Appendix B

Public Comments and SCDES Response to Comments

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Admitted in DC – Not Admitted in FL
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July 29, 2024

VIA E-MAIL
Mr. Greg Cassidy
South Carolina Department of Environmental Services
2600 Bull Street
Columbia, SC 29201

RE: Comments of CSX Transportation, Inc.
CSXT Bramlett Road Site (aka Duke Power Manufactured Gas Plant)
South Carolina Department of Environmental Services ("SCDES") Preferred Cleanup Plan

Dear Mr. Cassidy:

CSX Transportation, Inc. ("CSX") appreciates the opportunity to provide comments on DHEC's (now SCDES's) preferred remedy for the cleanup of the CSXT Bramlett Road Site (aka Duke Power Manufactured Gas Plant) ("Site").

Comment 1: The remedy selected needs to be based upon acknowledgement of the complete background regarding the regulatory status of the Vaughn landfill, including the subsequent approvals of the United States Army Corps of Engineers ("USACE") and SCDES (as DHEC) allowing the C&D to remain in place as legal fill.

SCDES's "Proposed Plan for Operable Units 1 and 2 CSXT Bramlett Road Site" dated May 2024 where SCDES proposes its preferred cleanup alternative provides in part:

> Beginning in 1988, Vaughn Construction created an unpermitted construction and debris (C&D) landfill and spread waste (including concrete, brick, wood, plastic, roofing materials, insulation, and glass) up to 10 feet deep over 6.3 acres on Parcel 3. It is estimated around 84,000 cubic yards of C&D debris exist within the Vaughn landfill. In 1993, DHEC advised Mr. Vaughn that landfilling activities were improper. In 1994, the United State Army Corps of Engineers notified CSX Transportation (CSXT) that the landfill was located on a wetlands area and CSXT ordered Mr.

Vaughn to cease operation and close the unpermitted landfill. Mr. Vaughn did not remove the C&D debris or remediate any environmental impacts.

A March 1995 "Soil, Sediment and Groundwater Sampling" report ("March 1995 Report") prepared by Applied Engineering & Science, Inc. ("AES"), provides that CSX officials did not become aware of the landfilling operations until they were notified by USACE, who ordered Vaughn Construction directly to cease the landfilling activities. In a February 26, 2001 letter, DHEC advised the USACE that removal of the C&D debris was not recommended as it would likely result in the destruction of unaltered wetlands and suggested offsite mitigation to address the violation, stating:

> As you are aware, the CSX/Vaughn Landfill site is located in the eastern-bank floodplain of the Reedy River and was developed as an unpermitted C&D landfill by Mr. Robert Vaughn. Biological and geotechnical assessments of the site have demonstrated that the coal tar constituents are not significantly impacting flora and fauna in the wetland area. However, free phase coal tar and coal tar impacted groundwater are present underlying the debris at the soil/ saprolite interface.
>
> Per our conversation, coal tar is a very viscous, relatively non-mobile material. The areal extent of the contaminant plume has not enlarged since it was first documented in 1996. No surface water or downstream/downgradient impact has been documented, nor are there any drinking water wells within 0.5 miles of the site. Activities associated with physical removal of the fill would very likely result in mobilization of the coal tars and destruction of the existing, unaltered wetlands. Continued monitoring of the monitoring wells proximal to the landfill will be the only action required at this time. For these reasons, the Department recommends that offsite mitigation be pursued rather than onsite mitigation.

In reliance on DHEC's 2001 assessment and recommendation that the fill should not be removed, CSX resolved the Clean Water Act violation with offsite mitigation such that the C&D debris fill could legally remain on the Site. CSX met with DHEC and USACE to discuss mitigation options with both agencies concurring that a stream restoration project on a section of Long Branch in Greenville would satisfy the Clean Water Act violation. A section of Long Branch bisecting a parcel owned by the Friends of the Reedy River was identified. The parcel was in close proximity to the Site (approximately 2,000 feet southwest) as well as the Reedy River.

CSX presented the stream restoration plan to the Friends of the Reedy River board members who approved the project and executed an access agreement with CSX. In 2007, an after the fact permit, Permit #2004-1V-086, was issued by USACE and a corresponding Clean Water Act 401 certification was granted by DHEC on August 9, 2005 for the C&D debris fill placed in the wetlands to remain on the Site. CSX completed the Long Branch stream restoration in 2008. Since the work, CSX fulfilled the 5-year monitoring and reporting requirement and worked with Upstate Forever to establish a Conservation Easement for the mitigation property.

The foregoing information on the past resolution of the Clean Water Act violation and legal status of the C&D debris fill on the Site is an important consideration in determining the remedy.

<u>Comment 2</u>: The remedy selected needs to be based upon acknowledgement of the past sampling information related to the C&D debris fill placed by Vaughn Construction on the Site.

DHEC's "Proposed Plan for Operable Units 1 and 2 CSXT Bramlett Road Site" dated May 2024 where DHEC proposes its preferred cleanup alternative provides in part:

> The primary risks identified are potential human exposure to MGP-related contaminants in soil, shallow and transition zone groundwater, surface water, sediment, and deep bedrock groundwater. ***Additionally, there are risks from the uncharacterized Vaughn Landfill material which could pose both a physical and chemical hazard.*** (Emphasis added).

As noted in Comment 1, in 1988, Vaughn Construction created an unpermitted construction and debris ("C&D") landfill and spread waste (including concrete, brick, wood, plastic, roofing materials, insulation, and glass) over a portion of the wetlands. CSX officials did not become aware of the landfilling operations until they were notified by USACE, who ordered Vaughn Construction directly to cease the landfilling activities.

CSX initially received a letter from DHEC dated August 24, 1994 advising that DHEC and USACE had been investigating the Site and had collected a sample near the Site that contained levels of toluene of unknown origin. The letter requested that CSX conduct an assessment to determine the horizontal and vertical extent of the contamination at the Site. On behalf of CSX, Applied Engineering & Science, Inc. ("AES") implemented the workplan approved by DHEC and completed initial investigations as documented in a March 1995 "Soil, Sediment and Groundwater Sampling" report. Additional work was completed by AES in accordance with a second workplan approved by DHEC resulting in the September 1996 "Site Investigation/Phase II Vaughn Landfill/Duke Power Sites" ("September 1996 Report"). The September 1996 Report provides in part:

> AES completed Phase I of the investigation in February 1995 and submitted a report of findings to DHEC in March 1995. During Phase I, no materials were discovered in the landfill that could be directly connected to the contamination. Rather, Phase I confirmed that the fill consisted of dirt, brick, concrete, and other construction debris. Contamination from volatile and semi-volatile compounds (VOCs and SVOCs) was discovered in soils and groundwater *below* the landfill materials and in the floodplain east of the Reedy River. A substance that appeared to be coal tar was found in the floodplain soils. A subsequent investigation into the historical activities of the area indicated that the Duke Power Company operated a coal gasification plant at the corner of West Washington Street and Bramlette Road during the 1940s and

1950s. Wastewater containing coal tar was released from the west side of the plant. The wastewater flowed through a culvert under Bramlette Road and dispersed into the floodplain. The heavy coal tar settled in low areas and eventually infiltrated the natural alluvial clays and sands, impacting local groundwater quality.

Following submittal of the Phase I report, DHEC requested additional fieldwork on the properties. Phase II consisted of the installation of eight monitoring wells to assess groundwater quality, an assessment of the extent of the coal tar in soil and groundwater, and a site characterization.

The information gathered during Phase II of the investigation indicates that the contaminants in soil and groundwater within the CSXT properties are the result of the release of coal tar and coal tar laden wastewater from the former Duke Power coal gasification plant. The VOC and SVOC compounds reported in the groundwater and soil samples are common byproducts of coal gasification processes.

CSX is not aware of any sampling over the past 29 years contradicting the early determination that the C&D debris was inert and not contributing to hazardous substance contamination caused by the MGP waste. The statement that "there are risks from the uncharacterized Vaughn Landfill material which could pose both a physical and chemical hazard" is simply speculation and not supported by any sampling data. A decision on the appropriate remedy must consider the data which indicates that the C&D debris is not a source of the hazardous substances contamination on the Site.

Comment 3: Alternative 5 includes removal of inert C&D debris fill from Parcel 3 that does not need to be removed to allow access for removal of the hazardous non-aqueous phase liquid ("NAPL") from the former manufactured gas plant. Alternative 5 as set forth in the October 11, 2023 Focused Feasibility Study, Revision 1 ("Revised FFS") proposes, in addition to the Alternative 4 tasks, the removal of the C&D debris from 3.15 acres not impacted by the NAPL and converting such 3.15 acres to wetlands. The estimated additional cost in the Revised FFS for such removal and conversion to wetlands is $6.2 million. Historical sampling as described in Comment 2 of this comment letter indicates that the C&D debris is inert and not contributing to the MGP hazardous substance contamination.

While CSX understands SCDES, Duke and citizens desire the removal of this additional 3.15 acres of inert C&D debris, such removal is an unnecessary task to accomplish the remedial goals of the VCC and is not consistent with the National Contingency Plan. Additionally, such C&D fill was properly permitted by the after the fact permit from USACE and 401 certification from DHEC. CSX mitigated the fill with the offsite mitigation approved by USACE and DHEC and cooperation of the Friends of the Reedy River and Upstate Forever. To now require the unnecessary removal of this fill and converting the acreage to wetlands is a potential taking of CSX uplands created with legally permitted fill.

CSX is willing to work with SCDES and Duke on terms of an agreement to allow such additional 3.15 acres of legally permitted C&D debris fill to be removed and such acreage to be converted to wetlands. The need for CSX's agreement for this removal and conversion to wetlands that goes beyond what is necessary to accomplish the remedial goals of the VCC and being inconsistent with the National Contingency Plan should be acknowledged as a part of any approval of Alternative 5.

Comment 4: Alternatives 5 and 4 include the removal of the inert C&D debris fill from approximately 4.8 acres from Parcel 3 to access the NAPL for remediation and to convert the 4.8 acres and some additional area to wetlands. CSX understands that the C&D debris must be removed from the approximately 4.8 acres of Parcel 3 in order to allow access to remediate the NAPL in such area as proposed in Alternatives 5 and 4. Both Alternatives 5 and 4 propose to turn the 4.8 acres into wetlands rather than restore the 4.8 acres to pre-remediation contours. Such C&D debris proposed for removal is legally permitted fill of wetlands that was authorized by USACE and DHEC with after the fact Permit #2004-1V-086 issued by USACE and the corresponding DHEC 401 certification with CSX having completed agreed offsite mitigation through stream restoration.

While CSX understands SCDES, Duke and citizens desire that after removal of the C&D debris fill in the 4.8 acres and that such 4.8 acres and some additional area are proposed to be converted to wetlands after remediation of the NAPL, the fact that such conversion to wetlands is unnecessary to accomplish the remedial goals of the VCC and is inconsistent with the National Contingency Plan should be acknowledged as a part of any approval of Alternative 5 or Alternative 4. Additionally, the failure to restore the 4.8 acres to pre-excavation elevations but instead require the conversion of the 4.8 acres and some additional land to wetlands is a potential taking of CSX uplands created with legally permitted fill authorized by the after the fact permit from USACE and 401 certification from DHEC.

CSX is willing to work with SCDES and Duke on terms of an agreement to allow such 4.8 acres and additional area to be converted to wetlands post remediation of the NAPL. The need for CSX's agreement for this conversion to wetlands that goes beyond what is necessary to accomplish the remedial goals of the VCC and consistency with the National Contingency Plan should be acknowledged as a part of any approval of Alternative 5 or 4.

Comment 5: The Feasibility Study indicates site conditions are generally stable with no significant indication of movement of constituents. This stability would be in alignment and expected with a mature source. In the public meeting presentation materials, SCDES also noted there are no health risks. As such a supplemental alternative (3A) should be considered for evaluation.

For Parcels 3, 4, and 5, removal of readily accessible impacted sediment including the southwest thin corner of the Vaughn Landfill could be retained as proposed in Alternative 3.

For the northern portion of the landfill, Alternative 3 calls out a sheet pile wall, low permeability cap, hydraulic control via mechanical pumping and trees to remove accumulated water. In lieu of actions noted above, the installation of only a low permeability cap over the northern portion of the Vaughn Landfill should be evaluated. A low permeability cap would serve to isolate the waste material below the Vaughn Landfill from precipitation infiltration. Additionally, by extending the cover to the base of slope, the top of the landfill can be sloped to promote drainage off the cap and eliminate the need for the sheet piling, trees and/or pumping system. To prevent issues with flooding the cover can be installed into an anchor trench.

Alternative 3A would align with the sediment OU-1 RAO by removal of exposed sediment containing visual NAPL. Remaining impacted sediment would be isolated beneath the footprint of the Vaughn Landfill. This alternative is also protective of groundwater and surface water as it limits contact between precipitation and impacted sediment beneath the capped portion of the Vaughn Landfill.

This Alternative 3A also offers significant reduction in impact to the community with reduced truck traffic and condensed construction schedule versus Alternatives 4 and 5.

The modifications for Alternative 3A are presented in the attached as an overlay to Alternative 3. Please note that if Alternative #A is implemented, any area of fill removed to access contamination for removal should include the restoration of the area rather than conversion to wetlands as noted in Comments 3 and 4 above. Also as noted above, CSX is willing to work with SCDES and Duke on terms of an agreement to allow certain uplands to be converted to wetlands post remediation.

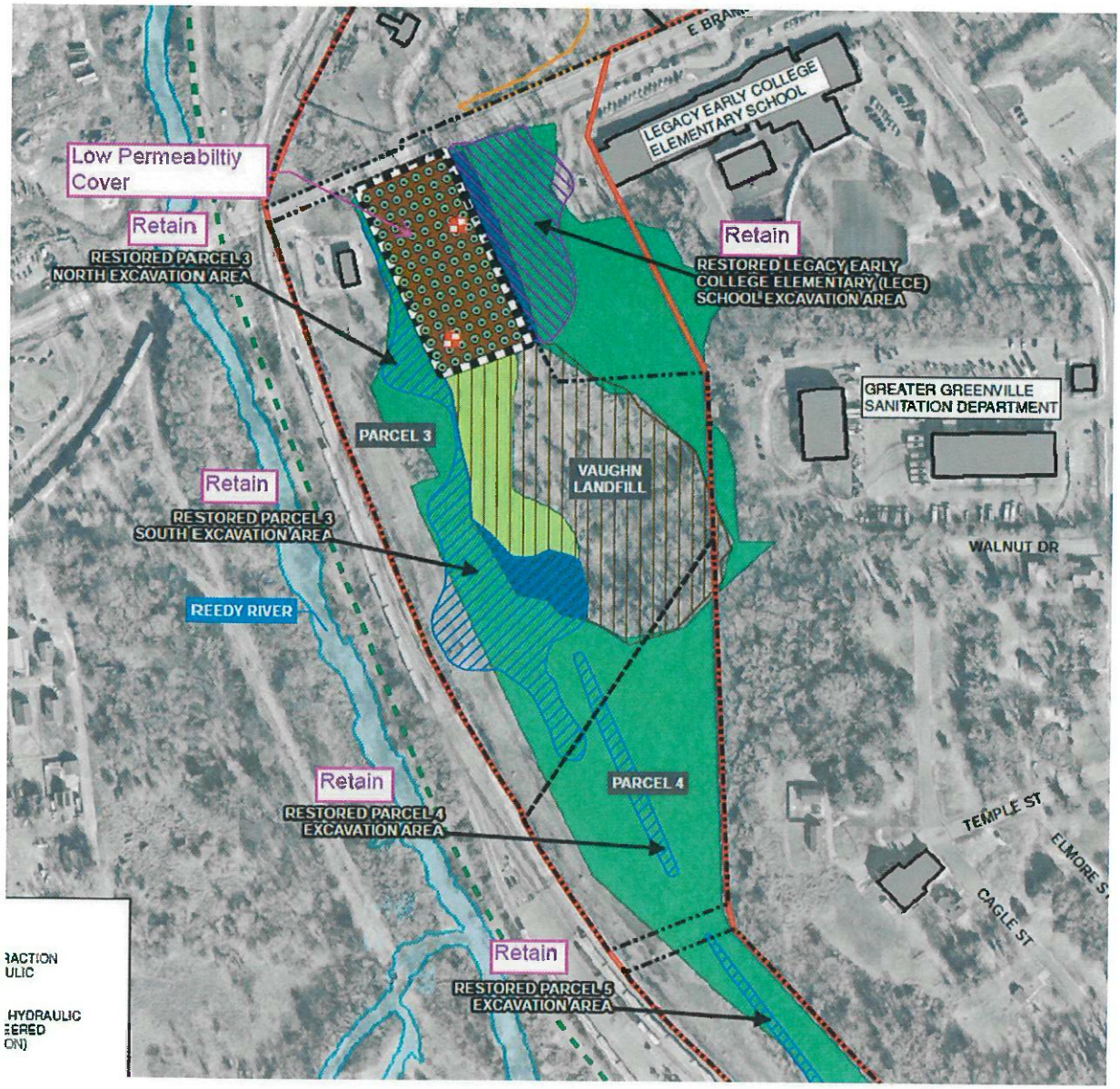
CSX appreciates your consideration of these comments.

Sincerely,

Daniel Schmitt
Assistant General Counsel
CSXT Law Department

cc: Raghu Chatrathi, Senior Director, Public, Health, Safety & Environment, CSXT
Matt Adkins, Sr. Manager, Environmental Remediation, CSXT
John Dillard, Director, State Relations, CSXT

Supplemental Alternative 3A



SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Daniel E. Schmitt
Assistant General Counsel
CSX
500 Water Street
Jacksonville, FL 32202

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Schmitt:

Thank you for your July 29, 2024, letter regarding the May 2024 Proposed Plan for Operable Units 1 and 2 at the CSXT Bramlett Road Site (Site) in Greenville, South Carolina.

As you know, the South Carolina Department of Environmental Services (SCDES)[1] and Duke Energy (Duke) have been studying conditions at the Site since 2016 when Duke entered into Voluntary Cleanup Contract 16-5857-RP (VCC). Pursuant to the VCC, Duke has conducted multiple investigation efforts to determine the extent of coal tar impact. Duke has also conducted a feasibility study to evaluate potential remedial alternatives to address contamination at the Site. Throughout this process, SCDES has engaged with and carefully considered the input of numerous stakeholders. Based on the studies conducted at the Site and the input of stakeholders, SCDES has selected Alternative 5 of the Proposed Plan for Operable Units 1 and 2.

SCDES has carefully considered CSX's comments and responds as follows:

Comment 1 – CSX states the selected remedy needs to be based upon acknowledgement of the complete background regarding the regulatory status of the Vaughn Landfill. Consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), the selected remedy is based on a comprehensive comparative analysis of alternatives using the remedy selection criteria outlined in the NCP. Previous offsite wetlands mitigation measures undertaken by agreement between the United States Army Corps of Engineers and CSX may have resolved the Clean Water Act violation by compensating for the loss of wetlands, but it did not remediate the release of hazardous substances. The remedy selected by SCDES focuses on addressing the cleanup of these hazardous substances that have been released to the environment.

[1] Pursuant to South Carolina Act No. 60 of 2023 and S.C. Code Ann. § 1-30-140, on July 1, 2024, SCDES was formed and assumed all functions, powers, and duties of the environmental divisions, offices, and programs of the South Carolina Department of Health and Environmental Control (SCDHEC). Prior to July 1, 2024, SCDHEC was the agency involved with the environmental assessment and investigation of the Site.

Comment 2 – CSX states the remedy selected needs to be based upon acknowledgement of past sampling information. SCDES agrees there is value in considering historical sampling information related to the C&D debris placed in the unpermitted Vaughn Landfill, as well as more recent sampling data collected during the remedial investigation conducted by Duke. SCDES also would like to clarify the statement in the last paragraph of comment 2 regarding a statement in the Proposed Plan that "there are risks from the uncharacterized Vaughn Landfill material which could pose both a physical and chemical hazard." It would have been more accurate for SCDES to state "risks from the MGP waste below the Vaughn Landfill materials could pose both a physical and chemical hazard, and any potential risks from the C&D debris are unknown at this time."

Comment 3 – CSX states the additional estimated 3.15-acre area of excavation/removal in Alternative 5 versus the area of excavation/removal in Alternative 4 is unnecessary and inconsistent with the NCP. CSX further states the "conversion" of this approximately 3.15-acre area to wetlands is a potential taking of CSX uplands and is inconsistent with the NCP. The selection of Alternative 5 over Alternative 4 is intended to ensure the complete removal of the NAPL/MGP waste from the footprint of the unpermitted Vaughn Landfill. Based on SCDES's experience at other MGP sites, the impacted area is likely to be larger than was estimated during the remedial investigation. In addition, there has been very limited characterization of landfill material in the approximately 3.15-acre area. Under Alternative 5, all areas where there are known or threatened releases of hazardous substances will be addressed. Upon completion of the excavations, these areas will be revegetated with wetlands vegetation. Addressing the release or threatened release of hazardous substances and the restoration of the excavated areas to pre-landfill conditions (i.e., wetlands) is not inconsistent with the NCP.

Comment 4 – CSX states that it understands the removal of C&D debris from approximately 4.8 acres in Parcel 3 is necessary to access the NAPL. CSX further states the "conversion" of this 4.8 acres to wetlands is a potential taking of CSX uplands and is inconsistent with the NCP. As part of Alternative 5, excavations in the footprint of the unpermitted Vaughn Landfill will be backfilled to closely match the existing contours of the surrounding wetland areas. These areas will then be revegetated with wetlands vegetation. Restoration of the excavated areas to pre-landfill conditions (i.e., wetlands) is not inconsistent with the NCP.

Comment 5 – CSX requests consideration of supplemental Alternative 3A which would involve the placement of a low permeability cap over the northern portions of the Vaughn Landfill to isolate impacted sediment beneath the footprint of the Vaughn Landfill. While Alternative 3A would likely lessen infiltration through the Vaughn Landfill, it would leave a significant volume of NAPL in place within the footprint of said landfill, where it would be exposed to shallow groundwater. Alternative 3 as presented in the Proposed Plan consisted of a permanent barrier wall to prevent remaining sorbed contaminants of concern and coal tar from migrating from beneath the Vaughn Landfill. Alternative 3A without a permanent barrier wall would not prevent the migration of impacted groundwater and coal tar. SCDES believes this material will be a continuing source of groundwater contamination unless it is removed. Furthermore, Alternative 3A would require continuous long-term maintenance of the capped area. SCDES does not believe Alternative 3A would provide the best combination of being protective of human health and the environment and complying with ARARs.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy, which are included in the Record of Decision (ROD). These changes include:

1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy;

2) Along with that change, language regarding monitored natural attenuation has been removed from the selected remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and

3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively.

