the Proposed Project to accommodate for industrial operations occurring at the Megasite. The development and operation of the railway is anticipated to be completed regardless of the completion of the Proposed Action (development and operation of the Microporous facility) at Lots 1 and 2. Refer to **Section 3.9** of this EA for additional discussion.

3.2.1.1 Construction

Construction noise would be anticipated as commensurate with comparable industrial development, and equivalent to other anticipated industrial construction on adjacent parcels within the Megasite. In addition, a new highway connector for U.S. Route 311 to US 58/US 29 was developed allowing for access to the Megasite, specifically leading to the southern extent of Lots 1 and 2. Ambient noise level would increase during construction activities but are anticipated to be short-term and intermittent. Construction noise associated with heavy machinery, building construction, site grading and leveling, installation of equipment can be anticipated during the construction phase of the Proposed Project. Studies of peak noise generated by heavy equipment and impact devices used in construction projects documented by the National Institute for Occupational Safety and Health (NIOSH) provide a range for sound levels associated with heavy construction equipment that ranges from 80 to 120 decibels A (dBA), and power tools commonly used during construction produce sound up to 115 dBA (Spencer, 2007). The City of Danville noise ordinance code (Ord. No. 2010-01.04, 1-5-10) prohibits construction noise between the hours of 10:00 p.m. and 6:00 a.m., except in the case of emergency under a permit granted by the city manager. Short-term and intermittent construction noise and vibration would generally be limited to the immediate vicinity of Lots 1 and 2. Construction during the prohibited time range is not currently anticipated and construction during general work hours (between 8:00 a.m. through 5:00 p.m.) can mitigate any potential concerns on the effect on the nearby properties. Construction of the Proposed Project is anticipated to last for approximately 12 months for building installation, and 24 months for equipment installation. During both construction and operations, use of existing Environmental Health and Safety (EH&S) protocols as applicable (e.g. training, industry best practices, and personal protective equipment (PPE)) would mitigate noise impacts to personnel within the site, and for private residences in the larger area.

3.2.1.2 Operation of the Facility

The Proposed Project would result in a minor, long-term increase in noise as an average increase in ambient noise is expected for industrial activities, increase in traffic to and from the site, and overall increase in noise in commensurate with comparable industrial development, and with other planned industrial construction on adjacent parcels within the Megasite. Primary noise sources during operations are anticipated from industrial activities within enclosed facility structures, and from truck and employee-vehicle traffic accessing Lots 1 and 2, and a possible incremental increase in rail traffic when the railway is constructed associated with material delivery and product shipment. Heating, ventilation, and air conditioning would be installed externally on facility structures, with small contributions to low-decibel ambient noise. Due to the expected

1 hiring of approximately 800 new employees at the Proposed Project within the first six years of
2 operation, there is expected to be a proportional increase in commuter vehicle noise on Berry Hill
3 Road and the new connector road.

4 **3.3 Geologic and Soil Conditions**

5 The Proposed Project will have a minor impact on the geology, topography, and soils, including
6 soil distribution and erosion. Several factors for consideration and management during the
7 proposed Project Area construction will include soil loss/distribution, erosion, grading, and
8 dewatering (if groundwater is encountered). Microporous plans to utilize best management
9 practices that will be implemented during construction and operations to effectively prevent effects
10 to soil and geologic resources. Such management practices that will be implemented (if
11 applicable) include: storm water training for onsite personnel, use of erosion control blankets for
12 exposed soil, avoidance of excessive soil stockpiling (wind and rain, potential migration factor),
13 sediment settling basin as part of the stormwater and erosion runoff control program, use of
14 temporary water or dust palliatives on soils to prevent exposure to erosive elements, proper use of
15 temporary or permanent landscaping to hold soils in place, and mechanics to prevent unwanted
16 soil movement. Proposed construction on the Proposed Project is limited to surface and near-
17 surface activities, which is not anticipated to affect the deeper geologic strata (Refer to **Section**
18 **3.3.1.2 and Section 3.3.1.3** for further information regarding regional geology and soil activities).
19 Seismic activity in this region is negligible and would be adequately addressed through compliance
20 with local building codes (refer to **Section 3.3.1.4** for further information regarding seismic
21 activity).

22 **3.3.1 Affected Environment**

23 **3.3.1.1 Topography**

24 The proposed Project Area presents various elevations, ranging approximately between 600-650
25 feet (ft) above mean sea level (amsl) (VDOE-GMR, n.d) with a down gradient slope towards the
26 northern adjacent McGuff Creek.

28 **3.3.1.2 Regional Geology**

29 Regional geologic features of the Proposed Project, as shown on the Geologic Map of Virginia
30 Portion of the Danville 30x60 Minute Quadrangle, compiled by William S. Henika (2002)
31 identified the Project Area to be situated on quaternary-aged terrace deposits soils or alluvial soils,
32 underlain by the Triassic age, Danville Basin Chatham Group. The Danville Basin Chatham Group
33 is divided into two groups:

- 34 • Newark Supergroup – Sandstone, undifferentiated (VDOE-GRM, n.d, Henika, 2002).
- 35 • Newark Supergroup – Sandstone, siltstone, and shale, interbedded (VDOE-GRM, n.d,
36 Henika, 2002).

37 A Mesozoic rock, igneous dike with a vertical (north/south) direction is identified on Lot 1 on the
38 Geologic Map of Virginia Portion of the Danville 30x60 Minute Quadrangle. No karst geology
39 (e.g. sinkholes, caves, sinking streams) were identified on the Proposed Project (VDOE-GRM,

n.d, Henika, 2002). In addition, no karst geology was observed during the F&R Phase II (F&2, 2011, refer to **Section 3.3.1.3.1** for further information regarding the geotechnical study). The location of the Proposed Project, as well as the geologic descriptions are presented on **Figure 3-2**.

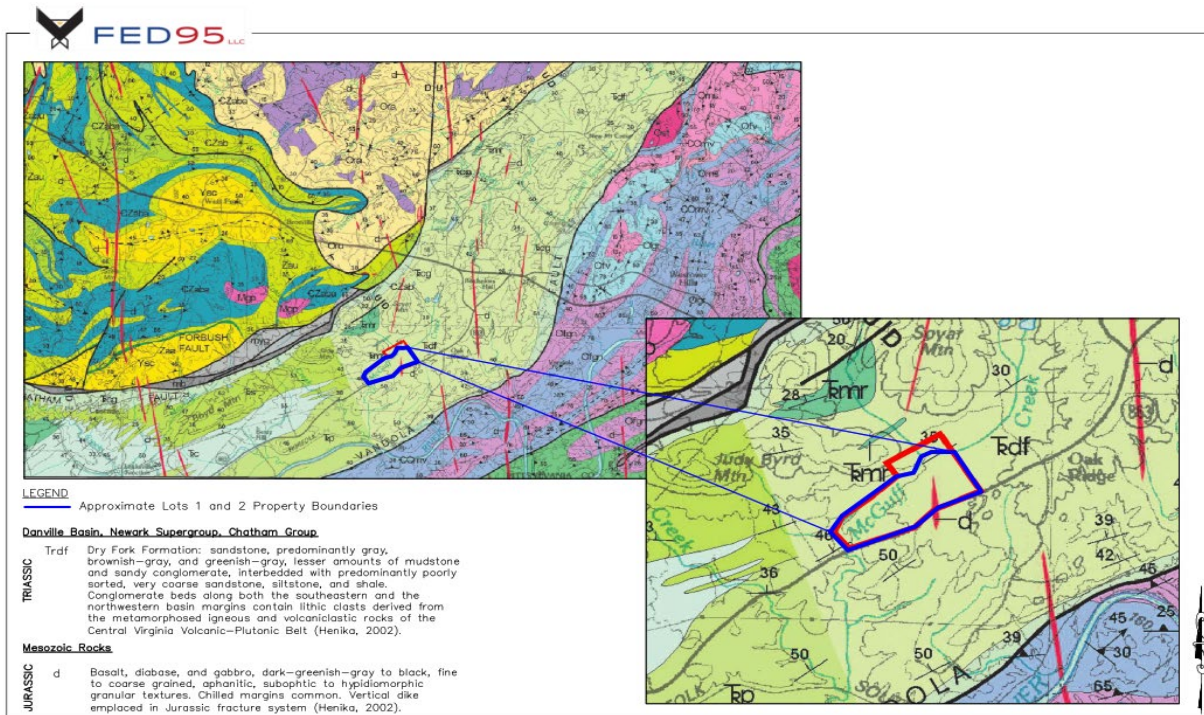


Figure 3-1: Geologic Map

Notes: Image not sized to scale, sourced from Geologic Map of the Virginia Portion of the Danville 30x60 Minute Quadrangle, William S. Henika, 2002

3.3.1.3 Soils

The USDA Web Soil Survey (WSS) indicates the surficial soils at the Proposed Project consist of sandy loam and silt loam. Further details of the surficial soils, including slope class, and estimated disturbance are summarized in **Table 3-1** below. The USDA Soil Survey Manual (SSM) soil descriptions are presented on **Figure 3-3**.

Table 3-1: USDA Soil Units

Soil Unit Name	Slope Class (%)	Surface Disturbance on proposed Project Area (Acres)	Location on proposed Project Area
Codorus-Comus complex	0 to 2%, frequently flooded	34	Along the northern property boundary of Lots 1 and 2
Clover fine sandy loam	2 to 7%, 7 to 15%	12.2	Northeastern-eastern portion of Lot 1
Sheva fine sandy loam	2 to 7%	27.7	Southeastern portion of Lot 1
Stoneville silt loam	2 to 7%, 7 to 15%	143.4	Central portion of Lots 1 and 2

USDA, Soil survey area: Pittsylvania County and the City of Danville, Virginia (September 5, 2023)
 Sloping Class (%): USDA, Soil Survey Manual, Agriculture Handbook No.18, Table 2-3, Issued March 2017, Minor Amendments February 201 - Nearly Level: 0-3%, Gently Sloping: 1-8%, Strongly Sloping: 4-16%

The Proposed Project is situated with a variety of elevation changes between a nearly level grade to strongly sloped throughout the area. The sloping degree can be interpreted as slight to moderate potential for erosion of natural soils at the Proposed Project. Based on the USDA soil mapping, a higher sloping percentage is likely to be encountered on Lot 1. However, it is Microporous' understanding the construction will include graded leveling for building construction.



Figure 3-2: Soils Map

Notes: USDA Natural Resources Conservation Service Web Soil Survey, Mapped at 1:24,000, 2024

3.3.1.3.1 Geotechnical Investigative Activities

A Subsurface Exploration and Geotechnical Study – Berry Hill Road Mega-Park (Phase II) was prepared by Froehling & Robertson, Inc. (F&R) for Dewberry & Davis, Inc. on July 29, 2011. F&R conducted 58 boreholes to evaluate the subsurface soil at the Megasite. Of these boreholes conducted, five were completed on the Project Area. The five boreholes (B-39 to B-43) on May 24-26, 2011 on the proposed Project Area were drilled to a depth between 11.2 to 35.0 feet below ground surface (bgs) (F&R, 2011). General soils encountered include: sandy clay, silt, silty sand, and trace gravel. F&R did not report contact with bedrock for the boreholes conducted within the Proposed Project. Based on the regional geology of the proposed Project Area, no karstic features, sinkholes, geomorphology, or caves were observed or identified on the proposed Project Area (F&R, 2011).

The purpose of this study is to present the subsurface analysis results to best describe existing (as of 2011) Proposed Project conditions and recommendation. A copy of the Report can be provided upon request, with approval from Dewberry & Davis, Inc.

The following simplified findings and/or recommendations for Proposed Project include:

- Two of the soil boreholes (B-40 and B-42) encountered refusal materials above the expected preliminary planned finish grades. Based on the final planned grade for the structure, subcontractors (construction, builders) should expect difficult excavation conditions in various areas (F&R, 2011).
- The proposed development for an allowable design bearing pressure in the range of 2,000 to 3,000 pounds per square foot (psf) should be suitable for footing bearings on approved soil material (F&R, 2011).
- The study finds that the on-site soils will have a moderate shrink-swell potential; however, it is not recommended to modify designs to accommodate potential shrink-swell potential (F&R, 2011).
- Subsurface water was encountered in B-40 during the study. It is likely perched water may be encountered during excavation activities and the contractor should be prepared to dewater. Fluctuations in subsurface water levels and soil moisture can be anticipated with changes in precipitation, runoff, and season (F&R, 2011).

Further findings and/or recommendations for specific items, such as: structural fill, slope stability, frost depth, seismic site, and foundation design can be found in Section 4.0 of the 2011 F&R Phase II.

3.3.1.4 Seismic Activity

Geologic faults are identified as a fracture in a zone between rock formations that allow geologic formations to move against one another. Such movement can result in seismic activity, including earthquakes. Virginia's seismic activities are concentrated in three primary areas: central Virginia seismic zone (CVSZ), Giles County seismic zone (GCSZ), and the Eastern Tennessee seismic zone (ETSC) (VDOE-GMR, Earthquakes, n.d.; Bollinger 1989). Virginia's earthquake activities generally, with a few exceptions, have been low to moderate-magnitude and have low occurrence but persistent (VDOE-GMR, Earthquakes, n.d.; Bollinger 1978). The largest earthquake recorded

in Virginia was recorded at 5.8 magnitude, with the epicenter (located within the fault zone (Shores fault zone, Chopawamsic fault, lakeside fault, and Spotsylvania fault)) determined in central Virginia, located near the town of Mineral, in Loudoun County on August 23, 2011 (located approximately 130 miles Northeast from the Project Area). Based on a review of the VDOE-GMR earthquake hazards and the Virginia Minerals, Seismic Hazard in Virginia, G.A. Bollinger (1978), Virginia is situated on a passive margin, where earthquakes will occur at depths between three to 15 miles bgs and may be unable to specify the quake to a specific fault (VDOE-GMR, Earthquakes, n.d.; Bollinger, 1978).

Based on the geologic mapping provided by VDOE-GMR and Geologic Map of Virginia Portion of the Danville 30x60 Minute Quadrangle (Henika, 2002), no faults or indication of a tectonic plate were identified on the Project Site, as well as the Project Area. In addition, the Project Area, is not located within VA's primary seismic zones. According to Federal Emergency Management Agency (FEMA), Earthquake Epicenters 1774 to the Present Map, Version: March 2017 (FEMA, 2017), one earthquake was identified in Danville with a magnitude between 3.01-4.00; however, the date of this earthquake was not provided. **Figure 3-4** present seismic activity within the Danville region between 2004 to 2024. According to VA Tech University Seismological Observatory (VA-TSO, image from Earthquaketrack.com) mapping area of magnitude 4+ earthquakes affecting Virginia over the last 30 years, no seismic activity was present within the Danville region.

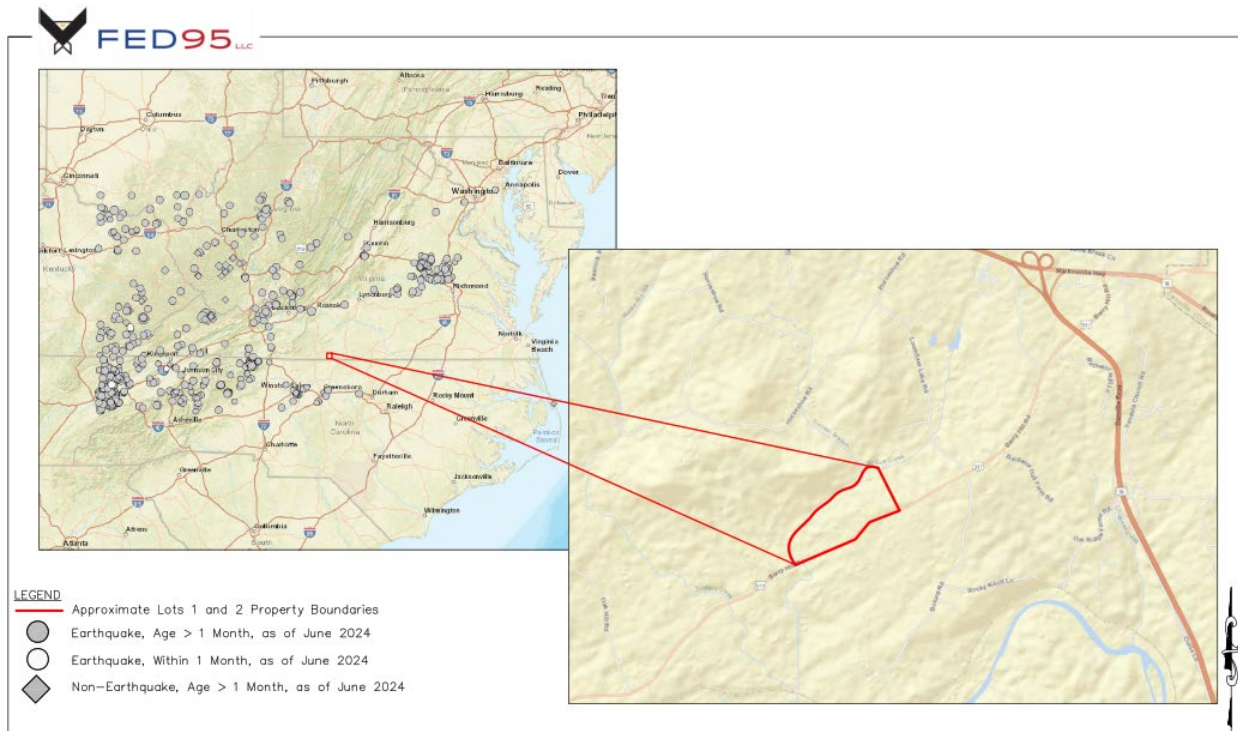


Figure 3-3: Seismic Activity 2004-2024

Notes: Not sized to scale. Imaged sourced from USGS, Earthquakes - Online Web Viewer, 2004-2024

A FEMA Earthquake Hazards Map shows the Danville region to be located within the seismic design category (SDC) "A" and is described as a *very small probability of experiencing damaging earthquake effects* (FEMA, 2020). The probability of minor-damage ground shaking, as shown in

the 2018 figure, the probability is less than 1%. **Figure 3-5** presents FEMA’s earthquake hazard map of the Eastern United States.

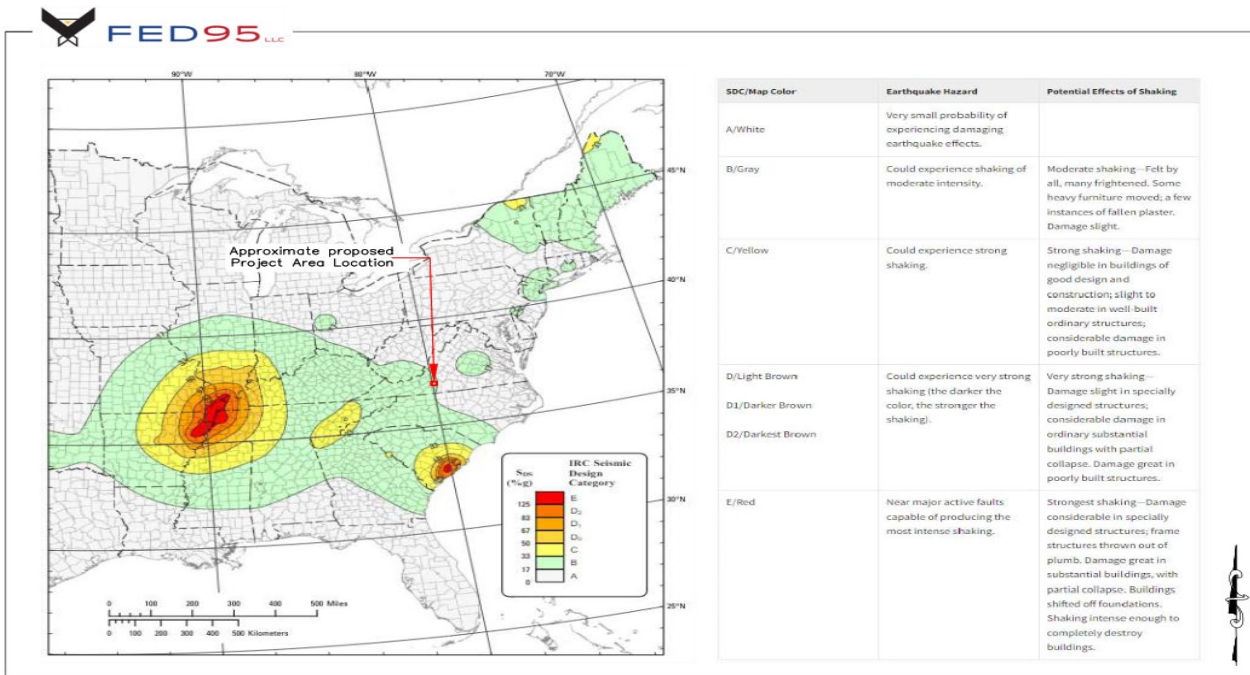


Figure 3-4: Earthquake Hazards Map
Notes: Not sized to scale. Imaged sourced from FEMA, Risk Management, Earthquake Hazards Map, 2020

The 2024 USGS National Seismic Hazard Maps (Peterson et al., 2014) shows the Danville regions to be in a low seismic hazard.

3.3.2 Environmental Consequences

3.3.2.1 Construction and Operations

The Proposed Project impacts to geology, soils, and topography are anticipated to be direct, long term, and minor. Construction will include excavation, dredging, surficial grading, soil movement, and/or topsoil loss throughout the Project Area to accommodate facility buildings, future additions, parking lots, and retention pond construction. Facility construction will include drilling into a stable soil unit with reinforced caissons to support structure foundations. The lack of karstic conditions within the Proposed Project for proposed construction and operations are not anticipated to cause adverse geological impacts. Based on the precautions and best management practices adhered to during construction, soil erosion it anticipated to be minimal. Planed levelling and grading activities would redistribute soils to accommodate planned development of the Proposed Project.

Microporous has indicated the Proposed Project will involve the clearing and/or excavating up to 120-acres (55-acres is already cleared, graded, and pad [concrete] ready). The filling of waters of the U.S. is not currently planned and are not anticipated to occur for any future development. The U.S Army Corps of Engineers has previously indicated that an on-site jurisdictional determination

found both jurisdictional and non-jurisdictional features within the Southern Virginia Megasite (**Appendix B**). If filling of waters of the United States is found to be required as part of the Proposed Project, Microporous would require a Department of the Army Permit and authorization by state and local authorities prior to initiation of those activities. DOE submitted a consultation letter to the Norfolk District of the U.S. Army Corps of Engineers regarding DOE's Proposed Action and Microporous' Proposed Project (**Appendix B**) and also provided a copy of the Draft EA to the Norfolk District for review and comment. **No comments were received from the Norfolk District on the Draft EA.**

3.3.2.2 Proposed Migration Measures

Potential for future impacts to soils and underlying geology would be mitigated throughout the life of the Proposed Action through the implementation of spill prevention and emergency response procedures, and a facility monitoring and inspection program. Microporous anticipates completing a permit for Stormwater Discharges associated with construction activities, but prior to operation, Microporous anticipates filing a Notice of Intent for authorization under the VPDES Permit for Stormwater Discharges associated with Industrial Activities (refer to **Section 3.5.2** for further information regarding stormwater permits). This required permit prohibits unauthorized discharges to surface water during operations and incorporates the requirements of a facility-specific Stormwater Pollution Prevention Plan (SWPPP) and erosion control measures, as well as other sitewide best management practices (BMPs).

Based on comments received from the Virginia Department of Environmental Quality, Microporous has confirmed that stormwater, erosion, and sediment control plans and applicable measures will be developed and implemented, as appropriate, in accordance with the required regulations and guidelines in the Virginia Erosion and Stormwater Management Regulations (VESCL&R). Land-disturbing activities on private and public lands in the state will comply with VESCL&R and Virginia Stormwater Management Law and Regulations (VSWML&R), including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates. Accordingly, Microporous will prepare a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The plan will be submitted to the DEQ Blue Ridge Regional Office (BRRO). Potential stormwater discharges would be managed according to requirements of authorizations provided through the Commonwealth of Virginia, specifically under Virginia DEQ VPDES permits for industrial construction and operations under the CWA NPDES program, and through a Virginia Water Protection (VWP) Permit from the Virginia DEQ under Section 401 of the CWA.

3.4 Non-Hazardous and/or Hazardous Materials and Waste

The Proposed Project is located within the Megasite (Lots 1 & 2 south of McGuff Creek). There is no known prior hazardous waste or non-agricultural or residential solid waste generation at the Proposed Project. In addition, no asbestos, lead, or polychlorinated biphenyl (PCB)-containing materials will be utilized for construction materials. There is also no USEPA identification number currently associated with the Proposed Project. There are no Superfund sites within at least a 1-mile radius from the proposed area (**Figure 3-6**) (USEPA, 2024). The Proposed Project on Lots 1 and 2 has been identified as agricultural with no known historical releases in soil or groundwater

contamination, and no known current sources of emission or effluents. No evidence of contamination has been reported from either of the Phase I Environmental Site Assessment surveys (Dewberry, 2019).

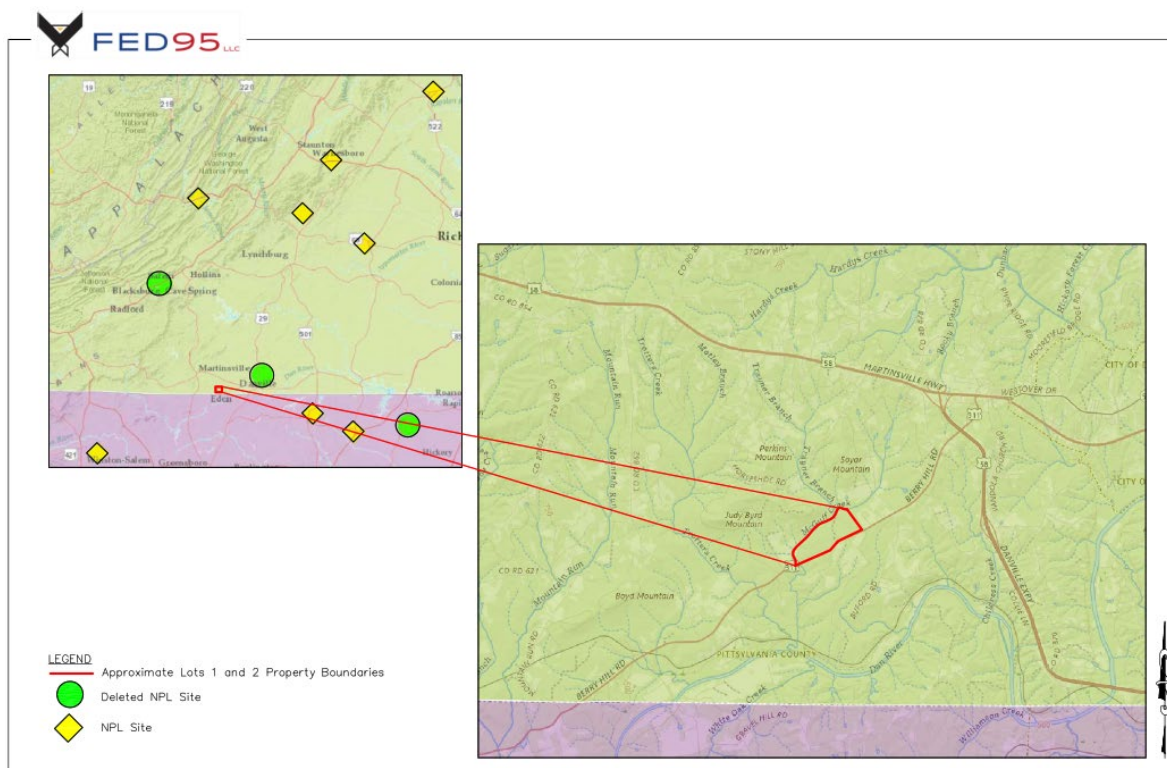


Figure 3-5: Superfund Sites within the Southern Virginia Area

Notes: Not sized to scale. Imaged sourced from FEMA Superfund National Priorities List (NPL), EPA Region 3, ESRI, USGS, NOAA, 2023

3.4.1 Permits

The Proposed Project is not classified as a hazardous waste generator, as no operations involving hazardous materials or waste generation have previously occurred in this location. However, it is anticipated that Microporous will be registered with the Virginia Department of Environmental Quality (VDEQ) and follow the 9VAC20-60 and CFR § 262.11 guidelines. Microporous LLC headquarters (596 Industrial Park Road, Piney Flats, TN) is an existing facility with appropriate permits currently in effect, suitable to cover planned Project Stellar activities at this location. For the Southern VA Megasite, the Proposed Project currently has no permits in effect for planned development and operations. Microporous has indicated the following permits **may be** required for their proposed Facility:

- **Federal Permits:** The following permits/approvals may be necessary for compliance with relevant federal requirements for proposed construction and operations
 - Federal approvals (U.S. Army Corps of Engineers authorization for placement of fill in waters at the U.S. (refer to **Section 3.5** regarding hydrologic conditions and water quality) under Section 404 of the CWA, USEPA permit under RCRA for applicable hazardous waste containment and disposal during operations

- Virginia State Permits:

- VDEQ Water Protection Section 401 of CWA (refer to **Section 3.5** for further information), VDEQ-VPDES permit for construction activities and industrial operations, under the CWA National Pollutant Distance Elimination System (NPDES) program.
- VDEQ Title V Permit under the Minor New Source Review (NSR) permitting program (refer to **Section 3.10** for further information)

- City permits: local approval of building permits from Pittsylvania County Community Development Department.

Other permits required include a Zoning Permit for Use, Erosion and Sediment Control Permit, Virginia Stormwater Management Permit (reviewed and approved by the City of Danville), Site Plan Approval for Zoning Ordinance, a Virginia Department of Transportation Land Use Permit (for ingress/egress to the property), and a Building Permit.

3.4.2 Non-Hazardous and/or Hazardous Generation and Waste

Microporous has indicated the following regulated chemicals and estimated quantities that are expected during annual operations, as shown on **Table 3-2** below

Table 3-2: Anticipated Chemical Production at the Proposed Project

Chemical Inventory		CAS Number	USEPA-CERCLA or OSHA* Hazardous List?	Estimated Production Quantity Used
Ceramics Powders (combined Boehmite + Alumina)	Boehmite	1318-23-6	Not listed	9,425 US Tons/year
	Alumina (aluminum oxide)	1344-28-1	Powder form is not listed. Fibrous form is listed in the USEPA CERCLA consolidated list of chemicals	
Polyvinylidene Fluoride (PVdF)		24937-79-9	Not listed	2,480 US Tons/year
Polymethyl methacrylate (PMMA) powder		9011-14-7	Not listed	Not specified
Porous polyolefin base film		83136-87-2	Not listed	600 MM sqm/year
Estimated annual production quantity at the proposed facility				After Phase 1 is fully operation, ~600 million sqm/year

**OSHA: Occupational Safety and Health Administration*

Chemical and estimated quantities are as provided by a representative of Microporous (2024)

OHSA, Appendix A to §1910.19 – List of Highly Hazardous Chemicals, Toxics, and Reactives (1992, updated 2019)

USEPA, CERCLA Hazardous Substances List (40 CFR 116.4, USEPA 550-B-24-001), (1978, updated 2024)

Microporous has stated the operations resulting from the Proposed Project will generate non-hazardous waste including recycling/trash and solid ceramic/polymer filter cake from slurry preparation for coating process. Wastewater will be treated off-site by the Publicly Owned Treatment work (POTW). Non-hazardous waste generated as a direct result of manufacturing

processes would be recycled to the extent possible by on-site recycling equipment and re-incorporated into the manufacturing process. Non-hazardous waste that cannot be recycled will be disposed of in accordance with Federal, State, and local environmental regulations, including RCRA.