We appreciate CSX's willingness to work with SCDES and Duke and we thank you again for your comments. Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
R. Gary Stewart, BLWM
Lucas Berresford, BLWM
Karen C. Ratigan, OGC

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Our Mission: We use our legal expertise to protect lan ater and communities across South Carolina.

August 2, 2024

VIA EMAIL AND U.S. MAIL
Greg Cassidy, Project Manager
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Bureau of Land & Waste Management
2600 Bull Street
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cassidga@dhec.sc.gov

RE: Proposed Cleanup of the Contaminated Bramlett Road Site

Dear Mr. Cassidy:

The South Carolina Environmental Law Project ("SCELP"), in cooperation with Mountain View Baptist Church ("MVBC" or "the Church"), writes to share their comments on the Department of Environmental Services' ("DES" or "the Department") Proposed Plan for cleaning up the severely contaminated Bramlett Road Site ("the Site") in Greenville County, South Carolina. This letter is intended to pertain to any and all forthcoming permitting processes that are relevant to the subjects this letter addresses and is in addition to any separate comment letters that the Church's members may submit.

The Church appreciates this opportunity to provide public comment on the Department's Proposed Plan and preferred alternative for cleaning up the Bramlett Site. As the Department considers the selected remedy to include in its forthcoming Record of Decision, we strongly support a fully restorative cleanup of the Bramlett Site. Specifically, we are calling for the Department's adoption of "Alternative 5+," which maintains several components of the Department's preferred remedy, Alternative 5, and also supplements the remedial approach to be wholly comprehensive. Anything less than Alternative 5+, which is explained in detail below, would be insufficient under the law and would further prolong the surrounding community's decades-long wait for environmental justice.

I. SITE OVERVIEW

The Bramlett Road Site consists of five parcels and a portion of the Legacy Early College Elementary School ("Legacy School") property, totaling approximately 35 acres, which are contaminated with coal tar. The north, south, and west sides of the Site are outlined by the CSX

Board of Directors – Gerald Schulze, Chairperson, Mac Bennett, Keith Bowers, Jamelle Ellis, Amy Fabri, Terry Grayson-Caprio, Tom Kester, Bess Lochocki, Esq., Walton McLeod, Esq., Carla Pinckney, Cynthia Powell, Greg VanDerwerker

Board Member Emeriti - Frances Close, John Mark Dean, Robert Schofield

Transportation ("CSX") railroad line, and the western boundary of the Site also includes the Reedy River and the Swamp Rabbit Trail. To the east, several properties, including Mountain View Baptist Church, the Greater Greenville Sanitation Department, and the Legacy School are directly adjacent to this contaminated Site.

The contamination present on the Site has been building for over a century. The source of this contamination stems from a former Manufactured Gas Plant (MGP) that was owned by Duke Energy's predecessor companies and operated on one of the Site's parcels from 1917 to 1952. Coal tar, a non-aqueous phase liquid (NAPL), was a byproduct of the coal gas manufacturing process that drained into and across the parcels of the Bramlett Site, three of which are wetlands, as well as toward and into the Reedy River via a historic drainage ditch running southeast through all of the Site's parcels. Coal tar is a known source of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and carcinogenic polynuclear aromatic hydrocarbons (PAHs) that pose a significant risk to human and ecological health, including—among others—benzene, naphthalene, and benzo(a)pyrene.

Unfortunately, the contamination of the Bramlett Site is further complicated by the existence of an illegal, unpermitted landfill on one of the Site's parcels. Shortly after the former MGP was demolished in 1958, CSX's predecessor company began negotiations for the purchase of the Site. By 1967, CSX's predecessor owned all the Site parcels, and CSX is still the current owner of the Site today. However, in 1988, Mr. Robert Vaughn of Vaughn Construction and Demolition Company offered to purchase a portion of one of the Site's parcels for a solid waste landfill. Although this property transaction and transfer were never completed, Mr. Vaughn began illegally dumping construction and demolition debris onto the wetlands of one of the Site's parcels, harming aquatic life and the ability of the wetlands to properly perform their intended hydrologic functions. These dumping activities continued for five years, leading to an estimated 150,000 tons of construction and demolition debris being blatantly disposed of in seven acres of wetlands without any regard for the law or the impact on the surrounding environment.

The investigation of the illegal Vaughn Landfill ultimately led to the discovery of coal tar contamination at the Bramlett Site. In 1993, when investigating the illegal landfill and determining that it violated the Clean Water Act, the U.S. Army Corps of Engineers ("USACE") and DES' predecessor agency, the Department of Health and Environmental Control ("DHEC"), found coal tar at the base of the landfill and in the surrounding wetlands. For the next several years, CSX studied the Site and determined that Duke Energy's MGP was the source of the coal tar, which then travelled through the wetlands and groundwater located on the other parcels.[1] In the early 2000s, Duke Energy performed very limited remedial excavation and backfilling across the parcel that housed the MGP, but the rest of the Site's contamination was not studied nor remediated at that time. For the next 15 years, little to no progress was made in terms of investigating and remediating the Site's remaining contamination.

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[1] *See* S.C. DEPT. OF ENVTL. SERV., *CSXT Bramlett Road Site (aka Duke Power Manufactured Gas Plant)*, https://des.sc.gov/community/environmental-sites-projects/csxt-bramlett-road-site-aka-duke-power-manufactured-gas-plant. All historical documents on this webpage from October 1994 to June 2000 were prepared by CSX and their consultants.

Finally, in 2016, Duke Energy signed a Responsible Party Voluntary Cleanup Contract (VCC) with DHEC[2] and began studying the Bramlett Site again and evaluating ways to remediate the remaining contamination.[3] This VCC directed Duke Energy to conduct an environmental investigation of the Site, evaluate potential remedial actions to address the remaining contamination, and submit quarterly progress reports summarizing on-site activities. In August of 2022, DHEC directed Duke Energy to prepare a Feasibility Study for the Site,[4] which was submitted in October of 2023.[5] In May of 2024, DHEC released a Proposed Plan presenting the Department's preferred cleanup alternative from Duke Energy's Feasibility Study.[6] A few weeks later, the Department hosted a public meeting to review the Proposed Plan and opened a public comment period for the public's input on the Plan. After all comments are received and reviewed, the Department will issue a Record of Decision that determines which remedial action will be performed and explains why that remedy was selected.

II. OUR COMMENTERS' INTERESTS

Mountain View Baptist Church has been a tremendous pillar in the Newtown community for the last 116 years. The Church's members live, work, recreate, and worship in and around the Newtown neighborhood, and many of these members come from families that have called Mountain View and Newtown home for several generations. However, over the years, the Newtown neighborhood has faced significant challenges due to environmental contamination, flooding, and disinvestment. One of the sources of environmental contamination affecting Newtown and the Church is the Bramlett Site, which is located less than 250 feet away from the Church building.

In response to these challenges, Pastor Stacey Mills, his staff, and his congregation live out a unique mission that is rooted not only in faith, but also in empowerment, healthy living, and

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2 S.C. DEPT. OF HEALTH & ENVTL. CONTROL, *Responsible Party Voluntary Cleanup Contract 16-5857-RP* (Aug. 1, 2016), https://des.sc.gov/sites/des/files/docs/HomeAndEnvironment/Docs/CleanUpPrograms/400801-17.pdf [hereinafter *Voluntary Cleanup Contract*].

3 *See* S.C. DEPT. OF ENVTL. SERV., *CSXT Bramlett Road Site (aka Duke Power Manufactured Gas Plant)*, https://des.sc.gov/community/environmental-sites-projects/csxt-bramlett-road-site-aka-duke-power-manufactured-gas-plant. All historical documents on this webpage from September 2000 and forward were prepared by Duke Energy and their consultants or are status documents drafted by DHEC and DES relating to Duke Energy's progress under the VCC.

4 S.C. DEPT. OF HEALTH & ENVTL. CONTROL, *Request for Feasibility Study Work Plan* (Aug. 10, 2022), https://des.sc.gov/sites/des/files/media/document/BLWM_Bramlett_FeasibilityStudyWPRequest.pdf.

5 GEOSYNTEC CONSULTANTS, *Focused Feasibility Study, Revision 1, Prepared for Duke Energy Carolinas, LLC* (Oct. 2023), https://des.sc.gov/sites/des/files/media/document/BLWM_Bramlett_FFSRev1.pdf [hereinafter *Duke Energy Focused Feasibility Study*].

6 S.C. DEPT. OF HEALTH & ENVTL. CONTROL, *Announcement of Proposed Plan* (May 2024), https://des.sc.gov/sites/des/files/BLWM_Bramlett_ProposedPlan.pdf [hereinafter *Proposed Plan*].

community belonging.[7] Through the Parish House Community Development Corporation ("Parish House CDC"), Mountain View Baptist Church has been able to pursue its mission and devote resources to addressing quality affordable housing, health and education disparities, and lack of economic opportunities—all with the final goal of revitalizing Newtown into a vibrant, healthy, thriving community. Over the past several years, the Parish House CDC has hosted meetings, workshops, and charettes, which have ultimately informed a complete Newtown Master Plan that innovatively plans for this community's future and all the things they would like to see happen here (see **Figure 1** below for the area included in the Newtown Master Plan). Foundational to this vision, however, is a clean environment that provides opportunities, rather than hazards, to the people who live in it.

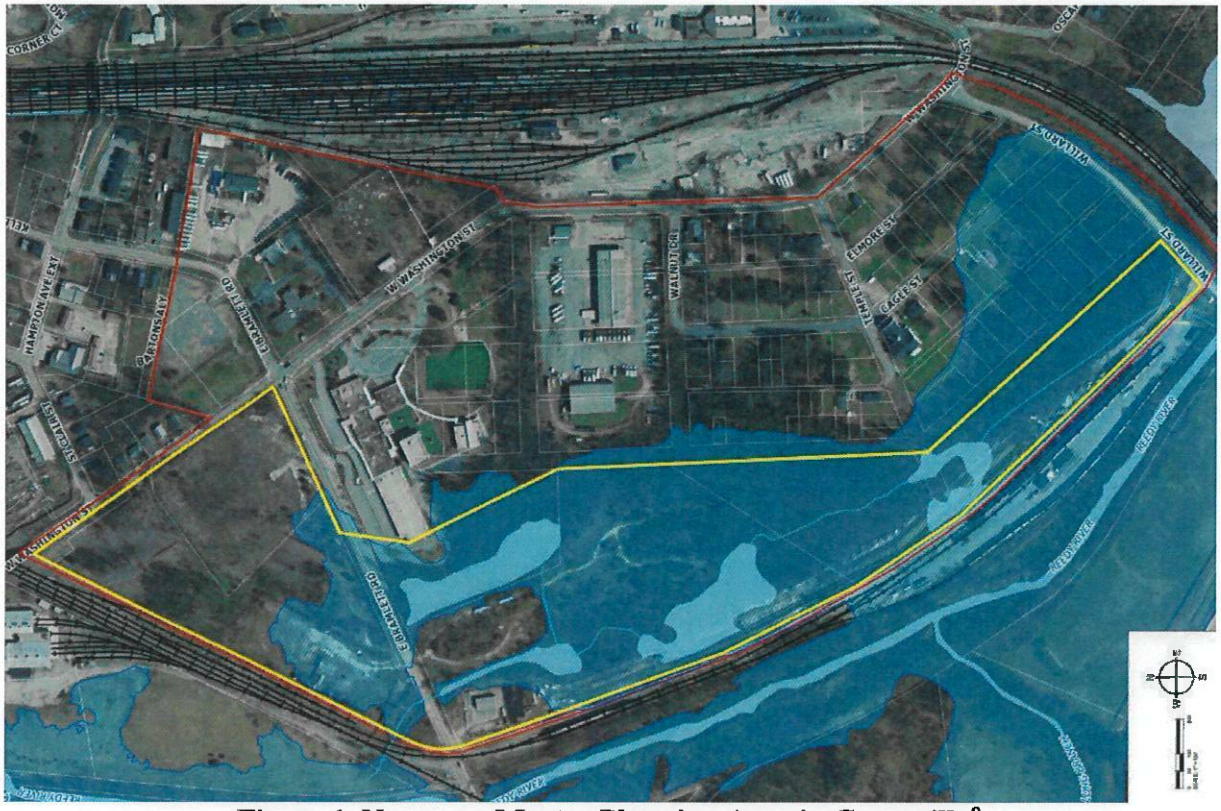

Figure 1. Newtown Master Planning Area in Greenville[8]

Not only is a full cleanup necessary for the Newtown Master Plan to become a reality, but a full cleanup of the Bramlett Site is also imperative for Mountain View to live out its values of community empowerment, pursuing equity, and cultivating a safe and healthy environment. For three decades, Duke Energy, CSX, and DHEC have been studying remediation of the Bramlett

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7 *See* MOUNTAIN VIEW BAPTIST CHURCH, *Our Mission*, https://www.mymvbc.org/mission-vision.

8 The master planning area is outlined in red, and the Bramlett Site, which is inside of the planning area, is outlined in yellow.

Site but have taken very few steps toward a full-scale cleanup of the Site. This community and this congregation deserve nothing less than a comprehensive cleanup and restoration of the Site, for that is the only remedy that will right the wrongs of the past and allow the Newtown community to step into a future of vibrancy and full possibility.

III. THE NECESSARY REMEDIAL APPROACH: ALTERNATIVE 5+

The South Carolina Hazardous Waste Management Act directs the Department of Environmental Services to "protect the health and safety of the public, the health of living organisms[,] and the environment from the effects of improper, inadequate, or unsound management of hazardous wastes."[9] In carrying out their responsibilities, the Department is empowered to implement and enforce the federal statute governing the cleanup of hazardous sites, the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA").[10] CERCLA provides the Department with the authority to contract with parties that are responsible for the creation of hazardous sites and guide those responsible parties through the selection and implementation of an appropriate remedial action.[11]

The predominant mandate of the remedy selection process under CERCLA "is to select remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste."[12] Any remedy that does not meet this program goal of CERCLA shall not be eligible for selection by the Department as the chosen cleanup alternative for the contaminated Bramlett Site.[13] To assist our review of the proposed cleanup remedies and whether those alternatives are protective of human health and the environment, we commissioned an expert report from an environmental consulting firm, Aquilogic, Inc., to objectively evaluate the proposed cleanup alternatives.[14] The Aquilogic team of scientists, engineers, and other professionals carefully studied the documents and corresponding data related to the Bramlett Site and published a Technical Memorandum that examines the sufficiency of Duke Energy's Focused Feasibility Study and the cleanup alternatives proposed. The 2024 Aquilogic Report is attached to this comment letter as **Exhibit 1** and fully incorporated herein by reference.

The subsections below highlight the major findings and recommendations from the 2024 Aquilogic Report. Given the extreme on-site contamination, Aquilogic reaches the emphatic conclusion that a more comprehensive clean-up than those listed in the Focused Feasibility Study

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9 S.C. CODE ANN. § 44-56-30.

10 S.C. CODE ANN. § 44-56-200(B).

11 *See* S.C. CODE ANN. §§ 44-56-200(C); 44-56-710; 44-56-740; *see also* 42 U.S.C. § 9607.

12 40 C.F.R. § 300.430(a)(1)(i).

13 *See id.* at (f)(1)(i)(A) ("Overall protection of human health and the environment and compliance with ARARs are threshold requirements that each alternative must meet in order to be eligible for selection.").

14 Aquilogic, Inc. is an environmental and water resources consulting company that is committed to finding and developing solutions to complex problems that also protect and restore the environment. For more information, please visit the company's website: https://www.aquilogic.com/index.php.

is needed to fully remediate and restore the Bramlett Site.[15] Thus, we are calling for the Department to adopt Alternative 5+ in its Record of Decision, which meaningfully supplements the Department's preferred alternative to be fully protective of human health and the environment in light of Aquilogic's findings and recommendations.

A. On-Site Contamination

As briefly mentioned above, the Bramlett Site is made up of five parcels and a portion of the Legacy School property. Figure 2 of the 2024 Aquilogic Report, which is based on Figure 2 of Duke Energy's Focused Feasibility Study, shows the location of each parcel and delineates the distinctive features of these parcels. Parcel 1, the location of the former MGP, and Parcel 2 underwent limited remedial excavation in the early 2000s (outlined in orange in Figure 2 of the 2024 Aquilogic Report). A series of drainage ditches flow from the north to the south under East Bramlett Road and across Parcels 3, 4, and 5.[16] Parcels 3, 4, and 5 are naturally made up of wetlands, but part of the wetlands of Parcel 3 have been unlawfully altered and filled with the Vaughn Landfill.

Across these parcels, the topography of the area generally slopes south-southwest toward the Reedy River, and the series of drainage ditches running through these parcels ultimately drain into the surface waters of the Reedy River in a lined drainage channel near Willard Street.[17] The wetland parcels became contaminated as a result of coal tar contaminated wastewater discharging through this series of drainage ditches. Further, because of these discharges, residual coal tar exists in the sediment along the line of the ditch as well as on the floodplain beneath the Vaughn Landfill. Below the surface, the shallow zone, transition zone, and bedrock of the groundwater are also contaminated, as a result of MGP operations and coal tar contamination flowing across the drainage ditches.[18] The groundwater beneath the Site is also hydraulically connected to the Reedy River, likely causing the contamination from the groundwater to discharge into the surface water and further the scope of contamination on and around the Bramlett Site.[19]

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15 Importantly, all of the data cited and explained in the Aquilogic Report originated in the monitoring results provided by Duke Energy and their consultants. Aquilogic did not undertake sampling or monitoring of its own to investigate the remedial alternatives proposed by Duke Energy. Instead, Aquilogic used the same data and monitoring results as Duke Energy—but reaches a vastly different conclusion about the necessary remedial approach.

16 *See 2024 Aquilogic Report* (Exhibit 1), Figure 3.

17 *Duke Energy Focused Feasibility Study*, *supra* note 5, at p. 2.

18 *See 2024 Aquilogic Report* (Exhibit 1), Figures 13–15.

19 *See id.* at pp. 7–8. This phenomenon of the groundwater contamination discharging into surface water was also noted in the early investigations of the Bramlett Site. *See also, e.g.*, APPLIED ENG. & SCI., INC., *Site Investigation / Phase II* (Sept. 1996), https://des.sc.gov/sites/des/files/docs/HomeAndEnvironment/Docs/CleanUpPrograms/400801-a4.pdf ("The discharge point of groundwater from the shallow saturated zone within the CSXT properties is expected to be in the river, therefore, it is likely that the contaminants in groundwater are discharging to the Reedy River."); DUKE ENG. & SERVS., *Phase III Investigation Report* (June 2000), https://des.sc.gov/sites/des/files/docs/HomeAndEnvironment/Docs/CleanUpPrograms

The South Carolina Hazardous Waste Management Act divides the specific features of a contaminated site into the following "media:" (a) soil; (b) surface water; (c) sediments; (d) ambient, noncontainerized air; and (e) the saturated zone beneath surface soils commonly referred to as "groundwater."[20] The nature and distribution of the contamination on the Bramlett Site affects surface water, groundwater, soil (found on Parcels 1 and 2), and sediment (found on Parcels 3, 4, 5, and the Legacy School property).[21] The contaminants of concern associated with the Bramlett Site are coal-tar derived hydrocarbons, and the indicator compounds used to locate these contaminants are benzene, naphthalene, and benzo(a)pyrene.[22] Several sources of regulatory law create the maximum contaminant levels (MCLs), risk-based screening levels (RBSLs) and regional screening levels (RSLs) for these contaminants in the different media present on-site. If a contaminant exceeds these levels, it represents a danger to human health and the environment. **Table 1** below outlines the level of the contaminant allowed in the different media on-site according to the appropriate regulatory standard.

Table 1. Regulatory Contaminant Levels for Bramlett Site Indicator Compounds

Compound	Surface Water	Groundwater	Soil	Sediment
Benzene	5 ug/L[23]	5 ug/L[23]	1,200 ug/kg[24]	1,200 ug/kg[24]
Naphthalene	25 ug/L[25]	25 ug/L[25]	3,800 ug/kg[24]	3,800 ug/kg[24]
Benzo(a)pyrene	0.2 ug/L[26]	0.2 ug/L[26]	87 ug/kg[27]	110 ug/kg[24]

/400801-a13.pdf, pp. 28–33.

20 S.C. CODE ANN. § 44-56-200(A)(1).

21 *See Duke Energy Focused Feasibility Study, supra* note 5, at p. 15 ("[T]he media contained within [Parcels 3, 4, 5 and the Legacy School property] is considered sediment rather than soil. For Parcels 1 and 2, the media present developed in place or was placed during backfilling of the remedial efforts on Parcel 1 and is considered soil.").

22 *See 2024 Aquilogic Report* (Exhibit 1), pp. 4–5.

23 S.C. CODE ANN. REGS. 61-58.5(N)(2)(b).

24 U.S. ENVTL. PROT. AGENCY, *Regional Screening Levels* (May 2024), https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables. Importantly, the standard for naphthalene recently changed from 3,800 to 2,000 ug/kg, but 3,800 is maintained here for consistency with the Aquilogic Report and Duke Energy's Focused Feasibility Study. Note that the residential limit, not industrial, is used in this table as directed by DES' VCC with Duke Energy. *See Voluntary Cleanup Contract, supra* note 2, p. 19.

25 S.C. DEPT. OF HEALTH & ENVTL. CONTROL, *Quality Assurance Program Plan for the Underground Storage Tank Management Division* (Feb. 2016), https://scdhec.gov/sites/default/files/docs/Environment/docs/DHEC%20UST%20QAPP_Rev-3.1(2).pdf, Table D1.

26 S.C. CODE ANN. REGS. 61-58.5(D)(2)(b)(xvi); S.C. CODE ANN. REGS. 61-58.6, App. B.

27 *See 2024 Aquilogic Report* (Exhibit 1), pp. 4–5 ("In 2000, benzo(a)pyrene was determined to be the most potent carcinogenic PAH in soils at the Site and a risk-based soil concentration of 0.087 milligrams per kilogram (mg/kg) or 87 micrograms per kilogram (ug/kg) was established (Duke Energy, 2000b, Appendix A).").

Over the years, Duke Energy's consultants performed many phases of testing and began to paint a picture of how much coal tar contamination exists on-site. Aquilogic has reviewed Duke Energy's results three times in the last several years to evaluate the data and fully explain what the levels of contamination mean for human health and the environment. Aquilogic's first review was in 2019, which led to the 2019 Aquilogic Report that is attached to this comment letter as **Exhibit 2** and fully incorporated herein by reference. One year later, Aquilogic updated its findings considering the newest testing results and published the 2020 Aquilogic Report, which is attached to this comment letter as **Exhibit 3** and fully incorporated herein by reference.

The three Aquilogic Reports show that the on-site contamination delineated so far is quite extensive and all the Bramlett Site's media need significant remediation and restoration. Turning first to soil, although there was limited excavation performed on Parcel 1 in the early 2000s, "soil contamination remains at the Site as the lateral extent of excavation work was constrained by site boundaries and landfill debris."[28] Because of these constraints, Duke Energy left some of the contaminated soil on Parcel 1 behind, and the maximum concentration of benzo(a)pyrene detected in a sample of soil still remaining was 180,000 micrograms per kilogram, far exceeding the target cleanup criteria of 87 micrograms per kilogram.[29] The locations where excavation did take place were also not comprehensive enough to remove all contaminated soil. For example, in a soil sample collected from the bottom of the depth of excavation, benzene was detected at a concentration of 27,000 micrograms per kilogram, again far exceeding the regulatory standard of 1,200 micrograms per kilogram.[30] As a result, the data collected since these excavation activities in the early 2000s continue to exceed the appropriate standards, for coal tar remains upon and beneath the Site and constitutes an ongoing source of contamination of soil and other media.[31]

Second, the sediment present on Parcels 3, 4, 5, and the Legacy School property is also highly contaminated, especially along the series of drainage ditches and at the southern end of Vaughn Landfill. Duke Energy's testing throughout the remedial investigation process showed that visible coal tar and NAPL on-site indicates that sediment contamination levels exceed regulatory standards.[32] The considerable area of visible NAPL in the sediment across Parcels 3, 4, 5, and the Legacy School property is outlined in Figure 12 of the 2024 Aquilogic Report, which represents all of the contamination that must be fully removed for regulatory standards to be met. In the meantime, the most recent sediment sampling results show that the current concentrations of benzene, naphthalene, and benzo(a)pyrene exceed regulatory standards by multiple orders of

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28 *2019 Aquilogic Report* (Exhibit 2), p. 7.

29 *Id.* at p. 29. Aquilogic goes on to explain that this sampling result for benzo(a)pyrene may not even fully capture the extent of the contamination left behind in the soil: "However, review of the analytical data summary tables indicates that the reported benzo(a)pyrene concentration at location 102SW for example was 4,350 mg/kg [4,350,000 ug/kg] and the total PAH concentration was 78,900 mg/kg."

30 *Id.* at pp. 29–30.

31 *2024 Aquilogic Report* (Exhibit 1), p. 6, Attachment 2 (Soils Laboratory Analytical Results).

32 *Duke Energy Focused Feasibility Study*, *supra* note 5, at p. 16; *see also Proposed Plan*, *supra* note 6, at p. 3.

magnitude.[33] Further, this contaminated sediment on-site extends all the way down to the Reedy River, and suspended sediment samples collected in 2018 exceeding regulatory levels confirmed that "[sediment] contamination in the current drainage channel has discharged, and will continue to discharge, to the Reedy River."[34] Since those results were analyzed, interim best management practices (BMPs) were installed to prevent the sediment contamination from continuing to enter the Reedy River, but no action has yet been taken to remove the vast volume of sediment that is contaminated with coal tar.[35]

Third, the groundwater is by far the most contaminated medium of the Bramlett Site. The groundwater contamination has been building since MGP operations, and this contamination has grown exponentially as a result of the contaminated soil and groundwater remaining on-site for so many years.[36] Because groundwater is fluid and does not stay in one place, this contamination now stretches beyond the bounds of the monitoring wells that have been installed across the Site's parcels.[37] Even so, those monitoring wells confirm that the contamination present in the groundwater, as measured by the indicator compounds benzene and naphthalene, far exceeds the maximum contaminant levels established by regulatory law. **Table 2** below lists the monitoring well sample results from available data for the past five years that have *exceeded* regulatory limits.[38] Importantly, benzene and naphthalene have regularly been detected above what regulatory standards allow, including up to 390 times the appropriate standard.

Table 2. Groundwater Monitoring Results Exceeding Regulatory Limits, 2019–2023

Date of Sample Collection	Monitoring Well Location ID	Monitoring Well Screen Interval (feet below land surface)	Benzene Level Detected (ug/L)	Naphthalene Level Detected (ug/L)
			Regulatory Limit: 5 ug/L	***Regulatory Limit: 25 ug/L***
03/27/2023	MW-1	5-15	**26.5**	**2,130**
03/24/2023	MW-3BRL	99-104	**575**	**4,450**
03/24/2023	MW-21BRL	60-65	**27.7**	**1,600**
03/24/2023	MW-45BR	80-90	**87**	**347**
03/24/2023	MW-47BR	110-120	**134**	**1,860**
03/23/2023	MW-3BR	60-64	**298**	**2,050**
03/23/2023	MW-20	20-25	**202**	**4,420**

33 *See 2024 Aquilogic Report* (Exhibit 1), Attachment 2 (Sediment Laboratory Analytical Results).

34 *2019 Aquilogic Report* (Exhibit 2), pp. 11–12.

35 *See 2024 Aquilogic Report* (Exhibit 1), Figure 16.

36 *Id.* at p. 6.

37 *Id.* at pp. 5–7.

38 These monitoring results are from the most recent available data compiled by Aquilogic and published in their Reports. *See 2024 Aquilogic Report* (Exhibit 1), pp. 11–12, Table 1, Figures 5–15; *2019 Aquilogic Report* (Exhibit 2), pp. 25–27; *2020 Aquilogic Report* (Exhibit 3), pp. 10–12, Table 2, Figures 4–9.

Date of Sample Collection	Monitoring Well Location ID	Monitoring Well Screen Interval (feet below land surface)	Benzene Level Detected (ug/L)	Naphthalene Level Detected (ug/L)
			Regulatory Limit: 5 ug/L	*Regulatory Limit: 25 ug/L*
03/23/2023	MW-49BR	***Sample Not Taken Due to 5.25 feet of Coal Tar in Well***		
03/21/2023	MW-2BR	55-60	**770**	**1,440**
03/21/2023	MW-2TZ	27-32	**495**	**2,390**
03/21/2023	MW-29BR	81-86	**238**	**612**
03/21/2023	MW-29TZ	26-31	**1,330**	**2,620**
03/21/2023	MW-36S	5-20	**6.8**	**82.8**
10/04/2022	MW-2TZ	27-32	**994**	**3,630**
10/04/2022	MW-2BR	55-60	**767**	**1,930**
10/03/2022	MW-1	5-15	**15.8**	**1,700**
10/03/2022	MW-20	20-25	**192**	**4,640**
10/03/2022	MW-45BR	80-90	**74.3**	**215**
10/03/2022	MW-3BRL	99-104	**532**	**3,400**
10/03/2022	MW-3BR	59.5-64.5	**181**	**763**
10/03/2022	MW-47BR	110-120	**167**	**2,620**
09/29/2022	MW-21BRL	60-65	**31.7**	**1,740**
09/28/2022	MW-36S	5-20	**5.8**	**200**
09/27/2022	MW-29TZ	26-31	**1,950**	**7,220**
09/27/2022	MW-29BR	81-86	**192**	**595**
02/18/2020	MW-3BRL	99-104	**588**	**2,430**
02/17/2020	MW-1	5-15	**29.9**	**1,970**
02/17/2020	MW-2BR	55-60	**964**	**1,160**
02/17/2020	MW-2TZ	27-32	**817**	**1,590**
02/17/2020	MW-3BR	59.5-64.5	**595**	**1,430**
02/13/2020	MW-29TZ	26-31	**1,680**	**3,200**
02/12/2020	MW-36S	5-20	**9.4**	**368**
02/11/2020	MW-29BR	81-86	**151**	**306**
11/25/2019	MW-2BR	55-60	**1,100**	**3,900**
04/10/2019	MW-3BR	59.5-64.5	**620**	**2,910**
03/21/2019	MW-29TZ	26-31	**1,920**	**4,060**
03/20/2019	MW-1	5-15	**25.8**	**1,700**
03/20/2019	MW-21	5-18	**30.4**	**57.5**

Fourth, the last contaminated medium of the Bramlett Site is surface water of the Reedy River and its floodplain. During MGP operations, "coal tar contaminated wastewater was routinely discharged into the drainage ditch which flowed beneath East Bramlett Road and onto the floodplain," and into the Reedy River.[39] After MGP operations ended, the remaining contaminated

[39] *2019 Aquilogic Report* (Exhibit 2), p. 38. Because it is located within the 100-year floodplain,

sediment throughout the series of drainage ditches leading from Parcel 1 to the river caused contamination to continue discharging into the Reedy River.[40] In 2019, Aquilogic performed sediment sampling at the southern end of the drainage channel on Parcel 5 near Willard Street to analyze the contamination in the Reedy River. The 2019 Aquilogic Report explains:

> Grab samples WT1 and WT2 were collected from channel-bottom sediments in April 2019. Total carcinogenic PAH concentrations of 6,608 ug/kg and 17,551 ug/kg were detected in WT1 and WT2, respectively. Samples of suspended sediment were collected from the water column 48 feet (1D), 78 feet (2D), and 178 feet (3D) upstream of the drainage channel's exit point into the Reedy River. Total carcinogenic PAH concentrations of 10,176 ug/kg, 28,200 ug/kg, and 20,270 ug/kg were detected in 1D, 2D, and 3D, respectively. These concentrations greatly exceed the risk-based target cleanup level of 319 ug/kg that was established for remediation of the former MGP in 2001-2002. During sampling, care was taken to ensure that the samples represented suspended material from natural flow in the channel, and not channel-bottom sediment. Therefore, the results suggest that there is a continuing outflow of contaminants from the Site to the Reedy River.[41]

The BMPs that were installed across the Site were designed to reduce contamination reaching surface water.[42] However, the hydraulic connection between groundwater and the surface water of the Reedy River makes it likely that the contaminants in the groundwater are discharging to the Reedy River, creating another path by which contamination is reaching surface water.[43] With such extreme levels of contamination present in the groundwater, this imminent threat to the Reedy River and its floodplain is substantial.[44]

B. Duke Energy's Proposed Alternatives & Their Deficiencies

Pursuant to Duke Energy's VCC with the Department,[45] Duke Energy submitted the Focused Feasibility Study evaluating cleanup options for remediating the Bramlett Site in October of 2023.[46] Unfortunately, Aquilogic determined that "[Duke Energy's] proposed remedial actions will not fully address soil, NAPL, groundwater, and sediment contamination at the Site."[47]

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this contaminated Site has a one percent chance of flooding every year, which further transports toxic and carcinogenic constituents downstream and onto adjacent properties, including Mountain View Baptist Church and the Newton residential neighborhood.

40 *Id.* at p. 12.

41 *Id.* at pp. 38–39.

42 *2024 Aquilogic Report* (Exhibit 1), p. 12.

43 *Id.* at pp. 7–8; *see supra* note 19 and accompanying text.

44 *2024 Aquilogic Report* (Exhibit 1), pp. 7–8. Aquilogic also stresses the importance of collecting sediment pore-water samples to characterize contaminant concentrations in the groundwater discharging to the Reedy River.

45 *See Voluntary Cleanup Contract*, *supra* note 2, p. 15.

46 *See Duke Energy Focused Feasibility Study*, *supra* note 5.

47 *2024 Aquilogic Report* (Exhibit 1), p. 8.

Because these proposed alternatives fail to fully address the contaminated media of the Site, they are fundamentally inadequate under the law. The applicable regulatory provisions, Aquilogic's expert analysis of each of the five alternatives proposed by Duke Energy, and the scientific and legal deficiencies with each approach are summarized below.

For a remedial alternative to be eligible for selection by the Department, it must meet two fundamental requirements. First, the alternative must "protect human health and the environment, in both the short- and long-term, from unacceptable risks posed by hazardous substances, pollutants, or contaminants present at the site by eliminating, reducing, or controlling exposures to levels established during development or remediation goals."[48] Second, the alternative must "attain applicable or relevant and appropriate requirements under federal environmental laws and state environmental or facility siting laws."[49] In South Carolina, these requirements are found in the Hazardous Waste Management Act:

> (E) Site-specific remediation standards developed for each medium and authorized by this section shall include an evaluation of remediation standards based upon the present or currently planned future use of a site. Site-specific remediation standards shall be developed in accordance with the following:
>
> (1) for surface water, the site-specific remediation standard shall be, or shall demonstrate compliance with, water quality standards adopted by the department [*see* S.C. Code Ann. Regs. 61-58, State Primary Drinking Water Regulations];
>
> (2) for a saturated zone or groundwater, the current and probable future use of the saturated zone or groundwater must first be identified, then site-specific sources of contaminants and potential receptors must be identified. Potential receptors must be protected, controlled, or eliminated, whether the receptors are located on or off the site where the source of the contamination is located;
>
> (3) natural environmental conditions affecting the fate and transport of contaminants, such as natural attenuation, shall be determined by the appropriate scientific methods and shall be considered a site-specific remediation standard;
>
> (4) permits for facilities located at sites covered by any of the programs or requirements established pursuant to regulation shall contain conditions to avoid exceedances of the applicable groundwater standards adopted by the department due to the continued operation of any onsite facility [*see* S.C. Code Ann. Regs. 61-58, State Primary Drinking Water Regulations];
>
> (5) for soil, the soil shall be remediated to levels that are no longer a continuing source of groundwater contamination in excess of the site-specific standards.

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48 40 C.F.R. § 300.430(e)(9)(iii)(A).

49 *Id.* at (e)(9)(iii)(B).

Soil shall be remediated to unrestricted use standards on residential property with the following exceptions:

(a) for mixed-use developments where ground level uses are nonresidential and all potential exposure to contaminated soil has been eliminated, the department may allow soil to remain on site in excess of unrestricted use standards; and

(b) if soil remediation is impractical because of preexisting structures or removal is impractical, then all areas of the real property where a person may come into contact with soil must be remediated to unrestricted use standards. All other areas of the real property engineering and institutional controls that are sufficient to protect public health, safety, and welfare and the environment must be implemented;

(6) if applicable, the potential for the human inhalation of contaminants from outdoor air and other site-specific indoor air exposure pathways shall be considered. Site-specific remediation standards also must protect against human exposure to contamination through the consumption of contaminated fish or wildlife and through the ingestion of contaminants in surface water or groundwater supplies;

(7) for known or suspected carcinogens, site-specific remediation standards shall be established at exposures that represent an excess lifetime cancer risk of one in one million. The site-specific remediation standard may depart from the one-in-one million risk level based on the criteria set out in 40 C.F.R. Section 300.430(e)(9). The cumulative excess lifetime cancer risk to an exposed individual shall not be greater than one in ten thousand based on the sum of carcinogenic risk posed by each contaminant present;

(8) for systemic toxicants, site-specific remediation standards shall represent levels to which the human population, including sensitive subgroups, may be exposed without any adverse health effects during a lifetime or part of a lifetime. Site-specific remediation standards for systemic toxicants shall incorporate an adequate margin of safety and shall take into account cases in which two or more systemic toxicants affect the same organ or organ system; and

(9) the site-specific remediation standards for each medium shall be adequate to avoid foreseeable adverse effects to other media or the environment that are inconsistent with the risk-based approach under this section.[50]

Further, other federal and state environmental laws and regulations contain additional specific requirements, based on the features and ecological characteristics of the particular site, that a remedial alternative must meet.[51] Therefore, remedial alternatives that do not protect human health

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50 S.C. CODE ANN. § 44-56-200(E).

51 For example, because there are jurisdictional wetlands on the Bramlett Site, a remedial action must comply with the provisions of the Clean Water Act. *See* 33 U.S.C. §§ 1251 *et seq.* In

and the environment, do not satisfy the provisions above, and do not satisfy other applicable statutes and regulations shall not be eligible for selection by the Department.[52]

In the Focused Feasibility Study, Duke Energy submitted five remedial alternatives to clean up the Bramlett Site for the Department's consideration. The first two proposed alternatives are passive remedies that do not involve active remedial efforts. In Alternative 1, Duke Energy proposes to leave the Site in its current condition.[53] Similarly, Alternative 2 also proposes to leave the Site in its current condition but adds continued monitoring for 30 years and implements soil, sediment, and groundwater land use controls (LUCs) on the parcels.[54] Because these alternatives leave the current contamination in place and do not remediate nor restore soil, sediment, groundwater, and surface water, they do not protect human health and the environment.[55] Failure to address current contamination on-site also violates the relevant legal requirements pertaining to remediation of hazardous sites.[56] Thus, Alternatives 1 and 2 are not eligible for selection by the Department.

The remaining alternatives proposed by Duke Energy are active remedies and involve varying levels of removal of on-site contamination. Alternatives 3, 4, and 5 share the following remedial components: (1) excavation of contaminated sediments on Parcels 4, 5, and the Legacy School property; (2) monitored natural attenuation (MNA) of groundwater; and (3) implementation of land use controls (LUCs) for long-term effectiveness.[57] The differences with these remedial approaches is how each alternative addresses the contamination on Parcel 3, which includes the Vaughn Landfill. First, Alternative 3 proposes selective excavation of visible NAPL, but for the coal tar that is under the landfill, the following actions would be taken: installation of a barrier wall in combination with capping of a portion of the Vaughn Landfill; and hydraulic control of the shallow- and transition-zone groundwater via mechanical pumping (5 years) and engineered phytoremediation on the capped portion of the Vaughn Landfill.[58] Second, Alternative 4 offers to only excavate the portion of the Vaughn Landfill where coal tar is thought to be below and then to excavate the contaminated sediment found underneath.[59] Third, Alternative 5 proposes to excavate

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Table 5-2 of the Focused Feasibility Study, Duke Energy states that they intend to meet their obligations under the Clean Water Act by applying for coverage under Nationwide Permit No. 38, which mandates in relevant part: "mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre" and "mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre." U.S. ARMY CORPS OF ENG., *Nationwide Permit 38 – Cleanup of Hazardous and Toxic Waste* (Feb. 2022), https://www.swt.usace.army.mil/Portals/41/docs/missions/regulatory/2021%20NWP/NWP-38.pdf?ver=vM5bZqWUo7mS-Xhk9baUzA%3D%3D, pp. 8–9.

52 40 C.F.R. § 300.430(f)(1)(i)(A).

53 *See Duke Energy Focused Feasibility Study*, *supra* note 5, at pp. 34–35.

54 *Id.* at pp. 35–36.

55 *See 2024 Aquilogic Report* (Exhibit 1), pp. 5–8, 12–13, 15.

56 *See* S.C. CODE ANN. § 44-56-200(E).

57 *Duke Energy Focused Feasibility Study*, *supra* note 5, at pp. 36–45.

58 *Id.* at pp. 36–40.

59 *Id.* at pp. 40–42.

the entire Vaughn Landfill and then excavate all contaminated sediment found underneath.[60]

Regrettably, each of the active remedies proposed by Duke Energy also do not meet the fundamental requirements that are necessary for these alternatives to be eligible for selection by the Department. One of the common elements of Alternatives 3, 4, and 5 is the excavation of impacted sediment on Parcels 4 and 5. However, Duke Energy does not specify that these excavations will extend the entire length of the drainage ditch that ran across these parcels and eventually converged with the Reedy River by Willard Street. Leaving any portion of this contaminated sediment in place would not protect human health and the environment and would not comply with the appropriate remediation standards in the law.[61] Next, the other common element of Alternatives 3, 4, and 5 is to simply use monitored natural attenuation (MNA) and land use controls (LUCs) to address groundwater contamination. This approach would leave the most contaminated portion of the Bramlett Site still in place, which would certainly not be protective of human health and the environment and compliant with legal requirements.[62] In fact, the South Carolina Hazardous Waste Management Act specifically states that monitored natural attenuation (MNA) shall only be used when appropriate scientific methods indicate that it will be successful in removing contaminants and stopping that contamination from being transported further.[63] Aquilogic's findings make clear that using monitored natural attenuation (MNA) as a remedy for the groundwater contamination is not supported by the data and will not bring the groundwater contaminant levels into compliance with the appropriate standards.[64]

As explained above, Alternatives 3, 4, and 5 diverge with their treatment of Parcel 3, and specifically, of the Vaughn Landfill. Only one of these alternatives, Alternative 5, proposes full excavation of the landfill. Without removal of the debris, it is plainly impossible to excavate the contaminated sediment, so Aquilogic emphasizes that removal of the landfill is absolutely necessary to prevent its contents from acting as "a continuing source of contamination for many years to come."[65] Therefore, removal of the landfill must be included in the remedial action to be protective of human health and the environment and to comply with the appropriate laws and regulations.[66] Consequently, the ideas included in Alternative 3, such as landfill capping, installation of a barrier wall, hydraulic control, and engineered phytoremediation, draw significant criticism from Aquilogic as experimental and inadequate measures to contain the contamination of this Site.[67] Alternative 4's suggestion of only partially removing Vaughn Landfill is similarly rejected by Aquilogic, for this approach would lead to contaminated sediment remaining on-site.[68]

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60 *Id.* at pp. 43–45.

61 *See* S.C. CODE ANN. § 44-56-200(E); *2024 Aquilogic Report* (Exhibit 1), pp. 15–18.

62 *See* S.C. CODE ANN. § 44-56-200(E); *2024 Aquilogic Report* (Exhibit 1), pp. 5–8, 12–13.

63 S.C. CODE ANN. § 44-56-200(E)(3).

64 *See 2024 Aquilogic Report* (Exhibit 1), pp. 16–17; *see also* S.C. CODE ANN. § 44-56-200(E); S.C. CODE ANN. REGS. 61-58.

65 *2024 Aquilogic Report* (Exhibit 1), p. 16.

66 *See* S.C. CODE ANN. § 44-56-200(E); *id.* at pp. 15–18.

67 *2024 Aquilogic Report* (Exhibit 1), pp. 15–17.

68 *Id.*

In summary, the five alternatives Duke Energy prepared for the Department's evaluation each suffer from one or more deficiencies that forbid the Department from selecting these alternatives for implementation.[69] The extreme contamination present at the Bramlett Site necessitates an active remedy, not a passive one, that will comprehensively address all contaminated media on-site. While Alternative 5 gets closest to the mark, even this option leaves major gaps in remediation that must be addressed to be protective of human health and the environment and meet all relevant provisions of law.

C. Components of Alternative 5+

Because the alternatives proffered by Duke Energy in the Focused Feasibility Study are not eligible for selection by the Department, Aquilogic crafted a remedial approach that would fully address the contamination, protect human health and the environment, and meet all requirements under the law. Because this remedial approach builds on the positive elements of Alternative 5, we have named this approach "Alternative 5+." Putting all of those elements together, Alternative 5+ includes the following components: **(1)** full excavation of the Vaughn landfill; **(2)** excavation of the contaminated sediment in Parcels 3, 4, and 5 and the Legacy School property, including along the course of the drainage ditch across Parcels 3, 4, and 5 to the confluence of the drainage ditch with the Reedy River; **(3)** restoration of all excavated portions of Parcels 3, 4, and 5 to a natural wetland or an improved wetland; **(4)** a long-term groundwater remedy including pump and treat (P&T) that extends to the bedrock zone to prevent the continued discharge of contaminated water; and **(5)** heightened monitoring, sampling, and studying of the Site and surrounding areas for the future.[70]

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69 *See* 40 C.F.R. § 300.430(f)(1)(i)(A).