If hazardous waste transportation and disposal is required, this will be completed by licensed and permitted contractors in accordance with Federal, State, and local environmental regulations. Microporous anticipates its operations will involve storing, using, handling, and otherwise processing hazardous materials, including granular or powder polymers and ceramics, binder, additives, industrial polyolefins, and industrial solvents. All such handling will occur in production scale equipment by properly trained individuals and as allowed under applicable permits, once granted to Microporous. Microporous has prepared, developed, and will have dedicated proper hazardous chemical/material handling, engineering controls, waste management, and disposal practices to minimize/eliminate risk to the public and environment (refer to **Section 3.9** for further information regarding EH&S). **In addition, any soil encountered during development to operations of the facility that is suspected of contamination will be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All solid wastes, hazardous wastes, and hazardous materials, including construction and demolition wastes and universal wastes will be managed in accordance with all applicable federal, state, and local environmental regulations.**

3.4.3 Environmental Consequences: Hazardous Materials and Hazardous Waste

3.4.3.1 Construction

The construction phase of the Proposed Project is expected to generate negligible to minor, direct, and temporary impacts from regulated waste. Solid waste and sanitary waste generated during construction activities would be limited to common construction-related waste streams. It is Microporous' responsibility to follow applicable state permits to discharge any construction-related waste stream. In-state or out-of-state landfills or recycling facilities would have the capability and capacity to accept these waste (if documented and approved), and therefore, there would be **negligible** impact associated with the disposal of these materials. In addition, the Facility would implement BMPs to minimize the quantity of non-hazardous solid waste generated, as appropriate, during construction and to ensure proper handling of materials. **No building demolition is anticipated under the Proposed Project, and therefore asbestos-containing materials (ACM) and lead-based paint (LBP) managed under State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP are not applicable, as no LBP or ACMs are anticipated to be utilized during the construction of the proposed facility, comprised of entirely new construction.**

3.4.3.2 Operation of the Facility

Operations of the facility under the Proposed Project are expected to incur minor, direct, long-term impacts from regulated wastes. There would be certain non-hazardous waste production generated during facility operations including municipal solid waste as well as any applicable chemicals used. No underground storage tanks are included in the Proposed Project. Materials would be stored in the appropriate containers designed for spill containment in accordance with BMPs and any applicable regulatory requirements. Materials would be received via truck to facilitate more

controlled and consistent unloading. While there is the potential that materials could be received via rail in the future, such development would not occur until later phases of this development (starting in Phase II).

It is anticipated that the Proposed Project may produce some amount of non-hazardous waste (see **Table 3-2** above for estimated annual production rates). Major waste stream estimates for the anticipated operations of Phase I completion are as followed on **Table 3-3**:

Table 3-3: Estimated Waste Streams at the Proposed Project (Full Capacity)

Production Area/Process	Description	Classification	Estimated Waste Stream
Slurry Preparation	Solid filter cake	Non-hazardous	115 mT/yr
Slurry Preparation	Liquid filtrate	Non-hazardous	45,600 gals/yr
Coating/Slitting	Coated PE separator	Non-hazardous	886 mT/yr
Total site	General trash	Non-hazardous	625 mT/yr

Note: This table will only include the estimated waste streams for the completion of Phase I. Phases II through IV waste streams are not included in this table.

The quantity of the non-hazardous waste generated at the facility would determine the facility's generator status and which Federal and State regulations related to waste generation, management, and disposal would be applicable. The initial operations as a result of the Proposed Project would have a negligible impact on the overall quantity of hazardous waste generated and the amount of waste that would require offsite treatment and disposal.

Microporous intends to recycle or reuse byproducts and non-hazardous waste to the maximum extent possible, minimizing the amount of waste that would be disposed off-site. As a result, the operations as a result of the Proposed Project would have minor impact on the overall quantity of solid waste generated at the Proposed Project, which would be disposed of at a licensed landfill off-site.

3.4.3.3 Proposed Mitigation Measures

During constructions, standard BMPs and preventive measures such as machining fencing around construction areas, establishing designated materials containment and storage areas, and controlling the flow of construction equipment and personnel through the Proposed Project, would minimize the potential for a release of hazardous materials to occur. If a release occurs, immediate action would be taken place to contain, remediate, and dispose of any contaminated materials in accordance with Federal, State, and local regulations and site-specific spill plans.

For the operational phase, arrangements are not yet made for the off-site transport and treatment, or disposal, of wastes generated during operations; however, the facility plans to reuse materials to the extent possible and would dispose of other materials offsite in accordance with applicable regulations.

3.5 Hydrologic Conditions and Water Quality

3.5.1 Groundwater

Groundwater is not directly utilized for potable or non-potable purposes at the Megasite in general; drinking water is supplied by the municipal water system (see **Section 3.8** for details) Groundwater is also not directly withdrawn from the Proposed Project, nor does wastewater discharge to groundwater occur. **The Virginia Department of Health commented that there are no public groundwater wells within a 1-mile radius of the proposed project site nor surface water intakes located within a 5-miles radius of the proposed project site.** No SWPPP, NPDES, Water Pollution Control Facility (WPCF) and/or other water related permits have been issued for Lots 1 and 2. Microporous intends to apply for any necessary permits related to discharging wastewater to the municipal system. Potential permits include a Virginia Water Protection Permit and/or a VPDES Permit.

The upper aquifer in the majority of area of Lots 1 and 2 is known to be present at depths greater than 6.5 feet bgs, with the exception of along the northeastern property boundary, which is at depths of up to three feet, and the area of McGuff Creek which is at depths of up to 1.5 feet bgs as reported by the Natural Resources Conservation Service (NRCS) (USDA, n.d.a) (**Figure 3-7**).

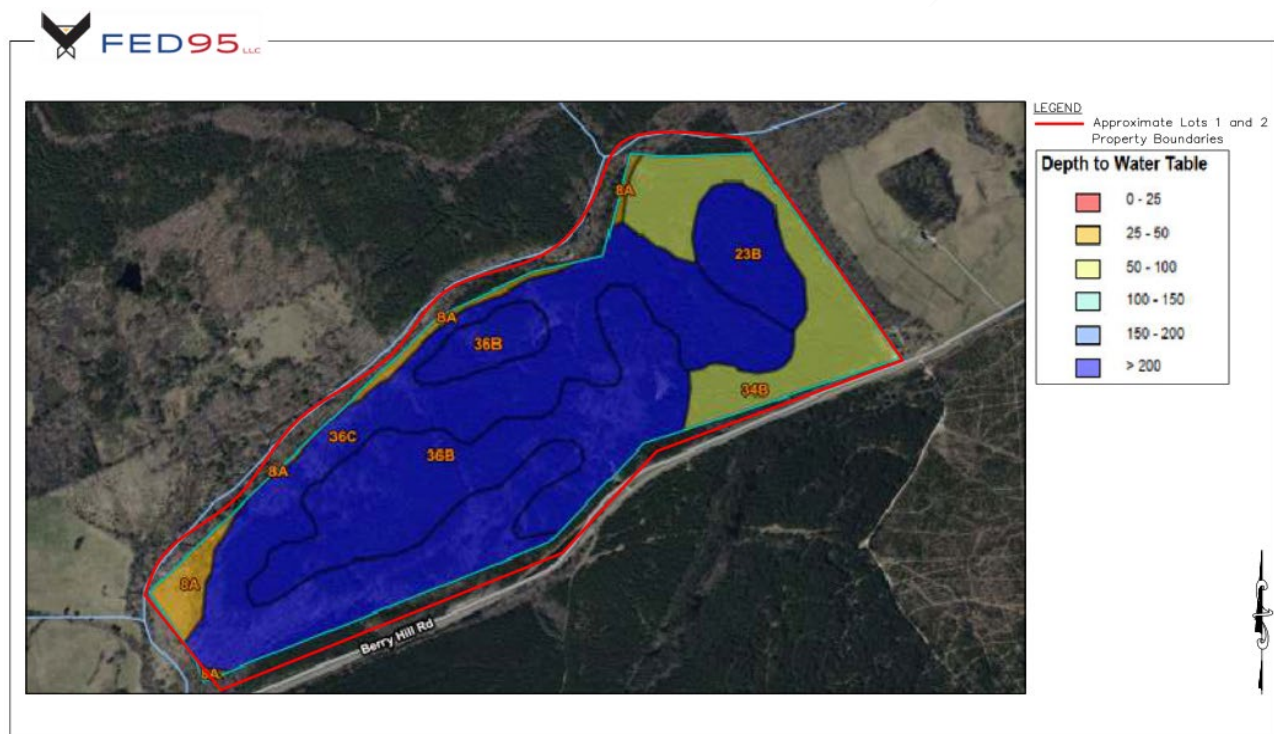


Figure 3-6: Depth to Groundwater

Notes: Not sized to scale Imaged sourced from USDA Natural Resources Conservation Service Web Soil Survey, Mapped at 1:24,000, 2023, retrieved June 5, 2024

3.5.2 Surface Water

The Proposed Project (Lots 1 and 2, south of McGuff Creek) is within the drainage basin of the Dan River, specifically the Trotters Creek-Dan River watershed (identification number HUC 030101030903 by the USGS). The nearest significant surface water body is the Dan River, located approximately 1.55 miles south of Lots 1 and 2. McGuff Creek and Trayner Branch are adjoining

north of the Proposed Project, and an unnamed tributary is located along the northern and western site boundaries which ultimately discharges to the Dan River. In addition, a 0.18-acre freshwater forested/shrub wetland is identified on the southern portion of the Proposed Project, which is identified to contain the seasonal presence of surface water during the early growing season (discussed further in Section 3.5.3 below). The McGuff Creek, Trayner Branch, and the unnamed tributary are listed as having an unknown condition under Section 303(d) of the CWA. Lots 1 and 2 are provided water by an existing municipal water line located along the southern Proposed Project boundary, along Berry Hill Road, and an existing sanitary sewer line is located along the southwestern portion of Lots 1 and 2. No current utilization of surface water nor discharges of any processed or sanitary wastewaters to surface waters are made at the Proposed Project, as the Proposed Project is currently approximately 55-acres of cleared, graded and pad ready area and the remaining acreage is forested area. A retention pond is anticipated to be installed within the Proposed Project based on the most recent Project Stellar building plans (provided by Microporous in 2024), and proper permitting will be acquired as necessary from applicable governing entities. Microporous anticipates the need to obtain and confirm the necessary permitting as required.

Figure 3-8 displays areas of surface water within the area of Lots 1 and 2.

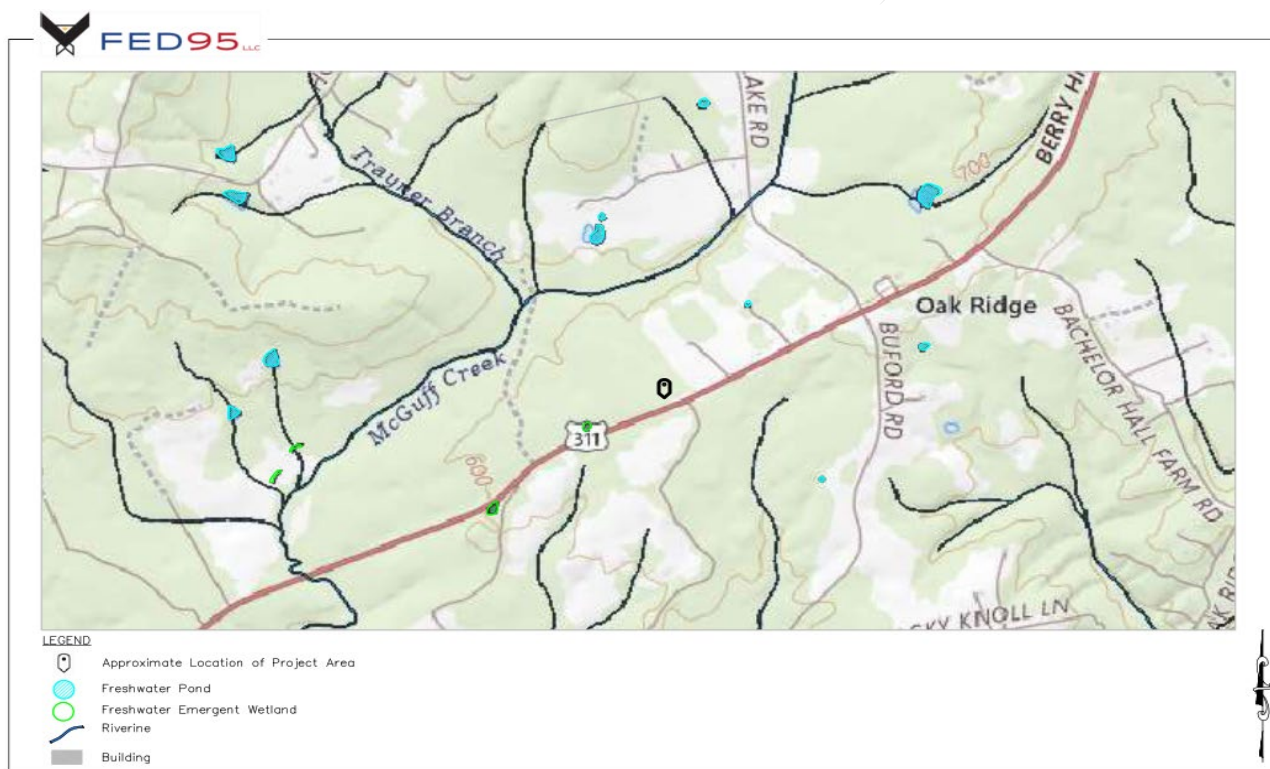


Figure 3-7: Surface Water Map

Notes: Imaged sourced from U.S. Fish and Wildlife Service, National Wetlands Inventory (NWI), NWI Mapper, retrieved May 29, 2024

3.5.3 Wetlands

The United States Fish and Wildlife Service (USFWS) NWI mapping system (USFWS, 2023) (**Figure 3-9**) indicates that no federally-regulated wetlands are present within the Proposed Project Area or adjacent areas. Two state-level wetland areas (Freshwater Forested/Shrub Wetland, PF01C) were identified to be present on the southern portion of Lot 1 and on the southern adjacent Berry Hill Road, based on review of the Virginia Department of Conservation and Recreation (VDCR), Virginia Wetlands Catalog: An Inventory of Wetlands and Potential Wetlands with Prioritization Summaries for Conservation and Restoration Purposes by Parcel, Subwatershed, and Wetland Boundaries. (Weber, 2014) (**Figure 3-9**). The wetland located on the southern property boundary of the Lot 1 location is approximately 0.18-acre. The wetland located adjacent to the southern property boundary of Lot 1 is approximately 0.34-acre. The USFWS Freshwater Forested/Shrub wetland description is provided below **Figure 3-9**.

The presence of hydric soils is one of the elements utilized to identify potential wetlands. When poorly drained soils such as Clover fine sandy loam, Sheva sandy loam, and Stoneville silt loam are wet for an extended period of time, they are considered hydric soils and are considered to be a factor in evaluating the presence of wetlands (see **Section 3.3.1.3** for further information regarding the soils at the proposed Project Area). Clover, Sheva sandy loam, and Stoneville silt loam are present on the Proposed Project (USDA, 2023), and have been assigned a USDA National Resources Conservation Service, State Soil Data Access Hydric reading of 2 (NRCS, n.d.). NRCS hydric rating 2 is defined as “soils-in-aquatic-suborders, great groups, or subgroups, Albolls-suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or show evidence that the soil meets the definition of a hydric soil.” On-site observations on May 24 through July 11, 2011, during a Geotechnical Study conducted by Froehling & Robertson, Inc. (F&R, 2011) confirmed that wetlands are not a potential concern on the project site (Refer to **Section 3.3.1.3.1** above for further details of this study).



Figure 3-8: National Wetland Inventory Map

Notes: Not sized to scale, Imaged sourced from U.S. Fish and Wildlife Service (1982), National Wetlands Inventory (NWI), NWI Mapper, ESRI, photo interpreted using 1:58,000 scale., retrieved May 29, 2024

System Palustrine (P): The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt (USFWS, 2023).

Class Forested (FO): Characterized by woody vegetation that is 6 m tall or taller (USFWS, 2023).

*Subclass Broad-Leaved Deciduous (1): Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (*Fraxinus nigra*) (USFWS, 2023).*

Water Regime Seasonally Flooded (C): Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface (USFWS, 2023).

3.5.4 Environmental Consequences: Water Resources

3.5.4.1 Ground Water

3.5.4.1.1 Construction

There is no current or anticipated direct use of groundwater at the Megasite, including the vicinity of Lots 1 and 2. Based on the availability of municipal water utilities, and as the Proposed Project would likely not encounter groundwater during construction activities, it is unlikely that the Proposed Project would have a negative impact on the groundwater in the area of Lots 1 and 2.

3.5.4.1.2 Operation of the Facility

There is no current or anticipated direct use of groundwater at the Megasite, including the vicinity of Lots 1 and 2. Based on the availability of municipal water utilities, and as the Proposed Project would likely not encounter groundwater during construction activities, it is unlikely that the Proposed Project would have a negative impact on the groundwater in the area of Lots 1 and 2.

3.5.4.2 Surface Water

3.5.4.2.1 Construction

Construction of the Proposed Project **would** have minor temporary indirect impacts from runoff to surface waters. A review of current permits for the Project Area indicated record of three permits in the NPDES system database in relation to the Project Area that are listed as Non-Major: General Permits for construction of storm water utilities (identifier: VAR10P821, VAR10R052, and VAR10T687). Compliance tracking for the permits indicates no violations identified in relation to the permits.

Sources of inputs for the Proposed Project include precipitation and runoff from the constructed building into storm water utilities that are managed by the City of Danville, Sanitation Division. Stormwater runoff from the Proposed Project is ultimately discharged to the City of Danville municipal stormwater drainage system. Current development plans for the Proposed Project avoid incursion into jurisdictional freshwater aquatic/wetland resources which have been identified within the area of Lots 1 and 2. If development plans are revised to include placement of fill in a wetland or other aquatic resource, avoidance and minimization measures would be defined in conjunction with application for appropriate permits and approvals under Section 404 and 401 of the CWA, and applicable state statutes. Construction and operations of Microporous facilities will include up to 120-acres of impervious surface, which could potentially impact stormwater runoff at the site, and may require a stormwater management structure(s) such as stormwater retention pond(s) and/or drainage culverts. **Alston Construction will be responsible for all site and facility impervious surfaces design impacting stormwater runoff. Alston is also responsible for designing and implanting effective stormwater management structures and mitigation measures.** Potential stormwater discharges would be managed according to requirements of authorizations provided through the Commonwealth of Virginia, specifically under Virginia DEQ VPDES permits for industrial construction and operations under the CWA NPDES program, and through a VWP Permit from the Virginia DEQ under Section 401 of the CWA. As the activities being performed at the Proposed Project for Phase I of development do not appear to include impacts to surface waters, such as land clearing, dredging, filling, excavating, draining, or ditching in open water or streams, a VWP Permit as issued by the VDEQ does not appear to be required for operations conducted at the site at this time. However, it is anticipated that Phase II of the Microporous Project Stellar will include the addition of a retention pond, and permitting will be assessed and complied with as required by the appropriate governing entities.

3.5.4.2.2 Operation of the Facility

During operations, discharges of process water to the local POTW would be managed according to requirements of authorizations obtained from the Commonwealth of Virginia. Discharge of

1 treated water to the local POTWs would be modest due to anticipated emphasis on internal water
2 recycling processes within Microporous facilities. The existing POTW provider has indicated their
3 established treatment works will be able to handle water and wastewater needs produced during
4 operations for the Proposed Project within existing capacity. The Proposed Project is anticipated
5 to generate non-hazardous waste (per 40 C.F.R. §261.2) including garbage/trash and sludge from
6 slurry preparation for coating processes. Wastewater will be treated off site via the POTW, and
7 therefore any sludge resultant from the Proposed Project would be treated off site as well. Non-
8 hazardous waste generated as a direct result of manufacturing processes will be recycled to the
9 extent possible by on-site recycling equipment and re-incorporated into the manufacturing process.
10 Non-hazardous wastes which cannot be recycled would be disposed of in accordance with Federal,
11 State, and local environmental regulations including RCRA and in accordance with CWA permits
12 or authorizations that may be required.

13 **3.6 Biological Resources**

14 **3.6.1 Vegetation**

15 The Proposed Project consists of gravel and areas of concrete, however the exterior boundaries of
16 Lots 1 and 2 consists of heavy vegetation and forested areas. The Proposed Project is identified as
17 being located within an area of shrub/scrub, pasture, hay, or forested area, as identified on the
18 USGS National Land Cover Database (USGS, 2019) obtained via NEPAassist
19 (<https://www.epa.gov/nepa/nepassist>) and covered by Evergreen, mixed, and deciduous forested
20 area. The surrounding properties to the north and east appear to be a mixture of residential,
21 agricultural, and vacant, forested or vegetated land. The anticipated use for the westerly and
22 southerly adjoining lots are included as part of the Megasite at Berry Hill and will be utilized for
23 industrial use. The adjoining properties are currently zoned heavy industrial/M-2. To date, 55-
24 acres have been cleared and developed on Lots 1 and 2 by the local municipal government to
25 prepare for industrial developments; however, a total area of planned development will eventually
26 amount to 212-acres of cleared and developed area on Lots 1 and 2. If Phases II through IV
27 proceed, those project plans would comply with federal, state, tribal, and local requirements for
28 tree and vegetation clearance.

29 In a general classification, Virginia is in the temperate deciduous forest biome, consisting of three
30 major forest biomes: eastern deciduous forest, southeastern mixed/evergreen forest, and a smaller
31 portion of eastern mixed forest. Original vegetation of the Triassic Basin has been mapped as Oak-
32 Hickory-Pine forest, dominated by various hickories, shortleaf pine (*Pinus echinata*), loblolly pine
33 (*Pinus taeda*), white oak (*Quercus alba*), and post oak (*Quercus stellata*). There is significant
34 agriculture in the area, including production of corn, tobacco, cotton, soybeans, small grains, and
35 truck crops. Many tree species are found on abandoned fields, and consist of an early-successional
36 stage of shortleaf pine, loblolly pine, Virginia pine (*Pinus virginiana*), and a variety of hardwoods
37 (Woods, Omerink, & Brown, 1999).
38

39 **3.6.2 Threatened and Endangered Species (TES)**

40 The Proposed Project is located in the Triassic Basins Ecoregion as defined by the USEPA as a
41 Level IV ecoregion in USEPA Region 3. Information regarding the potential state or federally
42 listed threatened, endangered, or candidate species within the vicinity of the Proposed Project was
43 obtained from the USFWS (Figure 3-10) and the VDWR (Figure 3-11). Table 3-4 summarizes

the information regarding status and habitat requirements for federal and state listed species. These are species that have the potential to be present within the Proposed Project and therefore are evaluated further in this EA. No listed endangered or threatened species have been observed or documented on Lots 1 and 2, and nowhere on the Proposed Project encompasses any designated critical habitat for a listed species. A report generated from query of the USFWS IPaC tool identified theoretical potential for three threatened, endangered, or candidate species and nine migratory bird species to exist within or in proximity to the Proposed Project (**Appendix B**). In particular, the USFWS IPaC tool identified a Proposed Endangered species (the Tricolored bat) that could be impacted by the Proposed Project, and utilizing a USFWS Determination Key (Dkey) found that the Proposed Project “may effect” this species. However, the Southern Virginia Megasite does not contain critical habitat for this species. **A Phase 2 Presence/Probable Absence Acoustic Monitoring Survey targeting the northern long-eared bat and tri-colored bat was conducted within the Southern Virginia Megasite. Results of this survey indicated a “probable absence” of the northern long-eared bat across all acoustic sites, while a “probable presence” was determined for the tri-colored bat across numerous sites within the Southern Virginia Megasite (Dewberry, 2024).** As part of a Quest Site Solutions Certification Report (Certification Report) commissioned prior to the development of the overall Southern Virginia Megasite in June 2021, the Northern Long-eared Bat (NLEB) was identified as a threatened species. However, this species was not identified in a recent (November 2024) USFWS IPaC Official Species List. The Certification Report noted that there are no known maternity roost trees or hibernaculum within close proximity to the Southern Virginia Megasite. DOE also completed a review of the Northern Long-Eared Bat Regulatory Buffer Interactive Tool (<https://dwr.virginia.gov/wildlife/bats/northern-long-eared-bat-application/>) in November 2024 and found that the overall Southern Virginia Megasite contained no NLEB hibernacula, roots, or mist-net and auditory captures.

Multiple surveys have been conducted on an area nearby west of the Proposed Project between 2010 and 2015, less than a mile from Lots 1 and 2, with the most recent study conducted in 2015, totaling 340 acres of surveyed land. The 2015 survey conducted was for potential populations of *Echinacea laevigata* (Smooth Coneflower), *Isotria medeoloides* (Small Whorled Pogonia) and *Nestronia umbellula* (Indian Olive) at the above referenced site. The survey for Indian Olive, a protected plant, was conducted under the recommendation of the consulted surveyors. Due to their rarity and loss of potential habitat from development, *Echinacea laevigata* and *Isotria medeoloides* have been listed by the USFWS as Endangered and Threatened, respectively. These plants have also received formal recognition as Threatened and Endangered, respectively, by the Virginia Department of Agriculture & Consumer Services under the Commonwealth of Virginia’s Endangered Plant & Insect Act. Prior surveys conducted in 2010 and 2011 were conducted during the growing seasons for the population of the above listed flora. Search efforts identified no individuals of any of the three target plant species within the investigated area in 2010, 2011, or 2015, and the site has been labeled as having a low potential for their occurrence.

A survey of freshwater mussel and fish was conducted for the Southern Virginia Megasite in September 2023. Note that none of the survey areas are located within the Project Area, although they are on the greater Megasite itself. The area was surveyed for the presence of the James spinymussel (*Pleurobema collina*), the Roanoke Logperch (*Percina rex*), the Atlantic Pigtoe (*Fusconaia masoni*), and the Green Floater (*Lasmigona subviridis*), which all have the potential to occur in streams located within the Southern Virginia Megasite

boundaries. The perennial streams evaluated in the study area included McGuff Creek, Trotters Creek, East Unnamed Tributary to the Dan River, and the West Unnamed Tributary to the Dan River. No native freshwater mussels were identified in any of the surveyed areas within the Megasite.

The only bivalves observed within the surveyed area (which was not located within the Project Area) were the Asian clam (*Corbicula fluminea*) and fingernail clams (*Sphaerium spp.*), which were found in McGuff Creek, Trotters Creek, and the East Unnamed Tributary to Dan River. No other mollusks or snails were observed. In addition, previous surveys performed in 2015, 2010 and 2011 in the area of the Southern Virginia Megasite produced no evidence of freshwater mussels. The recommended conclusion of the survey for the Atlantic Pigtoe, James Spiny mussel, and Green Floater, is that there is no effect on the species from the Proposed Project.

In addition, a fish survey was conducted in 2023 which included a survey for Roanoke Logperch habitat. Only a limited portion of Trotters Creek and McGuff Creek has suitable habitat for the Logperch, and only those areas were surveyed (which are not located within the Project Area). No Roanoke Logperch was observed or collected during the survey, and the recommended conclusion for the Proposed Project on the Roanoke Logperch is therefore no effect.

The Monarch Butterfly is considered a **proposed threatened** species but has not, to date, been formally listed as threatened under the Endangered Species Act (ESA) (Endangered Species Act, 1973). The Monarch Butterfly does not have a designated critical habitat, and there are no unique features/vegetation associated with the Proposed Project that preferentially support Monarch habitat. It is therefore unlikely that the Proposed Project would have a negative effect on this species.

Additionally, the USFWS identifies several eagles and other migratory birds on its Birds of Conservation Concern (BCC) list which are considered as part of this evaluation. All applicable species are identified in **Table 3-4** below.

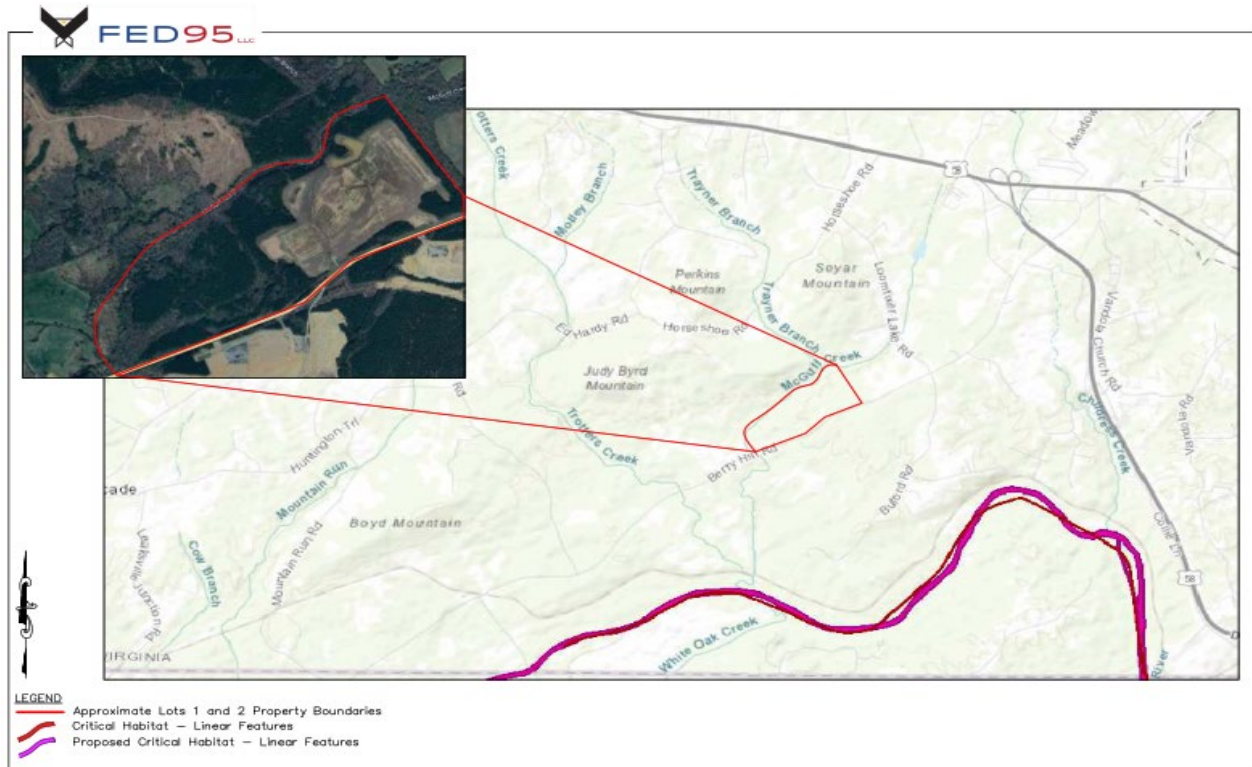


Figure 3-9: U.S. Fish and Wildlife Service Critical Habitat Map

Notes: Image not sized to scale. Imaged sourced from US Fish and Wildlife Service Critical Habitat, Online View, State of North Carolina, DOT, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA. Accessed May 9, 2024

No conservation of a critical habitat for threatened and endangered species is identified on Lots 1 & 2.

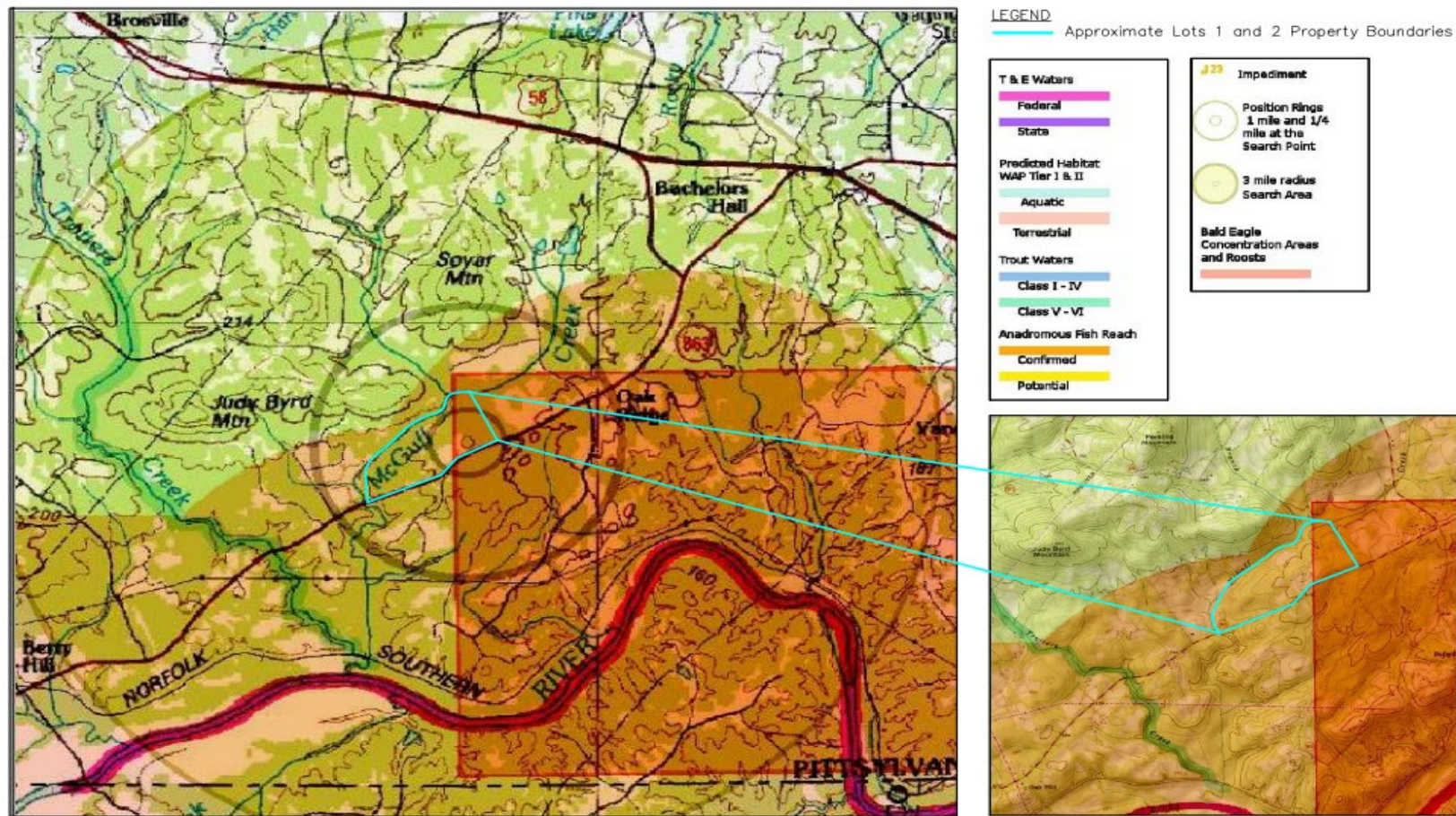


Figure 3-10: Virginia Department of Fish and Wildlife Habitat

Note: Image not sized to scale. Image sourced from: VDWR Habitat Mapper. ©Commonwealth of Virginia Department of Game and Inland Fisheries, June 2024

Table 3-4 summarizes the list of species identified as a potential concern by the USFW and VDWR based on habitat characteristics and the likelihood of the species occurring within the Proposed Project.