70 This last component of Alternative 5+ is designed to be a catch-all of several recommendations made by Aquilogic. Specifically, this fifth component of Alternative 5+ requires Duke Energy to: "revise the FFS to include evaluation of the bedrock zone; conduct a geophysical survey 300 feet on either side of Bramlett Road between the railroad line and the Reedy River; install two additional shallow, transition, and bedrock wells spaced 250 feet apart adjacent to the east side of the Reedy River, north of monitoring well MW-30S; install four additional shallow, transition, and bedrock wells spaced 250 feet apart are needed adjacent to the east side of the Reedy River, south of the southernmost well (i.e., MW-31S); install bedrock wells the length of the site along the west side of the Reedy River; identify and evaluate any information about groundwater monitoring wells that were installed on CSXT property on the west side of the Reedy River in 1993 and whether contamination may be passing under the Reedy River; sample all wells proximate to the current drainage channel on a consistent basis; analyze groundwater samples from each monitoring well on two occasions (low- and highwater conditions) for VOCs and SVOC constituents, metals, cyanide, ammonia, anions including sulfate, and general water quality parameters; conduct periodic sampling of the Reedy River on a semi-annual basis (coincident with low- and high-flow conditions); perform additional investigation of soil contamination, NAPL, and groundwater contamination in the southwestern corner at the former MGP, along the drainage ditch between the former MGP and Vaughn Landfill, and in the southern landfill area around MW-21; and locate and appropriately destroy the 298-foot deep water supply well located on Parcel

This supplementation of Duke Energy's proposed Alternative 5 is necessary to address a number of outstanding concerns identified by Aquilogic. First, the path of excavation for contaminated sediment on Parcels 4 and 5 must extend for the entire length of the drainage ditch that exists on those parcels for all contaminated sediment to be removed. Alternative 5, as written, does not make clear that the excavation extends to the Reedy River.[71] Second, all excavated portions of Parcels 3, 4, and 5 should be restored as natural wetlands or improved wetlands.[72] The Focused Feasibility Study details that restoration of the wetlands will occur for Parcel 3 excavations, but this restoration is also necessary for Parcels 4 and 5. Third, the lack of evaluation of the bedrock zone and the lack of a groundwater treatment remedy are unacceptable and dangerous, especially given that this is where the "most widespread contamination" exists and that contaminant migration will only continue if left untreated.[73] Finally, Aquilogic stresses in their 2024 Report that the extent of the groundwater contamination has not yet been delineated both laterally and vertically, so it is unknown how much the contamination has spread, whether it is now passing under the Reedy River, and whether contaminated groundwater is discharging into the Reedy River.[74] Each of these gaps and unanswered questions in Alternative 5 must be addressed so that the cleanup of the Bramlett Site honors the central mandates of CERCLA and the South Carolina Hazardous Waste Management Act.

D. Our Vision for the Record of Decision

In light of the above discussion, we urge DES to build upon its preferred remedial option, Alternative 5, and adopt Alternative 5+ in its forthcoming Record of Decision.[75] The removal of Vaughn Landfill and the contaminated sediment is a necessary step that is included in both options. In addition, Alternative 5+ adds the following clarifications to the Alternative 5 approach: all contaminated sediment across Parcels 3, 4, 5, and the Legacy School property will be removed, to the confluence of the drainage ditch with the Reedy River; and all excavations within wetlands

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1 or 2." *See 2024 Aquilogic Report* (Exhibit 1), Table D, pp. 12–13 (points 1, 6–15).

71 *Id.* at pp. 13, 18.

72 *See, e.g.*, U.S. ARMY CORPS OF ENG., *Nationwide Permit 38 – Cleanup of Hazardous and Toxic Waste* (Feb. 2022), https://www.swt.usace.army.mil/Portals/41/docs/missions/regulatory/2021%20NWP/NWP-38.pdf?ver=vM5bZqWUo7mS-Xhk9baUzA%3D%3D, p. 9 ("Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters."); *see also supra* note 51 and accompanying text.

73 *Id.* at pp. 15–16 ("The most widespread contamination in groundwater is in the Bedrock Zone; however, Revision 1 of the FFS provides remedial alternatives without addressing this unit. Sufficient data showing widespread contamination was already available at the time of writing of this report and an appropriate comprehensive remedy cannot be selected without inclusion of this contamination zone. To do so would further delay 'restoration' which can only be achieved by implementing a remedy which includes complete and expeditious remediation of the Bedrock Zone.").

74 *Id.* at pp. 5–8.

75 *See* 40 C.F.R. § 300.430(f)(5).

will be restored to natural or improved wetlands. However, Alternative 5+ also contains substantive remedial steps that were not addressed in Alternative 5, including a long-term groundwater remedy including pump and treat (P&T) and specific monitoring and sampling of the Site that should occur while cleanup is underway. Importantly, Aquilogic determined that these additional requirements are readily implementable without further delaying the cleanup action, so these necessary remedial components will not change the Department's proposed timeline for the cleanup of the Bramlett Site.[76]

In addition to selecting the remedial action that will be implemented, the Record of Decision is designed to respond to other community questions and concerns received during the public comment period.[77] In fact, at the public meeting held to announce the Proposed Plan, DES decisionmakers shared that public comments can and should include any specific provisions that commenters hope to see in the Record of Decision. To this end, the forthcoming Record of Decision should document three other objectives the Department presented at the public meeting.

First, DES employees shared that Duke Energy and the Department *do* plan to implement a long-term groundwater remedy with pump and treat (P&T) later in the cleanup process so that the excavation activities planned can begin without further delay. This is encouraging to MVBC and its members, so the Record of Decision should commit to this long-term groundwater remedy that will be implemented later. MVBC and its members do not in any way wish to delay the cleanup process; however, they do want assurance that the contaminated groundwater will be sufficiently treated through this remedial action.

Second, DES employees also shared that the soil excavation activities from the early 2000s are not fully complete, which is confirmed by the levels of soil contamination discussed earlier in this letter. DES stated that Duke Energy plans to remove around a dozen truckloads of remaining contaminated soil such that all Site parcels above East Bramlett Road will be remediated to residential standards. This is also encouraging for MVBC and its members, who want Parcels 1 and 2 to be safe for their future development plans. Therefore, the Record of Decision should commit to completing these remaining excavations of contaminated soil and bringing the soil's contamination levels into compliance with residential standards.

Third, in response to several questions asked by the community, DES promised that they would coordinate with personnel in the Department of Public Health to determine potential health impacts of the Bramlett Site on the surrounding neighborhood. As explained earlier, several families that are members of the Church have lived in the Newtown neighborhood for decades. Many attendees at the public meeting shared that they grew up playing in and around the Bramlett Site. The health impacts of the serious coal tar contamination across this Site have never been substantively documented and analyzed. Because DES assured the community it would further evaluate this Site's impact on health, the Record of Decision should codify this promise and give an estimated timeline of when the community can expect to hear next steps and results.[78]

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76 *See 2024 Aquilogic Report* (Exhibit 1), pp. 15–16.

77 40 C.F.R. § 300.430(e)(9)(iii)(I).

78 In addition to the promises made at the public meeting, the South Carolina Hazardous Waste

Finally, the Record of Decision must also state the remediation goals that the cleanup action will be expected to achieve.[79] Because of the future land use plans that the Church and the Newtown community have planned for their neighborhood, remediation goals should be framed in terms of *residential* standards, as opposed to industrial standards, whenever applicable.[80] Further, remediation goals set for this cleanup process should also reaffirm the risk-based site cleanup criteria established in the early 2000s for soil and consider extending those criteria to sediment as well.[81] Last, groundwater and surface water contamination should be required to meet the State of South Carolina's Primary Drinking Water Regulations, and land use controls should not be relied upon as an alternative to meeting the appropriate water quality standards.[82] Each of these remediation goals are necessary for the protection of human health and the environment of Newtown and the surrounding Southernside community, so they must all be documented in the Record of Decision.

IV. ENVIRONMENTAL JUSTICE

As explained in the section above, Alternative 5+ is the necessary remedial approach for the Bramlett Site under the law and the only alternative that will protect human health and the environment. Furthermore, as the only alternative that fully remediates and restores the Site, Alternative 5+ is the only cleanup approach that will effectuate environmental justice. The U.S. Environmental Protection Agency ("EPA") defines environmental justice as:

> the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people:
>
> (1) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to

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Management Act also directs the Department to consider the health impacts of the on-site contamination and take specific steps to be certain that the surrounding environment is safe and healthy after remediation efforts have taken place. *See* S.C. CODE ANN. § 44-56-200(E)(6–9). These efforts should include the Department thoroughly studying and analyzing the *existing* health impacts of the Site in order to properly comply with these statutory mandates.

79 40 C.F.R. § 300.430(e)(2)(i); (f)(5)(iii).

80 DES' VCC with Duke Energy directs any cleanup action to be performed according to residential standards, not industrial. *See Voluntary Cleanup Contract*, *supra* note 2, p. 19.

81 *See 2024 Aquilogic Report* (Exhibit 1), pp. 4–5 ("In 2000, benzo(a)pyrene was determined to be the most potent carcinogenic PAH in soils at the Site and a risk-based soil concentration of 0.087 milligrams per kilogram (mg/kg) or 87 micrograms per kilogram (ug/kg) was established (Duke Energy, 2000b, Appendix A).").

82 *See* 40 C.F.R. § 300.430(a)(1)(iii)(D) ("The use of institutional controls [such as water use and deed restrictions] shall not substitute for active response measures (e.g., treatment and/or containment of source material, restoration of ground waters to their beneficial uses) as the sole remedy.").

climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and

(2) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices.[83]

The EPA's definition embodies the core tenets of the environmental justice movement, which aims to ensure a conducive environment for living, learning, and working for all individuals. Given the definition stated above, the Southernside community, and the Newtown neighborhood in particular, have been experiencing an environmental injustice for the past 30 years due to the failure to clean up the Bramlett Site.

The Bramlett Site was situated in an area that provided safety to African Americans during the terror of the Jim Crow South. Notably, the surrounding area was included in the Green Book as a safe destination for African American travelers during segregation. The Southernside community even hosted prominent African American figures like Duke Ellington, Sarah Vaughan, Ella Fitzgerald, Della Reese, and Ethel Waters.[84] For the next several decades, the Newtown neighborhood and Southernside community remained a safe, healthy, and thriving place to live, work, and recreate. At its height in the 1950s, close to five hundred families lived in Newtown.

However, during this time, unbeknownst to the neighborhood, contamination was building at the Bramlett Site. Manufactured gas plants (MGPs) were fairly common in communities in the first half of the twentieth century because this was the primary way that these communities received electricity. In fact, just across the railroad tracks, another MGP was located on Broad Street, just over a mile away. The contamination from these two MGPs was discovered in 1988, but the two sites have been treated entirely differently since that discovery. Almost immediately after discovering the coal tar contamination on Broad Street, Duke Energy began cleaning up the Site. In the 2000s, DHEC required that the Broad Street Site be cleaned up to a higher standard before being developed, and the cleanup actually involved innovative technologies that were commended by the EPA.[85] By 2017, construction of luxury apartments, Ellison on Broad, began on the cleaned-up Broad Street Site.

In contrast, the only tangible solution the Newtown neighborhood has seen since 1988 is the 2016 Voluntary Cleanup Contract (VCC). This year marks 30 years of Newtown residents waiting for the Bramlett Site to be fully cleaned up. Instead of getting right to work on a cleanup like Duke Energy did on Broad Street, this community has experienced endless delays and empty promises that remedial action would soon be underway. In a community once regarded as a safe

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83 U.S. ENVTL. PROT. AGENCY, *Environmental Justice*, https://www.epa.gov/environmentaljustice (last accessed July 24, 2024).

84 S.C. Dept. of Archives & History, *Integrating the Arts Supplement 2020* (June 2020), https://scdah.sc.gov/sites/scdah/files/Documents/Historic%20Preservation%20(SHPO)/Publications/Integrating%20the%20Arts%20Supplement%202020%20.pdf, p. 129.

85 *See* U.S. ENVTL. PROT. AGENCY, *A Resource for MGP Site Characterization and Remediation* (May 1999), https://frtr.gov/pdf/sitemonitoring/02_mgp_resource.pdf, pp. 5.6–5.7.

haven for African Americans, the Bramlett Site now serves as a painful reminder of the inequality that the Newtown neighborhood has endured.

At the public meeting hosted by the Department on June 6, we heard generations of residents tell stories of playing in the nearby water body during their childhood, emerging covered in coal tar. Other residents spoke of the high cancer rates among their neighbors and loved ones. Despite decades of documented exposure to known carcinogens, not one formal study has been conducted to evaluate the long-term health impacts these residents are facing. To make matters worse, the indicator compounds of coal tar contamination like benzene and naphthalene are *known* dangers to human health. Benzene causes blood disorders like anemia and cancers like leukemia,[86] and naphthalene is associated with a wide array of cancerous and non-cancerous health impacts.[87] Further, samples of the different media on-site have not been fully analyzed for inorganic constituents, so the complete extent of this Site's health risks has yet to be characterized. This community deserves an environment they can feel safe in, and they deserve answers about the harm they have endured over the decades it has taken to act on this issue.

The tenets of environmental justice demand that this Site be cleaned up and fully restored. No other solution provides equitable protection against environmental risks, especially in light of the protection offered to residents near the Broad Street MGP more than 20 years ago. The Newtown community urges DES to enforce equitable treatment of the Bramlett Site. Specifically, because the Broad Street Site was excavated down to the bedrock and cleaned up using an active groundwater remedy, the same should happen for the Bramlett Site.[88] Further, because Duke Energy restored wetlands and funded the creation of outdoor classrooms at Unity Park, which is right across the street from Newtown, the same should happen for the Bramlett Site.[89] Any other solution would restrict this community's power to make decisions about how this land could be used in the future, as part of their living, learning, and working environment. The Newtown community has been made to feel unsafe and uncertain in their own environment for far too long, and their concerns must no longer be marginalized.

Given the decades of injustice this community has faced, we believe DES should be responsible not only for ensuring a safe and vibrant future, but also for rectifying the mistakes of

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86 *See* CTRS. FOR DISEASE CTRL. & PREV., *Facts About Benzene*, https://emergency.cdc.gov/agent/benzene/basics/facts.asp (last visited June 26, 2024).

87 *See* Erin E. Yost, et al., *Health Effects of Naphthalene Exposure: A Systematic Evidence Map and Analysis of Potential Considerations for Dose–Response Evaluation*, ENV. HEALTH PERSP. (2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8274693/.

88 *See, e.g.*, ENVIROSOUTH ENVTL. CONSULTANTS, *Phase I Environmental Site Assessment Report* (Apr. 15, 2014), pp. 11–14 (stating that the Broad Street MGP remediation included "[excavation of] contaminated soils down to the top of the bedrock" and that Duke Power implemented a groundwater remedy that was designed "to intercept and treat groundwater before it could enter the creek.").

89 *See* Kyle Steadings, *The Reedy River Wetlands Preserve Opens at Unity Park*, GVL TODAY (May 17, 2023), https://gvltoday.6amcity.com/city/reedy-river-wetlands-preserve-unity-park-greenville-sc.

the past. In addition to including the provisions described in the previous section within the Record of Decision, we call on the Department to conduct studies of the long-term health impacts this Site has had on residents, so that they may finally have the answers they deserve. We also join the community in calling for workforce development to be included in the cleanup project, and for job opportunities associated with the cleanup to be made available to residents. Finally, the forthcoming Voluntary Cleanup Contract with Duke Energy and CSX can and should be written to go beyond lifting this unjust burden and toward actively remediating the harm the Bramlett Site has caused this community.

V. CONCLUSION

Although Alternative 5 does take some meaningful steps toward remediating the Bramlett Site, Alternative 5+ is the only remedial action that will fully protect human health and the environment, meet all legal requirements, and begin to rectify the environmental injustice suffered by this community. Anything less than Alternative 5+ would fail to respect the wishes of the Newtown community, who all imagine a healthy and prosperous future free from hazardous contaminants. We urge DES to include the additional provisions enumerated above in the forthcoming Record of Decision so that the Department and responsible parties are bound by these commitments. This community has waited for a comprehensive cleanup for far too long, and the deficiencies of the Department's preferred alternative will only push this goal further out of reach. Moreover, DES' responsibility to this community does not end with the cleanup, and we amplify community members' voices in demanding that other measures be taken to rectify the mistakes of the past, such as health studies and workforce development. The Mountain View Baptist Church congregation and their neighbors deserve to thrive within their environment, and a comprehensive and restorative cleanup is vital to their shared vision.

Thank you again for welcoming our comments on this Proposed Plan. We ask you to consider this comment letter a request for notification of any and all future modifications, decisions, reports, and/or information related to this remedial action, which can be emailed to me at emily@scelp.org. We appreciate the opportunity to comment and look forward to remaining engaged in this process as it moves forward.

Sincerely,

Emily Poole

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Courtney Cannon, Esq.
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SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
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April 29, 2025

Ms. Emily Poole
South Carolina Environmental Law Project
315 W Antrim Drive
Greenville, SC 29607

Re: Comments Submitted on Behalf of SCELP
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Poole:

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comment letter submitted on behalf of the South Carolina Environmental Law Project (SCELP).

Duke Power entered a Voluntary Cleanup Contract (VCC) with the South Carolina Department of Environmental Services (SCDES, formerly DHEC) in 2016 to determine if additional remediation was necessary or if the site was acceptable in its current condition. SCDES follows EPA guidance in conducting assessment and remediation. Since the contract, this project has involved multiple phases of assessment to better understand the extent of contamination at the site. Duke also evaluated migration pathways and put into place engineering controls to limit any potential for contaminant migration. During the assessment a monitoring well network of approximately 70 wells was created. The fact that the coal tar is under approximately 10 feet or more of landfill material makes the assessment and evaluation process difficult. The amount of tar material discovered during the investigation was not anticipated based on the 2016 monitoring well network of 19 wells and led to multiple rounds of investigative work. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. SCDES has met regularly with community stakeholders and held numerous public meetings to keep the public informed of site progress. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has determined that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume.

In responding to your comments, it is first important to set out that SCDES has experience with the successful cleanup of many former MGP sites within the state. SCDES's selected remedy has been implemented at other sites successfully. Groundwater is not being directly addressed under this remedy. SCDES is going to include all groundwater under OU-3. The removal action should have a positive impact on the groundwater quality at the site.

To date, impacted groundwater has not been found to be discharging into the Reedy River. During the remedial investigation, five monitoring well nests were installed along the Swamp Rabbit Trail, immediately upgradient of the

Reedy River. Groundwater samples collected from these monitoring wells do not contain MGP related compounds at concentrations exceeding MCLs or RBSLs. Groundwater monitoring is ongoing.

Additionally, impacted sediment is not currently being released into the Reedy River. As part of the remedial investigation, sediment samples were collected from the Reedy River beginning at the outfall at Willard Street to approximately 4,700 feet downstream. Relatively low concentrations of PAHs were detected in the samples (1 ppm or less). A forensics evaluation of the samples indicate that the PAHs are related to historic MGP operations but are consistent with background concentrations (due to industrial use and urbanization). PAHs not associated with historic MGP operations were also detected along the ditch system which flow parallel to Willard Street from West Washington Street.

Impacted sediment was present in the wetlands west of the Legacy Charter Elementary School, at the Vaughn Landfill, and in the historic ditch system. As part of the remedial investigation activities, sediment samples were collected in the wetlands west of Legacy Charter Elementary School, on Parcel 3, and in the ditch system located between the Vaughn landfill and Willard Street. Impacted sediment exceeding regulatory screening criteria were detected within the wetlands west of Legacy Charter Elementary School, at and immediately adjacent to the Vaughn landfill, and extending the length of Ditch 4. Sediment control best management practices were constructed to mitigate the potential for impacted sediment transport within the ditch system. It should be noted that concrete cloth was used to replace the rip rap in the ditch south of the Transflo property and north of Willard Street. A total of 257 tons of existing rip rap within the ditch and approximately 1-foot of sediment from the ditch base was removed and disposed of properly.

Surface water quality in the Reedy River is not currently being impacted. Surface water samples collected from the Reedy River do not contain MGP related compounds at concentrations greater than analytical reporting limits and/or surface water quality standards. Surface water monitoring has been ongoing and will continue through the implementation of the remedy.

The selected remedy is not intended to be the final remedy for the site. After removal is complete, the need for groundwater remediation will be evaluated as Operable Unit 3. During the excavation process, dewatering and water management will be required. This is not intended to be the groundwater remedy for the site. However, the removal of the source material by excavation is expected to result in improved groundwater quality.

On page 11, SCELP notes the samples collected with an oven broiler pan from the drainage ditch utilizing a method that does not appear consistent with EPA or State sampling protocols. The constituents identified in those samples did not include benzene or naphthalene and would seem to indicate that they are likely from industrial use and urbanization not associated with MGP operations. The drainage area where these were collected had multiple drainage outflows that emptied into it including from the elevated railroad across Willard Street and the parking lot of the Transflo property. Duke Energy later performed best management practices in this ditch as listed earlier.

On pages 12-14, SCELP makes the argument that the alternatives presented are not protective of human health and the environment. SCDES does not agree with this statement. The remedy as proposed by SCDES in the Proposed Plan is not intended to be the final remedy for the site. After removal is complete, the need for groundwater remediation will be evaluated as Operable Unit 3. SCDES has stated that impacted sediment, which will be addressed in any of the active remedies, is the only media with a direct exposure pathway. Groundwater is not being used on or around the site. Surface water is not currently impacted by the site. Soil in Parcels 1 and 2 meet industrial/commercial use with land use controls. SCDES's selected remedy will remove as much source

contamination material as practicable and will have a positive effect on groundwater over time. The selected remedy is protective of human health and the environment.

On page 18 third paragraph, SCELP makes the incorrect statement that "SCDES employees shared that Duke Energy and SCDES do plan to implement a long-term groundwater remedy with pump and treat later in the cleanup process." SCDES reviewed the transcript of the public meeting and did not make this statement. SCDES pointed out in the meeting multiple times that the remedial action will remove coal tar to the extent practicable from the site soils and sediments and this will have a positive impact on the groundwater quality. An evaluation of remedial alternatives for groundwater will be evaluated once the selected remedial action's effect on groundwater can be determined. It is very important to understand groundwater conditions following the completion of the selected remedy and after there has been sufficient time to monitor changes in groundwater quality. This will allow for the evaluation for the best groundwater treatment options for the site.

On Page 18 fourth paragraph, SCELP requests adding the small soil removal that would bring Parcels 1 and 2 within residential standards into the Record of Decision. SCDES concurs with this request and will add this to the Record of Decision.