Table 3-4: Identified Federal and State Threatened and Endangered Species

Scientific Name	Common Name	Federal/ State Status	Habitat	Habitat Present
<i>Crotalus horridus</i> *	Timber Rattlesnake	Collection Concern	Mountainous or hilly forests, hardwood or pine forests, swamps and river floodplains, lowland cane thickets, and agricultural fields	Potentially
<i>Danaus Plexippus</i> **	Monarch Butterfly	Proposed Threatened (federal-level only)	Areas with presence of milkweed (<i>Asclepias</i> spp.) plants (fields, gardens, wetland areas, etc.)	No
<i>Fusconaia masoni</i> *	Atlantic Pigtoe	Federal Threatened, State Threatened	Coarse sand and gravel, and rarely in silt and detritus. Small creeks to larger rivers with excellent water quality, where flows were sufficient to maintain clean, silt-free substrates.	No
<i>Lampropeltis elapsoides</i> *	Scarlet Kingsnake	Collection Concern	Wet pinelands and mesic hammocks, and/or drier habitats under rocks, logs, and debris.	Potentially
<i>Lanius ludovicianus</i> *	Loggerhead Shrike	State Threatened	Open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns.	Potentially
<i>Lanius ludovicianus migrans</i> *	Migrant Loggerhead Shrike	State Threatened	Open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns.	Potentially
<i>Lasmigona subviridis</i> **, *	Green Floater	Proposed Threatened (Federal Protected, State Threatened)	Small streams and large rivers in the eastern United States.	No
<i>Myotis lucifugus</i> *	Little Brown Bat	State Endangered	Roost in caves and mines in the winter, can be found in trees, artificial structures, bat houses, under rocks and in piles of wood in the summer. Foraging habitat requirements are generalized, occurring primarily over streams and other bodies of water, along the margins of lakes and streams or in woodlands near water.	No
<i>Myotis septentrionalis</i> *	Northern Long-eared Bat	Federal Endangered, State Threatened	Overwinters in caves or mines and spends the remainder of the year in forested habitats.	Potentially
<i>Noturus gilberti</i> *	Orangefin Madtom	State Threatened	Upper Roanoke River (including the Dan River) drainage in Virginia and North Carolina.	No
<i>Pleurobema collina</i> *	James Spiny mussel	Federal Endangered, State Threatened	Found in the James River basin in Virginia and West Virginia and in the Upper Dan sub-basin of the	No

Scientific Name	Common Name	Federal/ State Status	Habitat	Habitat Present
			Roanoke River basin in Virginia and North Carolina.	
<i>Paravitreia hera</i> *	Spirit Supercoil	State Endangered	Steep forested slopes and in ravines, often among woody debris, rocks, or deeper leaf litter.	Potentially
<i>Percina rex</i> *	Roanoke Logperch	Federal Endangered, State Endangered	Found in larger streams in the upper Roanoke, Smith, Pigg, Otter, Nottoway river systems, and Goose Creek in Virginia and in the Dan, Mayo, Smith river systems and Big Beaver Island Creek in North Carolina. Large sized warm clear streams and riffles, runs and pools with sand, gravel or boulder.	No
<i>Perimyotis subflavus</i> **	Tricolored Bat	Proposed Endangered (Federal Protected, State Endangered)	Overwinters in caves and abandoned mines. Also found in road-associated culverts. Forested habitats, including roosting in trees. May also be found in Spanish moss, pine trees, and occasionally human structures.	Potentially

*The Virginia Fish and Wildlife Search Report compiled on 6/6/2024 requires a minimum 3-mile search radius from the Proposed Project.

**Included as part of the results from the IPaC list (USFW, 2024) for Lots 1 and 2.

Table 3-5 summarizes the list of migratory bird and eagle species identified as a potential concern by the USFWS based on habitat characteristics and the likelihood of the species occurring within the Proposed Project.

Table 3-5: Identified Eagles and Migratory Birds

Scientific Name	Common Name	Federal/State Status	Habitat	Habitat Present
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Not a BCC; protected under Eagle Act. Delisted due to recovery	Forested areas adjacent to large bodies of water.	No
<i>Chaetura pelagica</i>	Chimney Swift	BCC	Originally nested in natural sites such as caves and hollow trees of old-growth forests, Chimney Swifts now nest primarily in chimneys and other artificial sites with vertical surfaces and low light	No
<i>Antrostomus vociferus</i>	Eastern Whip-poor-will	BCC	Eastern forests with open understories. They can be found in both purely deciduous and mixed deciduous-pine forests, often in areas with sandy soil	Potentially
<i>Grasshopper Sparrow</i> <i>Ammodramus</i> <i>savannarum</i> <i>perpallidus</i>	Grasshopper Sparrow	BCC	Grasslands, prairies, hayfields, and open pastures with little to no scrub cover and often with some bare ground.	No

Scientific Name	Common Name	Federal/State Status	Habitat	Habitat Present
<i>Setophaga discolor</i>	Prairie Warbler	BCC	Shrubby habitats with open canopies, ranging from pine forests, scrub oak barrens, regenerating forests, and borders of forest and prairie.	Potentially
<i>Protonotaria citrea</i>	Prothonotary Warbler	BCC	Flooded bottomland forests, wooded swamps, and forests near lakes and streams. They tend to avoid forest patches smaller than about 250 acres or forest borders less than 100 feet wide.	Potentially
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	BCC	Deciduous woodlands with oak or beech, groves of dead or dying trees, river bottoms, burned areas, recent clearings, beaver swamps, orchards, parks, farmland, grasslands with scattered trees, forest edges, and roadsides.	Potentially
<i>Euphagus carolinus</i>	Rusty Blackbird	BCC	Flooded woods, swamps, marshes and the edges of ponds.	Potentially
<i>Hylocichla mustelina</i>	Wood Thrush	BCC	Mature deciduous and mixed forests in eastern North America, most commonly those with American beech, sweet gum, red maple, black gum, eastern hemlock, flowering dogwood, American hornbeam, oaks, or pines.	Potentially

There are elements for potentially suitable habitats for several species listed in **Table 3-4 and Table 3-5** (trees, deciduous forests, recent clearings, streams, etc.). Additional discussion is provided below in **Section 3.6.3**.

3.6.3 Critical and Sensitive Habitats

Critical habitat is defined in the ESA and includes “the specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with Section 4 of the Act, on which are found those physical or biological features (I) essential to the conservation of the species, and (II) which may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species.” No designated Critical Habitats meeting the ESA definition are located within the project area. The USFWS Critical Habitat and Endangered Species interactive Environmental Conservation Online System (ECOS) (ECOS, n.d.) was used to develop a species list for the project area. The resulting report generated by the USFWS system reports that no critical habitats are identified within the Proposed Project (**Figure 3-10**). Additionally, no state-level critical habitats were identified to be present in the project area based on a review of the Virginia Department of Wildlife Resources (DWR)/ Virginia Fish and Wildlife Service Mapping system (VaFWIS Search Report, 2024) (**Figure 3-11**).

3.6.4 Environmental Consequences: Biological Resources

Potential impacts to Biological Resources including vegetation, threatened and endangered species, and sensitive habitats are described below.

3.6.4.1 Construction

Impacts to listed endangered or threatened species or designated critical habitat from the Proposed Project are anticipated to be negligible. Phase I of Project Stellar would be constructed on the west half of Lot 1. Future expansion (Phase II) would occur on the eastern half of Lot 1, and the next expansion phases (Phase III and IV) would be constructed on Lot 2. Lot 1 is currently cleared and graded, and Lot 2 is currently forested. It is anticipated that forested and vegetated land will be cleared and developed **for Phases III and IV**. Trees within and/or immediately adjacent to the project area would be removed or otherwise potentially impacted (i.e., trimmed or unintentionally damaged) during proposed development activities. However, reasonable precautions will be taken to protect against potential adverse impacts to established trees. Grading and permanent removal of vegetation during construction will cause localized removal of topsoil and permanent minor adverse impacts to vegetation. Potential staging areas for construction equipment and materials will utilize existing cleared areas, minimizing adverse impacts to vegetation. In addition, no threatened or endangered plant species have been encountered in surveys conducted within the vicinity of the Proposed Project. **No instream work is planned for the Proposed Project.**

Based on surveys previously conducted for the Proposed Project, it is not reasonably expected that any of the protected species identified using USFWS and VDWR have established populations within or near the Proposed Project. The Phase I development will occur on the area already cleared and partially developed (as of August 2024), it is unlikely that established populations will be affected by further development of the cleared portion. The USFWS species list states that the Proposed Project “location does not overlap the [final] critical habitat” for species with a designated critical habitat, reaffirming that there is no critical habitat at risk from implementation of the Proposed Project.

DOE initiated consultation with the U.S. Fish and Wildlife Service – Virginia Ecological Services Field Office regarding the Proposed Action and Proposed Project by completing the Section 7 online review process required by the Virginia Ecological Services Field Office. DOE submitted its initial determinations regarding potential impacts to threatened and endangered species, and critical habitat (“May Effect” determination for the Tricolored bat, “No Effect” on the Green Floater, “Not Likely to Adversely Affect” the Monarch Butterfly, and “No Effect” on critical habitat) in November 2024. The Virginia Ecological Services Field Office replied to DOE and recommended a “Not Likely to Adversely Affect” determination for the Tricolored bat if the project could avoid tree removal and trimming during a time-of-year restriction from April 1 - November 15 should the Tricolored bat be listed throughout the duration of the project (Appendix B). Southern Virginia Megasite owners and developers have committed to adhering to this time-of-year restriction.

Based on recent developments of the Megasite (including the Proposed Project site) and surveys conducted within close proximity to the Proposed Project, presence of minimal natural habitat, and resulting low potential for wildlife use, use of the USFWS IPaC Tool, databases described above,

prior surveys of the Southern Virginia Megasite, and communication with the U.S. Fish and Wildlife Service – Virginia Ecological Services Field Office, DOE has made a final determination that the Proposed Action and DOE’s Proposed Project will have No Effect on the Green Floater, Not Likely to Adversely Affect the Monarch Butterfly, and **Not Likely to Adversely Affect the Tricolored bat. The Proposed Project would also have No Effect on critical habitats.**

Comments received from the DWR stated that given the scope and location of the proposed work, the DWR does not anticipate significant adverse impacts upon listed species or other designated resources under its jurisdiction. In addition, the Virginia Department of Conservation and Recreation (VDCR) commented that the Proposed Project will not affect any documented state-listed plants or insects, and there are no Virginia State Natural Area Preserves within the project vicinity (Appendix B).

Per comment from the VDCR, the proposed action will impact an ecological core (C4) as identified in the Virginia Natural Landscape Assessment. Mapped cores in the project area can be viewed via the Natural Heritage Data Explorer². Per the VDCR, “Ecological cores are areas of at least 100 acres of continuous interior, natural cover that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune and beach habitats. Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores. Cores also provide the natural, economic, and quality of life benefits of open space, recreation, thermal moderation, water quality and air quality.” Based on the definition of ecological cores being “areas of at least 100 acres of continuous interior, natural cover”, there is no identified issue with completion of Phase I or Phase II on Lot 1 on the northeastern portion. The ideal buildable area is already deforested; and no additional or significant land clearing activities will be necessary. The exact building size, design, and location is not yet determined for Lot 2, a future building (which will be of a similar size and overall construction as the Lot 1 building) will most probably be in the “interior core area” of Lot 2 to minimize impacts to wetland areas. No changes to the project scope are planned, however project information and a map for an update will be provided to the VCDR if the scope of the project changes and/or six months have passed before it has been utilized.

3.6.4.2 Operation of the Facility

Facility operations are not anticipated to create any additional impacts to vegetation or wildlife.

3.7 Cultural Resources

3.7.1 Prehistoric and Historic Archaeological Resources

3.7.1.1 Affected Area

The Proposed Project is situated within the cultural area of two federally recognized tribes, the Delaware Nation - Oklahoma and the Monacan Indian Nation, though no known sites of tribal interest are within proximity to the Megasite Project Stellar or within the vicinity to Lots 1 and 2.

² Natural Heritage Data Explorer: <https://www.dcr.virginia.gov/natural-heritage/nhdeinfo>

3.7.1.2 Archeological Survey

An archeological survey on historic features was previously conducted by WSP USA Inc. (WSP) in 2020 for portions of the Megasite (specifically, Lots 1-5, 8, and 9) based on a scope developed through their prior discussions with the DHR during non-federal development of the Megasite as a whole (“National Register Survey and Evaluations of Archaeological Sites and Evaluations of Architectural Resources in Lots 1,2,3,4,5,8, and 9”). The work conducted included providing information for eligibility for the NRHP for all previously recorded cultural resources identified within portions of the Megasite. Portions of the survey conducted on Lots 1 and 2 encompass the area of potential effect from Microporous’ Proposed Project. The land where the Proposed Project would occur is prior industrial tobacco farmland, and/or forest vegetation regenerated from former agricultural land.

The archaeological evaluations and survey completed by WSP in 2020 was designed to collect information to address DHR comments relative to 26 previously identified archaeological resources and their eligibility for the NRHP located throughout the Megasite. These investigations were performed pursuant to the National Historic Preservation Act of 1966 (as amended in 1980), the Archaeological and Historical Preservation Act of 1974, and Title 36 of the Code of Federal Regulations, Parts 60-66 and 800 (as appropriate). For the purpose of this EA and the Proposed Project (which concerns Lots 1 and 2), architectural resources identified on Lots 5/6 and 8/9 will not be discussed or reviewed. Based on the survey performed for Lots 1 and 2, six archeological resources including lithic/artifact scatter/prehistoric isolated finds were identified on Lots 1 and 2. WSP recommended that these six sites were not eligible for the NRHP.

WSP submitted this survey and their recommendations to the DHR, and per a letter from the Virginia DHR dated December 2020, DHR noted that two sites are multicomponent sites consisting of low density prehistoric lithic scatters and evidence of 19th to mid-20th century occupation. Three sites consist of structural remnants and historic artifact assemblages dating from the 19th to mid-20th century. These sites likely represent sharecropper, tenant occupations, and/or agricultural support structures. Based on the submitted information, DHR concurred that four of the sites are not eligible for listing in the NRHP. The DHR recommended that two sites be considered potentially eligible for listing the NRHP and additional archaeological testing should be conducted to determine the eligibility of the sites. Prior to grading the 55-acre pad at the Proposed Project, an additional survey (“Phase II Investigation...”) was conducted. WSP recommended that based on the results of this survey, these two sites were not eligible for the NRHP. Ground disturbance and earthmoving subsequently began at the Megasite. In June 2024, DOE initiated formal consultation with the DHR and provided the results of the Phase II survey and WSP’s recommendations. Microporous has also developed a Plan for Unanticipated Archaeological Discoveries that outlines procedures to follow in the event of unanticipated discovery of cultural or historic resources during the course of project construction and operations. **DOE submitted a copy of the Draft EA and the Unanticipated Archaeological Discoveries plan to the Virginia DHR for review and comment. Virginia DHR subsequently requested revisions and additional information pertaining to the Phase II survey but noted that DOE’s Proposed Action would have no adverse effect on historic resources and accepted the Unanticipated Discoveries Plan (Appendix B). DOE concurs with this determination.**

3.7.1.3 Traditional Cultural Resources

DOE consulted with the Virginia DHR, Delaware Nation of Oklahoma and the Monacan Indian Nation regarding the Proposed Project per the developed consultation letters (**Appendix B**).

3.7.2 Environmental Consequences: Cultural Resources

3.7.2.1 Construction and Operations

As described above, DOE consulted with the DHR during the development of the EA and initiated tribal consultation with the Delaware Nation and the Monacan Indian Nation. No comments were received from these Tribal Nations on the Draft EA. Microporous has also developed a Plan for Unanticipated Archaeological Discoveries that outlines procedures to follow in the event of unanticipated discovery of cultural or historic resources during the course of project construction and operations. The outcome of any future comments or consultation, in combination with requirements to follow procedures outlined in the Plan for Unanticipated Archaeological Discoveries, will avoid and/or minimize potential impacts to tribal cultural resources. Desktop query of the National Register of Historic Places has found no listed sites, and no prehistoric archaeological sites identified on the Proposed Project. Regardless, Microporous will adhere to the Plan for Unanticipated Archaeological Discoveries to address historic/prehistoric cultural resource discovery during the Proposed Project construction and operations phase. As noted above, Virginia DHR noted that **DOE's Proposed Action would have no adverse effect on historic resources. DOE concurs with this determination.**

3.8 Utilities and Energy Use

3.8.1 Environmental Consequences: Utilities and Energy Use

The Megasite has been developed by the local government to include water, wastewater treatment, natural gas, electricity, and fiber optic utility availability to Lots 1 and 2. Potable water is available through the City of Danville, which is partially subcontracted to the City of Eden, North Carolina, approximately 14 miles to the southwest of the Proposed Project. Wastewater treatment is available through the City of Danville. Natural gas transmission is provided by Transco, and distribution is provided by the Southwestern Virginia Gas Company (Quest Site Solutions, 2021). Electricity is available through American Electric Power (Southern Virginia Megasite at Berry Hill, n.d.). Internet services are available through fiberoptic cable owned by the Mid-Atlantic Broadband Community Corporation (Quest Site Solutions, 2021). Note that construction plans include a retention basin and therefore Microporous does not intend to connect to a municipal storm sewer system.

Danville Utilities owns and operates the Danville Water Treatment Plant (Danville Utilities, 2020) and purchases additional capacity from the City of Eden Department of Public Works (Quest Site Solutions, 2021), which operates the Robert A. Harris Water Filtration Plant, approximately 11 miles to the southwest of the Proposed Project, in the City of Eden, North Carolina (Eden North Carolina, n.d.). The combined total output capacity of these treatment plants is 38.6 million gallons per day (MGD) of potable water; the combined allocated output capacity of the treatment plants to the Megasite is 7 MGD of potable water. The source of water for the Danville Water Treatment Plant and the Robert A. Harris Water Filtration Plant is the Dan River (Danville Utilities, 2020;

Eden North Carolina, n.d.). The existing waterline servicing the area of Lots 1 and 2 is 16 inches in diameter and runs along the southern boundary of the lots, along Berry Hill Road (U.S. Route 311) (Southern Virginia Megasite at Berry Hill, n.d.).

The City of Danville purchases the entirety of the wastewater capacity provided to the Megasite from the City of Eden, NC, which processes the wastewater at the Mebane Bridge Wastewater Treatment Plant (Eden North Carolina, n.d.). The total capacity of this treatment plant is 13.5 MGD; the allocated capacity of this treatment plant to the Megasite is 3 MGD (Quest Site Solutions, 2021). The existing sewer line servicing the area is 20 inches in diameter and ends near the southwestern extent of Lots 1 and 2 (Southern Virginia Megasite at Berry Hill, n.d.).

The Southwestern Virginia Gas Company owns 4-inch and 8-inch distribution lines that service the Megasite that operate at 450 Pounds per Square Inch Gauge (PSIG). These distribution lines connect through a gas gate in the northwestern portion of the Megasite to transmission lines owned by Transco. These transmission lines are 30 and 42 inches and operate at 680 PSIG and are located along the northwest boundary of the Megasite. The capacity of these lines is over 50 million cubic feet (MMcf) of natural gas per month (Quest Site Solutions, 2021).

American Electric Power owns a 138 kilovolts (kV) electric transmission line and associated substation with a 30-megavolt ampere (MVA) transformer in the northwestern portion of the Megasite. The capacity of this line is over 100 megawatts (MW) of electric power (Southern Virginia Megasite at Berry Hill, n.d.).

3.8.1.1 Construction

Construction of the Proposed Project **would** have short-term, negligible impacts on utilities, specifically electricity, water, gas, and sanitary sewer. During the construction period the proposed Project **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 Proposed Project site. Once grading is completed, contractors will build out applicable utility lines to the new structures. New permanent utility connections **would** be installed during the construction period, but not be relied on for services in new buildings until those buildings are fully operational and occupiable.

3.8.1.2 Operations

Proposed Project operations will have minor direct impacts on local utilities and energy use, as the industrial processes involved will increase the demand for electricity, water, and gas at the Proposed Project, and increase the amount of wastewater generated on the site.

The Proposed Project is anticipated to increase demand for potable water by approximately 41,000 gallons per day, a quantity that will be allocated from the Danville Water Treatment Plant and the Robert A. Harris Water Filtration Plant as described in **Section 3.8.1** above. This quantity represents less than one percent of the potable water available from these sources to the Proposed Project and the increased demand from the Proposed Project will not have an adverse impact on availability for other users. Additionally, Microporous plans to incorporate water recycling into the facility to increase water use efficiency during operations, thereby minimizing the quantity of

1 water required from municipal sources. A service connection to the main water pipeline, available
2 along Berry Hill Road, will be constructed to service Microporous operations.

3 The wastewater produced by the Proposed Project (**estimated at 190,000 gallons per day when**
4 **operations at Lots 1 and 2 are fully utilized**) would be treated by the plants described in **Section**
5 **3.8.1** above; these wastewater treatment providers have indicated their established treatment
6 performs effectively and will be able to process and treat Microporous' wastewater discharge
7 within existing capacity and the increased demand from the Proposed Project will not have an
8 adverse impact on availability for other users. Additionally, Microporous plans to incorporate
9 water recycling into the facility to increase water use efficiency during operations, thereby
10 minimizing the quantity of water required from municipal sources. A service connection to the
11 present main sanitary sewer line located on the southwestern extent of Lots 1 and 2 will be
12 constructed to service Microporous operations.

13 The steam boilers for the site will utilize a maximum of 75 million cubic feet (MMcf) of natural
14 gas per month during the completion of Phase I, as described in **Section 3.8.1** above. According
15 to the 2021 *Southern Virginia Megasite Certification Report*, the minimum stated capacity of the
16 natural gas line available for connection to the site is less than the maximum operational
17 requirements of the Microporous facility. However, because the stated capacity is a minimum, it
18 is assumed that the gas lines capacity is in actuality greater than Microporous' operational needs.
19 A service line connection to the main natural gas line is available to the west of Lots 1 and 2 and
20 will be constructed to service Microporous operations.

21 The maximum electrical demand for the Proposed Project following the Phase I completion is
22 estimated to operate at 300,000 Megawatt hours per year (MWh/yr). The capacity of the American
23 Electric Power line is over 100 MW of electricity. An overhead power line will be constructed to
24 provide a service connection between the main 138 kV power line located west of Lots 1 and 2.

25 **3.8.2 Transportation and Traffic**

26 **3.8.3 Affected Environment**

27 The primary access to Lots 1 and 2 is from Berry Hill Road (U.S. Route 311), on the southern
28 boundary of the Proposed Project site. U.S. Route 311 was expanded in 2024 from a two-lane
29 undivided road to a four-lane divided road and a new connector road was constructed in 2024 from
30 the existing interchange of Oak Ridge Farms Road (Route 1260) and the Danville Expressway
31 (U.S. Route 58) west to tie in with U.S. Route 311 to accommodate the anticipated increase in
32 traffic from operations at the Megasite.

33 U.S. Route 311 connects to U.S. Route 58 Expressway, located approximately two miles to the
34 east of the Proposed Project site. U.S. Route 58 Expressway intersects with U.S. Highway 29
35 within the City of Danville, approximately seven miles from the Proposed Project site. A Norfolk
36 Southern rail line is located within the Megasite, approximately 1 mile to the south of Lots 1 and
37 2. Additions to the rail system within the Megasite are anticipated to be completed regardless of
38 the Proposed Action. Danville Regional Airport is located approximately 13 miles to the east of
39 the Proposed Project. The Proposed Project is currently vacant and does not generate any existing
40 vehicle traffic.

3.8.4 Environmental Consequences: Transportation and Traffic

3.8.4.1 Construction

Short term impacts to traffic and transportation are expected to be negligible during the construction phase of the Proposed Project. Construction of the facility is anticipated to take place over four phases, although Phases II – IV are in unconfirmed, conceptual stages. Phase I **would** include the construction of production, warehouse, office, support, and utility buildings, installation of equipment and storage silos, and extension of utilities to service newly constructed buildings. Phase I and Phase II of building construction is anticipated to last 12 months each, creating jobs that will be generated along with a corresponding increase in traffic to the area. The roads most impacted would include U.S. Route 311 and the Danville Expressway.

3.8.4.2 Operation

The Proposed Project would generate a minor long-term increase to traffic and transportation from anticipated daily semi-truck and personal-vehicle traffic into and out of the industrial park. Microporous expects all raw materials and finished goods to be transported by truck in Phase I, and all raw materials (except for base film) and finished goods by truck through Phase II. Phase I operations are expected to require 2,560 semi-truck trips per year for the importing of raw materials and outgoing shipments of finished goods. The rail spur will be connected to an existing rail line and **would** be used for incoming deliveries of imported base film during Phase II, eventually reducing the number of additional semi-truck trips needed to operate the facility. **Based on the very high estimated costs of implementing a rail spur into Lots 1 and 2 of the Southern Virginia Megasite, Microporous is not planning to implement a rail spur for incoming and outgoing freight. All incoming and outgoing freight will be managed using truck transport, potentially accessing nearby rail transloading facilities already in place.** At full site capacity when Phase II is complete, 2.64 billion square meters of base film will be carried by rail in 2,934 containers per year. (U.S. Route 311). Trucks will use the established road network to access the industrial park. These roadways are designed to accommodate industrial semi-truck traffic. Once Phases I through IV are completed and in operation, the facility would add approximately 800 employees with an expected corresponding daily number of personal vehicles at the site each day (see **Section 3.1.1 Socioeconomics**). The facility's site design will include adequate and sufficient parking, loading, and maneuver space to accommodate all incoming vehicles and semi-trucks.

3.9 Air Quality and Emissions

3.9.1 National Ambient Air Quality Standards

As a part of the Clean Air Act (42 U.S.C. §7401, et seq, CAA), the National Ambient Air Quality Standards (NAAQS) have been established as a means of assessing and controlling Hazardous Air Pollutants (HAP) emissions across the country. Each state is required to prepare a State Implementation Plan (SIP) intended to focus on state-specific industries and sources of emissions. The CAA requires the USEPA to set NAAQS for pollutants considered harmful to public health and the environment. The USEPA has established NAAQS for six (6) principal pollutants, which are called “criteria pollutants”: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM), sulfur dioxide (SO₂), and lead (Pb) (**Table 3-6**).

Pittsylvania County, Virginia has been classified as meeting attainment requirements since 1992 based on data published by the USEPA Greenbook (USEPA, 2024) for CO, particulate matter less than 10 microns (PM₁₀), PM less than 2.5 microns (PM_{2.5}), NO₂, SO₂, O₃, and criteria pollutants designated under USEPA NAAQS.

Table 3-6: USEPA National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead		primary and secondary	Rolling 3 month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded
Nitrogen Dioxide		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
Nitrogen Dioxide		primary and secondary	1 year	53 ppb ⁽²⁾	Annual Mean
Ozone		primary and secondary	8 hours	0.070 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution	PM _{2.5}	primary	1 year	9.0 µg/m ³	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m ³	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide		primary	1 hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m³ as a calendar quarter average) also remain in effect.

(2) The level of the annual NO₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O₃ standards.

(4) The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a SIP call under the previous SO₂ standards (40 CFR 50.4(3)). A SIP call is an USEPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS.

3.9.2 Existing Air Quality Standards

Air emissions from mobile and stationary sources are regulated on a federal level by the CAA. The CAA establishes standards and control requirements for facilities meeting the definition of a Major Source and those classified as Area Sources. A Major Source includes any facility with operations emission sources that emit HAPs totaling at least 10 tons of any single HAP or 25 tons of any combination of HAPs annually. Implementation of Air Quality regulations in Virginia is a shared responsibility between the USEPA and VDEQ. The Proposed Project will be subject to conditions within USEPA Title V Operating Permits co-administered with VDEQ (VDEQ; Megasite), which will provide monitoring and reporting on air emissions to maintain regulatory compliance. Facilities meeting the definition of a major source, or an area source are required to obtain a Title V air quality permit in accordance with 9VAC5-80-60 unless otherwise exempted.

Virginia DEQ also requires permitting for minor sources not otherwise required to obtain a Title V permit under the Minor New Source Review (NSR) permit program. The minor NSR permit program applies to the construction of any new stationary source or any project (which includes any addition or replacement of an emissions unit, any modification to an emissions unit or any combination of these changes) that will emit regulated air pollutants above the exemption thresholds listed in 9VAC5-80-1105 C or D of state regulations or that will require a permit via 9VAC5-80-1105 E or F. If a permit is required, it must be obtained before any activity on the project can begin. Minor NSR permits are for facilities that emit less than 100 tons per year of any criteria pollutant (PM, PM₁₀, PM_{2.5}, CO, nitrous oxide [NO_x], SO₂, and Volatile Organic Compounds [VOC]) and for facilities that emit toxic pollutants more than state toxic exemption levels. The criteria pollutant exemption levels are as follows (**Table 3-7**):

Table 3-7: Criteria Pollutant Exemption Levels

Pollutant	New Stationary (Tons/Yr)	Projects (Tons/Yr)
PM	25	15
PM ₁₀	15	10
PM _{2.5}	10	6
CO	100	100
NO _x	40	10
SO ₂	40	10
VOC	25	10

Source: <https://www.deq.virginia.gov/permits/air/>

Other permitting guided by the VDEQ include facilities that do not meet the exemption levels and specifications should be reviewed upon obtaining an emissions figure for the Proposed Project, discussed below.

3.9.3 Affected Environment

The Proposed Project is located west of the City of Danville, Pittsylvania County, Virginia in an area currently zoned for industrial use to the west and south; agricultural and residential land to the north and east. The Proposed Project is located within the eastern portion of the Megasite, located approximately 10 miles from the community of Danville, Virginia. The nearest population (sensitive receptor) are rural (farm) residences, the closest of which is adjoining to the Proposed Project (approximately 0.10 miles east). The nearest residential neighborhood to the Proposed Project is approximately two miles southwest. The Proposed Project is approximately five miles from the nearest school and about 1 mile from the nearest existing community structure (church). Other sensitive receptors, including parks, libraries, hospitals, and other care facilities, etc. are not present within a mile or more radius to the Proposed Project.

3.9.4 Environmental Consequences: Air Quality

3.9.4.1 Construction

Construction of the Proposed Project Phase I is expected to be developed over 120 acres of the total property area of 212 acres (approximate acres of Phases II through IV development). An area on the Proposed Project has cleared 55 acres, and has been graded, and ready for structure and/or pavement development. Minor, temporary, intermittent air emissions are anticipated during Proposed Project construction which could present a short-term, minor adverse impact on air quality. Air emissions of CO, NOX, SO₂, PM₁₀, PM_{2.5} and VOC associated with construction equipment and/or vehicles are anticipated during active use of heavy machinery, site grading and leveling, and installation of equipment. Construction material (i.e. mason supplies) deliveries via roadways can be anticipated during the construction of the Proposed Project - Phase I. As such, in addition to tailpipe emissions, surface soil disturbances during excavation and grading could result in generation of fugitive dust. Fugitive dust could potentially affect both public health and the environment. The severity of its effects on health depends on the size and composition of the particulate matter. Typical effects are persistent coughs, respiratory distress, eye irritation, asthma, etc. Use of EH&S protocols as applicable (e.g. training, industry best practices, and PPE) would mitigate any potential health impacts to personnel within the Proposed Project, and for private residences in the larger area. Construction emissions would be temporary (i.e. only during development or the area or renovations) in nature.