On Page 19 first paragraph, SCELP requests that remedial goals should be framed in terms of residential standards. SCDES looks to have parties clean up sites to the expected end use of the properties. Parcels 1 and 2 are expected to be cleaned up to residential standards. Parcels 3-5 are expected to have use scenarios that would not involve residential development. The selected remedy will remove to the extent practicable all impacted coal tar and landfill material on those parcels. Groundwater standards are not residential or industrial and must meet standards equivalent to drinking water without treatment. The responsible parties will also can evaluate site-specific standards during the remedial design process as set forth in SC's Amendment to Section 44-56-200, Hazardous Waste Cleanup.

SCDES is committed to working with Mountain View Baptist Church and residents of the Newtown neighborhood to address their questions and concerns. SCDES is committed to stay engaged with the community throughout the remediation process.

The Broad Street Site and the CSXT Bramlett Road Site are both former manufactured gas plants (MGP) in Greenville but that is about where the comparison ends. The Broad Street Site makes up approximately 1.2 acres compared to the approximately 35 acres that make up the CSXT Bramlett Road Site. After investigations were completed from 1988-1995 at the Broad Street Site, a series of removal actions (1995, 1999, 2001, 2008, 2011, and 2015-2017) were conducted from 1995-2017, totaling 54,000 tons. At the CSXT Bramlett Road Site, after investigation occurred from 1992-1999, 5073 tons were removed in 2000, and 61,0000 tons of soil was removed in 2001. So, the MGP Plant portion of the sites of both were removed in similar timeframes and the Bramlett removal was approximately 12,000 tons more material than the Broad Street site. Also, there has been no active groundwater remediation at the Broad Street Site. Concentrations in groundwater have reduced since the removal action was completed. Annual groundwater monitoring is still required to this date. Additionally, the Broad Street Site has significant restrictions in place on the parcel deeds that limit types of development, uses of groundwater, requires exposure barriers, and requires vapor mitigation measures for any built structures.

SCDES has determined that enough information has been collected to make a remedial decision that Alternative 5 is the best option for cleanup at this site. SCDES is committed to working with the RPs to assure an effective and efficient cleanup is conducted.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

SOUTHERN ENVIRONMENTAL LAW CENTER

525 East Bay Street, Suite 200
Charleston, SC 29403
southernenvironment.org

T 843 720 5270
F 843 414 7039

August 5, 2024

VIA EMAIL AND U.S. MAIL

Mr. Greg Cassidy, Project Manager
DHEC's Bureau of Land & Waste Management
2600 Bull Street
Columbia, SC 29201
cassidga@dhec.sc.gov

Re: CSXT Bramlette Road Site (aka Duke Power Manufactured Gas Plant)

Dear Mr. Cassidy:

The Southern Environmental Law Center submits these comments on the Proposed Plan for the cleanup of Duke Energy's Bramlette Road coal manufactured gas plant site. In 2019 we provided DHEC an analysis of the issues of this site, provided oral comments at the hearing on June 6, 2024, and provide these written comments also.

Below, we refer mostly to DHEC, rather than the new Department of Environmental Services (DES), because the now-defunct DHEC was responsible for what happened to date at the Bramlette site. The next steps will demonstrate whether DES lives up to its mission and responsibility when DHEC did not.

First, given the list of alternatives set out by DHEC, we support the selection of the most rigorous of the cleanup plans considered, but we urge DES to improve upon that cleanup plan. DES should adopt and require the additional cleanup steps set out in the expert analyses of aquilogic, Inc., contained in its memorandum of October 2019 provided to DHEC by SELC years ago (attached), an updated memorandum from 2020 (attached), and a more recent analysis by aquilogic provided to DHEC and/or DES by the South Carolina Environmental Law Project.

At a minimum, the cleanup should include the removal of entire illegal dump and debris that were allowed to be deposited on the site over an extended period of time and that DHEC and the interested parties have allowed to remain there in the ensuing decades; and the removal of all coal tar and associated contaminated soil under and around the dump, in and along the discharge canal that runs through the site and that discharges into the Reedy River, and anywhere else on the site. We understand from the Plan and DHEC's presentation at the hearing that the selected option includes these two basic requirements. Those were the first two recommendations contained in the aquilogic 2019 analytical memorandum that we provided to DHEC almost 5 years ago.

But as set out in the aquilogic memoranda and as discussed below, the Proposed Plan does not accomplish a complete cleanup of this site and takes an unjustified further extended period of time to finally rid this area of the illegal dump and toxic pollution. As a result, this surrounding neighborhood, the Reedy River corridor, and the greater Greenville community will

continue to suffer from the failures of DHEC to protect them from the toxic contamination and illegal dump that DHEC allowed to remain in place for decades, while a virtually identical site in an affluent neighborhood in Greenville was cleaned up and redeveloped long ago.

First, it is important to emphasize that the neighborhood and the Greenville community face this situation because of decisions made by DHEC itself, Duke Energy, and CSX in the late 1990s and that DHEC allowed to remain in place since. After meetings and communications, DHEC agreed with Duke Energy and CSX that the illegal dump would remain in place and that the underlying coal tar would not be removed. See attached minutes of December 1996 meeting. In the years since, DHEC did not require the removal of the extensive coal tar contamination along the ditch that discharges into the Reedy River, nor did DHEC require that this discharge stop. DHEC allowed the illegal dump and the coal tar to remain on the site and the pollution of the community and the Reedy River to persist. These actions by DHEC were very much in the interests of the corporations that met with DHEC and with whom DHEC made these decisions. DHEC is responsible for the fact that for almost 30 years, this illegal dump and this toxic pollution have remained in the midst of this neighborhood, on the banks of the Reedy River, along the Swamp Rabbit Trail, adjacent to Unity Park, and in the Greenville community. It is long past time that these serious DHEC mistakes be corrected.

DHEC's mishandling of this VCC process has compounded DHEC's decades-long failures. This process began in 2016 and has now spanned 8 years. Yet, after 8 years DHEC simply concluded what was obvious in 2016 and in 1996 – an illegal dump and toxic coal tar should be removed from this neighborhood near the heart of Greenville, and the contaminated ditch that transports toxic pollution into the Reedy River should be excavated along its reach. It is hard to believe that it took a state agency 8 years to reach such an obvious conclusion.

DHEC's final presentation is another example of how it failed the community and the environment. DHEC listed the most basic cleanup as supposedly the most protective alternative, Alternative 5. DHEC listed 4 lesser choices (Alternatives 1-4) that no responsible regulator would ever select, including leaving the illegal dump and toxic coal tar on site for eternity. In this way, it could appear that DHEC chose the most protective alternative by rejecting these unacceptable choices, when in fact DHEC chose the least protective conceivable alternative – the most basic steps of removing the coal tar, getting rid of the illegal dump, and cleaning up the ditch that carries pollution to the Reedy River. Alternative 5 should have been listed as Alternative 1, the most basic alternative, with more protective plans constituting Alternatives 2-5. And DHEC should have laid out the advantages and considerations relating to more protective alternatives. Instead of presenting a real list of meaningful cleanup choices, DHEC tried to make it seem that DHEC selected the most protective option when in fact it did not.

Second, the attitude DHEC took toward this site stands out conspicuously compared to the cleanup of Duke Energy's other manufactured gas plant site in Greenville. That site is located on Broad Street just a short distance from McDaniel Avenue in one of the most affluent areas of the City of Greenville. Years ago, that contaminated site was excavated to the bedrock, there was active groundwater treatment, and now the site is occupied by an upscale apartment building and a bank.

In contrast, the Bramlette site is located in a largely African-American neighborhood and a low-income community on the other side of Greenville. Here, DHEC worked with the concerned corporations to let an illegal landfill stay in place, to permit a pool of toxic coal tar and other coal tar deposits to remain, to allow continued pollution of the Reedy River, and to permit this embarrassing eyesore to remain unremediated. When DHEC finally began to address the situation, DHEC took 8 years to put forward the obvious and most basic cleanup, without requiring a complete cleanup of the site. And DHEC proposed that the toxic materials and illegal dump remain in this community for years to come.

Third, the Proposed Plan includes an unreasonably long timeline to accomplish the remediation of the site. The amount of material to be excavated is 183,800 cubic yards. DHEC proposes that this removal will take six to seven years. It is not clear when the excavation will begin, but presumably the start date is a year off. This remediation will not be completed until perhaps 2032, according to DHEC's proposal.

At the outset, there is no reason that Duke Energy cannot begin now removing the landfilled materials. Every day across the state, construction and debris materials are being removed from demolition and dump sites to C&D landfills or other appropriate disposal. There is no credible explanation why that removal did not occur years ago, why it was not done in 2016, why it has not occurred in the 8 years since, or why it cannot occur now.

The timeline for total excavation is long beyond explanation. For example, Duke Energy recently announced that just outside of its hometown of Charlotte, it will complete the excavation of its large coal ash impoundment at its Marshall plant ahead of the scheduled completion date of 2035 "by a few years." *Duke Energy Ahead of Schedule on Lake Norman Coal Ash Basin Closure*, WFAE (July 16, 2024).[1] Duke Energy began that excavation as part of a settlement at the beginning of 2020 of litigation with conservation groups and the North Carolina environmental agency. To date, Duke Energy has excavated 3.3 million tons (each ton is at least approximately a cubic yard)[2] in less than 5 years, including the time to drain and otherwise prepare the impoundment for excavation. Thus, Duke Energy removed over 600,000 tons per year from that site – each year over three times the quantity of materials to be removed from the Bramlette site. Going forward without the delays of draining the impoundment and other preparations, Duke Energy will remove 13.8 million tons in 8 years (assuming completion by 2032), or about 1.7 million tons per year. In other words, each year Duke Energy will be removing from this North Carolina site over 9 times the total amount of materials to be removed from the Bramlette site. Put differently, outside of Charlotte, Duke Energy will be removing the amount it will remove from the Bramlette site in less than 2 months.

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[1] Duke Energy ahead of schedule on Lake Norman coal ash basin closure | WFAE 90.7 - Charlotte's NPR News Source.

[2] Some consider a ton of coal combustion residuals to amount to as much as 1.35 cubic yards, meaning here that Duke Energy is removing even more cubic yards of coal ash than the tonnage indicated during the time periods referenced. Fortis-I01D385F.MAG (maryland.gov).

At another Charlotte-area site, Duke Energy completed the removal of 5,150,000 tons of coal ash and related materials from its Riverbend facility on Mountain Island Lake in March of 2019 – while DHEC was still studying this much smaller Greenville site. See attached Duke Energy Riverbend report. That removal began early in 2015, took approximately 4 ½ years, and was finished ahead of schedule. Duke Energy removed approximately 1.15 million tons per year, or 95,000 tons per month. Also at this second Charlotte-area site, Duke Energy removed the equivalent of the Greenville Bramlette site in about 2 months.

Yet, DHEC proposed to give Duke Energy up to 7 years (once the cleanup finally gets underway) to remove the contaminated materials and landfill debris from the Bramlette site. This timeline allows Duke Energy to remove just over 26,000 tons per year. Duke Energy will remove that much in just one week at the Marshall site outside of Charlotte.

DHEC made the decision to allow this contamination and illegal dump to remain in this neighborhood for 30 years. Now, it has proposed to add insult to injury by stretching out the removal by up to 7 or 8 more years. If Duke Energy lives up to its prediction for the Marshall site and DES gives Duke Energy this unjustified long time to complete the Bramlette cleanup, both projects will be finished the same year, with 13,800,000 tons having been removed from the Marshall site near Charlotte and only 183,800 cubic yards removed from the Bramlette site. It is striking how DHEC proposed to allow Duke Energy to treat the Greenville area so differently from Charlotte.

Third, DHEC's proposal does not require any groundwater remediation. DHEC pretended that there will be groundwater remediation by using the misleading term "monitored natural attention." In this context, that phrase is a euphemism for "do nothing." DHEC did not propose that contamination be removed from the groundwater but rather that the contamination will continue to flow and disperse in the area and into the sediments of the Reedy River where groundwater discharges. No contaminants are being removed from the groundwater except by polluting the surrounding environment. Instead, DHEC should have proposed actual groundwater treatment that removes contaminants and that intercepts contaminated water before it reaches the Reedy River. DHEC also does not require treatment of the well-established groundwater contamination in the bedrock zone, postponing yet again for years into the future a decision as to whether there will ever be any remediation, even though the bedrock zone contamination is well established. We urge DES to review the aquilogic reports and require real treatment of contaminated groundwater and real protection of the Reedy River. This is yet another example of DHEC's failure to protect this neighborhood, the Reedy River, and the greater Greenville community.

Finally, we direct DES's attention to the explanations in the aquilogic reports that there has not been adequate testing to determine what impacts there may be across the River and otherwise and that DHEC did not locate or deal with a well that is referred to in the historical materials and may be carrying contamination into the groundwater and ultimately the Reedy River.

DHEC has been abolished, and DES is now responsible for protecting South Carolina's environment. DES has a chance to show it is a more responsible agency than the now-defunct DHEC. The community is waiting to see if DES will be different.

Sincerely,

Frank S. Holleman III
Senior Attorney

Attachments

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Frank Holleman
Southern Environmental Law Center
310 Pine Forest Drive Ext
Greenville, SC 29601

Re: Comments Submitted on Behalf of SELC
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Holleman,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comment letter submitted on behalf of Southern Environmental Law Center (SELC).

Duke Power entered a Voluntary Cleanup Contract (VCC) with the South Carolina Department of Environmental Services (SCDES, formerly DHEC) in 2016 to determine if additional remediation was necessary or if the site was acceptable in its current condition. SCDES follows EPA guidance in conducting assessment and remediation. Since the contract was executed, this project has involved multiple phases of assessment to better understand the extent of contamination at the site. Duke also evaluated migration pathways and put into place engineering controls to limit any potential for contaminant migration. During the assessment a monitoring network of approximately 70 wells was created. The fact that the coal tar is under approximately 10 feet or more of landfill material makes the assessment and evaluation process difficult. The amount of tar material discovered during the investigation was not anticipated based on the 2016 monitoring well network of 19 wells and led to multiple rounds of sampling to determine the extent of contamination. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. SCDES has met regularly with community stakeholders and held numerous public meetings to keep the public informed of site progress. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has determined that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume.

The Broad Street Site and the CSXT Bramlett Road Site are both former manufactured gas plants (MGP) in Greenville but that is about where the comparison ends. The Broad Street Site makes up approximately 1.2 acres compared to the approximately 35 acres that make up the CSXT Bramlett Road Site. After investigations were completed from 1988-1995 at the Broad Street Site, a series of removal actions (1995, 1999, 2001, 2008, 2011, and 2015-2017) were conducted from 1995-2017, totaling 54,000 tons. At the CSXT Bramlett Road Site, after investigation occurred from 1992-1999, 5073 tons were removed in 2000, and 61,0000 tons of soil was removed in 2001. So, the MGP Plant portion of the sites of both were removed in similar timeframes and the Bramlett removal was approximately 12,000 tons more material than the Broad Street site. Also, there has been no active groundwater remediation at the Broad Street Site. Concentrations in groundwater have reduced since the

removal action was completed. Annual groundwater monitoring is still required to this date. Additionally, the Broad Street Site has significant restrictions in place on the parcel deeds that limit types of development, uses of groundwater, requires exposure barriers, and requires vapor mitigation measures for any built structures.

As to the timeframe for the remedial action, that is to be determined based on the site conditions. With much of the remedial action taking place in wetland areas, there are many aspects that may slow down remedial activities. Sheet piling and dewatering will have to be used to allow for a complete excavation. Remedial activities must be conducted in stages to prevent the spread of contamination and assure the work is done in a protective manner for the workers and residents in the area. The 7-year time frame is just an estimate.

As SCDES stated in the public meeting, coal ash and coal tar are not the same compounds, nor do they act the same way in the environment. Coal ash basins typically involve large 100+ acre ponds that are easily accessible and require minimal engineering design to excavate, resulting in large volumes of material that can be excavated limited only by the number of dump trucks available. Coal tar sites are typically in urban areas, near busy streets, and are in much tighter confines. The CSXT Bramlett Site has the added difficulties of the C&D landfill and wetlands issues that must be addressed. As was stated in the meeting to compare the two in any way is simply wrong.

There will be significant water management and water treatment during the excavation process. Areas will be dewatered, and the water will be treated through a treatment system. The volumes will depend on site conditions. Installing an active groundwater system before the excavation would be using poor engineering practices. Most of the monitoring wells will have to be abandoned during the remedial action. After the action is completed, new wells will be installed to monitor site conditions post removal. All work will be conducted under a monitoring plan approved by SCDES. The remedy as proposed by SCDES in the Proposed Plan is not intended to be the final remedy for the site. After removal is complete, the need for groundwater remediation will be evaluated as Operable Unit 3. During the excavation process dewatering and water management will be required. This is not intended to be the groundwater remedy for the site. However, the removal of the source material by excavation is expected to result in significantly improved groundwater quality.

As to the reference to a well onsite in the Aquilogic report. There have been efforts put forth by Duke Power and SCDES to locate the well referred to in the report. To date, there has been no well located at the site. If the well is located and identified it will be evaluated and handled in an appropriate manner.

SCDES has determined that enough information has been collected to make a remedial decision that Alternative 5 is the best option for cleanup at this site. SCDES is committed to working with the responsible parties to assure an effective and efficient cleanup is conducted.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3;

and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Friends of the Reedy River

August 5, 2024

Sent Via Email

Greg Cassidy, Project Manager
DES's (DHEC's) Bureau of Land & Waste Management
2600 Bull Street
Columbia, SC 29201
cassidga@dhec.sc.gov

Re: Public Comment on Proposed Plan for CSXT Bramlett Road Site Cleanup in Greenville, South Carolina

Dear Mr. Cassidy:

Friends of the Reedy River (FoRR) is a chartered 501c(3) nonprofit organization dedicated to protecting, improving, and preserving the valuable aesthetic, cultural, and ecological assets of the Reedy River watershed and engaging the public in its improved management. We envision a safe, clean, and accessible river corridor that enhances the quality of life for all residents, businesses, and visitors.

We are writing in response to the public call for comments on the Proposed Plan for the CSX Transportation (CSXT) Bramlett Road Site, as presented to the Southernside community on June 6, 2024.

This site and the surrounding Southernside community have endured nearly a century of neglect and abuse by Duke Energy, CSXT, and the larger Greenville community. Due to this legacy, we strongly encourage the Department of Environmental Services (DES) to pursue remediation beyond the most comprehensive cleanup strategy in the Proposed Plan, identified as Alternative 5.

Specifically, we urge DES to:

- Pursue full remediation of the contaminated groundwater plume. While FoRR understands that the full extent of subsurface contamination is challenging to assess prior to excavation, clear language should be added to the Record of Decision ensuring DES's commitment to fully remediate groundwater contamination at the site.
- Restore the onsite wetlands. These wetlands drain directly to the main stem of the Reedy River, and are immediately upstream of Greenville's Unity Park and Falls Park. The wetlands play a critical role in the local ecosystem, providing flood mitigation, habitat for

wildlife, and natural water filtration. Full restoration is necessary to regain these ecological benefits and allow the community to begin reclaiming their space.

- Proactively address community health concerns from legacy exposure to pollutants. DES and other state-level partners should engage with the Southernside community to answer questions and provide support regarding the potential health impacts and remediation efforts.

Additionally, we strongly encourage the wetlands property to be transferred to Parish House Community Development Corporation after Duke and CSXT have fulfilled their responsibility to fully clean up and restore the wetlands. Given the limited development potential of the property due to riparian buffer regulations, this transfer would serve as a meaningful gesture of corporate responsibility and benefit the local community. This transfer should only occur after the full cleanup and full restoration of the wetlands have both been completed.

We request that these proposals be explicitly included in the Record of Decision and pursued without delay. Addressing the longstanding neglect and contamination at this site is crucial for the health and well-being of the Southernside community. Immediate and decisive action will ensure a healthier and safer environment for current and future residents.

FoRR is committed to being an active partner in this cleanup effort and looks forward to working with DES, CSXT, and other stakeholders to ensure the successful remediation and revitalization of the CSXT Bramlett Site.

Thank you for your consideration.

Sincerely,

Scott A Butler

Scott Butler
President, Board of Directors
Friends of the Reedy River

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Scott Butler
President, Board of Directors
Friends of the Reedy River
PO Box 9351
Greenville, SC 29604

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Butler,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Upstate Forever Comments on Preferred Cleanup Alternative of CSXT Bramlett Road Site

Rebecca Wade <rwade@upstateforever.org>

Tue 8/6/2024 11:43 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>
Cc:cassidga@des.sc.gov <cassidga@des.sc.gov>;ehollis@upstateforever.org <ehollis@upstateforever.org>

1 attachments (184 KB)
Upstate Forever Bramlett Comment Letter.docx;

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hi Mr. Cassidy,

Please see Upstate Forever's Comment Letter on the preferred cleanup alternative of the CSXT Bramlett Road Site, attached to this email.

Further, please reach out to me if you have any questions, and/or if Upstate Forever can be of assistance.

Best regards,

Rebecca Wade
Clean Water Specialist
Upstate Forever
507 Pettigru St
Greenville, SC 29601
(864) 250-0500 x134
rwade@upstateforever.org

Upstate Forever is a conservation organization that protects critical lands, waters, and the unique character of the Upstate of South Carolina. Learn more at upstateforever.org.

UPSTATE FOREVER

Protecting Land & Water | Advocacy | Balanced Growth

August 6th, 2024

Greg Cassidy
South Carolina Department of Environmental Services
Bureau of Land & Waste Management
2600 Bull Street
Columbia, SC 29201
cassidga@des.sc.gov

Re: Comments on Preferred Cleanup Alternative of CSXT Bramlett Road Site

Dear Mr. Cassidy,

Upstate Forever (UF) is a membership-based nonprofit conservation organization that protects critical lands, waters and the unique character of Upstate South Carolina. We have a base of support of approximately 48,000 contacts in the Upstate region of South Carolina, many of whom live, work, or recreate in the Saluda River Basin.