3.9.4.2 Operation

The Proposed Project will require a VDEQ minor new source review permit, which will provide monitoring and reporting on air emissions to maintain regulatory compliance. The Proposed Project operations do not currently have any modeled air quality data available; however, based upon existing Microporous facilities with similar operations, the Proposed Project anticipates a closed-loop processes with limited air emissions, primarily associated with natural gas combustion for boiler operations. New technologies proposed for the Proposed Project boast

low operational emissions of potentially harmful pollutants. The Proposed Project’s operational impacts to air quality are expected to be minor, direct, and long term. Activities deemed ‘significant’ for air quality regulatory purposes include wet-processing, and raw material and product handling during the Li-ion production process.

3.10 Greenhouse Gasses (Revised under EO 14154)

3.10.1 Environmental Consequences: Greenhouse Gasses

3.10.1.1 Construction

Construction of the Proposed **Project would** result in temporary GHG emissions from sources including vehicle transportation of equipment and materials, use of construction machinery, and concrete curers. Use of electricity during construction may indirectly increase GHG emissions depending on electric generation sources/methods employed by local utilities serving the Proposed Project. 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. The site <http://buildcarbonneutral.org> provides these rough estimates using the following basic input parameters: area of disturbance planned, primary structural material to be used, region within the US, prior land use, and current vegetation type (or unvegetated). Estimates are given as net embodied carbon from construction activities, where “embodied carbon” includes emissions from raw material extraction, transportation of materials, materials waster, building operations and maintenance, and the emissions a building continues to produce after it is no longer in use. It does not account for GHGs other than embodied carbon. However, other GHG emissions as a result of construction are expected to be negligible in comparison to CO₂ emissions. Build Carbon Neutral estimates that construction would produce net emissions of 28,248 metric tons of embodied carbon per year. Because the input parameters for Phase I and Phase II of the Proposed Project are identical, this estimate is applicable to both phases.

3.10.1.2 Operation

Facility operations **would** include the use of natural gas steam boilers. Two steam boilers will be operational during Phase I (totaling 540,000 million British thermal units (mmBtu). After Phase II becomes operational, these values would be expected to increase to 960,000 mmBtu/yr. Natural gas contains methane, a minimal amount of which can escape into the atmosphere as fugitive emissions. Combustion of natural gas produces CO₂ and other GHGs.

The Proposed Project plans to purchase up to 157,000MWh/yr of electricity for facility operations during Phase I, with an increase to 302,000 MWh/year after Phase II becomes operational. The quantity of emissions that are associated with the purchased electricity will vary on a year-to-year basis, depending on electric generation sources and methods employed by local utilities serving the Proposed Project site. Estimates of emissions of GHG per MWh for Virginia are from the USEPA eGRID 2022 data (EPA 2024). Maximum GHG emissions from estimated electricity use per year for Proposed Project Phase I operations are outlined below in **Table 3-8** below.

Table 3-8: Estimated Annual GHG Emissions

Source	Base Value	Metric Tons CO ₂	Metric Tons CH ₄	Metric Tons N ₂ O
Phase I				
Steam Boilers	540,000 mmBtu/yr	28,652	0.54	0.054
Electricity Use	157,000 MWh/yr	41,869	4	1
Total		70,521	4	1
Phase II				
Steam Boilers	960,000 mmBtu/yr	50,938	0.96	0.096
Electricity Use	302,000 MWh/yr	80,537	7	1
Total		131,475	8	1

3.11 Public and Occupational Health and Safety

The Microporous Safety Program prescribes policies and procedures to protect personnel and the public from potential risks associated with normal activities conducted on the Proposed Project on Lots 1 and 2. Microporous Safety Program will include requirements established by the Virginia Occupational Safety and Health Administration³ (VOSH) and Virginia's Department of Labor and Industry (VDOLI) in accordance with the following Virginia Administrative Code (VAC):

- Labor and Employment Law: 16VAC15, Chapter 11, 21, 30, 40, and 50
- Virginia Occupational Safety and Health: 16VAC25, Chapters 11, 60, 70, 75, 80, 85, 90, 100, 120,
- Voluntary Protection Program: 16VAC25, Chapter 200
- Boiler and Pressure Vesel Regulations: 16VAC25-50-10

3.11.1 Radon

Radon is a naturally occurring odorless and colorless radioactive gas produced by decomposition of uranium in certain geologic formations and has been associated with health and safety concerns including lung cancer as reported by the National Academy of Sciences (NAS, 1999). Where present, radon may become concentrated in enclosed spaces such as basements and other poorly ventilated areas of buildings.

USEPA established a recommended action level for radon of 4 picocuries per liter (pCi/L) in indoor air for residences with radon levels above this concentration considered as a health risk to

³ OHSA Virginia State Plan Timeline:

Initial approved on September 28, 1976 (41 FR 42658)

State Plan Certification: August 21, 1984 (49 FR 33122 and 33126)

18(e) Final Approval: November 30, 1988 (53 FR 48258), amended on June 9, 2000 (65 FR 36630), and June 29, 2006 (71 FR 36991)

occupants. USEPA has designated Pittsylvania County, Virginia being within Radon Zone 1 (EPA, 1993), which has predicted indoor radon screening levels of greater than 4 pCi/L (**Figure 3-13**).

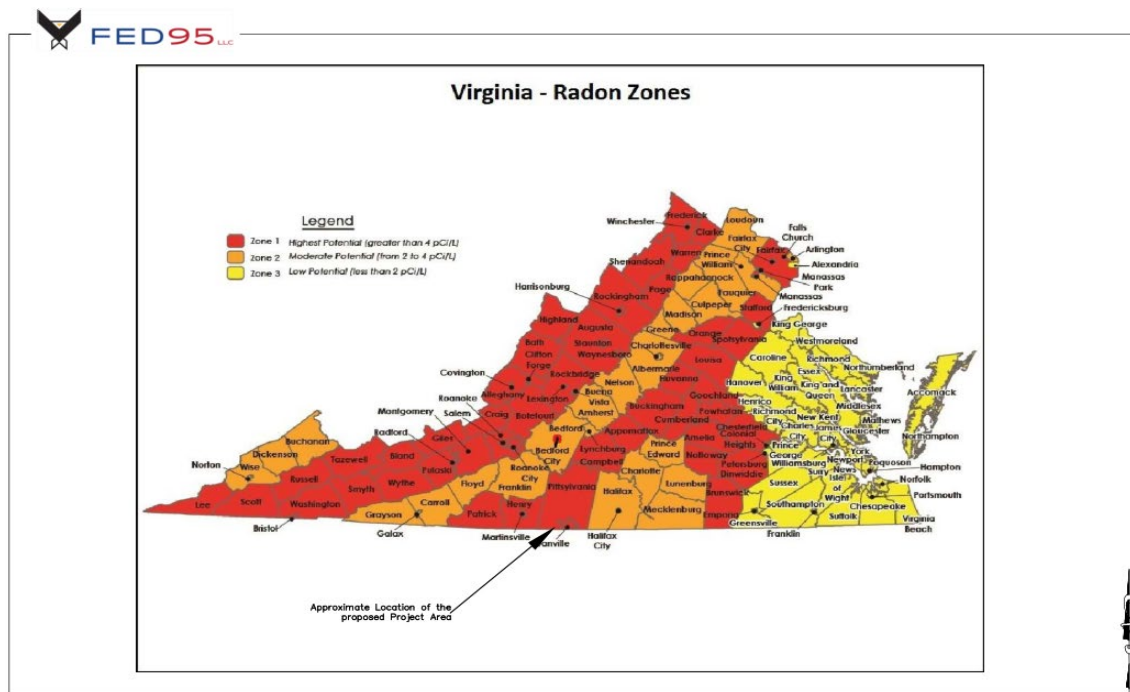


Figure 3-11: Radon Map

Notes: Not sized to scale. Imaged sourced Virginia Department of Health, EPA Radon Risk Map for Virginia, 1993.

3.11.2 Affected Area

No other risks to public or occupation health and safety from the existing Proposed Project have been identified. The proposed Project Area on Lots 1 and 2 has been identified as agricultural land with no known historical releases in soil or groundwater contamination, and no known current sources of emission or effluents. No evidence of contamination or hazards potentially affecting public and occupational health were reported from the Phase I Environmental Site Assessment survey (Dewberry, 2019).

3.11.3 Environmental Consequences

3.11.3.1 Construction and Operation

Risk to public and occupational health and safety from the Proposed Project construction and operations are expected to be minor, direct and indirect, and long-term. Numerous regulatory permitting requirements and planned mitigations governing Proposed Project construction and operations address factors relevant to public and occupational health and safety. These include noise (**Section 3.2**), regulated waste (solid and hazardous waste) (**Section 3.4**), hydrologic conditions and water quality (**Section 3.5**), transportation and traffic (**Section 3.9**), and air quality and emissions (**Section 3.10**), greenhouse gases (**Section 3.11**), Existing corporate policies of Microporous or future updates thereof, further address relevant health and safety risk factors and

would be followed throughout construction and operations. These mitigation measures are summarized below under **Section 3.12.3.2.4**.

Proposed Project operations will process certain hazardous materials on a regular basis including ceramic powder (combined boehmite and alumina), PVdF, and polymethyl methacrylate (PMMA) powder (**Table 3-2 of Section 3.4.2**). To reduce logistic risk and ensure safety, these materials would be received via truck within the facility area allowing for strictly controlled and consistent management. Prior to startup, Microporous will prepare an Emergency Action/Crisis Management (EA/CM) Plan that will address unanticipated events (e.g., natural disaster, terrorism, accidents, spills) and provide procedures for the protection of the site's personnel, environment, and infrastructure. Microporous would build on EA/CM Plans from their other facilities with similar operations. Microporous is prepared and dedicated to proper hazardous chemical/material handling, engineering controls, waste management, and disposal practices to minimize/eliminate risk to the public or employees. Hazardous materials will be managed in accordance with Federal, State, and local environmental regulations. To mitigate potential hazards and existing EH&S, corporate [Microporous, LLC Headquarters] policies and procedures would be specially adapted and refined for the proposed Facility prior to initiation of operations. Some items that are included but are not limited to are:

- Employee training
- Appropriate PPE
- Engineering controls
- Real-time monitoring
- Reporting along with internal EH&S assessment for compliance with applicable health and safety regulations

In additions, site preparations and construction activities will be consistent with industry-standard EH&S best practices in the U.S. and will comply with applicable laws and regulations governing public and occupation health and safety.

Microporous will require all employees to participate in the Company's established health, safety, and security training, which includes specialized training for individuals handling hazardous materials and waste. Microporous would maintain a visible emergency contact list and close coordination with local first responders (e.g., fire department and law enforcement). Microporous will maintain compliance with local, state, and federal regulatory requirements including the Emergency Planning and Community Right-to-Know Act (EPCRA), Tier II reporting, and RCRA (if applicable).

3.11.3.2 Accidents and Intentional Destructive Acts

Prior to the start of Phase I facility operations (including Phases II through IV), **Microporous would** initiate 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, and will be predicated on environmental, health, and safety protocols established in their other manufacturing and research and development facilities. Procedures and protocols would also include those discussed in above applicable **Sections 3.2. 3.4. 3.5. 3.9, and 3.10**, as part of

operations and regulatory compliance. The Proposed Project will be surrounded by a perimeter security fence and monitored by dedicated 24-hour security staff and trained facility first responders. In addition, the facility would have closed-circuit cameras in each building with focus on critical ingress and egress routes. Security badges will regulate access to facility buildings. Facility management will work in full and immediate cooperation with emergency responders and managers from outside the facility as appropriate. The nearest Fire Department (FD) is the Bachelor Hall FD, which is located 1.6 miles from the Proposed Project. The nearest hospitals are located 8 miles (SOVA Health Danville), and 10 miles (UNC Rockingham).

3.11.3.2.1 Proposed Mitigation Measures

Risk mitigation for handling hazardous materials will be established through defined operational procedures (e.g., Hazardous Communication, PPE, chemical management) including, maintenance of equipment in compliance with federal, state, and local occupational health and safety requirements, environmental regulations, and manufacturer recommendations. Spill detection equipment would be installed for appropriate containers with secondary containment, as necessary. Further Proposed Project mitigations covered under Microporous guidance include but are not limited to chemical handling procedures; waste management and handling procedures; and specific health and safety policies including proper employee training, equipment commissioning, regular maintenance, and engineering controls.

Site-specific process risk assessments will be completed to identify potential hazards by type (i.e., material handling or worker safety program) not present at an existing Microporous facility. If new hazards are identified additional policies would be implemented to directly address potential hazards, and in compliance with local, state, and federal regulations.

4.0 REASONABLY FORESEEABLE ENVIRONMENTAL EFFECTS

Activities at the Proposed Project Area (Lots 1 and 2) will ultimately represent a small proportion of the anticipated industrial operations to occur at the entire Southern Virginia Megasite, however, the Proposed Action and its alternatives may have the potential for reasonably foreseeable effects which may impact environmental conditions or regulatory obligations for Microporous, LLC and the Proposed Project Area. Reasonable efforts have been made in this EA to anticipate possible contributions to site environmental or cultural conditions that may affect the Proposed Project Area as a whole.

4.1 Reasonably Foreseeable Environmental Consequences

The following analysis considers how the impacts of the actions identified in the above sections might affect, or be affected by, other ongoing and/or proposed activities at Microporous, Lots 1 and 2. The analysis considers whether incremental effects contributed by the Proposed Action, or its alternatives, would be reasonably expected to result in potentially significant impacts not previously identified.

Table 4-1: Reasonably Foreseeable Effects

Resource	Proposed Project and Action	No Action Alternative
Socioeconomics	Construction and operations of the Proposed Project, combined with past, present, and future planned development within the Megasite would have a minor, beneficial impact on socioeconomic conditions in the area through increased tax revenues for state and local government due to increased sales transactions for the purchase of materials and supplies, and through the introduction of new full-time jobs. Microporous plans to hire employees for 800 permanent positions within the first six years of operations, and up to 2,015 permanent positions over the life of their proposed facility, which would contribute to additional beneficial socioeconomic impacts.	No reasonably foreseeable effects are expected under the No Action Alternative.
Noise	The Proposed Project would result in a minor, long-term increase in noise as an average increase in ambient noise is expected for industrial activities, increase in traffic to and from the site, and overall increase in noise in commensurate with comparable industrial development, and with other planned industrial construction on adjacent parcels within the Southern Virginia Megasite.	No reasonably foreseeable effects are expected under the No Action Alternative.
Soils	The Proposed Project would result in minor, adverse reasonably foreseeable effects to soils are anticipated under the Proposed Action. Soil impacts are limited to localized temporary disturbances which will be mitigated by required sedimentation and erosion control measures under the Proposed Action. These localized and temporary disturbances would occur if Microporous' facility would be expanded as part of Phases II – IV, but would be within the current development of the Southern Virginia Megasite. Although additional tenants are planned for the Megasite at Berry Hill, which may also disturb soils during construction and operations, all such activities would be subject to similar regulatory requirements under the Virginia Pollutant Discharge Elimination System (VPDES) program minimizing the movement of soils to stormwater.	No reasonably foreseeable effects are anticipated under the No Action Alternative.
Geology	No reasonably foreseeable effects are anticipated related to regional or local geology under any of the alternative actions. No proposed activity to disturb the bedrock or other geologic features are anticipated in any of the alternative actions. Potential impact from a significant earthquake is possible; however, the likelihood of an earthquake based on several research (refer to Section 3.4.1.4) and recent data, is unlikely for a high magnitude (greater than 5) earthquake, but not impossible. These conditions would remain the same if Microporous would be expanded as part of Phases II – IV. Geological and topographic conditions described for the Proposed Project are consistent with those across the Megasite and are not anticipated to be impacted by construction or operations of industrial facilities in the area. Therefore, despite plans for additional industrial development in the vicinity of the Proposed Project, no reasonably foreseeable actions have been identified that would interact with the Proposed Project to generate reasonably foreseeable adverse impacts to geology.	No reasonably foreseeable effects are anticipated under the No Action Alternative.
Hazardous Materials	Microporous would be required to evaluate the generator classification to determine if site-wide hazardous waste generation exceeds criteria for small quantity generator (SQG) status during operation activities. Depending on the operation activities, it is determined to be in compliance with applicable State and Federal regulations to be approved for the correct generator status and requirements. Based on the given hazardous	No reasonably foreseeable effects are expected under the No Action Alternative.

Resource	Proposed Project and Action	No Action Alternative
	materials used on the site by Microporous, it is unlikely any non-disclosed or new chemicals will be used at the Facility and would significantly increase the estimated usage or increase the amount of hazardous waste. The reasonably foreseeable effects on hazardous materials/regulated wastes are anticipated to be minor. The type and extent of impacts from regulated wastes from the other lots within the Megasite are not reasonably foreseeable due to the unknown nature of any use of other lots by the theoretical occupants and does not affect the current use of the Proposed Project. However, it is expected that any additional tenants within the Megasite would follow all applicable federal, state, and local permitting related to waste management, which would mitigate against potential significant impacts.	
Water Resources	No adverse reasonably foreseeable effects to water resources are anticipated under any of the alternatives considered. Two wetlands are present along and/or adjacent to the southern property boundary of the proposed Project Area. None of the scenarios involve groundwater use or discharge to groundwater. Localized surface water run-off will not affect site-wide water management. Potential stormwater discharges would be managed according to requirements of authorizations provided through the Commonwealth of Virginia, specifically under Virginia DEQ VPDES (Virginia Pollutant Discharge Elimination System) permits for industrial construction and operations under the CWA NPDES program, and through a Virginia Water Protection Permit from the Virginia DEQ under Section 401 of the CWA.	No reasonably foreseeable effects are anticipated under the No Action Alternative.
Biological Resources	No reasonably foreseeable effects to biological resources are anticipated under any of the considered alternatives. No critical habitats, sensitive habitats, and/or wetland habitats are present in the Project Area. Due to the recently developed nature of the project area, along with a lack of preferred and/or required habitat type, no threatened, endangered, or otherwise identified species of concern are likely to be present or otherwise negatively impacted by construction or operation. Therefore, no significant incremental or reasonably foreseeable effects on biological resources are anticipated.	No reasonably foreseeable effects are anticipated under the No Action Alternative.
Cultural Resources	No reasonably foreseeable effects to cultural resources are anticipated under any of the considered alternatives. Microporous has developed a Plan for Unanticipated Archaeological Discoveries that outlines procedures to follow in the event of unanticipated discovery of cultural or historic resources during the course of project construction and operations. Desktop query of the National Register of Historic Places has found no listed sites, and no prehistoric archaeological sites have been identified within Megasite Lots 1 and 2.	No reasonably foreseeable effects are expected under the No Action Alternative.
Utilities and Energy Use	Proposed Project operations would have minor effects on local utilities and energy use as the industrial processes involved will increase the demand for electricity, water, and gas at the Proposed Project, and increase the amount of wastewater generated on the site.	No reasonably foreseeable effects are anticipated under the No Action Alternative.
Transportation and Traffic	Construction and operations of the proposed project, combined with past, present, and future planned development within the Megasite would increase localized traffic volume along Berry Hill Road and within the Route 58 West corridor between Pembroke and Hopkinsville as a result of construction, shipping of materials and products, and employee commuting. In addition, the Proposed Action would likely increase regional rail traffic through transport of additional raw materials and finished products during operations. Combined, these would add	No reasonably foreseeable effects are anticipated under the No Action Alternative.

Resource	Proposed Project and Action	No Action Alternative
	incrementally to local and regional traffic and transportation impacts. However, the recent expansion of U.S. Route 311 and added connector road between the Megasite and the Danville Expressway to accommodate these anticipated traffic and transportation impacts	
Air Quality	The Proposed Project would require a VDEQ minor new source review permit. The Proposed Project operations do not currently have any modeled air quality data available; however, the Proposed Project anticipates closed-loop processes with limited air emissions. The Proposed Project's operational impacts to air quality are expected to be minor, direct, and long term.	No reasonably foreseeable effects are anticipated under the No Action Alternative.
Greenhouse Gasses	No reasonably foreseeable effects are anticipated from DOE's Proposed Action or Microporous' Proposed Project.	No reasonably foreseeable effects are anticipated under the No Action Alternative.
Public and Occupational Health and Safety	No reasonably effects are anticipated based on the Proposed Project. It is Microporous responsibility to ensure the Health and Safety Plan is in effect during construction and operation activities and any personnel to enter the proposed Project Area will abide to the requirements. Although additional industrial tenants are planned for the Megasite, which may also contribute to public and occupational health and safety risk, all future tenants will be subject to similar regulatory requirements as described in the resource sections listed above. Conditions described and planned for the Proposed Project are consistent with those across the Megasite and are not anticipated to be impacted by construction or operations of other industrial facilities in the area	No reasonably foreseeable effects are anticipated under the No Action Alternative.

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7.0 BIBLIOGRAPHY

- Avian Knowledge Network (2021), Rapid Avian Information Locator (RAIL), 29-Piedmont, Virginia [Map]. Retrieved on May 9, 2024. <https://data.pointblue.org/apps/rail/>
- Bollinger, G.A., (1978, November), Commonwealth of Virginia, Department of Conservation and Economic Development Virginia Minerals, Vol. 24, No.4, *Seismic Hazard in Virginia*.
- Bollinger, G.A., (1989, November), Commonwealth of Virginia, Department of Conservation and Economic Development, Virginia Minerals, Vol. 35, No.3, *Estimates of the Occurrence and Resulting Effects of Damaging Earthquakes in Virginia*.
- BuildCarbonNeutral (2007), Estimate the embodied CO2 of a whole construction project [Database], Retrieved June 11, 2024. <http://www.buildcarbonneutral.org/>
- Chmura Economics & Analytics, (2022). JobsEQ, *Economic Overview, Danville City, Virginia*.
- City of Danville, Virginia (1968, Version 2023, November), CODE City of Danville, Virginia Codified through Ordinance No. 2023-09.11, enacted September 19, 2023, Chapter 23.1 - NOISE. https://library.municode.com/va/danville/codes/code_of_ordinances
- Code of Federal Regulations, (2024, June), 40 CFR 98.38: *Mandatory Greenhouse Gas Reporting*, Accessed June 18, 2024 through eCFR.
- CreekLab (2015, September), *Survey for Freshwater Mussel Fauna in Trotters Creek and unnamed Tributaries of the Dane River, Berry Hill Commerce Centre, Pittsylvania County, Virginia*
- Danville Utilities (2020), *Water Treatment*, Retrieved May 28, 2024. <https://www.danvilleutilities.com/water/water-treatment.html>
- Danville Utilities, (2023), City of Danville, Water Quality Report, PWSID #5590100 <https://danvilleutilities.com/attachments/2023%20Water%20Quality%20Report%20FINAL.pdf>
- Department of Geosciences at Virginia Tech, Virginia Technical Seismological (2014), Research at the Virginia Tech Seismological Observatory [Map]. Retrieved May 14, 2024. <http://www.magma.geos.vt.edu/vtso/>
- Dewberry Engineers Inc. (2019, December), *Phase I Environmental Site Assessment, Southern Virginia Megasite at Berry Hill*
- Dewberry (2023, September), *Aquatic Species Survey Report for the Southern Virginia Megasite*
- Dewberry (2024, December), *U.S. Fish and Wildlife Service Phase 2 Bat Acoustic Survey***

Eden North Carolina (n.d.), *Public Works*, Retrieved May 28, 2024.
<https://www.edennnc.us/departments/municipal-services>

EPR, P.C. (2020, August), *Route 58 West Access Management Study*

Executive Order 14148 (2025, January 20). *Initial Recissions of Harmful Executive Orders and Actions.*

Executive Order 14173, (2025, January 21). *Ending Illegal Discrimination and Restoring Merit-Based Opportunity.*

Executive Order 11988, (1977, May 24). *Floodplain Management.*

Executive Order 14154, (2025, January 20). *Unleashing American Energy.*

Federal Emergency Management Agency, (1774 to the Present). *Earthquake Epicenters*, Virginia [Map]. <https://www.fema.gov/emergency-managers/risk-management/earthquake/hazard-maps>

Federal Emergency Management Agency, (2010). Flood Map Service Center, Virginia [Map]. Retrieved May 14, 2024.
<https://msc.fema.gov/portal/search?AddressQuery=1600%20berry%20hill%20road%2C%20danville%2C%20va>

Federal Emergency Management Agency, (2018-2024). *Earthquake Hazard Maps*, Virginia [Map]. <https://www.fema.gov/emergency-managers/risk-management/earthquake/hazard-maps>

Froehling & Robertson, Inc. (2011, July), *Report of Subsurface Exploration and Geotechnical Engineering Evaluation, Berry Hill Road Mega-Park (Phase II)*

Henika, W.S., (2002), Commonwealth of Virginia, Department of Mines, Minerals and Energy, Division of Mineral Resources, *Geologic Map of The Virginia Portion of the Danville 30x60 Minute Quadrangle*

INDUS Corporation, United States Protection Agency, Office of Water (2013, October), U.S. Geological Survey mapping for water resources, *Streams and Waterbodies in Virginia, The National Hydrography Dataset.*

Kelly, W. et al. (2017), Virginia Division of Geology and Mineral Resources, Publication 185, *Seismic History of Virginia.*

Microporous GmbH (2019, November), *Policy for the Environment, Health and Safety in the Workplace and Corporate Social and Ethical Responsibility.*

Mid-Atlantic Regional Integrated Sciences (2022, April), *Community Climate Outlook, Pittsylvania County, VA.*

Price V.C., et. al, (1980), Virginia Department of Energy, *Geology and Mineral Resources Webmap* [Map], Geology of the Whitmell and Brosville Quadrangles, 1:24,000, Virginia. Retrieved May 14, 2024.

<https://energy.virginia.gov/webmaps/GeologyMineralResources/>

Quest Site Solutions (2021, June), *Southern Virginia Megasite at Berry Hill Pittsylvania County, Virginia Certification Report*

Quest Site Solutions, *Mega Sites*. Accessed March 2025.

<https://questsitesolutions.com/mega-sites/>

Roble, S.M., (2024, March), Virginia Department of Conservation and Recreation, division of Natural Heritage, *Natural Heritage Resources of Virginia: Rare Animals*

Rouse Environmental Services (2015, September) *Project R10015d, Resurvey for Populations of Echinacea Laevigata (Smooth Coneflower), Isotria Medeolides (Small Whorled Pogonia), and Nestronia Umbellula (Indian Olive), Berry Hill Industrial Park – Phase I (revised), Pittsylvania County, Virginia.*

Southern Virginia Megasite at Berry Hill (n.d.). *Site Overview*, Retrieved June 18, 2024.

<https://sovamegasite.org/mega-site-overview>

Spencer, E. (2007, July), National Institute of Occupational Safety and Health, Pittsburgh Research Laboratory, *Heavy Construction Equipment Noise Study Using Dosimetry and Time-Motion Studies.*

Thornton, Tim. “\$550 Million Development Planned for Pittsylvania’s Axton Area.” *Virginia Business*, 26 Jan. 2024, www.virginiabusiness.com/article/550-million-development-planned-for-pitsylvanias-axton-area/.

Townsend, J.F., (2024, March), Virginia Department of Conservation and Recreation, division of Natural Heritage, *Natural Heritage Resources of Virginia: Rare Plants*

U.S. Geological Survey. (n.d.). *U.S. Quaternary Faults Map* [Map]. USGS Geologic Hazards Science Center; Interactive Quaternary Faults Map. Retrieved May 14, 2024.

<https://www.usgs.gov/tools/interactive-us-fault-map>

U.S. Geological Survey. (2024), National Water Information System, ERIS, HERE, Garmin, NGA, USGS, NPS [Map]. Retrieved May 13, 2024. <https://waterdata.usgs.gov/nwis>

United State Department of Transportation Federal Highway Administration, (2022, May), *Average Annual Miles per Driver by Age Group*, Retrieved June 11, 2024.

<https://www.fhwa.dot.gov/ohim/onh00/bar8.htm>

United State Department of Transportation Federal Highway Administration, (n.d.), Bureau of Transportation Statistics, *Energy Consumption by Mode of Transportation*, Retrieved June 11, 2024. <https://www.bts.gov/content/energy-consumption-mode-transportation>

United States Census Bureau, (2023). Quick Facts, Danville City, Virginia; Pittsylvania County, Virginia.

https://data.census.gov/profile/Danville_city,_Virginia?g=050XX00US51590#populations-and-people

United States Department of Agriculture, & National Resource Conservation Center, (2003), Pittsylvania County and the City of Danville, Virginia *Web Soil Survey* [Map]. National Resource Conservation Service. Retrieved May 13, 2024. from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

United States Department of Agriculture, & National Resource Conservation Center, (2003), Pittsylvania County and the City of Danville, Virginia *Web Soil Survey* [Map]. National Resource Conservation Service. Retrieved May 13, 2024. from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

United States Department of Agriculture, & National Resource Conservation Center, (2003), Pittsylvania County and the City of Danville, Virginia *Web Soil Survey, Depth to Water Table* [Map]. National Resource Conservation Service. Retrieved June 5, 2024. from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

United States Department of Agriculture, & National Resource Conservation Center, (n.d.b). National Resource Conservation Service. *State Soil Data Access (SDA) Hydric Soils rating by Map Unit*. Retrieved June 13, 2024. <https://www.nrcs.usda.gov/publications/Lists%20of%20Hydric%20Soils%20-%20Query%20by%20State%20Map%20Unit%20Rating%20.html>

United States Department of Energy, (2024, February), Office of Energy Efficiency and Renewable Energy, Environmental Questionnaire (EQ-1), *Environmental Questionnaire (EQ-1)*

United States Department of Homeland Security, Federal Emergency Management Agency, (2023, August 17). *National Flood Hazard Layer FIRMette* (No. 41043C0526G) [Review of *National Flood Hazard Layer FIRMette*].

United States Department of the Interior (2024, January), National Parks Service, National Register of Historic Places, Nation Register Database and Research, Retrieved May 9, 2024. <https://www.nps.gov/subjects/nationalregister/database-research.htm>

United States Department of the Interior (2024, June), Fish and Wild Services, Virginia Ecological Services Field Office, Code: 2024-0098662, *List of Threatened and Endangered Species that may occur in Your Proposed Project Location or may be Affected by Your Proposed Project*.

United States Department of Transportation (2017, May), Federal Highway Administration, FHWA-HEP-17-053, *Sound Level Descriptors in Alphabetical Order*.

United States Environmental Protection Agency (2023, July), Ecosystems Research, Level III and IV Ecoregions of EPA Region 4. Retrieved June 11, 2024. <https://www.epa.gov/ecoresearch/level-iii-and-iv-ecoregions-continental-united-states>

United States Environmental Protection Agency (2023, October), Superfund: National Priorities List (NPL) Interactive Map [Map], Retrieved June 11, 2024. <https://www.epa.gov/superfund/superfund-national-priorities-list-npl>

United States Environmental Protection Agency (2024, January), eGRID, Summary Data, eGRID with 2022 Data [list], Retrieved May 20, 2024. <https://www.epa.gov/egrid/summary-data>

United States Environmental Protection Agency, (1970, Amended 1990), Law and Regulations, Summary of the Clean Air Act, 42 U.S.C §7401 et seq., updated September 2023. <https://www.epa.gov/laws-regulations/summary-clean-air-act>

United States Environmental Protection Agency, (1973), Law and Regulations, Summary of the Endangered Species Act, 16 U.S.C §1531 et seq., updated September 2023. <https://www.epa.gov/laws-regulations/summary-endangered-species-act>

United States Environmental Protection Agency, (1992), Nonattainment Areas for Criteria Pollutants, Green Book, updated May 2024, Retrieved May 9, 2024. <https://www.epa.gov/green-book>

United States Environmental Protection Agency, (2023, December), *The 2023 EPA Automotive Trends Report*.