UF has a long-standing history of working to protect and restore the Reedy River Watershed. Specifically, UF has actively engaged in this cleanup effort through years of dedicated research and communication of our concerns and recommendations to Duke Energy, SC Department of Environmental Services (SCDES), formerly SC Department of Health and Environmental Control, and other partners such as Friends of the Reedy River and the South Carolina Environmental Law Project (SCELP). **We are writing this letter as a continuation of our efforts and to voice support for a full remedial and restorative cleanup of the CSXT Bramlett Road Site and all coal tar contamination through the expeditious implementation of Alternative 5 with additional measures that are discussed below.**

While we are supportive of SCDES' position to pursue Alternative 5 from Duke Energy's Focused Feasibility Study[1], there are key elements of this alternative that fall short of a complete restoration. First, to adequately assess risk to potential receptors and determine groundwater remediation needs, SCDES needs a more robust dataset of surface and groundwater samples. UF understands SCDES'

[1] Duke Energy's Focused Feasibility Study submitted October 2023 can be accessed using the following lihttps://scdhec.gov/sites/default/files/media/document/BLWM_Bramlett_FFSRev1.pdf.

argument that there is no evidence of groundwater contamination leaching into the Reedy River from the monitoring wells adjacent to the river outside of the current boundary of the contaminated site. Moreover, the current dataset, which contains samples from two monitoring wells just downstream of the area where the contaminated site meets the river, shows no sign of impairments with surface water sampling. While all of this indicates that no contaminants are exiting via surface or groundwater connections into the Reedy River, it is risky to draw such conclusions from a dataset that may not represent the seasonality of surface water and groundwater conditions. UF submits the following measures are necessary in addition to those proposed in Alternative 5 to fully support the narrative that no contamination is migrating off-site into the Reedy River Watershed:

1. At least two monitoring wells should be installed just below the connection point where the contaminated site feeds into the Reedy River. We recommend at least two more monitoring wells be installed further downstream, in agreement with recommendations from the 2024 Aquilogic Report.

2. Current monitoring wells need to be sampled at least twice annually, rather than annually, which has been the protocol on site since 2019. One of those sampling events should always take place during the summer months when rivers and streams are at their lowest levels and most indicative of contamination levels.

3. The monitoring wells that run adjacent to the Reedy River (i.e., MW-30S, MW-30TZ, MW-31S, MW-31TZ, MW-32S, MW-32TZ) that would be most likely to show if the groundwater plume was growing, need to be monitored quarterly.

Additional monitoring is a low-cost method to ensure that no contamination is leaching into the Reedy River Watershed.

The second element of Alternative 5 that is of concern is the language and overall restoration of the wetlands on Parcels 3, 4, and 5. UF urges SCDES to incorporate explicit language in the Record of Decision to ensure the complete restoration of wetlands on Parcels 4 and 5 and that the contaminated sediment be removed along the entire length of the drainage ditch on Parcels 3, 4, and 5. These additional measures are necessary to fully restore the functionality of these wetlands and protect the surrounding communities and immediate downstream users in Unity Park.

Third, Alternative 5 includes the application of Land Use Controls (LUCs) as an additional protective measure that would limit the public's interaction with contaminated groundwater, NAPL-impacted material, and construction debris. However, SCDES does not provide any explanation of what types of LUC measures would be implemented and how they would be protective of human health. UF is in support of SCDES' proposed plan to implement Alternative 5 if these additional monitoring measures are implemented synchronously with this cleanup effort.

In addition to these proposed enhancements for SCDES' preferred Alternative 5 plan, UF is concerned about the impact this contamination has on the students who attend Legacy Elementary School. The

school directly abuts the contaminated site, and it is reasonable to assume that during flooding events, or when commuting to school following flooding events, these children are exposed to residual contamination leaching from this site. This charter school not only serves residents of the Southernside Community, but also students from across Greenville County. It is critical that all potential exposure pathways to the students are fully outlined and addressed.

Lastly, we must underscore the stark contrast between the CSXT Bramlett Road Site, and the cleanup of another Duke Manufactured Gas Plant located in an affluent part of Greenville on Broad Street. At the Broad Street site, there was a complete and thorough cleanup of contamination down to the bedrock, while contamination remains at the CSXT Bramlett Road Site. This disparity in cleanup responses highlights the injustice associated with the community's decades long effort to have the CSXT Bramlett Road Site restored. This community deserves justice. Justice is nothing short of the most comprehensive cleanup possible with full restoration without further delay. Justice is the opportunity to implement their neighborhood master plan spearheaded by leaders of the Mountain View Baptist Church and the Parish House Community Development Corporation for the Newtown community. Therefore, we urge SCDES to implement Alternative 5 with the additional provisions outlined above as soon as possible.

Thank you for your consideration of our comments. Please reach out to Rebecca Wade via email at rwade@upstateforever.org or call 864-250-0500 ext. 134 if you have any questions about these comments or if there is anything Upstate Forever can do to support SCDES' efforts to bring justice to this community and the surrounding area.

Sincerely,

Erika J. Hollis

Clean Water Director

Rebecca Wade

Clean Water Specialist

Sherry Barrett

Land Planning and Policy Director

Tre'Dessa Smalls

Land Policy Grassroots Specialist

Megan Chase-Muller

State Policy Director

SC DEPARTMENT *of*
ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Rebecca Wade
Clean Water Specialist
Upstate Forever
507 Petigru Street
Greenville, SC 29601

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Wade,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions semiannually for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.
Land Use Controls (LUCs) are usually in the form of limiting the use of groundwater through a deed restriction. This would usually restrict the use of any groundwater for drinking or irrigation at a Site. LUCs may have restrictions on

certain types of property use such as schools, day care centers, senior care facilities, or other uses. Parcels 3, 4, and 5 are kind of unique in that most of these areas are in a wetlands area so reuse other than a wetland is unlikely. Restrictions on groundwater are usually in place until groundwater quality meets Maximum Contaminant Levels.

The Broad Street Site and the CSXT Bramlett Road Site are both former manufactured gas plants (MGP) in Greenville but that is about where the comparison ends. The Broad Street Site makes up approximately 1.2 acres compared to the approximately 35 acres that make up the CSXT Bramlett Road Site. After investigations were completed from 1988-1995 at the Broad Street Site, a series of removal actions (1995, 1999, 2001, 2008, 2011, and 2015-2017) were conducted from 1995-2017, totaling 54,000 tons. At the CSXT Bramlett Road Site, after investigation occurred from 1992-1999, 5073 tons were removed in 2000, and 61,0000 tons of soil was removed in 2001. So, the MGP Plant portion of the sites of both were removed in similar timeframes and the Bramlett removal was approximately 12,000 tons more material than the Broad Street site. Also, there has been no groundwater remediation at the Broad Street Site. Concentrations in groundwater have reduced since the removal action was completed. Annual groundwater monitoring is still required to this date. Additionally, the Broad Street Site has significant restrictions in place on the parcel deeds that limit types of development, uses of groundwater, requires exposure barriers, and requires vapor mitigation measures for any built structures.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

July 29, 2024—FINAL DRAFT FOR REVIEW

TO: Emily Poole, Attorney, SC Environmental Law Project (SCELP)

FROM: John B Cook, PE, BSCE, MECE, MSEE, LM-AWWA

RE: Review of aquilogic's DRAFT MEMORANDUM of May 07, 2024, *Review of Contaminant Conditions and Focused Feasibility Study (FFS) CSXT Bramlett Road Site (Former Manufactured Gas Plant, MGP), Greenville, SC*, Project No. 087-01

INTRODUCTION AND PURPOSE

Briefly stated, the purpose of a well-designed groundwater and sediment contaminant assessment of any site is to determine the presence of contaminants of concern (COC) and their concentration levels, the extent of vertical and horizontal contamination both on- and off-site, the likely threat to public health and to air and water quality in the surrounding area, the velocity and limits of migration, and the rate of attenuation of COCs from the Site under assessment.

Aquilogic, Inc. (hereinafter "aquilogic") was retained by SCELP to evaluate and summarize the results of existing engineering, geologic, and contaminant studies conducted by various consultants relative to the contamination of the Bramlette Site which was formerly owned by Duke Energy Carolinas (hereinafter "Duke") and presently owned by CSX Transportation, Inc. (hereinafter "CSXT"). CSXT also owns five parcels adjacent to the MGP site. The review by this author is limited to and focuses on aquilogic's "Draft Memorandum" and has excluded other and numerous site studies performed by SynTerra Corp., Site Remediation Services Group, Geosyntec Consultants, Inc, and the South Carolina Dept. of Health and Environmental Control ("SCDHEC").

Overall, it is this author's position that aquilogic performed a thorough, albeit succinct, summary of the engineering and assessment studies of the Site under consideration for remedial action. Unfortunately, there are weaknesses in previous studies that this author urges to be addressed before final completion of a

conceptual remediation plan, after which, a well-designed and implementable plan can go forward.

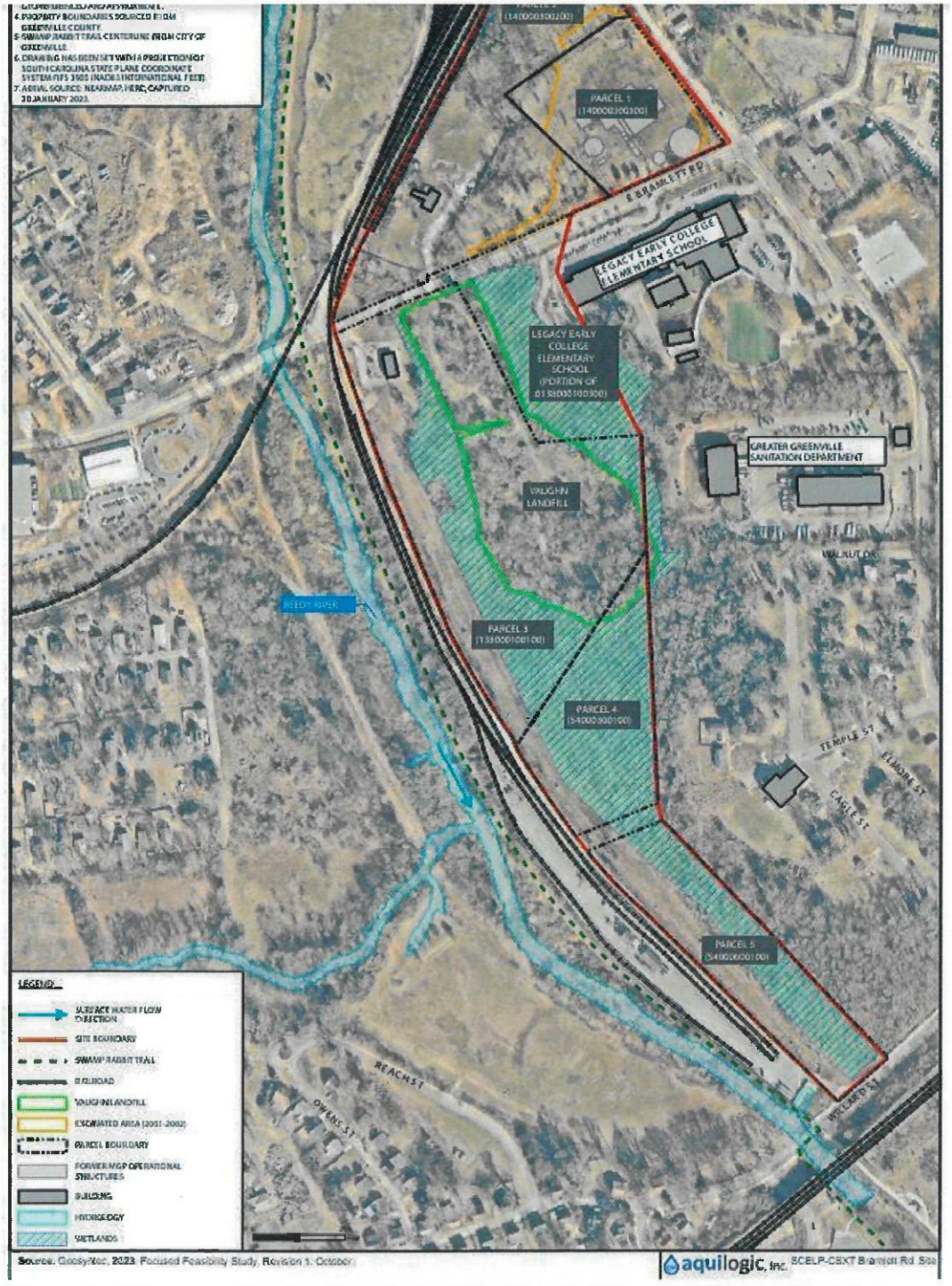

Figure 1. Site map showing location of the Reedy River relative to Vaughn Landfill and Parcels 1 – 5 of the Site. (Original figure from aquilogic.)

Background and Description of Site. The Manufactured Gas Plant (MGP) on the Site (Parcel 1, Figure 1) was operational from 1917 through 1952, during the period in which MGP was a common means of manufacturing "coal gas" fuel from oil, wood, and/or chiefly coal. This process produced "coal gas," a mixture consisting of methane, hydrogen, ethylene, plus various heavy hydrocarbons. The waste residuals of concern today at the Bramlette Site, among many other abandoned coal gas sites, are coal tar (from coal carbonization), cyanides (from a lime purification process) as well as a plethora of hydrocarbons and inorganics that have contaminated soils, groundwater, and surface waters by means of uncontained contaminant transport. In the case of the Bramlette Site, of particular concern also is the impact on the contiguous Reedy River of contaminated groundwater flows originating from the Site.

The geology of the Site presents challenges. The soil characteristics of the Site can be known but there is no known bedrock aquitard that forms a barrier to the transport of contaminated groundwater to deeper geologic levels. This presents a special hurdle if designing containment systems. The Site's geology consists of native soil or frequently "off-site fill and debris," native clayey and sandy soils containing the vadose aquifer, saprolite between the soil layers and the weathered, permeable bedrock, followed by the lower, less-weathered, permeable bedrock. Thus, the bedrock is a non-containment zone for purposes of remediation design.

BACKGROUND OF THE REEDY RIVER

The Reedy River runs parallel to and is within approximately 100-200 ft of the edge of the Site; hence, it is highly vulnerable to interaction with the contaminated Site parcels. The Reedy River is a highly-valuable, aesthetic water resource of the City and County of Greenville. It is located within the foothills of the Appalachian Mountains and its journey begins in the City of Travelers Rest and flows until confluent with the Saluda River just above Lake Greenwood, an important water source of supply for drinking water. It has a water basin area of approximately 167,000 acres, a hydraulic course of approximately 69 miles, and an average gradient of 0.15 percent as determined by the author.

Within the Reedy River Water Basin are thirteen (13) sub-watersheds (See Figure 2). Water quality of the Reedy River has varied considerably over time and especially so in the twentieth century. In the early part of the 20th century, water quality was primarily impacted by poorly- or un-treated industrial waste streams from the textile industrial base and from runoff from contaminated industrial sites *(Friends of the Reedy River, 2024).*

In 1972, the USEPA promulgated the Clean Water Act (PL-92,500) which provided specific effluent quality goals with deadlines, and an enforcement-oriented mechanism to achieve these goals. Through this, and changes in the textile economy of the SC Upstate, most existing industrial point source wastewater discharges were eliminated and domestic wastewater discharges were permitted and upgraded to meet secondary or tertiary standards as receiving water bodies dictated. However, the primary impact on water quality shifted from point source to *nonpoint source* pollution. And as new development accelerated, so did runoff quantity and pollutant loading despite stormwater detention basins and other stormwater mitigation efforts helping to control peak stormwater flow and nonpoint source loading.

All Pollutant Loading into the Reedy River. Both the Reedy River and Lake Greenwood are downstream of the Site, and are presently categorized by the SC Department of Health and Environmental Control (SCDHEC) and the US Environmental Protection Agency (USEPA) as *"Impaired"* in accordance with Section 303(d) of the Clean Water Act (See Figure 2). The Clean Water Act addresses all forms of water pollution, from sources such as wastewater treatment plants to "diffuse" or "nonpoint sources" such as stormwater runoff, as well as sites with diffuse pollution from contaminated sediment and groundwater.

The Act also established a permitting process by which National Pollutant Discharge Elimination System or NPDES permits could be issued to provide control over all dischargers. For stormwater agencies such as Greenville County and other governmental entities in Greenville County, an NPDES Permit (No. SCS230001) was issued June 4, 2021 in which Greenville County (the "County") was "granted

permission to discharge storm water from (its) municipal storm sewer sanitation system (MS4)."

To meet fundamental requirements to preclude contravention of water quality classification standards, minimum treatment was required for all runoff and potentially contaminated runoff. When there are other water quality standards in the downstream receiving water bodies, additional requirements are to be imposed. In the case of the Reedy River, Lake Greenwood is impaired for total phosphorus (*TP*), among other pollutants *(E-coli)* that could potentially impact potable water quality as Lake Greenwood is a source for drinking water supply. Contaminants from the Site such as *Benzene, Benzo(a)pyrene, Naphthalene, Arsenic, PAHs, et al,* could potentially be listed for inclusion in Greenville County's NPDES Stormwater permit contingent upon the concentrations.

Based upon the USEPA-approved 303(d) list of impaired water bodies developed by SCDHEC, there appear to be other pollutants that are causing impairment in Lake Greenwood, specifically *turbidity*, *E-coli,* and *pH*. The 303(d) List is compiled using five years of data, the most recent list being developed for FY 2020. The assessment methodology is developed by SCDHEC and approved by USEPA, Region IV. The most recently-approved list is for FY 2018 (SCDHEC, 2024)

The Reedy River Water Basin Has Special Permit Conditions. In Table 9.1 of the County's Stormwater Management Plan (Greenville Co, 2024), there is a special category for the Reedy River and all stream flow within the Reedy River Water Basin (Greenville Co, 2024). For purposes of the Site contamination as regards the health of the Reedy River, there is a special category referred to as an *antidegradation requirement* of total phosphorus *(TP)* for developments less than 25 acres as well as the requirement for 85% removal of *TSS*. The antidegradation rule further applies to all impaired waters, and ensures that no new activities will further degrade waterbodies that are not presently meeting water quality standards (cf. Section 9.1.3 of Greenville County's SWMP).

The determination of "impaired" waterbodies made by SCDHEC are those waterbodies listed as impaired on the 5-year 303(d) lists and/or which have an established Total Maximum Daily Load (TMDL) or equivalent. Generally-speaking,

the TMDL is the total mass loading of any individual pollutant from point source and nonpoint or diffuse source loading that can be discharged to a waterbody while still preserving all water classification standards.

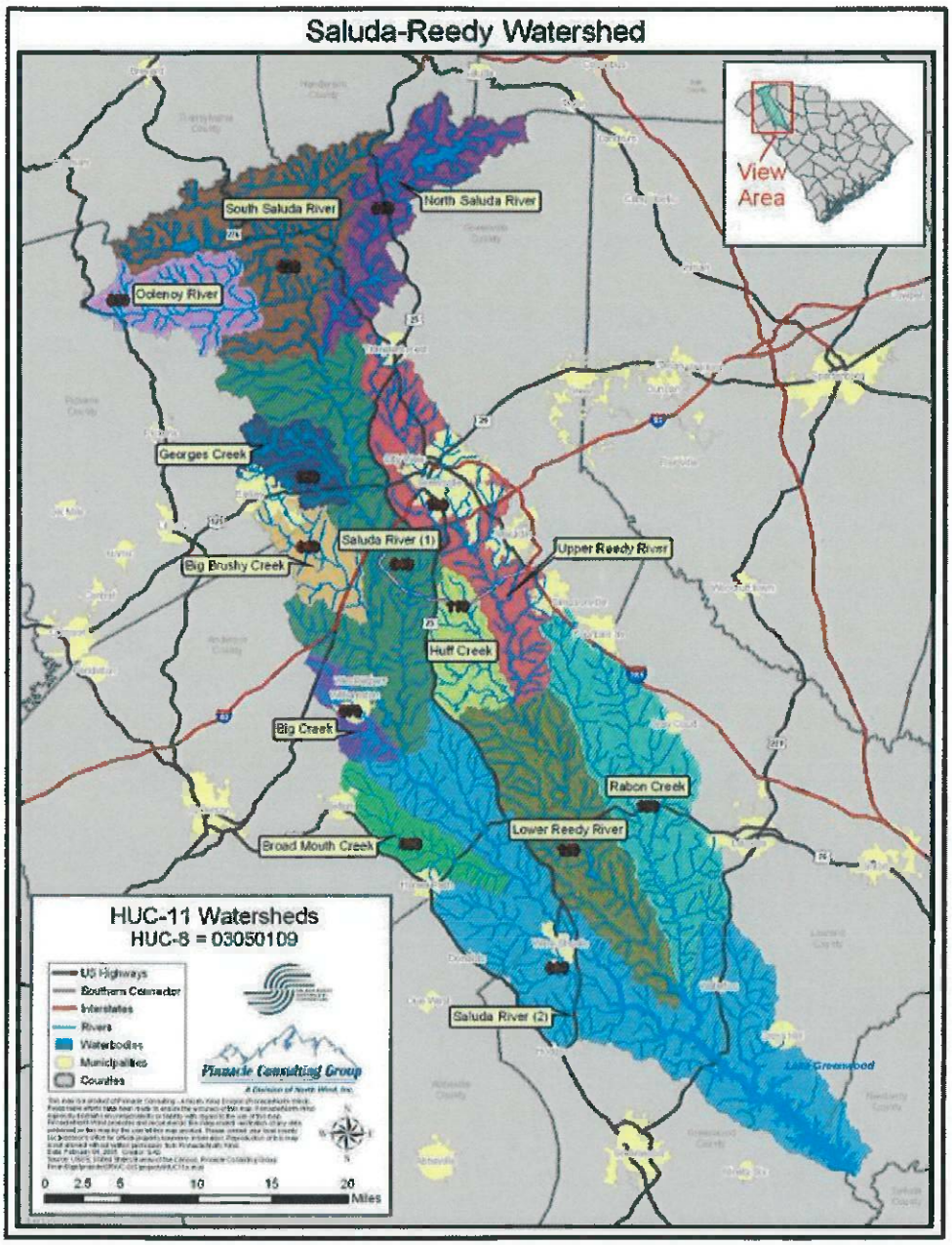

Figure 2. The Reedy River and its sub-basins and downstream Lake Greenwood (original obtained from Pinnacle Consulting Group.)

SCOPE OF GROUNDWATER CONTAMINATION AT BRAMLETTE SITE

Each of the seventy (70) monitoring wells are located within one of the following geologic layers: 1) Shallow soils such as clay, silt, and sand; 2) Saprolite soil; 3) Weathered and permeable bedrock with fissures and leaks; and 4) Deep and permeable bedrock. The reviewer is referred to all past technical reports and monitoring results to have a greater appreciation for the scope of the spread of contaminants throughout the Site and its geology with respect to the monitoring conditions. Included in Figure 3, below, is the surface soil, water, and surface sediment layer for the Site, excluding groundwater monitoring wells that in Figure 4.