United States Environmental Protection Agency, (2023, October), New Source Review (NSR) Permitting, Minor NSR Basic Information, Retrieved June 5, 2024. <https://www.epa.gov/nsr/minor-nsr-basic-information#:~:text=The%20purpose%20of%20minor%20NSR,control%20strategy%20in%20nonattainment%20areas.>

United States Environmental Protection Agency, (2024), Interactive Map of Sole Source Aquifers [Map]. Retrieved May 7, 2024. <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>

United States Environmental Protection Agency, (2024, April), Green Vehicle Guide, Comparison: Your Car vs. an Electric Vehicle, Retrieved June 11, 2024. <https://www.epa.gov/greenvehicles/comparison-your-car-vs-electric-vehicle>

United States Environmental Protection Agency, (2024, April), Section 404 of the Clean Water Act, Permit Program under CWA Section 404. <https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404>

- United States Environmental Protection Agency, (2024, February), Criteria Air Pollutants, National Ambient Air Quality Standards Table, 40 CFR part 50, Retrieved June 5, 2024. <https://www.epa.gov/criteria-air-pollutants/naqs-table>
- United States Environmental Protection Agency, (2024, January), Air Quality implementation Plans, Basic Information about Air Quality State Implementation Plan, Retrieved June 5, 2024. <https://www.epa.gov/air-quality-implementation-plans/basic-information-about-air-quality-sips>
- United States Environmental Protection Agency, (2024, January), Greenhouse Gas Equivalencies Calculator, Convert emissions or energy data into concrete terms you can understand [Database], Retrieved June 11, 2024. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
- United States Environmental Protection Agency, Radon Division, Office of Radiation and Indoor Air. (1993, September). EPA's Map of Radon Zones, Virginia [Map]. <https://www.epa.gov/radon/epa-maps-radon-zones-and-supporting-documents-state>
- United States Environmental Protection Agency. (2024, April 30). *Map of Sole Source Aquifer Locations* [Review of *Map of Sole Source Aquifer Locations*]. <https://www.epa.gov/dwssa/map-sole-source-aquifer-locations>
- United States Federal Aviation Administration, (2016), Aeronautical Information Services Airports [Map]. Retrieved May 14, 2024. https://adds-faa.opendata.arcgis.com/datasets/e747ab91a11045e8b3f8a3efd093d3b5_0/explore
- United States Fish and Wildlife Services (2003), National Wetland Inventory, Surface Water and Wetland Mapper [Map]. Retrieved May 8 and 29, 2024. <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>
- United States Fish and Wildlife Services (2024), Critical Habitat and Endangered Species interactive Environmental Conservation Online System [Map]. Retrieved May 9, 2024. <https://gis-fws.opendata.arcgis.com/>
- US. Department of Labor (1988, November), Occupational Safety and Health Administration, Virginia State Plan. Retrieved June 11, 2024. <https://www.osha.gov/stateplans/va>
- USFWS Critical Habitat and Endangered Species interactive Environmental Conservation Online System (ECOS), (n.d.). <https://ecos.fws.gov/ecp/>
- Virginia Department of Conservation and Recreation (2022, May) Virginia Natural Heritage Program, Virginia conservation Vision, *Potential Rare Species Richness* [Map]. Retrieved May 9, 2024. <https://www.dcr.virginia.gov/natural-heritage/vaconvisprsr#:~:text=The%20Potential%20Rare%20Species%20Richness,with%20three%2Dmile%20diameter%20hexagons.>
- Virginia Department of Energy (2021), Geology and Mineral Resources, Hazards, Earthquakes. <https://energy.virginia.gov/geology/earthquakes.shtml>

- Virginia Department of Energy (n.d.). *Geology and Mineral Resources Webmap* [Map].
Geology Mineral Resources; Interactive Geology, Faults Map, Mineral resources Map,
Geophysical, topography. Retrieved May 14, 2024.
<https://energy.virginia.gov/webmaps/GeologyMineralResources/>
- Virginia Department of Environmental Quality (n.d), Air, Issued Title V Permits [List],
Retrieved June 5, 2024. <https://www.deq.virginia.gov/permits/air/issued-title-v-permits>
- Virginia Department of Health (1993-2024), Indoor Radon Program, EPA Radon Risk Map for
Virginia [Map]. <https://www.vdh.virginia.gov/radiological-health/indoor-radon-program/epa-radon-risk-map-for-virginia/>
- Virginia Department of Labor and Industry (2023), Virginia Occupational Safety and Health
Program, Retrieved June 11, 2024.
https://doli.virginia.gov/virginia_occupational_safety_health_program/
- Virginia Department of Transportation (2024), Virginia Roads, Interactive Maps, Functional
Classification of Roads [Map]. <https://www.vdot.virginia.gov/travel-traffic/maps/>
- Virginia Department of Wildlife Resources (2024), Virginia Fish and Wildlife Information
Services Online Viewer, Search Report [Map]. Retrieved May 9, 2024.
https://services.dwr.virginia.gov/fwis/?Menu=Home._By+Map
- Virginia Department of Wildlife Resources, (2003, March), Aquatic Wildlife Resources
Division, *Special Status Faunal Species in Virginia*.
- Virginia Department of Wildlife Resources, (2024), Fish and Wildlife Information Service, 3
Mile Radius Around Point 36.5763200 -79.5610897, Pittsylvania County, Danville City,
VA. Retrieved June 6, 2024.
- Virginia Institute of Marine Sciences (2024), Wetland condition Assessment Tool [Map].
Retrieved June 12, 2024. https://www.vims.edu/ccrm/advisory/wetlands_mgmt/wetcat/
- Weber, J.T. and Bulluck J.F., (2014, October) Virginia Department of Conservation and
Recreation, Virginia Natural Heritage Program, Natural Heritage Technical Report 14-4,
*Virginia Wetlands Catalog: An Inventory of Wetlands and Potential Wetlands with
Prioritization Summaries for Conservation and Restoration Purposes by Parcel, Sub
watershed, and Wetland Boundaries*.
- Woods, A.J, Omernik, J.M., Brown, D.D. (1999) U.S. Environmental Protection Agency:
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Virginia.
- WSP USA Inc. (2020, November), *National Register Survey and Evaluations of Archaeological
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- WSP USA Inc. (2022, June), *Phase II Investigation of Sites 44PY0394 and 44PY0398*

APPENDIX A
ENVIRONMENTAL SYNOPSIS

ENVIRONMENTAL SYNOPSIS
Advanced Energy Manufacturing and Recycling Grant
Program (Section 40209)

DE-FOA-002907

September 2024

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

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INTRODUCTION

A number of applications were received under DE-FOA-0002907, and a smaller subset of those technically acceptable applications was presented for detailed consideration of environmental factors. This synopsis summarizes the consideration given to environmental factors for those applications, and documents that the relevant environmental consequences of reasonable alternatives were evaluated under the Office of Manufacturing and Energy Supply Chains (MESC), who issued the Funding Opportunity Announcement (FOA) DE-FOA-0002907 Advanced Energy Manufacturing and Recycling Grant Program.

DOE initially selected numerous projects under two topic areas of interest (AOIs) and provided cost-shared funding for project definition activities; all the projects are subject to the completion of project-specific NEPA reviews. DE-FOA-0002907 supports new, re-equipped and expanded industrial domestic facilities in eligible energy communities to produce or recycle advanced energy property. This synopsis does not contain business-sensitive, confidential, trade secret or other information that statutes or regulations would prohibit DOE from disclosing. It also does not contain data or other information that may reveal the identity of the offerors.¹

BACKGROUND

The projects that will result from this FOA are cost-shared collaborations between the government and industry to increase investment in projects for the production or recycling of advanced energy property. 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 advanced energy manufacturing and recycling facilities is a key objective of the nation's effort to help gain energy independence and bolster the domestic supply chain.

The applications reviewed under this FOA were selected for negotiations in November 2023. Two topic AOIs were included in the FOA, each outlining their own specific project objectives. The two AOIs were separated according to sections 40209(a)(6)(A) and 40209(a)(6)(B):

<u>Topic Areas</u>	<u>Title</u>
Advanced Energy Manufacturing and Recycling Program Grants Pursuant to Section 40209(a)(6)(A)	
1	Building New Advanced Energy Manufacturing or Recycling Facilities

3. All information provided by the applicant must to the greatest extent possible exclude Personally Identifiable Information (PII). The term "PII" refers to information that can be used to distinguish or trace an individual's identity alone (e.g., their name, social security number, biometric records), or when combined with other personal or identifying information that is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name, or race.

Advanced Energy Manufacturing and Recycling Program Grants Pursuant to Section 40209(a)(6)(B)	
2	Re-Equipping or Expanding Existing Advanced Energy Manufacturing or Recycling Facilities

AOI 1 was directed at projects that involve the construction of new facilities. AOI 2 was directed at projects that expand or re-equip existing facilities. Both AOIs had the same criteria, and each application was evaluated against the criteria as outlined below:

A. Technical Review Criteria AOIs 1 and 2:

Criterion 1: Technical Merit, Project Management, and Impact (25%)

Criterion 2: Financial and Market Viability (25%)

Criterion 3: Project Workplan (15%)

Criterion 4: Management Team and Project Partners (15%)

Criterion 5: Community Benefits Plan: Job Quality and Equity (20%)

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

The evaluation process consists of multiple phases; each includes an initial eligibility review and a thorough technical review. Rigorous technical reviews of eligible submissions were conducted by reviewers that are experts in the subject matter of the FOA. Ultimately, the selection official considered the recommendations of the reviewers, along with other considerations such as program policy factors, in determining which applications to select.

Applications that were determined to be eligible were evaluated in accordance with this FOA, by the standards set forth in EERE’s Notice of Objective Merit Review Procedure (76 Fed. Reg. 17846, March 31, 2011) and the guidance provided in the “DOE Merit Review Guide for Financial Assistance,” effective September 2020, which is available at:

<https://www.energy.gov/management/articles/merit-review-guide-financial-assistance-and-unsolicited-proposals-current>

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 to inform its decision-making process.

PURPOSE AND NEED

The overall scope in DE-FOA-0002907 included the construction of new advanced energy manufacturing or recycling facilities, or re-equipping or expanding existing facilities to manufacture or recycle advanced energy property. FOA-0002907 seeks the establishment of new — or the re-equipment or expanding of existing — industrial facilities in eligible energy communities to produce or recycle advanced energy property, as per Section 40209.

DOE took into consideration whether projects selected under the FOA provide workforce opportunities; encourage partnership with universities and laboratories to spur innovation and drive down costs; and partner with tribal nations.

DOE intends to further this purpose and satisfy this need by providing financial assistance under cost-sharing arrangements, as specified in this FOA, for projects selected.

ALTERNATIVES

DOE received numerous applications in two AOIs: AOI 1 under Advanced Energy Manufacturing and Recycling Grants pursuant to Section 40209(a)(6)(A) and AOI 2 under Advanced Energy Manufacturing and Recycling Grants pursuant to Section 40209(a)(6)(B):

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

AOI	AOI Title
1	Building New Facilities
2	Re-Equipping or Expanding Existing Facilities

ENVIRONMENTAL REVIEW

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

- Aesthetics and Visual Resources
- Air Quality
- Community Services
- Cultural Resources
- Wetlands and Floodplains
- Geology, Soils, and Topography
- Greenhouse Gasses
- Land Use
- Noise and Vibration
- Public and Occupational Health and Safety
- Regulated Wastes (Solid and Hazardous Wastes)
- Socioeconomics
- Soils
- Surface Water and Groundwater
- Transportation and Traffic
- Utilities and Energy Use
- Vegetation and Wildlife

The review teams were composed of environmental professionals having expertise in the resource areas considered by DOE. The review teams considered the information provided as part of each application, which included narrative text, worksheets, and the environmental-focused

documentation for the sites proposed by the applicant. In addition, reviewers independently verified the information provided to the extent practicable using available sources commonly consulted in the preparation of NEPA documents and conducted preliminary analyses to identify the potential range of impacts that would be associated with each application. 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).

Applications in Response to the FOA

Based on the technologies and sites proposed, the applications reviewed were preliminarily evaluated and reviewed by the NETL NEPA Division. In some cases, site selections for some projects had 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 candidates for award:

Aesthetics and Visual Resources — Low impact would be expected as applications proposing new construction would primarily be conducted on existing industrial sites or areas zoned for industry, and in numerous cases, work would be limited to refurbishing existing facilities with no or minimal groundbreaking required. One project would involve new construction of an advanced materials production facility, though no aesthetic impacts are expected.

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. Environmental permits will be obtained for all projects as emissions from power generation or other processes are expected. One project noted that the locations of their project are currently designated as “in attainment, unclassifiable” for carbon monoxide (CO), particulate matter less than 10 microns (PM10), PM less than 2.5 microns (PM2.5), nitrogen dioxide (NO2), sulfur dioxide (SO2), ozone (O3), and criteria pollutants designated under U.S. Environmental Protection Agency (EPA) National Ambient Air Quality Standards (NAAQA). Closed-loop

processes with limited air emissions would be implemented and the project would be subject to conditions with EPA Title V Operating Permits. Other impacts may be expected from transportation-related emissions or fugitive dust from construction activities.

Vegetation and Wildlife — Low impact would be expected for a project application that requires new construction of industrial facilities, as construction would occur in a previously disturbed areas currently being zoned and developed for industrial use, while other projects will have no new facility construction and will take place in existing buildings. Projects will be assessed for agricultural or natural habitat concerns, if any identified, and consultation initiated with the U.S. Fish and Wildlife Service, if appropriate.

Greenhouse Gasses — Negligible impacts would likely occur for all projects as advanced energy projects are critical for grid modernization, establishing secure domestic supply chains for critical grid infrastructure, heat pumps, building insulation and clean-electricity generating equipment, as noted in the FOA.

Community Services — Low impacts would be expected for the projects. 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. Operation of new facilities may place additional demand on community services in response to any accidents or emergencies during operations, but it is expected these would be mitigated through each applicant following established environmental safety and health plans and best practices.

Cultural Resources — There is negligible to low impact expected for all applications evaluated. A project requiring construction and earthmoving would require consultation under Section 106 of the National Historic Preservation Act (NHPA) for compliance purposes.

Wetlands and Floodplains — Wetlands and floodplains impacts would be low. None of the applications noted specific wetlands concerns, but if any of those plans were to change, avoidance and minimization measures would be defined in conjunction with application for applicable permits and approvals (including approvals from the U.S Army Corps of Engineers). The extent and conditions of the wetlands on the one project site will be addressed during formal NEPA process and subsequent construction and/or operations as required. One application was located within the 100-year floodplain, but the applicant has provided details of extensive resiliency and mitigation measures planned for the project site. This application would also involve interior renovation of an existing structure, so no construction-related impacts to the floodplain would be expected.

Geology, Soils, and Topography — Impacts to geology, soils, and topography would be negligible to low for all projects. The majority of applications would not involve new construction, so impacts to geology, soils, and topography would be negligible for those. An application involving new construction would be subject to construction and stormwater management permitting and guidelines, which would likely avoid any significant impacts related to construction activities. Construction activities could result in a potential for soil erosion, but appropriate mitigation would be implemented as necessary, such as run-off control and silt fences. The remaining projects have existing facilities that will be repurposed for advanced energy purposes and do not expect soil impacts.

Surface Water and Ground Water — Ground water impacts for the projects would be low. None of the applications reviewed cited 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. Stormwater runoff will be managed in accordance with all relevant requirements, if required by projects. Surface water impacts would be low to moderate. Battery separator manufacturing and clean energy recycling facilities would potentially have water influent and wastewater effluent requirements to minimize the impacts with municipalities treating water. Disposal of discharges would be carried out in compliance of all applicable laws and regulations. Controls could be used on hazardous liquids, if any, to minimize impacts.

Public and Occupational Health and Safety — Impacts will be low to moderate, but impacts would be mitigated as all projects have environmental, health and safety policies and procedures. Low to moderate impacts may also be considered during both construction and operations of the proposed facilities. The level of risk is generally related to the size and 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 would be implemented for all projects, as will compliance with federal, state, and local regulations and standards.

Land Use — Impacts to land use would be negligible-to-low for all applications reviewed. The majority of applications would not require new construction with no change in land use, and an application with new construction would occur in an area in the process of being developed for industrial use.

Noise and Vibration — Noise impacts would be low to moderate. One application specifically cited noise impact. During the project construction phases, noise levels will increase, but the increase would be temporary and would end after construction. All project facilities conducting manufacturing and/or recycling may have noise, but much will occur in closed buildings. Any projects 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. All projects would provide some additional employment during construction and operations, with most opportunities occurring within the local area distressed communities. Tax revenue generation and direct and indirect spending in the local economy is expected for the projects.

Surface Water — Impacts would be low to moderate. Battery separator manufacturing and clean energy recycling facilities would potentially have water influent and wastewater effluent requirements to minimize the impacts with municipalities treating water. Disposal of discharges would be carried out in compliance with all applicable laws and regulations. Stormwater controls could be used during construction of one project that includes construction of a new facility. Controls could be used on hazardous liquids, if any, to minimize impacts.

Transportation and Traffic — Low to moderate impacts are expected. Two projects indicated there would be changes to local traffic patterns, citing minimal increases causing minor impacts. Transportation of construction workforce to the site would be temporary. New parking lots will be considered for one project, as needed. Recycling and manufacturing facilities would also require trucking or railcar transport of materials and wastes in and out of the facility.

Utilities and Energy Use — Low to moderate impacts would be expected. Projects would either utilize existing utility infrastructure or would require minor modifications or additions to existing

utility infrastructure. Facilities developed may have need for water, electricity, steam, wastewater, industrial gases and/or natural gas or other for the processes and facilities, or in a single case, new utility infrastructure would be required for a new industrial facility.

Regulated Wastes (Solid and Hazardous Wastes) — Impacts would be low to moderate. Projects will obtain permits related to hazardous waste management if the project involves handling, storage, or disposal of hazardous materials or substances. The nature of the manufacturing and/or recycling for clean energy components will require diligence in hazardous/nonhazardous waste management practices and applicable permitting. Transportation of waste to landfills will be considered, if applicable to the projects.

CONCLUSION

The applications received in response to the FOA provided DOE with reasonable alternatives for accomplishing its purpose and need to satisfy the responsibility imposed on it to carry out a program to strengthen energy supply chains and accelerate domestic energy manufacturing. An environmental review was part of the evaluation process for a select number of technically acceptable applications. DOE prepared a critique containing information from this environmental review. That critique, summarized here, contains summaries and project-specific environmental information. DOE determined that selecting numerous applications in response to the FOA would meet DOE's purpose and need.

APPENDIX B

CONSULTATION LETTERS AND RESPONSES

July 3, 2024

Diane Shields
Tribal Chief
Monacan Indian Nation
111 Highview Drive
Madison Heights, VA 24572

Subject: Tribal consultation and Section 106 compliance for the Microporous Assets Corporation - Project Stellar at the Southern Virginia Megasite

Dear Chief Shields,

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to Microporous Assets Corporation (Microporous) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Advanced Energy Manufacturing and Recycling Grant Program (Section 40209)," with funds appropriated by the Infrastructure Investment and Jobs Act, also more commonly known as the Bipartisan Infrastructure Law.

The proposed project would involve the construction of a coated lithium-ion (Li-ion) battery separator plant on Lots 1 and 2 of the Southern Virginia Megasite near Danville, VA for lithium-ion batteries integral to electric vehicle supply chains. The total project footprint encompassing Lots 1 and 2 is approximately 212 acres. This project would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF) coating, complete with slurry mixing and slitting equipment. The plan would consist of manufacturing buildings, an administrative building, a utility building, and storage silos. Microporous would provide 282 permanent jobs within the DOE grant's three-year performance period and would ensure that at least 85% of full-time employees are from local Disadvantaged Communities by the completion of the project.

The location for the proposed project is within Lot 1 and Lot 2 of the Southern Virginia Megasite, located at 6100 Berry Hill Road, City of Danville, Pittsylvania County, Virginia (Attachments 1 and 2). The construction of the Li-ion battery separator plant would be conducted in accordance with applicable federal, state, and local ordinances, as necessary. There are multiple stages of construction planned, with Phase I and II occurring on Lot 1 and including the construction of a manufacturing and administration building within a currently graded area. Phase III and IV would take place on Lot 2 and include an would additional manufacturing building(s) in an area that is currently forested. Attachment 1 is a conceptual layout which would construct a base separator film plant to produce onsite (vs. purchasing) the base film required for the separator coating lines in Phases I and II. Attachment 2 is a conceptual layout of adding additional separator coating lines requiring additional purchased

base film. Phase II, Phase III, and Phase IV are not funded under the current proposed award (DOE's Proposed Action) and are still in unconfirmed conceptual stages. Phase I plans are in darker green color, while Phase II is in light green color and Phases III– IV plans are bordered with dashed lines. All Phases are labeled accordingly. Different possible layouts for Phase II – IV are noted with Attachments 1 and 2.

I have provided attachments that contain additional details pertaining to the proposed project, including project site plans and cultural resource survey reports encompassing the proposed project area. In particular, a “National Register Survey and Evaluations of Archaeological Sites and Evaluations of Architectural Resources in Lots 1, 2, 3, 4, 5, 8, and 9” report (Attachment 4) was completed in November 2020 by WSP USA, Inc. (WSP) that documented archaeological fieldwork and architectural research completed from May – July 2020 encompassing the above-noted lots of the Southern Virginia Megasite (including Lots 1 and 2, the site of the Microporous project). This report was submitted to the Virginia Department of Historic Resources (DHR). The Virginia DHR subsequently recommended in a letter dated from December 30, 2020 that two archaeological sites identified within Lots 1 and 2 (44PY0394 and 44PY0398) were potentially eligible for listing in the National Register of Historic Places (NRHP) and recommended avoidance or additional archaeological testing to determine eligibility for the NRHP (Attachment 5). WSP completed a Phase II investigation of sites 44PY0394 and 44PY0398 in August 2021 and documented the investigation in the “Phase II Investigation of Sites 44PY0394 and 44PY0398” report (Attachment 6) and subsequently formed an opinion that sites 44PY0394 and 44PY0398 are not eligible for listing in the NRHP. If your review of these materials concludes that no historic nor cultural properties would be affected by the proposed project, a written acknowledgment of that conclusion would be appreciated. DOE is also consulting with the VA DHR regarding this proposed project.

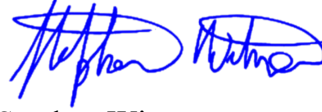
Based on the scope of the proposed Microporous project, DOE plans to prepare an Environmental Assessment (EA) in accordance with requirements of the National Environmental Policy Act to analyze, document, and disseminate information on the potential environmental and cultural consequences of the project. While Phase II, Phase III, and Phase IV are not part of DOE's Proposed Action, the potential impacts of Phases II, III, and IV are being reasonably evaluated in the EA as part of the Cumulative Effects of the Proposed Action. Information that you provide will be incorporated and appropriately addressed in the EA. Moreover, when the Draft EA is circulated for public comment, the Monacan Indian Nation will be provided electronic and hard copies where you may provide additional comments.

If you have any questions, comments, or concerns regarding this project, please contact me at the following address, phone, or email below:

U.S. Department of Energy
National Energy Technology Laboratory
626 Cochran Mill Road
M/S 921-227
Pittsburgh, PA 15236
Telephone: 412-386-7589
Email: stephen.witmer@netl.doe.gov

Thank you for your attention to this request, and I look forward to working with your Tribal Nation.

Sincerely,



Stephen Witmer
NEPA Compliance Officer

Attachments:

1. Microporous Project Site Plan – Future A.pdf
2. Microporous Project Site Plan – Future B.pdf
3. Southern Virginia Megasite Utilities and Infrastructure Map.pdf
4. WSP Evaluation of Sites in Lots 1, 2, 3, 4, 5, 8, 9_11-25-2020.pdf
5. VA DHR Response Letter to WSP Survey_12-30-2020.pdf
6. Phase II Investigation of Sites 44PY0394 and 44PY0398_06-13-2022.pdf

July 3, 2024

Katelyn Lucas
Tribal Historic Preservation Officer
Delaware Nation, Oklahoma
P.O. Box 825
Anadarko, OK 73005

Subject: Tribal consultation and Section 106 compliance for the Microporous Assets Corporation - Project Stellar at the Southern Virginia Megasite

Dear Ms. Lucas,

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to Microporous Assets Corporation (Microporous) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Advanced Energy Manufacturing and Recycling Grant Program (Section 40209)," with funds appropriated by the Infrastructure Investment and Jobs Act, also more commonly known as the Bipartisan Infrastructure Law.

The proposed project would involve the construction of a coated lithium-ion (Li-ion) battery separator plant on Lots 1 and 2 of the Southern Virginia Megasite near Danville, VA for lithium-ion batteries integral to electric vehicle supply chains. The total project footprint encompassing Lots 1 and 2 is approximately 212 acres. This project would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF) coating, complete with slurry mixing and slitting equipment. The plan would consist of manufacturing buildings, an administrative building, a utility building, and storage silos. Microporous would provide 282 permanent jobs within the DOE grant's three-year performance period and would ensure that at least 85% of full-time employees are from local Disadvantaged Communities by the completion of the project.

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base film. Phase II, Phase III, and Phase IV are not funded under the current proposed award (DOE's Proposed Action) and are still in unconfirmed conceptual stages. Phase I plans are in darker green color, while Phase II is in light green color and Phases III– IV plans are bordered with dashed lines. All Phases are labeled accordingly. Different possible layouts for Phase II – IV are noted with Attachments 1 and 2.

I have provided attachments that contain additional details pertaining to the proposed project, including project site plans and cultural resource survey reports encompassing the proposed project area. In particular, a “National Register Survey and Evaluations of Archaeological Sites and Evaluations of Architectural Resources in Lots 1, 2, 3, 4, 5, 8, and 9” report (Attachment 4) was completed in November 2020 by WSP USA, Inc. (WSP) that documented archaeological fieldwork and architectural research completed from May – July 2020 encompassing the above-noted lots of the Southern Virginia Megasite (including Lots 1 and 2, the site of the Microporous project). This report was submitted to the Virginia Department of Historic Resources (DHR). The Virginia DHR subsequently recommended in a letter dated from December 30, 2020 that two archaeological sites identified within Lots 1 and 2 (44PY0394 and 44PY0398) were potentially eligible for listing in the National Register of Historic Places (NRHP) and recommended avoidance or additional archaeological testing to determine eligibility for the NRHP (Attachment 5). WSP completed a Phase II investigation of sites 44PY0394 and 44PY0398 in August 2021 and documented the investigation in the “Phase II Investigation of Sites 44PY0394 and 44PY0398” report (Attachment 6) and subsequently formed an opinion that sites 44PY0394 and 44PY0398 are not eligible for listing in the NRHP. If your review of these materials concludes that no historic or cultural properties are present in the project area and that neither historic nor cultural properties would be affected by the proposed project, a written acknowledgment of that conclusion would be appreciated. DOE is also consulting with the VA DHR regarding this proposed project.

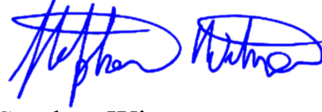
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If you have any questions, comments, or concerns regarding this project, please contact me at the following address, phone, or email below:

U.S. Department of Energy
National Energy Technology Laboratory
626 Cochran Mill Road
M/S 921-227
Pittsburgh, PA 15236
Telephone: 412-386-7589
Email: stephen.witmer@netl.doe.gov

Thank you for your attention to this request, and I look forward to working with your Tribal Nation.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Stephen Witmer', with a stylized flourish at the end.

Stephen Witmer
NEPA Compliance Officer

Attachments:

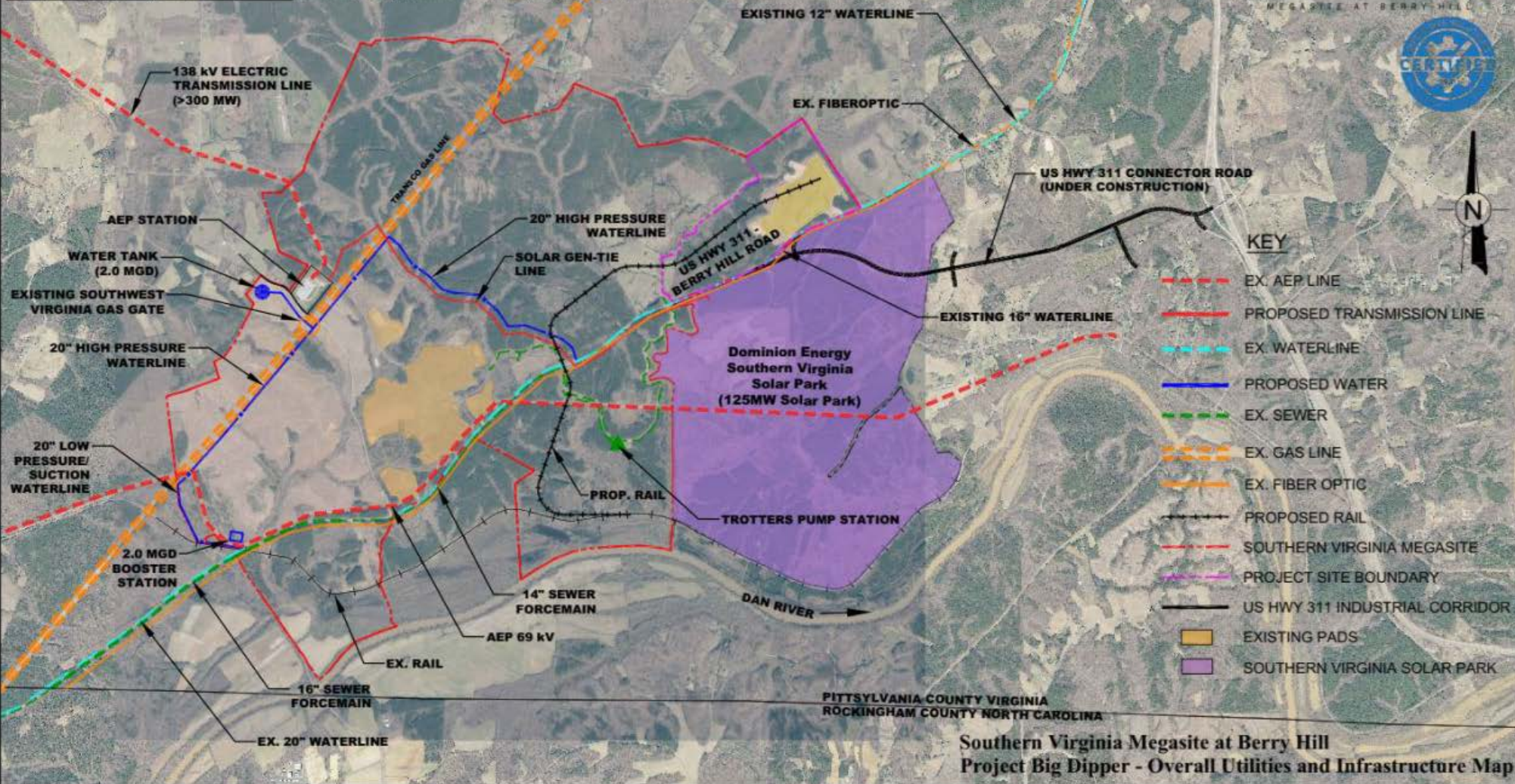
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6. Phase II Investigation of Sites 44PY0394 and 44PY0398_06-13-2022.pdf



Dewberry Engineers Inc.

GRAPHIC SCALE

1"=2500'



Southern Virginia Megasite at Berry Hill
Project Big Dipper - Overall Utilities and Infrastructure Map



SITE PLAN - FUTURE A

AREAS

TOTAL - 499,000 SF

PRODUCTION	250,000 SF
WAREHOUSE	132,000 SF
OFFICE (2 STORY)	40,000 SF
SUPPORT	50,000 SF
UTILITY	27,000 SF

PARKING SPACES 400

PROS

- Office facing main access road.
- Minimized sitework for Phases 1 and 2.
- Short travel distance from warehouse to coating modules.
- Central water feature and green space for entire campus
- Minimized sitework for all phases and retain existing retention pond.
- Central warehouse between phases 1 and 2.
- Building shape should not require fire walls.

CONS

- Phases 3 and 4 are not directly connected to Phases 1 and 2.
- Utilities not centralized in Phase 1 and 2.
- If Phases 3 and 4 are coating lines it will necessitate expansion of the building pad.
- Longer travel distance between Phase 2 and central office building.

SITE PLAN - FUTURE B

AREAS

TOTAL - 499,000 SF

PRODUCTION	250,000 SF
WAREHOUSE	132,000 SF
OFFICE (2 STORY)	40,000 SF
SUPPORT	50,000 SF
UTILITY	27,000 SF

PARKING SPACES 400

PROS

- Office facing main access road.
- Minimized sitework for Phases 1 and 2.
- Short travel distance from warehouse to coating modules.
- Central water feature and green space for entire campus
- Minimized sitework for all phases and retain existing retention pond.
- Central warehouse between phases 1 and 2.
- Building shape should not require fire walls.

CONS

- Phases 3 and 4 are not directly connected to Phases 1 and 2.
- Utilities not centralized in Phase 1 and 2.
- If Phases 3 and 4 are coating lines it will necessitate expansion of the building pad.
- Longer travel distance between Phase 2 and central office building.





United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694



In Reply Refer To:
Project Code: 2024-0131963
Project Name: Project Stellar

11/04/2024 19:41:05 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

(804) 693-6694

PROJECT SUMMARY

Project Code: 2024-0131963

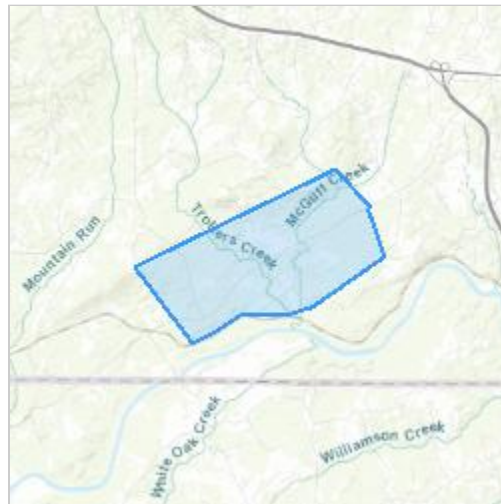
Project Name: Project Stellar

Project Type: Federal Grant / Loan Related

Project Description: The proposed project would involve the construction of a coated lithium-ion (Li-ion) battery separator plant on Lots 1 and 2 of the Southern Virginia Megasite near Danville, VA for lithium-ion batteries integral to electric vehicle supply chains. The total project footprint encompassing Lots 1 and 2 is approximately 212 acres. This project would secure 600 million m2 per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF) coating, complete with slurry mixing and slitting equipment. The plan would consist of manufacturing buildings, an administrative building, a utility building, and storage silos.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.566958299999996,-79.58139969235967,14z>



Counties: Pittsylvania County, Virginia

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

CLAMS

NAME	STATUS
Green Floater <i>Lasmigona subviridis</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7541	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider

implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

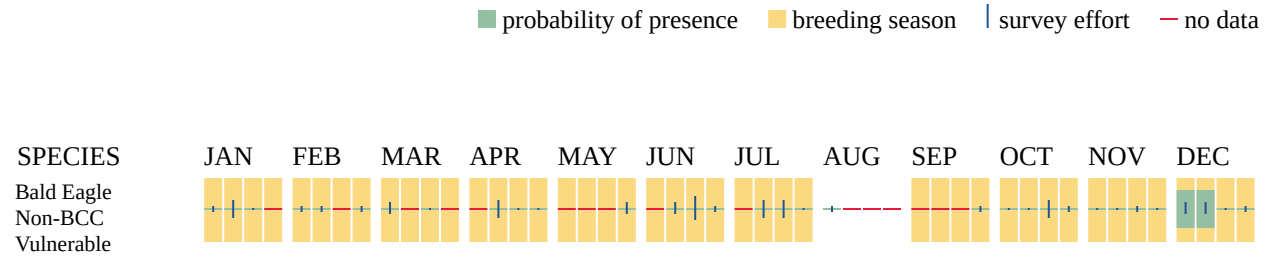
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Prairie Warbler <i>Setophaga discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental](#)

[Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

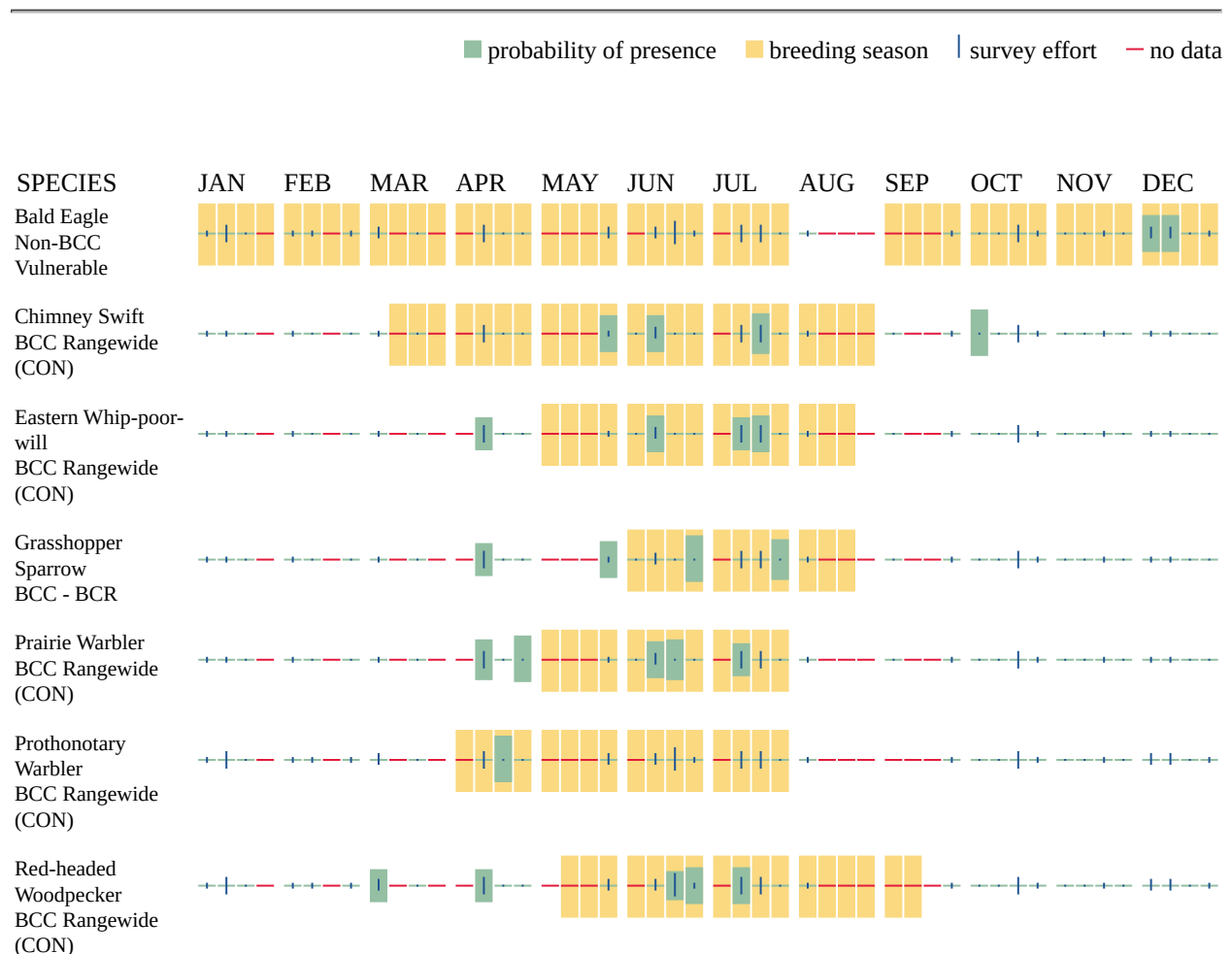
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

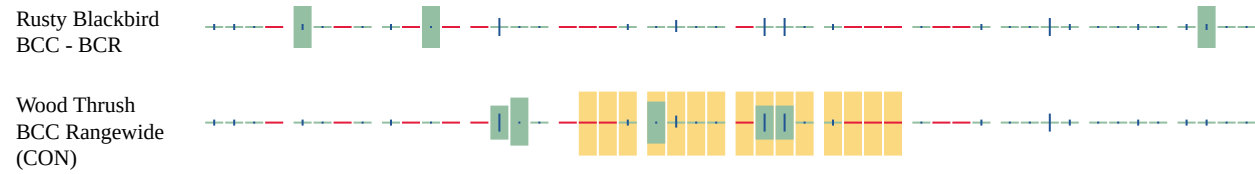
Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

IPAC USER CONTACT INFORMATION

Agency: Department of Energy
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City: Pittsburgh
State: PA
Zip: 15236
Email: stephen.witmer@netl.doe.gov
Phone: 4123867589

You have indicated that your project falls under or receives funding through the following special project authorities:

- BIPARTISAN INFRASTRUCTURE LAW (BIL) (OTHER)

Endangered Species Act (ESA) Section 7 Determination Table

Project Name: Project Stellar

Date: 11/12/2024

Consultation Code: 2024-0131963

Species / Resource Name <i>Insert name of species or resource as listed on Official Species List.</i>	Habitat/Species Presence in Action Area <i>Indicate if suitable habitat and species are present in the Action Area (see examples in Step 5).</i>	Sources of Info <i>Explain what info suitable habitat/species presence is based on.</i>	ESA Section 7 Determination <i>Using reasoning and decision tables in Step 5, select determination for each species (e.g. no effect, not likely to adversely affect, or likely to adversely affect).</i>	Project Elements that Support Determination <i>Explain which project elements may impact the habitat or individuals of each species and any Avoidance and Minimization Measures being implemented.</i>
Perimyotis subflavus (Tricolored bat)	No critical habitat has been designated for this species, but suitable habitat present.	VAFO CH Map Tool, IPaC Official Species list (2024), Determination Key.	May affect	The Tricolored Bat overwinters in caves and abandoned mines. Also found in road-associated culverts. Forested habitats, including roosting in trees. May also be found in Spanish moss, pine trees, and occasionally human structures. The Tricolored Bat does not have a designated critical habitat. However, forested habitats on Lot 2 may provide suitable habitat for the Tricolored Bat. As of this submission, results from a survey commissioned over the Southern Virginia Megasite to ascertain the presence of the Tricolored Bat are not yet final. It is expected that if the species could be present (particularly on Lot 2), proposed tree removal would be timed so as to not impact Tricolored Bat populations.

Lasmigona subviridis (Green Floater)	Critical habitat not present, and no suitable habitat present.	VAFO CH Map Tool, IPaC Official Species list (2024), Quest Site Solutions Certification Report (2021), conclusions drawn from “Survey for Freshwater Mussel Fauna in Trotters Creek and unnamed Tributaries of the Dan River, Berry Hill Commerce Centre, Pittsylvania County, Virginia” (2015).	<i>No effect</i>	Per the conclusions of the “Survey for Freshwater Mussel Fauna” survey previously referenced, “No species of freshwater mussels were found at any examined site. The sites to be affected on the two unnamed tributaries of the Dan River are overtly inappropriate for freshwater mussels of interest, being seasonal streams. Trotters Creek was found to contain an exotic species, the Asian clam, while the habitats that might be expected to possibly support James spinymussel where badly impacted by siltation with much habitat otherwise inappropriate for that species. From consideration of general biological features and stream habitats, no listed species of freshwater mussel including James spinymussel, or other Atlantic slope species potentially occurring in the Roanoke basin is expected to occur in the survey area or be affected by the proposed Commerce Centre development.”
Danaus plexippus (Monarch Butterfly)	No critical habitat has been designated for this species, and no suitable habitat present	VAFO CH Map Tool, IPaC Official Species list (2024)	<i>Not likely to adversely affect</i>	The Monarch Butterfly is considered a candidate and has not, to date, been formally listed or proposed for listing under the Endangered Species Act (ESA) (Endangered Species Act, 1973). The Monarch Butterfly does not have a designated critical habitat,

				and there are no unique features/vegetation associated with the Proposed Project that preferentially support Monarch habitat.
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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694



In Reply Refer To:
Project code: 2024-0131963
Project Name: Project Stellar

11/07/2024 19:34:09 UTC

Federal Nexus: yes
Federal Action Agency (if applicable): Department of Energy

Subject: Technical assistance for 'Project Stellar'

Dear Stephen Witmer:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on November 07, 2024, for 'Project Stellar' (here forward, Project). This project has been assigned Project Code 2024-0131963 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project. **Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (Dkey), invalidates this letter.**

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Tricolored Bat (<i>Perimyotis subflavus</i>)	Proposed	May affect
	Endangered	

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Green Floater *Lasmigona subviridis* Proposed Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the species listed above.

Conclusion

Consultation with the Service is not complete. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of “May Affect.” A “May Affect” determination in this key indicates that the project, as entered, is not consistent with the questions in the key. Not all projects that reach a “May Affect” determination are anticipated to result in adverse impacts to listed species. These projects may result in a “No Effect”, “May Affect, Not Likely to Adversely Affect”, or “May Affect, Likely to Adversely Affect” determination depending on the details of the project. Please contact our Virginia Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

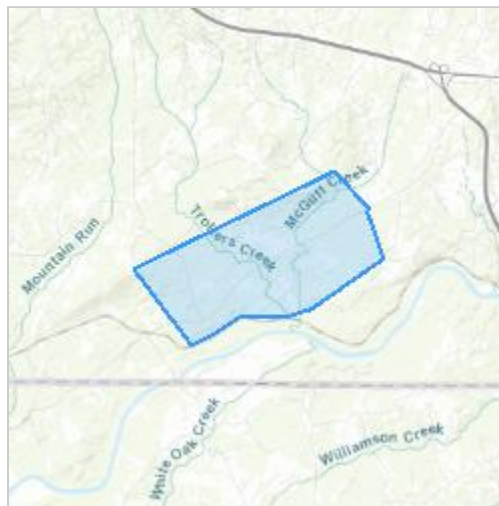
Project Stellar

2. Description

The following description was provided for the project 'Project Stellar':

The proposed project would involve the construction of a coated lithium-ion (Li-ion) battery separator plant on Lots 1 and 2 of the Southern Virginia Megasite near Danville, VA for lithium-ion batteries integral to electric vehicle supply chains. The total project footprint encompassing Lots 1 and 2 is approximately 212 acres. This project would secure 600 million m2 per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF) coating, complete with slurry mixing and slitting equipment. The plan would consist of manufacturing buildings, an administrative building, a utility building, and storage silos.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.566958299999996,-79.58139969235967,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

No

12. Will the action cause effects to a bridge?

Note: Covered bridges should be considered as bridges in this question.

No

13. Will the action result in effects to a culvert or tunnel at any time of year?

No

14. Are trees present within 1000 feet of the action area?

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

15. Does the action include the intentional exclusion of bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

No

16. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

17. Will the action cause construction of one or more new roads open to the public?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

18. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic permanently or temporarily on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

Yes

19. Will the increased vehicle traffic occur on any road that lies between any two areas of contiguous forest that are each greater than or equal to 10 acres in extent and are separated by less than 1,000 feet? Bats may cross a road by flying between forest patches that are up to 1,000 feet apart.

Note: "Contiguous forest" of 10 acres or more may include areas where multiple forest patches are separated by less than 1,000 feet of non-forested area if the forested patches, added together, comprise at least 10 acres.

No

20. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

Note: For information regarding NSF/ANSI 60 please visit <https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects>

No

21. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

22. Will the action include drilling or blasting?

Yes

23. Will the drilling or blasting produce noise or vibrations above existing background levels that will affect suitable summer habitat for northern long-eared bats and/or tricolored bats?

Note: Additional information defining suitable suitable summer habitat for the northern long-eared bat and/or tricolored bat, can be found in Appendix A in the USFWS' Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

No

24. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

25. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

No

26. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

No

27. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

No

28. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

Yes

29. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

No

30. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

No

31. Does the project intersect with the 0- 9.9% forest density category?

Automatically answered

No

32. Does the project intersect with the 10.0- 19.9% forest density category map?

Automatically answered

No

33. Does the project intersect with the 20.0- 29.9% forest density category map?

Automatically answered

No

34. Does the project intersect with the 30.0- 100% forest density category map?

Automatically answered

Yes

35. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

No

36. Will the proposed action result in the use of prescribed fire?

Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

No

37. Does the action area intersect the tricolored bat species list area?

Automatically answered

Yes

38. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

39. Has a presence/probable absence bat survey targeting the [tricolored bat and following the Service's Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines](#) been conducted within the project area?

No

40. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?

(If unsure, answer ""Yes."")

Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the [Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines](#).

Yes

41. Do you have any documents that you want to include with this submission?

No

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

67

IPAC USER CONTACT INFORMATION

Agency: Department of Energy
Name: Stephen Witmer
Address: 626 Cochran Mill Road
Address Line 2: Mailstop 921-227
City: Pittsburgh
State: PA
Zip: 15236
Email: stephen.witmer@netl.doe.gov
Phone: 4123867589

You have indicated that your project falls under or receives funding through the following special project authorities:

- BIPARTISAN INFRASTRUCTURE LAW (BIL) (OTHER)

November 12, 2024

U.S. Fish and Wildlife Service
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, Virginia 23061-4410

Subject: Review Request Letter: Project Stellar at the Southern Virginia Megasite

Dear Virginia Ecological Services Field Office,

The U.S. Department of Energy (DOE) is proposing to provide a financial assistance grant (DOE's Proposed Action) to Microporous Assets Corporation (Microporous) as part of the funding opportunity announcement titled "Bipartisan Infrastructure Law (BIL) Advanced Energy Manufacturing and Recycling Grant Program (Section 40209)," with funds appropriated by the Infrastructure Investment and Jobs Act, also more commonly known as the Bipartisan Infrastructure Law.

The location for the Proposed Project is within Lot 1 and Lot 2 of the Southern Virginia Megasite, located at 6100 Berry Hill Road, City of Danville, Pittsylvania County, Virginia (Attachments 1 and 2). The Southern Virginia Megasite is 3,528-acres in total and is publicly owned and zoned for industrial use. The Southern Virginia Megasite is currently being developed for industrial use, which has included site preparation, clearing, and development of select lots. Utilities including water, sanitary sewer, natural gas, fiber optic, and electricity, and Class 1 railway and Expressway (US 58/US 29) access have already been or are otherwise planned to be installed across the Megasite, including for applicable portions of Lots 1 and 2. Current development plans for the Proposed Project avoid incursion into jurisdictional freshwater aquatic/wetland resources which have been identified within the area of Lots 1 and 2. Trees within and/or immediately adjacent to the project area will be removed or otherwise potentially impacted (i.e., trimmed or unintentionally damaged) during proposed development activities.

Microporous has planned multiple stages of construction, with Phase I and II occurring on Lot 1 in the short-term and including the construction of a manufacturing and administration building within a currently graded area. Phase III and IV would take place on Lot 2 and would include additional manufacturing building(s) in an area that is currently forested. Attachment 1 is a conceptual layout which would construct a base separator film plant to produce onsite (vs. purchasing) the base film required for the separator coating lines in Phases I and II. Attachment 2 is a conceptual layout of adding additional separator coating lines requiring additional purchased base film. Phase II, Phase III, and Phase IV are not funded under the current proposed award (DOE's Proposed Action) and are still in unconfirmed conceptual stages. Phase I plans are in

darker green color, while Phase II is in light green color and Phases III– IV plans are bordered with dashed lines. All Phases are labeled accordingly. Different possible layouts for Phase II – IV are noted with Attachments 1 and 2.

Multiple surveys have been conducted on an area nearby west of the Proposed Project between 2010 and 2015, less than a mile from Lots 1 and 2, with the most recent study conducted in 2015, totaling 340 acres of surveyed land. The 2015 survey conducted (Attachment 8) was for potential populations of *Echinacea laevigata* (Smooth Coneflower), *Isotria medeoloides* (Small Whorled Pogonia) and *Nestronia umbellula* (Indian Olive) at the above referenced site. The survey for Indian Olive, a protected plant, was conducted under the recommendation of the consulted surveyors. Due to their rarity and loss of potential habitat from development, *Echinacea laevigata* and *Isotria medeoloides* have been listed by the USFWS as Endangered and Threatened, respectively. Prior surveys conducted in 2010 and 2011 were conducted during the growing seasons for the population of the above listed flora. Search efforts identified no individuals of any of the three target plant species within the investigated area in 2010, 2011, or 2015, and the site has been labeled as having a low potential for their occurrence. A survey of freshwater mussel fauna in Trotters Creek and unnamed tributaries of the Dan River was conducted in 2015 (Attachment 7) nearby west of the Proposed Project to determine potential impact to the freshwater mussel habitat during development of the entire Megasite. The area was surveyed for the presence of the James spinymussel (*Pleurobema collina*) and potential habitat, which has been identified as a federally and state endangered species and has the potential to be within the area of the Proposed Project. The surveyed area did not account for potential freshwater mussels in McGuff Creek or Trayners Branch, which are located adjoining north of Lots 1 and 2. However, of the entirety of the survey which consisted of approximately 3.1 effort hours of observed area (less than 1 mile west of the Proposed Project), no mussel species, family Unionidae were observed during the survey. The only bivalve observed was the Asian clam (*Corbicula fluminea*), which was found in Trotters Creek. No other mollusks or snails were observed, and water conditions were reported to be clear and shallow, which would have provided fair conditions to find mussels. In addition, previous surveys performed in 2010 and 2011 across the entirety of Trotters creek produced no evidence of freshwater mussels. In addition, no areas of potential habitat were observed, as concluded by the survey.

Information regarding the potential state or federally listed threatened, endangered, or candidate species within the vicinity of the Proposed Project area was obtained from the USFWS website's Information, Planning, and Conservation (IPaC) Tool Official Species List (Attachment 3). DOE also completed the online project review steps outlined on the Virginia Ecological Services Field Office website based on the identification of three species from the USFWS Official Species List and has provided a Determination Table as part of this submission (Attachment 4). The Tricolored Bat, Green Floater, and Monarch Butterfly were identified on the Official Species List. No critical habitats were identified within (or adjacent to) the Proposed Project boundaries. As part of a Quest Site Solutions Certification Report and Quest Site Solutions Certification Letter (Attachment Six) commissioned prior to the development of the overall Southern Virginia Megasite in

June 2021, the Northern Long-eared Bat (NLEB) was identified as a threatened species. However, this species was not identified in the most-recent USFWS IPaC Official Species List used as the basis for DOE's analysis. The Certification Report noted that there are no known maternity roost trees or hibernaculum within close proximity to the Southern Virginia Megasite. DOE also completed a review of the Northern Long-Eared Bat Regulatory Buffer Interactive Tool in November 2024 and found that the overall Southern Virginia Megasite contained no NLEB hibernacula, roosts, or mist-net and auditory captures.

DOE's determination is that the Proposed Project would have No Effect on the Green Floater, Not Likely to Adversely Affect the Monarch Butterfly, and May Effect the Tricolored Bat. The Proposed Project would also have No Effect on critical habitats. The "May Affect" determination for the Tricolored Bat was also supported by use of a Determination Key on the IPaC website (Attachment 5). It is DOE's understanding that a survey to determine the presence of the Tricolored Bat within the entirety of the Southern Virginia Megasite has been completed, with findings to be finalized in the near-term. If the presence of this species is confirmed, Microporous and developers of the Southern Virginia Megasite would ensure that tree clearing would be timed to avoid adverse impacts to the Tricolored Bat.

Based on the scope of the proposed Microporous project, DOE plans to prepare an Environmental Assessment (EA) in accordance with requirements of the National Environmental Policy Act to analyze, document, and disseminate information on the potential environmental and cultural consequences of the project. While Phase II, Phase III, and Phase IV are not part of DOE's Proposed Action, the potential impacts of Phases II, III, and IV are being reasonably evaluated in the EA. The Virginia Ecological Services Field Office will be provided a copy of this Draft EA as part of the 30-day public comment and review period. Any information you provide regarding DOE's Determination of Effect noted above, along with pending results of the bat survey within the Southern Virginia Megasite will be accounted for as part of the Final EA for DOE's Proposed Action and Microporous' Proposed Project.

Please contact Stephen Witmer using the contact information below if you have questions, comments, or would like additional information regarding DOE's Determination of Effect.

U.S. Department of Energy
National Energy Technology Laboratory
626 Cochran Mill Road
M/S 921-227
Pittsburgh, PA 15236
Telephone: 412-386-7589
Email: stephen.witmer@netl.doe.gov

Sincerely,

Stephen Witmer

Stephen Witmer
NEPA Compliance Officer

Attachments:

1. Microporous Project Site Plan – Future A.pdf
2. Microporous Project Site Plan – Future B.pdf
3. IPaC Official Species List_Microporous.pdf
4. Virginia Ecological Services Field Office Determination Table.pdf
5. Determination Key_Tricolored Bat.pdf
6. Quest Site Solutions Certification Letter.pdf
7. Freshwater Mussel Survey – SVMS.pdf
8. Smooth Coneflower-Small Whorled Pogonia-Indian Olive Survey.pdf



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Field Office
6669 Short Lane
Gloucester, VA 23061



Date: 12/27/24

Self-Certification Letter

Project Name: Project Stellar

Dear Federal Action Agency:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Ecological Services online project review process. By submitting this letter, in conjunction with your project review package to our office for review, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your determinations. From the date of receipt, our office has 60 days (50 CFR § 402.13(c)(2)) to review your project package. If we do not concur with the Section 7 determination(s) provided or if we have any questions/concerns regarding the information provided, you will be contacted. If you are not contacted during the 60-day review period, this letter and your project review package complete the review of your project in accordance with the Endangered Species Act (16 USC 1536), as amended (ESA). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 USC 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office by the Federal action agency or their officially designated non-federal representative (per 50 CFR 402.08) for this self-certification letter to be valid. This letter and the project review package will be maintained in our records.

The ESA Section 7 Determination Table in the enclosed project review package summarizes your ESA analyses and determinations. These analyses resulted in a “no effect” and/or a “may affect, not likely to adversely affect” determination for proposed/listed species and/or proposed/designated critical habitat.

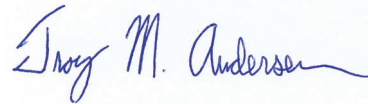
The use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package resulted in reaching the appropriate determinations. Therefore, we concur with the not likely to adversely affect determination(s) for proposed/listed species and proposed/designated critical habitat provided in the ESA Section 7 Determination Table.

Should project plans change, surveys expire, or information on the distribution or status of proposed/listed species and/or proposed/designated critical habitat become available/change, this letter is no longer valid and you must submit an updated project package.

Note that under 50 CFR 402.12(e) of the regulations implementing Section 7 of the ESA, the accuracy of official species lists should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available on our website (<https://www.fws.gov/office/virginia-ecological-services/virginia-field-office-online-review-process>). If you have any questions, please contact Troy Andersen of this office at (804) 728-0695.

Sincerely,

A handwritten signature in blue ink that reads "Troy M. Andersen". The signature is fluid and cursive, with a long horizontal stroke at the end.

Troy Andersen
Acting Field Supervisor
Virginia Ecological Services

Enclosures - project review package

Endangered Species Act (ESA) Section 7 Determination Table

Project Name: Project Stellar

Date: 12/27/2024 (Revised from prior submission to Virginia Ecological Services Field Office on 11/12/2024, per guidance from Virginia Ecological Services Field Office). Items in red represent revisions from the prior submission on 11/12/2024.

Consultation Code: 2024-0131963

Species / Resource Name <i>Insert name of species or resource as listed on Official Species List.</i>	Habitat/Species Presence in Action Area <i>Indicate if suitable habitat and species are present in the Action Area (see examples in Step 5).</i>	Sources of Info <i>Explain what info suitable habitat/species presence is based on.</i>	ESA Section 7 Determination <i>Using reasoning and decision tables in Step 5, select determination for each species (e.g. no effect, not likely to adversely affect, or likely to adversely affect).</i>	Project Elements that Support Determination <i>Explain which project elements may impact the habitat or individuals of each species and any Avoidance and Minimization Measures being implemented.</i>
Perimyotis subflavus (Tricolored bat)	No critical habitat has been designated for this species, but suitable habitat present.	VAFO CH Map Tool, IPaC Official Species list (2024), Determination Key.	<i>Not likely to adversely affect</i>	The Tricolored Bat overwinters in caves and abandoned mines. Also found in road-associated culverts. Forested habitats, including roosting in trees. May also be found in Spanish moss, pine trees, and occasionally human structures. The Tricolored Bat does not have a designated critical habitat. However, forested habitats on Lot 2 may provide suitable habitat for the Tricolored Bat. As of this submission, results from a survey commissioned over the Southern Virginia Megasite to ascertain the presence of the Tricolored Bat are not yet final. <i>However, the project applicant (Microporous) has confirmed that time-of-year restrictions on tree removal and trimming from April 1 – November 15 will be adhered to</i>

				should the Tricolored bat be listed throughout the duration of the project.
Lasmigona subviridis (Green Floater)	Critical habitat not present, and no suitable habitat present.	VAFO CH Map Tool, IPaC Official Species list (2024), Quest Site Solutions Certification Report (2021), conclusions drawn from “Aquatic Species Survey Report – Freshwater Mussel and Fish Survey – Southern Virginia Megasite (2023)”.	No effect	An “Aquatic Species Survey Report – Freshwater Mussel and Fish Survey – Southern Virginia Megasite” (dated 9/29/2023) was commissioned and prepared prior to development of the overall Southern Virginia Megasite – of which Lots 1 and 2 are the planned site of Microporous’ facility. This survey was commissioned to ascertain if any protected aquatic species, including the Green Floater, would be impacted by development and projects within the Southern Virginia Megasite. The conclusions drawn from this survey and documented in the Survey Report noted that “Based on the quality of the instream habitat and the survey results of no live freshwater mussels being detected during surveys of the study area, it does not appear the portion of McGuff Creek, Trotters Creek, EUT Dan River, or WUT Dan River that run through the Southern Virginia Megasite support a healthy mussel population. Given the results of this survey and previous surveys, development at the Southern Virginia Megasite will have No Effect on the Atlantic Pigtoe, James Spiny mussel, or Green Floater.” Microporous has

				also confirmed that no instream will work is associated with their proposed project.
Danaus plexippus (Monarch Butterfly)	No critical habitat has been designated for this species, and no suitable habitat present	VAFO CH Map Tool, IPaC Official Species list (2024)	<i>Not likely to adversely affect</i>	The Monarch Butterfly is considered a candidate and has not, to date, been formally listed or proposed for listing under the Endangered Species Act (ESA) (Endangered Species Act, 1973). The Monarch Butterfly does not have a designated critical habitat, and there are no unique features/vegetation associated with the Proposed Project that preferentially support Monarch habitat.



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

December 31, 2024

Mr. Stephen Witmer
U.S. Department of Energy
National Energy Technology Laboratory
626 Cochran Mill Road
M/S 921-227
Pittsburgh, PA 15236
Sent via email: stephen.witmer@netl.doe.gov

RE: U.S. Department of Energy Draft Environmental Assessment: Microporous Assets—Project Stellar, Danville (DEQ 24-205F)

Dear Mr. Witmer:

The Commonwealth of Virginia has completed its review of the draft Environmental Assessment (EA) issued on December 3, 2024. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. The following agencies participated in this December 2024 review:

Department of Environmental Quality
Department of Wildlife Resources (DWR)
Department of Conservation and Recreation (DCR)
Department of Health (VDH)

The Department of Historic Resources, Department of Energy, West Piedmont Planning District Commission, and the city of Danville were also invited to comment.

PROJECT DESCRIPTION

The U.S. Department of Energy (DOE) proposes to provide cost-sharing funding towards the construction and operation of a battery separator facility for Microporous, LLC at 3304 Berry Hill Road in Danville, Virginia. The action proposed applies to only Phase I of the overall development planned by Microporous, LLC at this location, although a total of four phases are anticipated for this project and included for evaluation in the submitted EA. Phase I of the project would include the development of a coated lithium-ion battery separator plant, which would allow for the domestic manufacturing of batteries integral to electric vehicle supply chains. Twenty aqueous coating lines would be installed for ceramic and polymer coating, complete with slurry mixing and slitting equipment. The proposed plant would consist of manufacturing buildings, an administrative building, a utility building and storage silos.

It would be constructed on Lots 1 and 2 of the proposed project site, which comprise 212 acres in total and are located on the eastern edge of a megasite. The submitted EA considers the proposed action and a no action alternative, which assumes that the development would not occur. However, Microporous, LLC will proceed with the development and operation of the project in the absence of DOE funding.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Wildlife Resources. The EA (page 3-29) states that no listed endangered or threatened species have been observed or documented on Lots 1 and 2.

1(a) Agency Jurisdiction. The Virginia Department of Wildlife Resources (DWR), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state- or federally listed endangered or threatened species, but excluding listed insects (Virginia Code, Title 29.1). DWR is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 US Code §661 *et seq.*) and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DWR determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce or compensate for those impacts. For more information, see the DWR website at <https://dwr.virginia.gov/>.

1(b) Agency Findings. Given the scope and location of the proposed work, DWR does not anticipate it to result in significant adverse impacts upon listed species or other designated resources under its jurisdiction.

2. Natural Heritage Resources. According to the EA (page 3-29), there is no designated critical habitat for listed species on the project site.

2(a) Agency Jurisdiction.

2(a)(i) The Virginia Department of Conservation and Recreation's (DCR) Division of Natural Heritage (DNH): DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorized DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and to protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

2(a)(ii) The Virginia Department of Agriculture and Consumer Services (VDACS): The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

2(b) Agency Findings. According to the information currently in the Biotics Data System, natural heritage resources have not been documented within the submitted project boundary including a 100-foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

The proposed action will impact an ecological core (C4) as identified in the Virginia Natural Landscape Assessment. Mapped cores in the project area can be viewed via the [Natural Heritage Data Explorer](#).

Ecological cores are areas of at least 100 acres of continuous interior, natural cover that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune and beach habitats. Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores. Cores also provide the natural, economic, and quality of life benefits of open space, recreation, thermal moderation, water quality and air quality. Cores are ranked from C1 to C5 (C5 being the least significant) using nine prioritization criteria, including the habitats of natural heritage resources they contain.