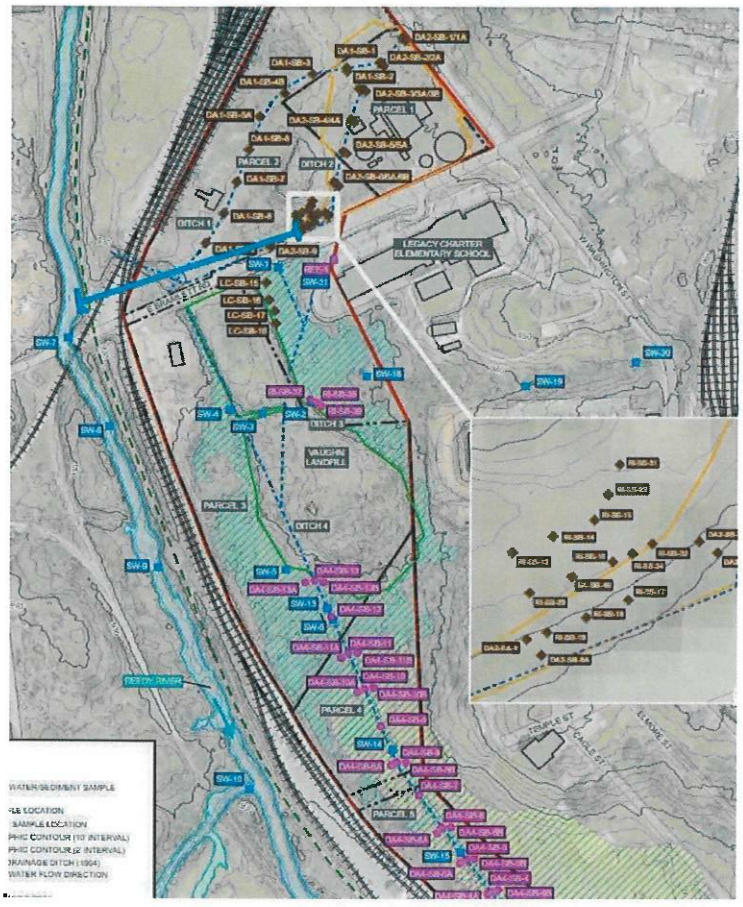

Figure 3. Location of monitoring of soil and surface water and sediment sampling on Site. Notice "insert box" of brown dense sediment Sampling locations and hydraulic gradient distance to the Reedy River of approximately 700 ft and sediment sampling along the Parcel 4 ditch. (Figure from Aquilogic.)

The best overview of contaminant monitoring is contained in section "Evaluation Summary," p. 4 of aquilogic's Report. As can be seen, there are three contaminants in the *VOC* and *SVOC* category and two PAH compounds. These contaminants include:

1. **Benzo(a)pyrene** [$C_{20}H_{12}$; log_{Kow} = 6.50], a Polycyclic Aromatic Hydrocarbon (*PAH*). This contaminant was monitored during an earlier monitoring phase and a risk-based soil concentration of 87 mg/kg was established in the year 2000 for Benzo(a)pyrene. The report does not provide the sample location nor more current monitoring results for this contaminant. (No map of the sampling location was provided.) However, this remains a potential contaminant of concern barring monitoring to the contrary.

2a. **Naphthalene Sediment Sample** [$C_{10}H_8$; log_{kow} = 3.36], another *PAH*. This contaminant was detected in **sediment** sample **DA4-SB-7** at a concentration of **58.6 mg/kg** which is greater than the regulatory standard. (See Figure 3.)

2b. **Naphthalene Transition** Zone **Groundwater Sample**. This contaminant was detected in sample collected Sept 27, 2022 at a concentration of **7220 µg/L** in groundwater well **MS-29TZ**, located approximately 700 ft downgradient of the former MGP operation. Even though this well is located in the geologic "Transition Zone", the groundwater table is nevertheless relatively shallow (924.4 ft NAVD) and therefore of concern. (See Figure 6).

3a. **Benzene** [C_6H_6; log_{Kow} = 2.13]. Monitoring results for the **shallow groundwater** aquifer for well **MW-1** is **26.5 µg/L** collected on Sept. 27, 2022, at groundwater location of 926.4 ft NAVD. (See Figure 5.)

3b. **Benzene Transition Zone Groundwater Sample**. The contaminant was detected in sample collected Sept. 27, 2022 at a concentration of **1950 µg/L** from transition well **MW-29TZ**, groundwater elevation 924.4 ft NAVD. (See Figure 6.)

Contaminant Fate and Transport. An important missing component for all prior studies evaluated by aquilogic is the absence of any effort to evaluate fate and transport of contaminants; hence, the author will demonstrate how this could be

done in practice and what some general estimates of the fate of each contaminant are, especially related to potential downstream adverse human health and environmental impacts.

The data requirements for modeling contaminant fate and transport are numerous and consist of: 1) Aqueous solubility determinations; 2) Chemical speciation for charge distribution of ions; 3) Likelihood of volatilization as determined by Henry's Law; 4) Octanol-water portioning coefficients; 5) Organic carbon coefficients; and 6) Half-life and degradation processes. Moreover, the physics involved consist of multiple complicated processes; hence, the following additional information is needed for each organic contaminant: 7) determine an adsorption coefficient, K_d using the following approach: 8) Find the aqueous contaminant compound's octanol-water partitioning coefficient, K_{ow}; 9) Convert the K_{ow} to the organic carbon partitioning coefficient, K_{oc}; 10) Find the organic carbon fraction f_{oc} in the soil; and finally, 11) Compute K_d since it is known that $K_d = K_{oc}f_{oc}$ *(Mercer and Waddell, 1993).*

Further, with many organic contaminants, retardation of concentration is affected by the growth of enzymes and the associated attenuation of the assimilated contaminant, described mathematically as *Michaelis-Menten kinetics*; and for microbial growth, described by *Monod kinetics* and the *Monod equation (Cunningham and Characklis, 1991).*

Moreover, in addition to characteristics for the contaminant compounds, the characteristics of surface and groundwater soils is critical. This information appears to have been largely missing from earlier evaluations given the paucity of soil characteristics data and geologic formation details, including soil types and soil characteristics such as, but not limited to, groundwater location, contaminant wave (isotherm) velocities, flow direction, soil organic fractions, and fractions of clay, silt, and sand, *inter alia*. The author obtained soil maps with soil properties at *Soil Survey Staff (1999)* and *UCDavis, (2024.)*

There are three major soil groups of concern relative to the Site: *Cartecay* Soils intermixed with *Chewacha* Soils (named *"Cartecay"* and abbreviated *Ca*), *"Chewala"* Soils (abbr. *Cv*), and *"Cecil Urban Land Complex"* Soils (*CuC*), proximal

to, but *outside of the Site*. A summary of important characteristics is given for each soil as follows:

Cartecay-Chewacha (65%-35%) Soil *(Ca)*. The organic matter *(OM)* on the top layer is approximately **1.5%**, clay 10%, sand 65%, hydraulic conductivity **(Ksat) ranges from 3.94 to 15.8** inches/hour. The soil is somewhat "poorly drained," is "somewhat limited" for use as an unlined retention basin and "severely limited" for disposal of rubble or construction debris. It is important to point out that the Vaughn Landfill in Parcel 3 is located within this soil classification.

Chewacha *(Cv)*. The organic matter on the top layer is approximately 2.5%, clay 35%, sand 15%, hydraulic conductivity **Ksat is 1.28** inches per hour. The soil is "somewhat poorly drained," "severely limited" when using this soil for rubble and debris disposal, and "poor" for use in an unlined retention basin.

Cecil-urban land complex *(CuC)*. This soil classification is not within the various Site's Parcels but is contiguous to the Site and the Reedy River. It is not well-defined and is characterized by Cecil soil with multiple urban land uses. The organic matter is approximately 1.3%, clay 15%, sand 65%, with **Ksat = 1.38** inches/hr.

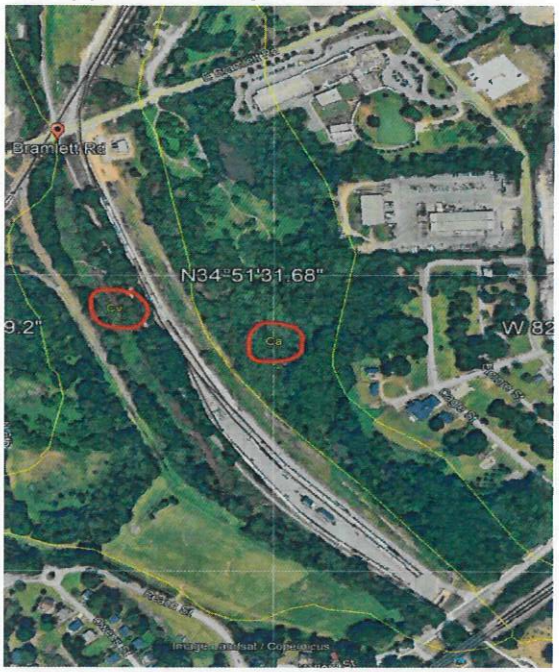

Figure 4. Location of Soil Classifications Ca and Cv within the Site boundaries and CuC outside of those boundaries (Figure from Google Earth, NTS).

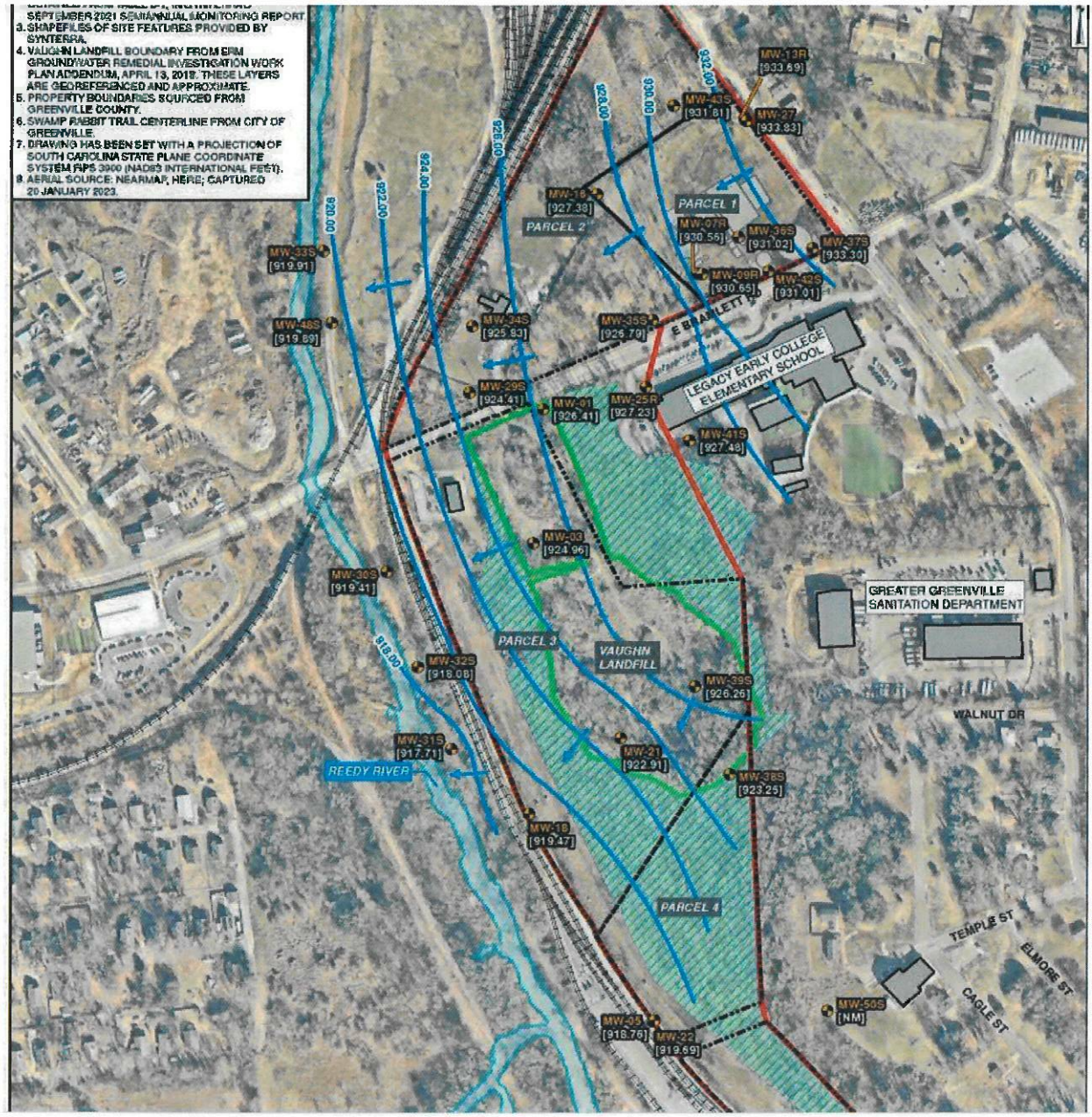

Figure 5. Shallow Zone Groundwater Potentiometric Surface Map with Monitoring Wells (Figure from aquilogic Sept. 26, 2022).

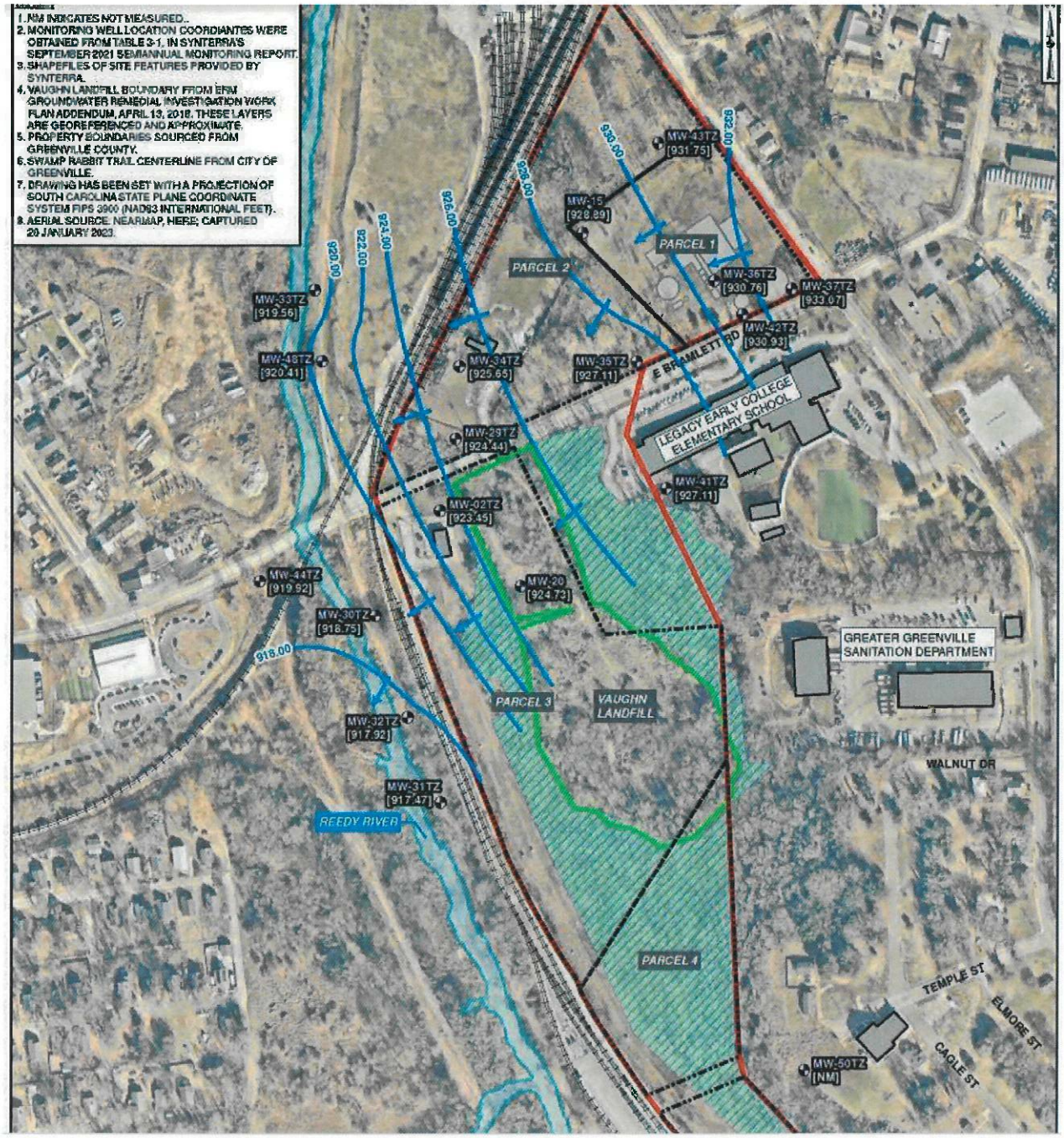

Figure 6. Transition Zone Groundwater Potentiometric Surface Map. (Figure from aquilogic Sept. 26, 2022.)

Irrespective of which contaminant, the transport of any contaminant is primarily through the movement of groundwater which generally moves parsimoniously

with three modes of action: **Advection, Diffusion,** and **Dispersion** *(Novotny and Olem, 1994; Tchobanoglous and Schroeder, 1987).*

Groundwater movement alone does not fully explain the transport and spread of contaminants in aquifers but groundwater movement is one of the critical components of action. First and most importantly of all, *Advection* is the process in which soluble contaminants are transported by bulk water through interstitial pores, and can be related to the average linear groundwater velocity as defined by the rate of hydraulic conductivity. *Dispersion* describes groundwater movement as a consequence of the differing groundwater pore sizes and pore branching which results in the hydraulic flow traveling in nonlinear longitudinal and transverse directions. Molecular diffusion, first referred to as *Brownian Motion*, is the process by which contaminants move due to the kinetic activity of molecules as first discovered and explained mathematically in 1905 *(Albert Einstein).*

The fate of any chemical in soil and groundwater is determined by its pathway. A chemical can volatilize to the atmosphere, be adsorbed on soil receptors, be leached from groundwater to lower depths through advection and diffusion, be transported by stormwater runoff to a nearby water body, be assimilated by plants, or be degraded through microbiological processes *(Stumm and Morgan, 1996; Chesters, 1986).*

The mobility of chemicals, and especially organic compounds in soils and sediments, can be related to the so-called *octanol-water partitioning* of the chemical expressed by the coefficient K_{ow} (*Schwarzenbach et al, 1993*). The coefficient is thus the accepted measure of the solubility of the chemical in (pore) water and consequently, mobility in soils. K_{ow} is *dimensionless*, but it is commonly reported as Liters/kilogram, or L/kg. As regards to inorganic contaminants, the dissolution of minerals is probably the most important process by which groundwater chemistry is controlled, and the recharge water derives almost the entire solute content through the dissolution of minerals along the flow path *(Domenico and Schwartz, 1990).*

The preferred mathematical form for describing the proportion between the dissolved and adsorbed fraction is to relate the concentration of the contaminant

adsorbed on the soil particles, R (in µg of contaminant per gram of soil, µg/g) to the equilibrium solution concentration, C_e (mg/L) at a fixed temperature (isothermic reaction; *Schwarzenbach et al, 1993*). Several formulations of equilibria have been proposed from which the *Langmuir*, or in special cases, *Freundlich* isotherms are the most widely accepted *(Notovny and Olem, 1994)*. The *Langmuir* isotherm adsorption model is expressed in the form:

$$R = [\, Q^o b C_e \,] / [(1 + bC_e)]$$

in which,

Q^o = the adsorption maximum at the fixed temperature (µg/g)

b = a constant related to the energy of net enthalpy of adsorption (L/mg or L/µg)

R = adsorbed concentration of the contaminant (µg/g)

C_e = dissolved (free) concentration of the contaminant water (µg/L)

For low concentrations of contaminants, the Langmuir isotherm may be simplified to:

$$R = \Pi C_d$$

in which,

Π = the partitioning coefficient, L/g.

Again, for low concentrations, the Langmuir isotherm can be expressed in linear form as:

$$\Pi \approx Q^o b$$

The total concentration of the contaminant is then the sum of the dissolved fraction *(C_d)* and the particulate concentration *(C_p)*. Hence, if $C_p = m_{ss} \times R$, where m_{ss} is the concentration of solids in g/L, then:

$$C_T = \Theta C_d + C_p = \Theta C_d + (m_{ss} \times R) = C_d (\Theta + \Pi m_{ss})$$

in which, Θ = water content of the soil as a fraction of the total soil volume so that for water, Θ = 1.0.

The relation between the dissolved (pore water) concentration of the chemical and the total concentration in the soil, or sediment-laden water, then is:

$$C_d = C_T / [\Theta + \prod (m_{ss})]$$

The adsorbtivity of nonpolar organic chemicals is related to their solubility expressed by the octanol partition coefficient, K_{ow} and the particulate *organic carbon content* of the soil *(OC) expressed in percent*. Then, the solid-liquid partition coefficient can be expressed as:

$$\prod \approx K_{oc} \text{ x } (\% \text{ OC}) / 100$$

in which,

K_{oc} = *the partitioning coefficient normalized by organic carbon*. K_{oc} is relatively constant and varies by a factor of only 2.0 for a wide range of soils *(Schwarzenbach and Westall, 1981)*. The coefficient K_{oc} can be correlated to the octanol partitioning coefficient, K_{ow} using the following relationship:

$$K_{oc} = (0.63)\ K_{ow}$$

Thus, water and contaminant movement through groundwater can be solved with the addition of the movement of the groundwater through soil pores. This can be determined using *Darcy's Law* which relates water velocity in a porous medium to the hydraulic gradient as:

$$v = k \frac{\partial h}{\partial l}$$

in which,

v = velocity of groundwater movement

k = constant of proportionality

h = hydraulic head

l = distance in the direction of flow

Special caution needs to be exercised here. Darcy's Law is intended to be applied to saturated soils that are *homogeneous (soil water properties independent of location)* and *isotropic (soil water properties independent of direction)*. For the soil waters at the Site, the soil water is nearly homogeneous and isotropic, and the gradient forcing and water flux rates are consistent among soil types.

The soils are saturated and unsaturated closer to the surface and it is commonly assumed that unsaturated flow is *isomotic* and *isothermal,* so that the effects of salt- and temperature-variations in soil, insofar as water movement is concerned, can be neglected.

From the limited data provided, the contaminants of greatest health and environmental risk originating from the Site seem to be ***Napthalene*** *and* ***Benzene,*** *although* ***Benzo(a)pyrene****, as a carcinogen, should be evaluated if the contaminant location can be located*. For illustration purposes, the following examples of potential contamination routes are considered. Ideally, all contaminants of concern due to risk measures should be evaluated. Benzene is a monocyclic aromatic compound with a relatively low K_{ow}.

Example 1. Route Naphthalene through the Transition Zone of the groundwater and soil matrix. The routing of the largest concentration of Naphthalene was collected from the Site's groundwater monitoring well, MW-29TZ, flowing toward the Reedy River. The groundwater flow is transported through a combination of sandy and clayey soil with only a partial transport through the deeper saphrolite soil located between the surface soils and the deeper bedrock layers. Hence, for analyses purposes, soil quality attributes will assume to be closer to the sandy-clayey shallow soil lens.