Impacts to cores occur when their natural cover is partially or completely converted permanently to developed land uses. Habitat conversion to development causes reductions in ecosystem processes, native biodiversity, and habitat quality due to habitat loss; less viable plant and animal populations; increased predation; and increased introduction and establishment of invasive species.

2(c) State-listed Plant and Insect Species. The current activity will not affect any documented state-listed plants or insects.

2(d) State Natural Area Preserves. There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

2(e) Recommendations. DCR recommends avoidance of impacts to cores. When avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

New and updated information is continually added to Biotics. Please resubmit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months have passed before it is utilized.

3. Erosion and Sediment Control and Stormwater Management. The EA (page 8) states that an application involving new construction would be subject to construction and stormwater management permitting and guidelines, which would likely avoid any significant impacts related to construction activities. Appropriate mitigation measures, such as run-off control and silt fences, would be implemented as necessary.

3(a) Agency Jurisdiction. DEQ administers the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*.

3(b) Requirements.

3(b)(i) Erosion and Sediment Control and Stormwater Management Plans. The applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates. Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles and related land-disturbing activities that result in the total land disturbance of $\geq 10,000$ square feet would be regulated by *VSWML&R*. Accordingly, the applicant must prepare a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM plan is submitted to the DEQ Blue Ridge Regional Office (BRRO). The applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanism consistent with agency policy.

3(b)(ii) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program. The owner or operator of projects involving land-disturbing activities of ≥ 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific Stormwater Pollution Prevention Plan (SWPPP). Construction activities requiring registration also include land disturbance of < 1 acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb ≥ 1 acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available at: <https://www.deq.virginia.gov/permits/water/stormwater-construction>.

4. Water Quality and Wetlands. According to the EA (page 3-25), no federally regulated wetlands are present within the proposed project area or adjacent areas. Two state-level wetland areas were identified to be present on the southern portion of Lot 1. The wetland located on the southern property boundary of the Lot 1 location is approximately 0.18-acre. The wetland located adjacent to the southern property boundary of Lot 1 is approximately 0.34-acre.

4(a) Agency Jurisdiction. The State Water Control Board promulgates Virginia's water regulations covering a variety of permits to include the Virginia Pollutant Discharge Elimination System Permit regulating point source discharges to surface waters, Virginia Pollution Abatement Permit regulating sewage sludge, storage and land application of biosolids, industrial wastes (sludge and wastewater), municipal wastewater, and animal wastes, the Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection (VWP) Permit regulating impacts to streams, wetlands, and other surface waters. The VWP permit is a state permit which governs activities in state surface waters including wetlands, and certain surface water withdrawals, diversion, and impoundments. It also may serve as Section 401 Water Quality Certification of the federal licenses and permits under the Clean Water Act. The VWP Permit Program is under the Office of Wetlands and Stream Protection, within the DEQ Division of Water Permitting. Six DEQ regional offices perform permit application reviews and issue permits or coverages for the covered activities.

- Clean Water Act Sections 404 and 401 (33 U.S.C. § 1251 *et seq.*);
- Section 404(b)(i) Guidelines Mitigation Memorandum of Agreement (2/90) (40 CFR Part 230);
- State Water Control Law, Chapter 3.1 of Title 62.1 of the Code of Virginia; and
- State Water Control Board regulations 9VAC25-210 *et seq.*; 9VAC25-660 *et seq.*; 9VAC25-670 *et seq.*; 9VAC25-680 *et seq.*; and 9VAC25-690 *et seq.*

4(b) Agency Findings. Depending on the type and scope of any impacts to streams or wetlands, a Clean Water Act Section 404 Permit may be required from the Corps and/or a VWP permit may be required by DEQ.

5. Solid and Hazardous Wastes. According to the EA (page 3-28), the proposed project is anticipated to generate non-hazardous waste including garbage/trash and sludge from slurry preparation for coating processes. Non-hazardous waste generated as a direct result of manufacturing processes will be recycled to the greatest extent possible by on-site recycling equipment and reincorporated into the manufacturing process. Non-hazardous wastes which cannot be recycled would be disposed of in accordance with Federal, State and local environmental regulations including RCRA.

5(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization (DLPR) is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 *et seq.*), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund. The DEQ Division of Land Protection and Revitalization also administers those laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 *et seq.*), including Aboveground Storage Tanks (9VAC25-91 *et seq.*) and Underground Storage Tanks (9VAC25-580 *et seq.* and 9VAC25-580-370 *et seq.*), also known as Virginia Tank Regulations, and § 62.1-44.34:14 *et seq.* which covers oil spills.

Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 *et seq.*
- Virginia Solid Waste Management Regulations, 9VAC20-81
 - (9VAC20-81-620 applies to asbestos-containing materials)
- Virginia Hazardous Waste Management Regulations, 9VAC20-60
 - (9VAC20-60-261 applies to lead-based paints)
- Virginia Regulations for the Transportation of Hazardous Materials, 9VAC20-110.

Federal:

- Resource Conservation and Recovery Act (RCRA), 42 U.S. Code sections 6901 *et seq.*
- U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 Code of Federal Regulations, Part 107
- Applicable rules contained in Title 40, Code of Federal Regulations.

5(b) Agency Findings. DLPR staff conducted a search (200 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR search did not identify any waste sites within the project area which might impact the project.

5(c) Requirements. Any soil that is suspected of contamination must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All solid wastes, hazardous wastes, and hazardous materials, including construction and demolition wastes and universal wastes (batteries, fluorescent lights, refrigerants, mercury switches, mercury thermostats, etc.), must be managed in accordance with all applicable federal, state, and local environmental regulations. All structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed.

5(d) Agency Recommendations. DEQ encourages all projects and facilities to implement pollution prevention principles, including:

- the reduction, reuse and recycling of all solid wastes generated; and
- the minimization and proper handling of generated hazardous wastes.

6. Air Quality. The EA (page 3-46) states that minor, temporary, intermittent air emissions are anticipated during construction.

6(a) Agency Jurisdiction. The DEQ Air Division, on behalf of the State Air Pollution Control Board, is responsible for developing regulations that implement Virginia’s Air Pollution Control Law (Virginia Code §10.1-1300 *et seq.*). DEQ is charged with carrying out mandates of the state law and related regulations as well as Virginia’s federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia’s air quality. The appropriate DEQ regional office is directly responsible for the issuance of necessary permits to construct and operate all stationary sources in the region as well as monitoring emissions from these sources for compliance. As a part of this mandate, environmental impact reviews (EIRs) of projects to be undertaken in the state are also reviewed. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

The Air Division regulates emissions of air pollutants from industries and facilities and implements programs designed to ensure that Virginia meets national air quality standards. The most common regulations associated with major State projects are:

- Open burning: 9VAC5-130 *et seq.*
- Fugitive dust control: 9VAC5-50-60 *et seq.*
- Permits for fuel burning equipment: 9VAC5-80-1100 *et seq.*

6(b) Agency Findings. The proposed project site is not located within an ozone attainment area or emission control area.

6(c) Requirements.

6(c)(i) Fugitive Dust. Fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 *et seq.* of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control, however, do not use water for dust control to the extent that it results in runoff to surface waters or wetlands;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

6(c)(ii) Open Burning. If project activities include the burning of construction material, this activity must meet the requirements under 9VAC5-130 *et seq.* of the Regulations for open burning, and it may require a permit. The Regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. The applicant should contact locality fire officials to determine what local requirements, if any, exist. Some applicable provisions of the regulation include, but are not limited to:

- Open burning or the use of special incineration devices for the destruction of clean burning waste and debris waste resulting from clearing operations is prohibited from May 1 through September 30.
- Open burning is permitted for forest management, agricultural practices, and highway construction and maintenance programs approved by the board shall be at least 1,000 feet from any occupied building unless the occupants have given prior permission, other than a building located on the property on which the burning is conducted and the burning shall be attended at all times.
- Special attention should be directed to § 10.1-1142 of the Code of Virginia, which is enforced by the Department of Forestry.
- Special attention should also be directed to the regulations of the Virginia Waste Management Board.
- Follow the open burning prohibitions as outlined in 9VAC5-130-30.

7. Water Supply. The EA (page 3-23) states that the proposed project is within the drainage basin of the Dan River, specifically the Trotters Creek-Dan River watershed.

7(a) Agency Jurisdiction. The Virginia Department of Health (VDH) Office of Drinking Water reviews projects for the potential to impact drinking water sources (groundwater wells, springs, and surface water intakes) serving waterworks. VDH administers the Virginia Waterworks Regulations (12VAC5-590) governing waterworks operation and construction and has primacy for the National Primary Drinking Water Regulations (40 CFR § 141) and implements the National Secondary Drinking Water Regulations (40 CFR § 143).

7(b) Agency Findings. There are no public groundwater wells within a 1-mile radius of the project site nor surface water intakes located within a 5-mile radius of the project site.

The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
5117310	CLARKSVILLE, TOWN OF	KERR RESERVOIR INTAKE
5117707	ROANOKE RIVER SERVICE AUTHORITY	LAKE GASTON INTAKE
5780600	HCSA- LEIGH STREET PLANT	RAW WATER INTAKE
5590100	DANVILLE, CITY OF	DAN RIVER INTAKE

7(c) Recommendations. Best management practices should be employed, including erosion and sedimentation controls and spill prevention controls and countermeasures on the project site.

7(d) Requirement. Potential impacts to public water distribution systems or sanitary sewer collection systems must be verified by the local utility.

REGULATORY AND COORDINATION NEEDS

1. Natural Heritage Resources. Follow DCR's recommendation regarding the avoidance of impacts to ecological cores. For more information, contact Allison Tillet at (804) 238-8620 or allison.tillet@dcr.virginia.gov.

Resubmit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months have passed before it is utilized.

2. Erosion and Sediment Control and Stormwater Management. Stormwater and erosion and sediment control plans and measures are required to be developed and implemented, as appropriate, in accordance with the required regulations and guidelines in the Virginia Erosion and Stormwater Management Regulation. A General VPDES Permit for Discharges of Stormwater from Construction Activities is required for land disturbances of greater than one acre. For more information, please contact Tim Fletcher, DEQ BRRO Stormwater and VWP Manager at (540) 524-0665 or timothy.fletcher@deq.virginia.gov.

3. Water Quality and Wetlands. A Clean Water Act Section 404 Permit may be required from the Corps and/or a VWP permit may be required by DEQ. Please contact Tim Fletcher, DEQ BRRO Stormwater and VWP Manager at (540) 524-0665 or timothy.fletcher@deq.virginia.gov for information regarding any VWP permits required for this project.

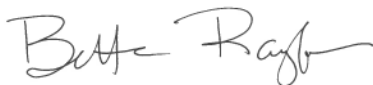
4. Solid and Hazardous Waste. For any questions regarding the requirements for removal and disposal of construction debris or wastes associated with operations, please contact Nikki Herschler, DEQ BRRO Land Protection Program Manager at (540) 597-6373 or by email at Nichole.Herschler@deq.virginia.gov.

5. Air Quality. Activities associated with this project are subject to the fugitive dust and open burning air regulations administered by DEQ. For questions regarding these requirements, contact Paul Jenkins, DEQ BRRO Air Permit Program Manager at (540) 597-8178 or by email at paul.jenkins@deq.virginia.gov.

6. Water Supply. Potential impacts to public water distribution systems or sanitary sewer collection systems must be verified by the local utility. Contact Danville Utilities at 434-799-5155.

Thank you for the opportunity to comment on this EA. The detailed comments of reviewers are attached. If you have questions, please feel free to contact me or Megan Black at (804) 698-4099.

Sincerely,



Bettina Rayfield, Manager
Environmental Impact Review and Long Range Priorities Program
Virginia Department of Environmental Quality
804-659-1915
Bettina.Rayfield@deq.virginia.gov
Central Office
1111 E. Main St., Suite 1400
Richmond, VA 23219
804-698-4000

cc: Lee Brann, DWR
Allison Tillett, DCR
Arlene Warren, VDH
Adrienne Birge-Wilson, DHR
Matthew Heller, VDE

DOE Microporous Assets—Project Stellar
DEQ 24-205F

Kristie Eberly, West Piedmont Planning District Commission
Ken Larking, Danville



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

December 31, 2024

Ms. Megan Black
Department of Environmental Quality
Office of Environmental Impact Review
1111 East Main Street, Suite 1400
Richmond, VA 23219

Re: EIR Comments: DOE – Microporous Assets – Project Stellar, Lots 1 and 2 in the
Southern Virginia Megasite at Berry Hill
Project Number: DEQ #24-205F

Dear Ms. Black:

The Blue Ridge Regional Office (BRRO) of the Virginia Department of Environmental Quality has completed its review of the Environmental Assessment for the proposed Microporous, LLC – Project Stellar facility, DEQ EIR #24-205F. The project sponsor is the Department of Energy. DEQ BRRO's comments regarding this project, consisting of the development of Lots 1 and 2 in the Southern Virginia Megasite at Berry Hill located at 3304 Berry Hill Road, Danville (Pittsylvania County), are as follows:

Water

- Based upon the projected disturbed area, stormwater and erosion and sediment control plans and measures are required to be developed and implemented, as appropriate, in accordance with the required regulations and guidelines in the Virginia Erosion and Stormwater Management Regulation (Code of Virginia, 9VAC 25-875). Also, a General VPDES Permit for Discharges of Stormwater from Construction Activities is required for land disturbances of greater than one acre in accordance with the Code of Virginia, 9VAC25-880. For questions, please contact Tim Fletcher, DEQ BRRO Stormwater and VWP Manager at (540) 524-0665 or timothy.fletcher@deq.virginia.gov.
- Depending on the type and scope of any impacts to streams or wetlands, a Clean Water Act Section 404 Permit may be required from the Corps and/or a Virginia Water Protection (VWP) permit issued by the DEQ. Please contact Tim Fletcher, DEQ BRRO Stormwater and VWP Manager at (540) 524-0665 or timothy.fletcher@deq.virginia.gov for information regarding any VWP permits required for this project.

Waste

- For any questions regarding the requirements for removal and disposal of construction debris or wastes associated with operations, please contact Nikki Herschler, DEQ BRRO Land Protection Program Manager at (540) 597-6373 or by email at Nichole.Herschler@deq.virginia.gov.

Air

- An air permit application is to be submitted for evaluation of the need of an air permit. For any questions regarding the application forms and their submittal, please contact Paul Jenkins, DEQ BRRO Air Permit Program Manager at (540) 597-8178 or by email at paul.jenkins@deq.virginia.gov.

If you have any questions or comments related to this review, please do not hesitate to contact me by phone at (540) 759-9855 or email at kevin.harlow@deq.virginia.gov

Sincerely,



Kevin A. Harlow, Water Permit Writer
Virginia Department of Environmental Quality
(540) 759-9855 (Direct Line)
Kevin.Harlow@deq.virginia.gov
DEQ Blue Ridge Regional Office
901 Russell Drive, Salem, VA 24153
(540) 562-6700 (Main Office)



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: December 16, 2024

TO: Megan Black

FROM: Allison Tillett, Environmental Impact Review Coordinator

SUBJECT: DEQ 24-205F, DOE Microporous Assets - Project Stellar

Division of Planning and Recreation Resources

DCR's Division of Planning and Recreational Resources (DCR-PRR) administers the Virginia Scenic Rivers (Virginia Code § 10.1-200), state trails programs (Virginia Code §10.1-204), and the state park master planning process (Virginia Code §10.1-200.1). DCR-PRR develops the Virginia Outdoors Plan (VOP), the state's comprehensive outdoor recreation and open space plan (Virginia Code §10.1-200) and administers the state-assistance side of the Land and Water Conservation Fund (LWCF). The VOP recognizes the importance of scenery, natural landscapes, and access to recreational opportunities for Virginians.

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100-foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

In addition, the proposed project will impact an Ecological Core (**C4**) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnl>). Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: <http://vanhde.org/content/map>.

Ecological Cores are areas of at least 100 acres of continuous interior, natural cover that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh,

dune, and beach habitats. Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores. Cores also provide the natural, economic, and quality of life benefits of open space, recreation, thermal moderation, water quality (including drinking water recharge and protection, and erosion prevention), and air quality (including sequestration of carbon, absorption of gaseous pollutants, and production of oxygen). Cores are ranked from C1 to C5 (C5 being the least significant) using nine prioritization criteria, including the habitats of natural heritage resources they contain.

Impacts to cores occur when their natural cover is partially or completely converted permanently to developed land uses. Habitat conversion to development causes reductions in ecosystem processes, native biodiversity, and habitat quality due to habitat loss; less viable plant and animal populations; increased predation; and increased introduction and establishment of invasive species.

DCR recommends avoidance of impacts to cores. When avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed <https://services.dwr.virginia.gov/fwis/> or contact Lee Brann at Lee.Brann@dwr.virginia.gov.

Thank you for the opportunity to comment on this project.

Division of State Parks

DCR's Division of State Parks is responsible for acquiring and managing, state parks. Park development and master planning are managed by the Division of Planning and Recreation Resources. Master plans are required prior to a parks opening and are updated every ten years (Virginia Code § 10.1-200 *et seq.*).

Division of Dam Safety and Floodplain Management

Dam Safety Program:

The Dam Safety program was established to provide proper and safe design, construction, operation and maintenance of dams to protect public safety. Authority is bestowed upon the program according to *The Virginia Dam Safety Act*, Article 2, Chapter 6, Title 10.1 (10.1-604 *et seq.*) of the Code of Virginia and Dam Safety Impounding Structure Regulations (Dam Safety Regulations), established and published by the Virginia Soil and Water Conservation Board (VSWCB).

Floodplain Management Program:

The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

State Agency Projects Only

All agencies and departments of the Commonwealth shall comply with the Code of Virginia [§ 10.1-603. State agency compliance.](#)

Federal Agency Projects Only

Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must reach out to the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. For state projects, DCR recommends that compliance documentation be provided prior to the project being funded. For federal projects, the applicant/developer is encouraged reach out to the local floodplain administrator and comply with the community's local floodplain ordinance.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris

To find community NFIP participation and local floodplain administrator contact information, use DCR's Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.



ESSLog# 45814_24-205F_Microporous Assets—Project Stellar_DWR_HLB20241217

From Brann, Lee (DWR) <Lee.Brann@dwr.virginia.gov>

Date Tue 12/17/2024 10:07 AM

To Black, Megan (DEQ) <Megan.Black@deq.virginia.gov>

Cc Strawderman, Nicole (DWR) <Nicole.Strawderman@dwr.virginia.gov>

Ms. Black,

We have reviewed the subject project that proposes to construct a Microporous LLC facility in Danville. Given the scope and location of the proposed work, we do not anticipate it to result in significant adverse impacts upon listed species or other designated resources under our jurisdiction.

Thank you,



Lee Brann

Environmental Services Biologist

Wildlife Information and Environmental Services

P 804.367.1295

C 804.481.1934

Department of Wildlife Resources

CONSERVE. CONNECT. PROTECT.

A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228

www.VirginiaWildlife.gov



MEMORANDUM

TO: Megan Black, DEQ/EIR Environmental Program Planner

FROM: Nikolas I. Churchill, Division of Land Protection & Revitalization Review Coordinator

DATE: December 16, 2024

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Review: 24-205F Microporous Assets-Project Stellar in the City of Danville, Virginia.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the U.S. Department of Energy's December 3, 2024 EIR for 24-205F Microporous Assets-Project Stellar in the City of Danville, Virginia.

DLPR staff conducted a search (200 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR search did not identify any waste sites within the project area which might impact the project.

DLPR staff has reviewed the submittal and offers the following comments:

Hazardous Waste/RCRA Facilities – none in close proximity to the project area.

CERCLA Sites – none in close proximity to the project area.

Formerly Used Defense Sites (FUDS) – none in close proximity to the project area.

Solid Waste – none in close proximity to the project area.

Virginia Remediation Program (VRP) – none in close proximity to the project area.

Petroleum Releases – none in close proximity to the project area.

Please note that the DEQ's Pollution Complaint (PC) cases identified should be further evaluated by the project engineer or manager to establish the exact location, nature and extent of the petroleum release and the potential to impact the proposed project. In addition, the project engineer or manager should contact the DEQ's Blue Ridge Regional Office at (540) 562-6700 (Tanks Program) for further information about the PC cases.

PROJECT SPECIFIC COMMENTS

None

GENERAL COMMENTS

Soil, Sediment, Groundwater, and Waste Management

Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Asbestos and/or Lead-based Paint

All structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed. Questions may be directed to the DEQ's Blue Ridge Regional Office at (540) 562-6700.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Nikolas Churchill by phone at (804) 659-2663 or email nikolas.churchill@deq.virginia.gov.



FW: NEW PROJECT-EXPEDITED REVIEW-DOE Microporous Assets Project Stellar, DEQ 24-205F

From Angueira, Antony (DEQ) <Antony.Angueira@deq.virginia.gov>

Date Thu 12/19/2024 10:48 AM

To Black, Megan (DEQ) <Megan.Black@deq.virginia.gov>

Good morning Megan,

I had accidentally sent my comment to Valerie (below). Sorry about that!

Thank you,

Tony



Tony Angueira

Stormwater Team Lead

Office of Stormwater Management

[Virginia Department of Environmental Quality](https://www.deq.virginia.gov/)

1111 E. Main St., Suite 1400

Richmond, VA 23219

(804) 584-6265

From: Angueira, Antony (DEQ) <Antony.Angueira@deq.virginia.gov>

Sent: Wednesday, December 18, 2024 8:43 AM

To: Fulcher, Valerie (DEQ) <Valerie.Fulcher@deq.virginia.gov>

Subject: RE: NEW PROJECT-EXPEDITED REVIEW-DOE Microporous Assets Project Stellar, DEQ 24-205F

Hi Valerie,

Here is the OSWM comment.

(a) Agency Jurisdiction. The Department of Environmental Quality (DEQ) administers the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*.

(b) Erosion and Sediment Control and Stormwater Management Plans. The Applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act).

Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of $\geq 10,000$ square feet ($\geq 2,500$ square feet in Chesapeake Bay Preservation Area) would be regulated by *VESCL&R*. Accordingly, the Applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. Land-disturbing activities that result in the total land disturbance of ≥ 1 acre ($\geq 2,500$ square feet in Chesapeake Bay Preservation Area) would be regulated by *VSWML&R*.

Accordingly, the Applicant must prepare and implement a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM plan is submitted to the DEQ Regional Office that serves the area where the project is located for review for compliance. The Applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL 62.1-44.15 et seq.]

(c) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The owner or operator of projects involving land-disturbing activities of ≥ 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific Stormwater Pollution Prevention Plan (SWPPP). Construction activities requiring registration also include land disturbance of < 1 acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb ≥ 1 acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available at: <https://www.deq.virginia.gov/permits/water/stormwater-construction> [Reference: Virginia Stormwater Management Act 62.1-44.15 et seq.; *Consolidated ESC/SWM Regs. 9VAC25-875-10 et seq.*]

Thank you,
Tony



Tony Angueira

Stormwater Team Lead
Office of Stormwater Management
[Virginia Department of Environmental Quality](https://www.deq.virginia.gov/permits/water/stormwater-construction)
1111 E. Main St., Suite 1400
Richmond, VA 23219
(804) 584-6265

From: Fulcher, Valerie (DEQ) <Valerie.Fulcher@deq.virginia.gov>

Sent: Tuesday, December 3, 2024 11:46 AM

To: dgif-ESS Projects (DWR) <ESSProjects@dwr.virginia.gov>; DCR-PRR Environmental Review (DCR) <envreview@dcr.virginia.gov>; odwreview (VDH) <odwreview@vdh.virginia.gov>; Birge-wilson, Adrienne (DHR) <Adrienne.Birge-Wilson@dhr.virginia.gov>; Heller, Matthew (Energy) <matt.heller@energy.virginia.gov>; Kristie Eberly <keberly@wppdc.org>; klarking@danvilleva.gov; Churchill, Nikolas (DEQ) <Nikolas.Churchill@deq.virginia.gov>; Ballou, Thomas (DEQ) <Thomas.Ballou@deq.virginia.gov>; Lovain, Ava (DEQ) <Anna.Lovain@deq.virginia.gov>; Angueira, Antony (DEQ) <Antony.Angueira@deq.virginia.gov>; Harlow, Kevin (DEQ) <Kevin.Harlow@deq.virginia.gov>

Cc: Black, Megan (DEQ) <Megan.Black@deq.virginia.gov>

Subject: NEW PROJECT-EXPEDITED REVIEW-DOE Microporous Assets Project Stellar, DEQ 24-205F

Good morning- this is a new OEIR review request/project:



RE: NEW PROJECT-EXPEDITED REVIEW-DOE Microporous Assets Project Stellar, DEQ 24-205F

From Warren, Arlene (VDH) <Arlene.Warren@vdh.virginia.gov>

Date Wed 12/18/2024 9:30 AM

To Black, Megan (DEQ) <Megan.Black@deq.virginia.gov>

Project #: 24-205F

Project Name: USDOE Microporous Assets—Project Stellar

UPC #: N/A

Location: City of Danville

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility**.

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
5117310	CLARKSVILLE, TOWN OF	KERR RESERVOIR INTAKE
5117707	ROANOKE RIVER SERVICE AUTHORITY	LAKE GASTON INTAKE
5780600	HCSA- LEIGH STREET PLANT	RAW WATER INTAKE
5590100	DANVILLE, CITY OF	DAN RIVER INTAKE

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene F. Warren

GIS Program Support Technician

Mobile 804-389-2167 (office/cell/text)

Email [arlene.warren@vdh.virginia.gov]arlene.warren@vdh.virginia.gov

VDH, Office of Drinking Water

109 Governor Street, 6th Floor

Richmond, VA 23219



COMMONWEALTH of VIRGINIA

Travis A. Voyles
Secretary of Natural and
Historic Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director
Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

December 5, 2024

Mr. Stephen M. Witmer
U.S. Department of Energy
National Energy Technology Laboratory
626 Cochran Mill Road, M/S 921-227
Pittsburgh, PA 15236

Re: Microporous Assets Corporation – Project Stellar
Southern Virginia Megasite, Pittsylvania County, Virginia
DHR File No. 2012-0023

Dear Mr. Witmer

Thank you for initiating consultation on the project referenced above. The project, as presented, involves the construction of a coated lithium-ion battery separator plant on 212 acres within Lots 1 and 2 of the Southern Virginia Megasite (SVM). SVM is also referenced as Berry Hill Industrial Park in certain correspondence. Our comments are provided as assistance to the U.S. Department of Energy (DOE) in meeting its responsibilities pursuant to Section 106 of the National Historic Preservation Act.

As you are aware, cultural resources studies of the SVM have been ongoing since 2010. In your submission, you included a copy of the report entitled *National Register Survey and Evaluations of Archaeological Sites and Evaluations of Architectural Resources in Lots 1,2,3,4,5,8 and 9, Southern Virginia Megasite at Berry Hill* (WSP 2020) and DHR's comments on the report dated December 30, 2020. It is important to note that following a response from the consultant to our December 30, 2020 comments, DHR provided additional comments on March 12, 2021 (see attached). The more recent comments are relevant to the Microporous project in that they provide additional context for a potential Berry Hill Archaeological District (44PY0627) that includes SVM Lots 1 and 2.

Also included in your submission is a previously unreviewed report entitled *Phase II Investigation of Sites 44PY0394 and 44PY398, Southern Virginia Megasite at Berry Hill, Pittsylvania County, Virginia* (dated June 13, 2022) prepared by WSP USA Inc (WSP) for Dewberry. Sites 44PY0394 and 44PY0398 were identified during a Phase I investigation by Browning & Associates, Ltd. (BAL) in 2011 and resurveyed by WSP in 2020. Both archaeological resources are described as domestic single-dwelling sites dating to the late 19th to early 20th centuries. In 2020, WSP recommended the sites as not eligible for listing in the National Register of Historic Places (NRHP); however, in our December 30, 2020 letter, we recommended

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Salem, VA 24153
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Northern Region Office
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PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
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Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
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sites 44PY0394 and 44PY0398 as potentially eligible for listing in the NRHP and requested avoidance or additional testing.

In June 2021, Dewberry proposed grading SVM Lots 1 and 2 which would impact sites 44PY0394 and 44PY0398. Prior to the proposed grading, WSP conducted Phase II archaeological testing in August 2021. The resulting report was first submitted to DHR in August 2024, after grading had been completed. During the Phase II investigations, WSP excavated two (2) test units at site 44PY0394 and four (4) test units and four (4) judgmental shovel tests at site 44PY0398. Both sites date broadly to the 19th and 20th centuries, consistent with the Phase I investigations. WSP recommends both sites as Not Eligible for NRHP listing.

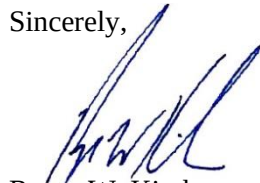
On November 26, 2024, the archaeological subcommittee of our Department's National Register Eligibility Evaluation Team (E-Team) met to consider the eligibility of sites 44PY0394 and 44PY0398. It is the opinion of E-Team that the information presented in the report is not sufficient to evaluate the eligibility of the two sites. Specifically, the level of effort was not sufficient to assess integrity of the resources or fully delineate the site boundaries. The evaluation would have benefited from a more robust testing strategy, including the excavation of additional test units, to assess the NRHP eligibility of the sites. According to DHR *Survey Guidelines*, it is recommended that a 2-10% sample of the site surface area be exposed during Phase II investigations.

The report also lacks photographs of the test units, surface features (like the stone wall at 44PY0394), artifacts, or noted disturbances. At 44PY0398, in particular, E-Team noted a lack of interpretation of the structural elements and artifact assemblage recovered during the excavations. Wenonda School is noted on several maps in the general location of site 44PY0398, and some of the artifacts recovered from a midden near structural remains are consistent with what would be found at a school, but the report lacks information interpreting those data. Finally, the report does not address the potential for the sites to be contributing resources to the potentially eligible Berry Hill Archaeological District (44PY0627).

Although site grading precludes additional archaeological testing, the Phase II evaluations would benefit from report revisions, to include (1) photographs of test units, artifacts, surface features, and noted disturbances; (2) further research into Wenonda School and how the artifact assemblage at site 44PY0398 may reflect this use; and (3) how the sites may contribute to the cultural landscape of the Berry Hill Archaeological District.

We understand that DOE did not formally engage with this project until 2024, after the completion of archaeological investigations and preliminary site grading. We recommend that DOE consider how the grading of SVM Lots 1 and 2 relates to its undertaking and whether that grading has affected resources eligible for listing in the NRHP. We are available to discuss these comments and provide guidance to DOE on concluding consultation under Section 106. Please contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,



Roger W. Kirchen
Deputy Director of Preservation Programs

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COMMONWEALTH of VIRGINIA

Travis A. Voyles
Secretary of Natural and
Historic Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director
Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

January 14, 2025

Mr. Stephen M. Witmer
U.S. Department of Energy
National Energy Technology Laboratory
626 Cochran Mill Road, M/S 921-227
Pittsburgh, PA 15236

Re: Microporous Assets Corporation – Project Stellar
Southern Virginia Megasite, Pittsylvania County, Virginia
DHR File No. 2012-0023

Dear Mr. Witmer

The Department of Historic Resources (DHR) has received additional information in support of our review of the project referenced above. Our comments are provided as assistance to the Department of Energy (DOE) in meeting its responsibilities pursuant to Section 106 of the National Historic Preservation Act.

Thank you for submitting a response to our December 5, 2024 letter with additional information regarding the Phase II report for archaeological sites 44PY0394 and 44PY0398 prepared by WSP USA Inc (WSP). While it is not clear why the photographs submitted in your response were not included in the report submitted to DHR, we continue to recommend that the Phase II report be revised to include photographs of the test units, surface features, artifacts, and disturbances, including photos from the 2019 Phase I resurvey and the 2021 Phase II testing.

We also recommend that the Phase II report be revised to include further research into Wenonda School and how the artifact assemblage at site 44PY0398 may (or may not) reflect this use. The sheer number of artifacts found at 44PY0398 is much greater than found at most of the other investigated sites at Berry Hill. If WSP feels that the site does not represent a school, as the mapping suggests, please include a more detailed interpretation describing why the artifact assemblage does not reflect that of a rural school.

Over the past few years, DHR has maintained that the potential Berry Hill Archaeological District (44PY0627) could provide important information related to the cultural and historic landscape of a former plantation in the period of transition to tenant farming and use of space by African American and white tenant farmers during the late 19th to 20th centuries, and may be eligible for listing in the National Register of Historic Places (NRHP) under Criteria A and D. Cumulatively, the sites within the district present

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opportunities for better understanding of the post-Civil War choices and experiences of a diverse population of sharecroppers, tenant farmers, and renters. The archaeological remains at Berry Hill can be used to illustrate or interpret broad patterns of history.

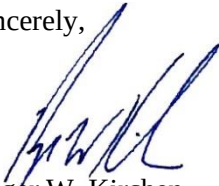
As previously stated, the inherent value of these sites is not necessarily tied to the total amount of artifacts found at one site, but with the comparative study of the distinct assemblages and cultural features associated with these sites. These sites may provide a foundational dataset for elucidating patterned and divergent practices of an underrepresented population. Taken as a whole, they represent the remnants of a cultural historic landscape and offer an opportunity to better understand community and settlement patterning. The district may have the potential to yield additional information about changes in land use, and the relationships among the property owners and the occupants of these sites, and other research questions. researchers should assess the information value of an archaeological resource as a contributing (or non-contributing) element associated with property types linked to the historic context (e.g. dwelling sites, historic road traces, agricultural outbuildings, wells, cisterns, etc.). The Phase II report, as submitted, does not adequately address the potential district or how the sites fit within the broader cultural and historic landscape. We recommend revising the report to include a section that addresses the district and how these sites fit within the larger context. Sites within the Berry Hill Archaeological District should be evaluated for individual eligibility and as potential contributing resources to the historic district.

Finally, regarding the level of effort for future Phase II investigations, when requesting technical assistance, WSP should submit a formal work plan that includes mapping showing the proposed locations of the test units. Please be sure to follow DHR's *Survey Guidelines* as it is recommended that a 2-10% sample of the site surface area be exposed during Phase II investigations. As a reminder, typical review time is about thirty days, so please plan accordingly.

Based on the sum of the information provided and the extent and timing of prior disturbance to Lots 1 and 2, including sites 44PY0394 and 44PY0398, we find that a determination of No Adverse Effect is appropriate for this undertaking. We ask that the Phase II report be revised to address the comments above and submitted to DHR in bound hardcopy and digital formats. Finally, we have reviewed and accept the Unanticipated Archaeological Discoveries Plan (November 2024).

Thank you for your consideration of historic resources and your patience through the consultation process. If you have any questions regarding these comments or our review of this project, please do not hesitate me at roger.kirchen@dhr.virginia.gov.

Sincerely,



Roger W. Kirchen
Deputy Director of Preservation Programs

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Draft EA Consultation Tracking Log					
Commenting Agency	Microporous Draft EA issued on 12/3/2024				
	Comment Category	Comments Received (Agency Findings and Requirements)	Commenting Agency Recommendations	Required Actions	DOE Response
Federal Agencies					
Department of Energy	NA	No comments received	NA	NA	NA
Virginia Department of Environmental Quality (DEQ)	Erosion and Sediment Control and Stormwater Management Plans	Erosion and Sediment Control and Stormwater Management Plans: The applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with VESCL&R and VSWML&R, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates. Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles and related land-disturbing activities that result in the total land disturbance of ≥10,000 square feet would be regulated by VSWML&R. Accordingly, the applicant must prepare a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM plan is submitted to the DEQ Blue Ridge Regional Office (BRRO). The applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanism consistent with agency policy.	NA	Stormwater, erosion, and sediment control plans and applicable measures are required to be developed and implemented, as appropriate, in accordance with the required regulations and guidelines in the Virginia Erosion and Stormwater Management Regulation. A General VPDES Permit for Discharges of Stormwater from Construction Activities is required for land disturbances of greater than one acre.	Comment acknowledged by DOE. Applicable Erosion, Sediment Control, and Stormwater Management Plans will be obtained and implemented as necessary.
		General Permit for Stormwater Discharges from Construction Activities (VAR10): DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program. The owner or operator of projects involving land-disturbing activities of ≥1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific Stormwater Pollution Prevention Plan (SWPPP). Construction activities requiring registration also include land disturbance of <1 acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb ≥1 acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and must address water quality and quantity in accordance with the VSMP Permit Regulations. General information and registration forms for the General Permit are available at: https://www.deq.virginia.gov/permits/water/stormwater-construction .	NA		Comment acknowledged by DOE. Applicable permits regarding stormwater discharges will be obtained and implemented as necessary. Potential stormwater discharges would be managed according to requirements of authorizations provided through the Commonwealth of Virginia, specifically under Virginia DEQ VPDES (Virginia Pollutant Discharge Elimination System) permits for industrial construction and operations under the CWA NPDES program, and through a Virginia Water Protection (VWP) Permit from the Virginia DEQ under Section 401 of the CWA.
	Water Quality and Wetlands	Depending on the type and scope of any impacts to streams or wetlands, a Clean Water Act Section 404 Permit maybe required from the Corps and/or a VWP permit may be required by DEQ.	NA	A Clean Water Act Section 404 Permit may be required from the Corps and/or a VWP permit may be required by DEQ.	Comment acknowledged by DOE. As the activities being performed at the Proposed Project for Phase I of development do not appear to include impacts to surface waters, such as land clearing, dredging, filling, excavating, draining, or ditching in open water or streams, a VWP Permit as issued by the VDEQ does not appear to be required for operations conducted at the site at this time. However, it is anticipated that Phase II of the Microporous Project Stellar will include the addition of a retention pond, and permitting will be assessed and conformed to as required by the appropriate governing entities.

Commenting Agency	Microporous Draft EA issued on 12/3/2024				
	Comment Category	Comments Received (Agency Findings and Requirements)	Commenting Agency Recommendations	Required Actions	DOE Response
Virginia Department of Environmental Quality (DEQ)	Solid and Hazardous Wastes	DEQ Division of Land Protection and Revitalization (DLPR) staff conducted a search (200 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR search did not identify any waste sites within the project area which might impact the project. Requirements: Any soil that is suspected of contamination must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All solid wastes, hazardous wastes, and hazardous materials, including construction and demolition wastes and universal wastes (batteries, fluorescent lights, refrigerants, mercury switches, mercury thermostats, etc.), must be managed in accordance with all applicable federal, state, and local environmental regulations. All structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and leadbased paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed.	DEQ encourages all projects and facilities to implement pollution prevention principles including: -The reduction, reuse, and recycling of all solid wastes generated; and -The minimization and proper handling of generated hazardous wastes	Requirements for removal and disposal of construction debris or wastes associated with operations should be reviewed.	Comment acknowledged by DOE. No building demolition is anticipated under the Proposed Project. Any soil suspected of contamination will be collected for analytical testing and all solid wastes, hazardous wastes, and hazardous materials will be managed in accordance with applicable federal, state, and local regulations.
	Air Quality	The proposed project site is not located within an ozone attainment area or emission control area. Requirements: Fugitive Dust: Fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 et seq. of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following: -Use, where possible, of water or chemicals for dust control, however, do not use water for dust control to the extent that it results in runoff to surface waters or wetlands; -Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials; -Covering of open equipment for conveying materials; and -Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion. Open Burning: If project activities include the burning of construction material, this activity must meet the requirements under 9VAC5-130 et seq. of the Regulations for open burning, and it may require a permit. The Regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. The applicant should contact locality fire officials to determine what local requirements, if any, exist. Some applicable provisions of the regulation include, but are not limited to: -Open burning or the use of special incineration devices for the destruction of clean burning waste and debris waste resulting from clearing operations is prohibited from May 1 through September 30. -Open burning is permitted for forest management, agricultural practices, and highway construction and maintenance programs approved by the board shall be at least 1,000 feet from any occupied building unless the occupants have given prior permission, other than a building located on the property on which the burning is conducted and the burning shall be attended at all times. Open burning is permitted for forest management, agricultural practices, and highway construction and maintenance programs approved by the board shall be at least 1,000 feet from any occupied building unless the occupants have given prior permission, other than a building located on the property on which the burning is conducted and the burning shall be attended at all times. -Special attention should be directed to § 10.1-1142 of the Code of Virginia, which is enforced by the Department of Forestry. - Special attention should also be directed to the regulations of the Virginia Waste Management Board. -Follow the open burning prohibitions as outlined in n 9VAC5-130-30.	NA	Activities associated with this project are subject to the fugitive dust and open burning air regulations administered by DEQ.	Comment acknowledged by DOE. A USEPA permit under Title V of the CAA is anticipated to be obtained during Phases II and IV of the Proposed Project, no such permit has been deemed necessary for Phase I or II. The Title V of the CAA approval would be co-administered with VDEQ).
Virginia Department of Wildlife Resources (DWR)	Wildlife Resources	Given the scope and location of the proposed work, DWR does not anticipate to result in significant adverse impacts upon listed species or other designated resources under its jurisdiction.	NA	NA	Comment acknowledged by DOE
Virginia Department of Conservation and Recreation (DCR)	Natural Heritage Resources	General comment: According to information currently in the Biotics Data System, natural heritage resources have not been documented within the submitted project boundary including a 100-foot buffer. The absence of data may indicate that the project area including a 100-foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources. The proposed action will impact an ecological core (C4) as identified in the Virginia Natural Landscape Assessment. Mapped cores in the project area can be viewed via the Natural Heritage Data Explorer . Ecological cores are areas of at least 100 acres of continuous interior, natural cover that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune and beach habitats. Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores. Cores also provide the natural, economic, and quality of life benefits of open space, recreation, thermal moderation, water quality and air quality. Cores are ranked rom C1 to C5 (C5 being the least significant) using nine prioritization criteria, including the habitats of natural heritage resources they contain. Impacts to cores occur when their natural cover is partially or completely converted permanently to developed land uses. Habitat conversion to development causes reductions in ecosystem processes, native biodiversity, and habitat quality due to habitat loss; less viable plant and animal populations; increased predation; and increased introduction and establishment of invasive species.	DCR recommends avoidance of impacts to cores. When avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edge of cores, so that the most interior remains intact.	Resubmit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months have passed before it is utilized	Given the definition of ecological cores being “areas of at least 100 acres of continuous interior, natural cover”, there is no identified issue with completion of Phase I or Phase II (first building) on Lot 1 (NE end). The ideal buildable area is already deforested; no additional or significant land clearing activities would be necessary. While the exact building size/design/location is not yet determined for Lot 2 (SW end), the building (which will be of a similar size as the Lot 1 building) will most probably be in the “interior core area” of Lot 2 (“Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores.”) to minimize impacts to wetland areas.

Commenting Agency	Microporous Draft EA issued on 12/3/2024				
	Comment Category	Comments Received (Agency Findings and Requirements)	Commenting Agency Recommendations	Required Actions	DOE Response
Virginia Department of Conservation and Recreation (DCR)	Natural Heritage Resources	<u>State-Listed Plant and Insect Species:</u> The current activity will not affect any documented state-listed plants or insects.	NA	NA	Comment acknowledged by DOE
		<u>State Natural Area Preserves:</u> There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.	NA	NA	Comment acknowledged by DOE
Virginia Department of Health (VDH)	Water Supply	There are no public groundwater wells within a 1-mile radius of the project site nor surface water intakes located within a 5-mile radius of the rproject site.	Best management practices should be employed, including erosion and sedimentation controls and spill prevention controls and countermeasures on the project site.	Potential impacts to public water distribution systems or sanitary sewer collection systems must be verified by the local utility.	Comment acknowledged by DOE
Virginia Department of Historic Resources	NA	No comments received	NA	NA	NA
City of Danville	NA	No comments received	NA	NA	NA
West Piedmont Planning District Comission	NA	No comments received	NA	NA	NA

APPENDIX C

RELEVANT TECHNICAL STUDIES AND BACKGROUND MATERIALS



22 March 2021

Mr. Brian Bradner, P.E.
Dewberry Engineers, Inc.
551 Piney Forest Road
Danville, Virginia 24540

RE: Southern Virginia Megasite

Dear Mr. Bradner:

We have reviewed our previous reporting for the Berry Hill Phase II project entitled: *Report of Subsurface Exploration and Geotechnical Engineering Evaluation Berry Hill Road Mega-Park (Phase II) Pittsylvania County, Virginia, F&R Project No. 62N0066, dated 29 July 2011*. With respect to the referenced report, the Megasite is comprised of Lots 4, 5, 8 and 9 which as explored by Boring numbers B-53 through B-69 and B-79 through B-95 in the 2011 report. Based on our review of this data, it is our opinion that the residual (native) soil profile strength characteristics for this area are more favorable than what is generally typical for the Piedmont physiographic province of the southeastern United States.

We note that not only was our firm involved with the above listed geotechnical exploration performed in 2011, we also performed a Berry Hill Phase I exploration in 2010 as well as providing fulltime Construction Materials Testing services to observe mass grading operations for the existing graded pad areas across the Megasite. Based on previous inquiry and review, we note that expansive clay, sinkholes, or high ground water are not issues for this site. In consideration of past inquiries, our work at the site, and our general experience in the region, we believe that heavy industrial design bearing pressures of at least 3,500 psf can be met at the site.

Once definitive information with respect to structure types, locations, loading and elevations are determined for each specific project within the Megasite, additional subsurface information will be required to provide final geotechnical design parameters and recommendations.

Please contact us if you have any questions regarding this letter or if we may be of further service.

Sincerely,



Andrew R. Frank, P.E.
Regional Senior Geotechnical Engineer

Gary A. Bruce, P.E.
Regional Vice President

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CERTIFICATION LETTER

June 22, 2021

Linda Green
Executive Director
Southern Virginia Regional Alliance
P.O. Box 3300
Danville, VA 24543-3300



Dear Ms. Green:

The Southern Virginia Megasite at Berry Hill, located in Pittsylvania County, Virginia, has completed Quest Site Solutions' (Quest), formerly McCallum Sweeney Consulting, Mega Site Certification Program. Quest has conducted a thorough analysis of the property and based on the information provided by the Danville-Pittsylvania County Regional Industrial Facility Authority, Dewberry, and our evaluation of the property, we are certifying the **Southern Virginia Megasite at Berry Hill** as a **Mega Site / Super Park**.

Quest has certified the Southern Virginia Megasite at Berry Hill as meeting the following criteria for Mega Site / Super Park certification:

- The property must be available for sale or lease (with a documented price and terms) to prospective industrial investors for a minimum of three years.
- The property must be at least 1,500 total acres with at least one 800-acre contiguous, developable parcel that would be acceptable for a single industrial user (Mega Site). The remainder of the property acreage (Super Park) must be at least 60% developable.
- The property's developable acreage must be located outside of the 100-year flood zone or be able to be filled within 180 days.
- The property must be free of recognized environmental concerns or have recognized environmental concerns remediated and/or resolved prior to certification.
- The property's developable acreage must be free of wetlands or be able to be mitigated within 180 days.
- The property's developable acreage must be free of federal threatened and endangered species or be able to be mitigated within 180 days.
- The property's developable acreage must be free of areas of archaeological or historical significance or be able to be mitigated within 180 days.
- The property's developable acreage must have soils compatible with industrial development.
- The property must be zoned appropriately or be able to be rezoned for industrial use within 90 days (if applicable). The surrounding properties must also be compatible with industrial uses.

CERTIFICATION LETTER

- The property must be within five miles of an interstate or four-lane limited-access divided highway. The property must be directly served or be able to be served within 12 months by a road that is compatible with standards for tractor-trailer access (80,000 pounds / 20,000 pounds per axle).
- The property must be served or be able to be served within 12 months by rail.
- The property must be served or be able to be served by industrial quality power that can meet a minimum of 30 MW demand. The first 15 MW must be able to be provided to the property within 12 months with an additional 15 MW to follow in the next 12 months. The property must also be served or be able to be served within 12 months by redundant electric service, preferably with feeds from two substations.
- The property must be served or be able to be served within 12 months by natural gas. Natural gas service must provide at least 50,000 mcf per month.
- The property must be served or be able to be served within 12 months by water infrastructure and a water system with a minimum excess capacity of 1,200,000 gallons per day.
- The property must be served or be able to be served within 12 months by wastewater infrastructure and a wastewater treatment plant with a minimum excess capacity of 1,000,000 gallons per day.
- The property must be served or be able to be served within 12 months by fiber telecommunications infrastructure.

The details on how the property meets each of these criteria is included in the following sections of this report.

This certification will expire on **June 22, 2026**. Upon certification expiration, the property will need to submit for recertification.

We congratulate the team at the Danville-Pittsylvania County Regional Industrial Facility Authority for their hard work and on achieving certification. If there are any questions regarding our analysis, please contact me.

Sincerely,



Lindsey M. Cannon
Director

NOTES TO USERS

is for use in administering the National Flood Insurance Program. It is necessary to identify all areas subject to flooding, particularly from local sources of small size. The community map repository should be used for possible updates or additional flood hazard information.

For more detailed information in areas where **Base Flood Elevations** and/or **floodways** have been determined, users are encouraged to consult the **Profile and Floodway Data and/or Summary of Stillwater Elevations** contained within the Flood Insurance Study (FIS) report that accompanies the FIRM. Users should be aware that BFEs shown on the FIRM represent whole-foot elevations. These BFEs are intended for flood insurance purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of flood and/or floodplain management.

Base Flood Elevations shown on this map apply only to landward of the American Vertical Datum of 1989 (NAVD 89). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Elevations tables in the Flood Insurance Study report for this jurisdiction, as shown in the Summary of Stillwater Elevations tables should be used for flood and/or floodplain management purposes when they are higher than elevations shown on this FIRM.

Floodways were computed at cross sections and interpreted at cross sections. The floodways were based on hydraulic considerations and to requirements of the National Flood Insurance Program. Floodway and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Areas not in Special Flood Hazard Areas may be protected by **flood structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **datum** used in the preparation of this map was Virginia State Plane South of the horizontal datum was NAD 83, GR830 spheroid. Differences in spheroid, projection or State Plane zones used in the production of FIRM data in other jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Elevations on this map are referenced to the North American Vertical Datum of 1989 (NAVD 89). These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding the difference between the National Geodetic Survey Datum of 1929 and the American Vertical Datum of 1989, visit the National Geodetic Survey at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

Information Services
NAD83
Geodetic Survey
#0202
46 West Highway
Annapolis, Maryland 20710-3282
302-3242

For current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch, National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Map information shown on this FIRM was provided in digital format by the Commonwealth of Virginia, through the Virginia Geographic Information System of Technology Planning (VGITP). These data were produced at a scale of 1"=500' from two-foot resolution digital orthorectified data from 2007.

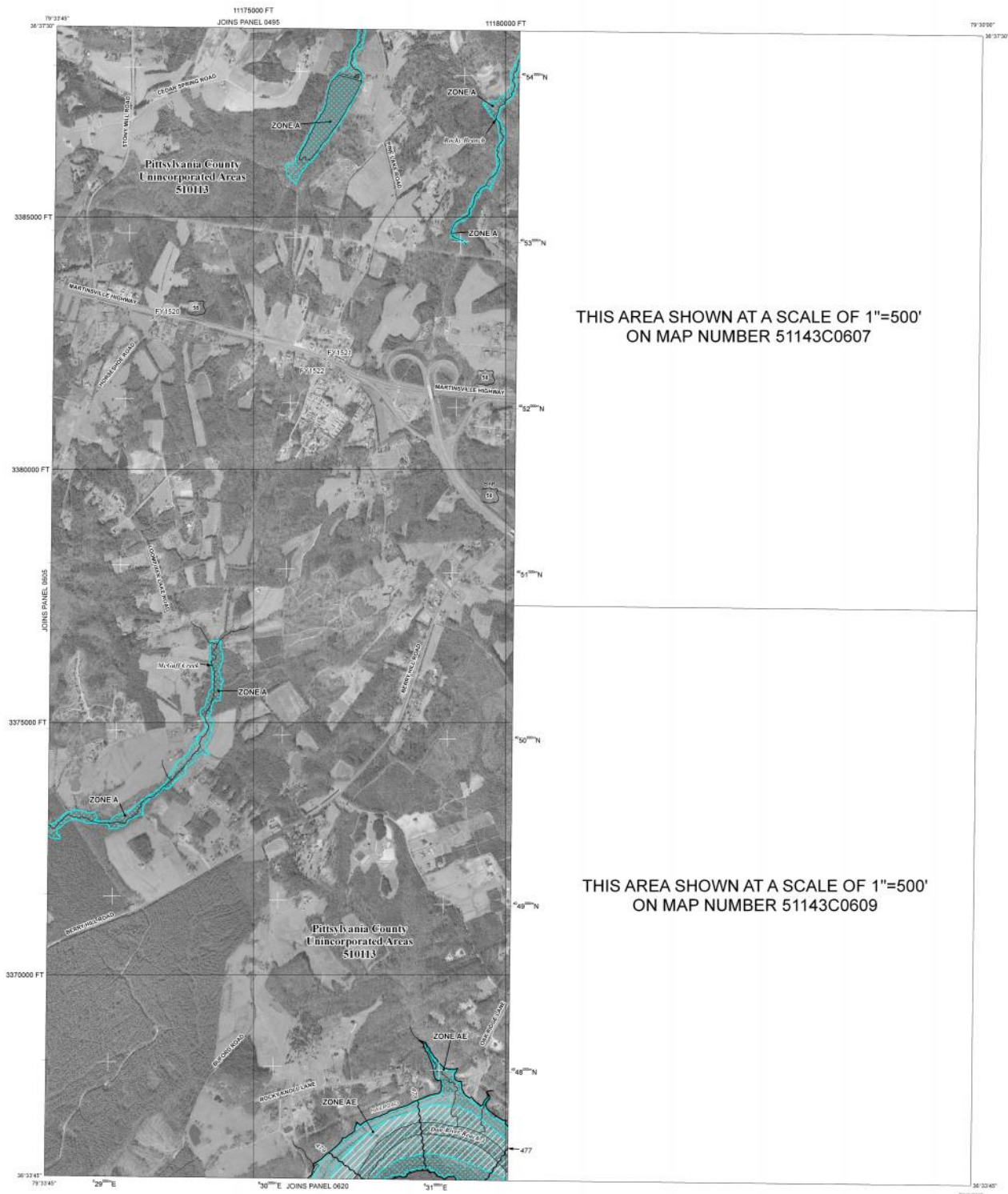
In updated topographic information, this map reflects more detailed and up-to-date channel configurations and floodplain delineations than those shown in the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Data tables in the Flood Insurance Study Report (which contains the hydraulic data) may reflect stream channel dimensions that differ from those shown on this map. Also, the road to floodplain relationships for unimproved roads may differ from what is shown on previous maps.

Map limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may occur after this map was published, map users should contact appropriate local officials to verify current corporate limit locations.

For more information, refer to the separately printed **Map Index** for an overview map of the area showing the layout of map panels, map repository addresses, listing of Communities tables containing National Flood Insurance Program data for each community as well as a listing of the panels on which each community is located.

For the **FEMA Map Service Center** at 1-800-358-6616 for information on products associated with the FIRM. Available products may include Flood Insurance Study Letters of Map Change, a Flood Insurance Study report, and/or other products of this map. The FEMA Map Service Center may also be reached at 1-800-358-6620 and its website at <http://www.msc.fema.gov>.

For **questions about this map** or **questions** concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/info>.



THIS AREA SHOWN AT A SCALE OF 1"=500'
ON MAP NUMBER 51143C0607

THIS AREA SHOWN AT A SCALE OF 1"=500'
ON MAP NUMBER 51143C0609

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard are designated as Zone A, AE, AH, AD, AR, AS, AV, V, and VE. The Base Flood Elevation is the water elevation of the 1% annual chance flood.

ZONE A
No Base Flood Elevation determined.

ZONE AE
Base Flood Elevation determined.

ZONE AH
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevation determined.

ZONE AD
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); depths determined. For areas of alluvial fan flooding, velocity determined.

ZONE AR
Special Flood Hazard Area formerly protected from the 1% annual flood by a flood control system that was subsequently dismantled. Note that the former flood control system is being restored to protect from the 1% annual chance or greater flood.

ZONE AS
Area to be protected from 1% annual chance flood by a flood protection system under construction; no Base Flood Elevation determined.

ZONE AV
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.

ZONE VE
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.

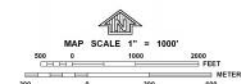
FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept unobstructed so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS
ZONE X
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS
ZONE D
Areas determined to be outside the 0.2% annual chance floodplain; areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zone D boundary dividing Special Flood Hazard Areas of different flood depths or flood velocities
Limit of Moderate Wave Action
Base Flood Elevation line and value, elevation in feet*
Base Flood Elevation value where uniform within zone
Reference to the North American Vertical Datum of 1989
Cross section line
Transect line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
[600-meter Universal Transverse Mercator grid values, and 5000-foot grid values; Virginia State Plane coordinate system, South Zone (FIPS/ZONE 4302), Lambert Conformal projection
Bench mark (see explanation in Notes to Users section FIRM panel)
River mile
MAP REPOSITORY
Refer to listing of Map Repositories on Map Index
EFFECTIVE DATE OF COURTYNCE FLOOD INSURANCE RATE MAP
September 29, 2016
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your local agent or call the National Flood Insurance Program at 1-800-626-6625.



NFIP **PANEL 0610E**

FIRM
FLOOD INSURANCE RATE

PITTSBURGH COUNTY, VIRGINIA AND INCORPORATED AREAS

PANEL 610 OF 690
(SEE MAP INDEX FOR FIRM PANEL LA)

CONTAINS
COMMUNITY
PITTSBURGH COUNTY
EFFECTIVE DATE
2016

MAP NUMBER
51143C0607

EFFECTIVE DATE
SEPTEMBER 29, 2016

Federal Emergency Management Agency

NOTES TO USERS

is for use in administering the National Flood Insurance Program. It is necessary to identify all areas subject to flooding, particularly from local sources of small size. The community map repository should be used for possible updated or additional flood hazard information.

In more detailed information in areas where **Base Flood Elevations** and/or **floodways** have been determined, users are encouraged to consult the Flood Profile and Floodway Data and/or Summary of Stillwater Elevations obtained within the Flood Insurance Study (FIS) report that accompanies the map. Users should be aware that BFEs shown on the FIRM represent whole-foot elevations. These BFEs are intended for flood insurance purposes only and should not be used as the sole source of flood information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of flood and/or floodplain management.

Base Flood Elevations shown on this map apply only to landward of the floodway. Flood elevations were based on hydraulic considerations and to requirements of the National Flood Insurance Program. Floodway and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Areas not in Special Flood Hazard Areas may be protected by **flood structures**. Refer to Section 2.4 "Flood Protection Measures" of the Insurance Study report for information on flood control structures for this area.

Information used in the preparation of this map was Virginia State Plane South of the horizontal datum was NAD 83, GRS80 spheroid. Differences in spheroid, projection or State Plane zones used in the production of FIRM's may result in slight positional differences in map features and jurisdiction boundaries. These differences do not affect the accuracy of this map.

Elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Elevations tables in the Flood Insurance Study Report for this jurisdiction. The elevations shown in the Summary of Stillwater Elevations tables should be used for flood and/or floodplain management purposes when they are higher than elevations shown on this FIRM.

These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding the difference between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

Information Services
NAD83
Geodetic Survey
#0202
66 West Highway
Spring, Maryland 20910-3282
301-328-4242

For current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Map information shown on this FIRM was provided in digital format by the State of Virginia, through the Virginia Geographic Network Division of its Department of Technology Planning (VTGN). These data were produced at a scale of 1:50,000 from two-foot resolution digital orthorectified flown in 2007.

In updated topographic information, this map reflects more detailed and upstream channel configurations and floodplain delineations than those shown in the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Data tables in the Flood Insurance Study Report (which contains five hydraulic data) may reflect stream channel dimensions that differ from those shown on this map. Also, the road to floodplain relationships for unimproved roads may differ from what is shown on previous maps.

Map limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may occur after this map was published, map users should contact appropriate local officials to verify current corporate limit locations.

For more information, refer to the separately printed **Map Index** for an overview map of the community showing the layout of map panels, community map repository addresses, listing of Communities table containing National Flood Insurance Program information for each community as well as a listing of the panels on which each community is located.

For the **FEMA Map Service Center** at 1-800-358-6616 for information on products associated with the FIRM. Available products may include: Flood Insurance Study, Flood Insurance Study Report, Flood Insurance Study Map, Flood Insurance Study Map Change, a Flood Insurance Study report, and/or other products of this map. The FEMA Map Service Center may also be reached at 1-800-358-6620 and its website at <http://www.msc.fema.gov>.

For questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/info>.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard are designated as Zone A, AE, AH, AO, AR, AR9, V, and VE. The Base Flood Elevation is the water elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevation determined.
ZONE AE Base Flood Elevation determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevation determined.
ZONE AO Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevation determined. For areas of alluvial fan flooding, water depth determined.
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that has subsequently deteriorated. Indicates that the former flood control system is being restored or protection from the 1% annual chance or greater flood.
ZONE AR9 Area to be protected from 1% annual chance flood by a flood protection system under construction; no Base Flood Elevation determined.
ZONE AV Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept unobstructed so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS
ZONE D Areas determined to be outside the 0.2% annual chance floodplain; areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zone A boundary dividing Special Flood Hazard Areas of different flood elevations, flood depths or flood velocities.
Limit of Moderate Wave Action

Base Flood Elevation line and value, elevation in feet (e.g., 12.0)
Base Flood Elevation value where uniform within zone (e.g., 12.0)

Reference to the North American Vertical Datum of 1988
Traverse line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), UTM zone 18N
UTM meter Universal Transverse Mercator grid values, 5000-foot grid values; Virginia State Plane coordinate system, South Zone (VP52ZONE 4302), Lambert Conformal projection

Bench mark (see explanation in Notes to Users section FIRM panel)
River mile
MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COURTYNCE FLOOD INSURANCE RATE MAP
September 29, 2016
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your local agent or call the National Flood Insurance Program at 1-800-358-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0605E
FIRM
FLOOD INSURANCE RATE
PITTSYLVANIA COUNTY VIRGINIA AND INCORPORATED AREAS
PANEL 605 OF 690
(SEE MAP INDEX FOR FIRM PANEL LA)
CONTAINS
COMMUNITY PITTSYLVANIA COUNTY
NUMBER 510113
PANEL 0605E
Notice to User: The Map Number shown below is used when placing map orders. The Government shown above should be used on insurance applications subject to company.
MAP NUMBER
511430
EFFECTIVE DATE
SEPTEMBER 29, 2016
Federal Emergency Management Agency



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

April 5, 2021

APPROVED JURISDICTIONAL DETERMINATION

Western Virginia Regulatory Section
NAO 2010-00423 (Overall Site)

Pittsylvania County
Berry Hill Industrial Park (Overall Site)
C/O Mr. Troy Shelton
Dewberry
551 Piney Forest Road
Danville, Virginia 24540

Dear Shelton:

This letter is regarding your request for an approved jurisdictional determination for waters of the U.S. (including wetlands) located at the Southern Virginia Mega-site at Berry Hill. The site is located near Berry Hill Road, Pittsylvania County, Virginia. This letter supersedes any previous determinations for the Berry Hill site.

An on-site jurisdictional determination (July 23, 2020, September 2, 2020) has found waters regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344) on the property listed above. Both jurisdictional and non-jurisdictional features have been identified on the site. This letter shall serve to confirm the streams, as surveyed and shown on the map titled, "Southern Virginia Mega-site at Berry Hill - Overall Federal Jurisdiction", dated September 2, 2020 by Dewberry, are under Federal jurisdiction as well as those water features not under Federal jurisdiction.

Our basis for this determination is the application of the Corps' definition of waters of the United States. These waters are part of a tributary system to interstate waters (33 CFR 328.3 (a)) and have an ordinary high water mark. This letter is not confirming the Cowardin classifications of these aquatic resources.

The attached approved jurisdictional determination form shows the acreage/linear feet) of water features (both under Federal Jurisdiction and non-Federal jurisdiction) on the Berry Hill site. Any discharge of dredged and/or fill material into any non-Federally regulated will not require a Department of the Army permit. However, a permit may be required from the Virginia Department of Environmental Quality (DEQ) and we are notifying them by copy of this letter.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into jurisdictional waters and/or wetlands on this site will require a Department of the Army permit and may require authorization by state and local authorities, including a Virginia Water Protection Permit from the Virginia Department of

Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps jurisdiction for the waters on the subject property and does not authorize any work in these jurisdictional areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the North Atlantic Division Office at the following address:

ATTN:
Ms. Naomi J. Handell
Regulatory Program Manager (CENAD-PD-OR)
U.S. Army Corps of Engineers
Fort Hamilton Military Community
301 General Lee Avenue
Brooklyn, New York 11252-6700
Telephone number: (917) 789-4841
Naomi.J.Handell@usace.army.mil

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by June 5, 2021. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

This jurisdictional determination is valid for a period of five (5) years from the date of this letter unless new information warrants revision prior to the expiration date. If you have any questions, please contact me at Vincent.d.pero@usace.army.mil or at 757-297-0011

Sincerely,

Vincent D. Pero

Vincent D. Pero
Project Manager, Western Virginia
Regulatory Section

Enclosure(s)

Cc: VA-DEQ