Referring to **Figure 6**, taking the elevation from the potentiometric map for the groundwater from **monitoring well MS-29TZ** to the down-gradient surface elevation of the Reedy River, yields a hydraulic head differential of:

$h = 924.4 - 920 = 4.4$ ft

$l \approx 275$ ft (from the groundwater location moving horizontally to the Reedy River)

For Darcy's Equation,

$$v = k\frac{\partial h}{\partial l}$$

in which,

$\frac{\partial h}{\partial l}$ = 4.4 ft/275 ft = 0.0160 (no dimension)

$K = 10^{-2}$ cm/sec for the soil

For primarily clay soils such as the Cecil Series, from *Todd (1980)*, the porosity (%) is between 45 and 55%, so use 50% porosity for the hydraulic conductivity, and convert to US Customary Units for final answers,

$K = 10^{-2}$ cm/sec

Applying Darcy's Law;

v = [(10^{-2} cm/s) (0.0160) (1 ft/12 in) (1 in/2.54 cm)] / (0.50) = 0.000010 ft/sec or

v = 0.907 ft/day = 331 ft/year

And the partitioning coefficient is,

$\Pi = K_{oc}\ (\%OC)/100$ = (0.5) 6300 (1.0) /100 = 63 L/Kg;

C/C_o = 0.5 (63 L/Kg) = 31.5 L/Kg

Next, the time for Naphthalene to reach the Reedy River through adsorption on soil particles can be determined. For isotherms, the time to be calculated represents the contaminant concentration, C, divided by the initial concentration, C_o, and represents the mid-point of the Langmuir isotherm assuming a Gaussian distribution. Expressed mathematically:

C/C_o = 0.5 ppm or ppb (typical)

With the correct soil properties, contaminants can be adsorbed on the soil particles of an aquifer. Adsorption is commonly incorporated into groundwater transport models using a retardation factor, R, that is an empirical term derived from the

partitioning coefficient, Π, defined above. The retardation factor, *R*, is per *Fetter (1988 above)*:

$$R = \frac{Vx}{Vc} = 1 + \frac{\rho b}{pe}\Pi$$

in which,

V_c = velocity of the solute front at which point, the solute concentration is one-half the original value

V_x = average convective velocity of water in aquifer

ρ_b = specific density of the porous media (kg/m^3 = g/L; assume 1800 kg/m^3)

p_e = effective porosity or "ϕ" (dimensionless)

Π = partitioning coefficient for the contaminant (L/g)

The Retardation Factor, $R = 1 + \frac{\rho b}{pe}\Pi$

Π = 1 + (1800 kg/m^3) (0.63L/kg/ (0.50) = 3.37 m/day = 10.3 ft/day

For distance to the Reedy River, time of travel = 275 ft/ (10.3 ft/day)

Travel Time = 27 days contaminant plume from MS-29TZ to the Reedy River

Example 2. Determine travel time from the Naphthalene-contaminated sediment in Ditch 4 to the Reedy River along with potential toxicity.

This is a difficult deterministic problem to solve given there are many more unknowns than equations, given the dimensions of the ditch are unknown, but can be reasonably assumed.

However, there is a curve of an infinite number of solutions, *N* values, that solve the various relationships among a trapezoidal section (assumed and common) for a given length and slope (both known) in this case, with *l* = 2600 ft from Bramlette Rd to the Reedy River, with a maximum depth, *y* = 2 ft (assumed); *b*= 1 (assumed width), *y/b* = 2 (calculated), and *z* = 1.5 (assumed). The population of curves to correlate all possible values for a trapezoidal cross-sectional area to meet the given conditions is:

$N = 10/3\ [(1 + 2(1.5)\ (2)]\ [(1 + (1.5)\ (2)] - 8/3[(1 + (1.5)^2\ (2)]^{0.5}/\ [1 + 2(1 + (1.5)^2\ (2)]^{0.5}$

in which the difference between assumed and calculated comparison is 0.6 ft, a relatively small error given the many unknowns involved in a solution to this multivariate equation. (With more iterations, this error would converge to zero.)

Therefore, $y = 2$; $b = 1$; $y/b = 2$; $z = 1.5$, ideal $N = 0.0$.

Now, find the flow in ditch. Using Mannings Equation, $Q = 1.49/n\ [AR^{2/3}\ S^{1/2}]$

Given a medium grass length and a relatively flat channel bottom, assume,

n (roughness coef.) = 0.15 *(Chow, 1959)*

S (slope) = 2 ft/2600 ft = $7.69 * 10^{-4}$

A (area) = (2)0.5 + 2(2) = 5 ft^2

R (wetted perimeter) = 5

Q (flow in ditch) = $v * A$ = 3.64 ft^3/sec

Example 3. Estimate concentration of Naphthalene entering Reedy River from surface water flow from Ditch 4 and sediment contamination. For Naphthalene, *log* K_{ow} = 3.37 = 2340 L/kg. The organic content of the sediment is 1.5% = 0.015.

Therefore, for Naphthalene, the Chronic Sediment Toxicity (USEPA, 1980) = 620 µg/L for freshwater aquatic species from which sediment toxicity criterion (*SQC*) can be determined.

The *Sediment Toxicity Criterion* is then:

SQC = (foc)(Koc)(WQC) = (0.015) (1.470 L/g) (620 µg/L)

SQC = 13.7 µg/g, given as the DRY WEIGHT of the sediment for Naphthalene.

Example 4. Analyze the isotherm for its Benzene concentration versus its original concentration [C/C_o] moving from MW-1 to the Reedy River.

C_o = Benzene concentration at point of initial contamination, MW-1.

K_{ow} = 135 L/kg

K_{oc} = 0.63 x 135 = 85 (L/kg)

V_x = /day (calculated above from Darcy's Law) = 0.173 m/day = 63.1 m/year

Determine retardation factor, *R*,

in which,

$R = 1 + \frac{\rho b}{pe} \Pi$ where, ρb = 1800 kg/m^3 (reasonable assumption); pe = 0.50 (for the clayey and sandy soil porosity under consideration);

$\Pi = K_{oc} \times (\%OC)$ = 85 x 1% = 85

R = 1 + [1800 (kg/m^3) x 0.001(m^3/L)/0.50] x 0.85 (L/kg) = 4.06

The velocity of the Benzene isotherm plume is:

$V_c = V_x/R$ = 0.173 m/day/4.06 = 0.0426 m/day = 15.5 m/year as the wavefront velocity for Benzene

This is less than V_x = 63.1 m/year, the convective velocity, so use:

15.5 m/year for plume velocity. Thus, time-of-travel through groundwater for Benzene to reach the Reedy River from MW-1 is 10.7 years. As is seen, the overall plume of the Benzene isotherm moves relatively slowly.

CONTROL MEASURES

Containment. Common methods for containment include surface sealing to minimize additional groundwater flow and advection of contaminants, and/or the installation of physical or hydraulic barriers to reverse the gradient forcing. Physical barrier methods consist of slurry walls, sheet piling, and grout curtains for limited, small areas where soils are unable to be removed or treated. Hydraulic barriers can be developed by a combination of pumping to injection wells, a common practice in the petroleum removal industry.

Given the permeability of the Site's Bedrock layer, contaminant containment options to minimize additional movement from the Site are very limited.

Treatment or Treatment and Removal. Removal of contaminated soils is a proven option for areas in which contamination is well-defined. The approach would consist of physical removal of contaminated soils and groundwater, then applying one or two methods for destruction of contaminants: 1) Physical removal off-site to a permitted landfill or high-temperature incinerator; or 2) On-site treatment of contaminated groundwater using granular activated carbon or the equivalent. The latter option would also work well in conjunction with a pump-and-treat approach for groundwater. *(Tchobanoglous and Schroeder, 1985).*

The contamination of the Site is heterogeneous and so presents a good opportunity to consider an application of a matrix of methods in optimizing contaminant removal and/or stabilization.

COMMENTS ON Aquilogic's PROPOSED REMEDIAL APPROACH

The following are the author's comments and recommendations on the fifteen (15) items on pages 12 – 13 of aquilogic's Technical Memorandum:

1. Revise FFS to include evaluation of bedrock zone. **Agreed.** The bedrock zone is non-homogeneous, anisotropic, and contains permeable zones. It would be helpful to have a thorough understanding of the geology of the bedrock zone in the event a containment approach to a contaminant control system is the selected lowest risk alternative.
2. Fully excavate the Vaughn Landfill. **Agreed.** There is no possible way to understand what the Vaughn Landfill contains or to what level its contents pose a risk to the environment and neighborhood. It should be excavated and contents taken for disposal to either a secure Hazardous Waste Landfill or to an Incinerator.
3. Remove contaminated sediment along the current drainage ditch across Parcels 3, 4, and 5 to the confluence of the drainage ditch with the Reedy River. **Agreed.** The removal of these soils, some of which are confirmed as

being contaminated, is a relatively minor investment to achieve a large reduction in risk to the protected Reedy River.

4. Implement a long-term groundwater remedy including P&T to prevent discharge of contaminated water to the Reedy River. **Agreed, with Conditions.** Pump and treat can be an important solution for areas that are well-defined and of a limited spatial scope. It would be nearly impossible to provide P&T for the entire Site. It is one of many potential solutions and may represent a much-needed approach in the event other more reliable treatment modes are not viable.
5. Restore Parcels 3, 4, and 5 to natural or improved wetland. **Agreed.** This achieves several important goals. The wetlands will provide important future contaminant reduction, they are an important aesthetic addition to the Site, and they provide a safe habitat haven for flora and fauna.
6. Conduct geophysical survey 300 ft on either side of Bramlette Rd. **Agreed.** It is assumed that this is a very well-defined scope that consists of visual observation and limited sampling. This is a relatively minor expense for helping to define the scope of contamination.
7. Install two additional shallow, transition, and bedrock wells spaced 250' apart adjacent to the east-side of the Reedy River, to the north of MW-30S. **Agreed.** Again, this will help to determine the extent of contamination. The contaminants to be included in monitoring should be well-defined.
8. Install four (4) additional wells each in the Shallow, Transition, and Bedrock zones spaced 250 ft apart and adjacent to the east-side of the Reedy River, south of MW-31S. It is assumed this refers to 12 additional wells. Agreed. Again, this enables the boundary conditions to be established for the larger area.
9. Install bedrock wells the length of the Site along the west-side of the Reedy River. **Agreed.** Again, defining the extent of contamination is important; however, it is unclear to what extent the bedrock zone impacts the Reedy River.
10. Identify and evaluate information as regards groundwater monitoring wells installed on CSXT property on the west side of Reedy River in 1993. Purpose is to determine if contamination is passing under the Reedy. **Agreed.**

11. Sample all wells proximate to the present drainage channel on a consistent basis. **Agreed, with Conditions**. It is unclear as to why this is needed unless previous sampling programs missed existing wells. If so, sampling should be conducted so as to add information not presently available.
12. Analyze groundwater samples from each MW on a low- and high-water condition for VOCs and SVOCs, including metals, cyanide, NH3, anions with sulfate, and general water quality parameters. **Agreed, with Conditions**. It is unclear as to where the well-water elevations presently are, so difficult to draw this conclusion. Given the access that aquilogic has to the well-head sampling details, this could be necessary.
13. Conduct periodic sampling of the Reedy River on a semi-annual basis to coincide with low- and high-flow conditions. **Agreed, with Reservations**. While this is a good idea in theory, it is difficult to believe sampling of the Reedy River will produce viable data. The obvious issue is the large dilution effect from the Reedy River flow, even low flow conditions. However, the author suggests that the Greenville Friends of the Reedy River become involved at this step and have their input solicited. They routinely sample the Reedy River on a monthly or quarterly basis. Another option, if a species is available, would be to sample freshwater clams. Clams are filter-feeders and tend to concentrate all water solutes in their flesh. So, instead of an instantaneous sample, sampling clam meat could provide a much longer period of sampling of the Reedy River. This is a common technique used for sampling marine waters by using marine filter-feeding organisms such as mussels, oysters, etc.
14. Perform additional investigation of soils, NAPL, and GW contamination in the southwestern corner of the former MPG, along drainage ditch between former MGP and Vaughn Landfill, and in the southern landfill area around MW-21. **Agreed, if monitoring data is not extant.**
15. Locate and destroy the 298-ft deep water supply well located in Parcel 1 or 2. **Agreed, with a Condition.** It is unclear what is meant by "destroy" the well, but it should be closed-out, decommissioned, and inactivated by thoroughly filling the well shaft space with highly impermeable grout, then sealing the top of the well casing with a structurally-sturdy concrete cap.

PLENURY FINAL COMMENTS ON THE REPORT

A. Given the number of samples collected from each location, and at different times over many years, the fact that each monitoring location was installed at its own date, and that different wells were installed by several different consultants, results in what seems to the author to be confusing to follow. The author would suggest a unique time stamp for each monitoring location, designated by type (whether well, soil, or sediment) with time stamp for each unique sample. The idea would be to observe if there are patterns within the sequence of various samples collected for each monitoring site. The weakness at present is the absence of an integrated data set that allows monitoring data to be compared.
B. In some cases, the magnitude of the monitored analyte is given, but no location nor precise time is provided as a reference to the monitoring. This is critical information for a meaningful interpretation of any monitoring result.
C. While there was some limited sampling for Arsenic and Cyanide, the author recommends a thorough round of monitoring for inorganic contaminants such as Arsenic, Lead, and other inorganics associated with the coal gasification process.
D. Interim Best Management Practice could be helpful but certain BMPs such as "Check Dams" would be useful for the reduction of organic waste only to the extent that the soil in runoff had high levels of organic adsorption sites and significant organic carbon content. Otherwise, contaminants in water runoff would not be removed and the check dams would be useful only for removal of large soil (sand) grains, pebbles, large wooden debris, *et al.* Other approaches are recommended *(Moore and Samuel, 1990; Wagner and Bilitewski, 2009; USDOE, 1999).*

CITATIONS

Chesters, G, 1986. *Pesticide Transformations and Movements in Soils*, Water Resources Center, University of Wisconsin, Madison, WI.

Chow, Ven T, 1959. *Open-Channel Hydraulics*. McGraw-Hill Book Co, NY.

Cunningham, AB and WG Characklis, 1991. *Influence of microbial transport processes on in-situ biodegradation of groundwater contaminants, Technical Progress Report, Final*, Office of Science and Technical Information, USDOE, OSTI ID: 5906688.

Domenico, PA, and FW Schwartz, 1990. *Physical and Chemical Hydrogeology*, John Wiley, NY.

Einstein, A, 1905. On the Theory of the Brownian Movement, *Annalen der Physiks*, (17), **19.**

Fetter, CW, 1988. *Applied Hydrogeology, 2nd ed.,* Merrill Publ., Columbus, OH.

Friends of the Reedy River, 2024. Online at https://www.friendsofthereedyriver.com/.

Greenville County, 2024. Stormwater Management Plan. Online at http://www.amlegal.com/codes/greenvillecounty/latest/

Kaser, Daniel, and Daniel Hunkeler, 2016. Contribution of alluvial groundwater to the outflow of mountainous catchments, *American Geophysical Union*, Issue. **2**, Vol. 52.

Mercer, James W, and Richard K Waddell, 1993, Contaminant Transport in Groundwater, contained in *Handbook of Hydrology*, ed. David R Maidment, McGraw-Hill, NY.

Moore, Johnnie and Samual Luomas, 1990. Hazardous Wastes from Large-Scale Metal Extraction. A Case Study. *Environmental Sci. Technol, 24.9, American Chemical Society Publications.*

Novotny, Vladimir, and Harvey Olem, 1994. *Water Quality Prevention, Identification, and Management of Diffuse Pollution,* Von Nostrand Reinhold, NY.

Schwarzenbach, RP, PM Gschwend, and DM Imboden, 1993. *Environmental Organic Chemistry*, John Wiley, NY.

Schwarzenbach, RP, and J Westall, 1981. Transport of nonpolar organic compounds from surface water to groundwater, laboratory sorption studies, *Environ. Science and Technology* **5.**

Soil Survey Staff, 1999. *Soil Taxonomy: A basic system of soil classification for making and interpreting soil surveys, 2nd ed.* NRCS. USDA Handbook 436.

SCDHEC, 2024. Online at https://scdhec.gov/bow/south-carolina-303d-list-impaired-waters-tmdls#2).

Snoeyink, Vernon L and David Jenkins, 1980. *Water Chemistry*, John Wiley & Sons, NY.

Stumm, Werner and James J Morgan, 1996. *Aquatic Chemistry: Chemical Equilibria and Rates in Natural Waters, 3rd ed,* John Wiley & Sons, NY.

Tchobanoglous, George and Edward D Schroeder, 1985. *Water Quality: Characteristics, Modeling, Modification.* Addison-Wesley Publ. Co, Menlo Park, CA.

Todd, DK, 1980. *Groundwater Hydrology, 2nd ed,* John Wiley, NY.

UCDavis, 2024. Online at https://CaSoilResource.lawr.ncdavis.edu/group/.

US Dept. of Energy, 1999, *Environmental Assessment for the Interim Measures for the Mixed Waste Management Facility for Groundwater at the Burial Ground Complex at the Savannah River Site*, DOE/EA-1302, SRS Operations Office, Mixed Waste Management Facility.

US EPA, 1980. *Ambient Water Quality Criteria for Naphthalene*, Office of Water Regulations and Standards, Report EPA 440/5-80-059, Washington, DC.

Wagner, J., and Bilitewski, 2009. The Temporary Storage of Municipal Solid Waste—Recommendations, *J. of Waste Management*, 29: 5, Elsevier Publishing.

Ward, CH, W. Giger, and PL McCarty, Editors, 1985. *Ground Water Quality*, Office of Science and Tech. Information, USDOE, OSTI ID: 5906688.

SC DEPARTMENT *of* ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. John B. Cook
cookjohnb@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Cook,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email. While your comments were not specifically on the Proposed Plan, we appreciate your review of Aquilogic's Draft Memorandum of May 7, 2024.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

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From: Ame R Sanders <s_ame@bellsouth.net>
Date: Friday, June 7, 2024 at 11:23 AM
To: <cassidga@dhec.sc.gov>
Subject: CSXT Bramlett Road Site - Public Meeting

Mr. Cassidy,
Thank you for your presence in our community last night to present the findings and recommendations for the cleanup of the Bramlett sites and for the well-managed and respectful public question and answer period following your presentation. Finally, thank you also for publicly stating DHEC's commitment to a full cleanup of the sites. It is also appreciated that representatives from CSX and Duke Power were present at the meeting and also demonstrated their support for full cleanup. As you were clearly able to see last night, this is an important local project and matters a great deal to our community.

I'm writing to demonstrate full support for the requests by Rev. Mills and my neighbors who live immediately adjacent to this site. What affects my neighbors in one area of our local community affects us all. **I would ask that DHEC continue to respect and commit to completely honoring our community's demands for a full cleanup.** If Rev. Mill's and the adjacent community's requests are fully recognized and met, I will be fully satisfied as well. I stand in solidarity with my neighbors on this issue.

That said, I have a few comments following last night's session.

- **Groundwater**
  - **I would ask that DHEC specifically include a formal commitment to further remediation of the groundwater as part of the decision of record.** This was requested last night by several community members and was the recommendation of SCELP. I'm asking for this to be done in a way that formally acknowledges and demonstrates a long-term commitment to the community for full cleanup, including groundwater. By including this formally in your decision it will help hold responsible parties fully accountable to ensure follow-on activities are seamlessly pursued. All of this should be done in a manner that in no way delays or jeopardizes the immediate next steps in the currently proposed cleanup for the existing sites.
  - During the presentation, you mentioned two periods relating to the subsequent monitoring of groundwater contamination. First, you suggested that the groundwater be monitored for five years before follow-on actions are taken. Subsequently, you mentioned that typically after two years, you would be able to assess the result of the previous cleanup and know where you stand. You were clear that design on a groundwater technical solution could not reasonably be accomplished until after the cleanup and removal of toxic materials. That said, **I am requesting that, based on your comments, you plan to initiate discussion, design, and work toward phase II of groundwater remediation after the shortest period feasible, which, based on your comments, would appear to be two years, not five.** This should be formally

confirmed in your decision and done as a natural follow-on to this project. It should not require further legal pressure, outcries, advocacy, or demands from the community. It should simply be done as a matter of course and as expeditiously as technically feasible.

- **Design and Execution of Proposed Option 5 Cleanup**
  - Timeline - During the meeting, you were asked multiple times about the timeline (how long it took) for cleaning up the Broad St. site. I did not hear you provide an answer to that question. **I would like you to share the relative scale and time for the Broad St site cleanup vs. this proposed cleanup as a reference.** Time is of the essence for this project and this community. Delays have already been far too long. The disruption in the community should be as short as reasonably and safely feasible. Also, there is an opportunity cost to the community for further delay. Seven to ten years seems quite long. That said, it is clear that this project has some added complexities that must be considered. However, transparency on timelines for other comparable projects is important to fairly assess the proposed alternative and, ultimately, the design.
  - Economic Development - The recommendation was made that the project bid and award process should include economic development for the nearby affected community by using and/or training local workers. Despite the difficult history of this project, it is never too late to make this an example of best practices going forward. This type of local economic development approach is a best practice and could be a very positive move for both the state, the responsible parties, and the community. **Please include this in your design and agreement as a factor to be considered in the project bid and vendor selection.**
  - Monitoring - During the presentation, you mentioned that as the material is being removed, there will be ongoing and constant monitoring of air and water quality. However, you did not elaborate on how the monitoring would take place and how those results would be shared with the community. Perhaps this is already intended, but I would like to request that the monitoring be conducted by a 3rd party independent evaluator contractually responsible to all parties, that the results be communicated publicly to the community on a regular basis, and that the community be alerted immediately to any adverse discharges or findings. In addition, discovering any additional types of toxic materials during the excavation of the unpermitted landfill should be transparently disclosed to the surrounding community. Self-monitoring by the vendor executing the project would not guarantee the level of control needed in such a complex and lengthy project. Also, the community needs to be apprised regularly to feel safe during the removal. **Please include a strong and publicly transparent monitoring process in your design and execution proposal.**
- **Community Health Consequences**
  - As others expressed last night, I'm disappointed that no one qualified to speak to the possible health impacts created by this site was present. Individual health discussions must remain private by law. However, sharing transparently what is known about possible adverse outcomes linked with the confirmed present toxic elements should already have occurred. I was disappointed to learn this has not happened in any substantive way. **Information sharing on this site's community health risks should occur publicly and without delay.**

Thank you for the work you have already done on our behalf. As this critical project moves forward, we count on DHEC's continued commitment to recognizing and meeting the needs of our community.

Sincerely,

Ame Sanders
201 Hermitage Rd
Greenville, SC 29615
864-630-8540

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SC DEPARTMENT *of* ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Ame Sanders
S_ame@bellsouth.net

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Sanders,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 7, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

The Broad Street Site and the CSXT Bramlett Road Site are both former manufactured gas plants (MGP) in Greenville but that is about where the comparison ends. The Broad Street Site makes up approximately 1.2 acres compared to the approximately 35 acres that make up the CSXT Bramlett Road Site. After investigations were

completed from 1988-1995 at the Broad Street Site, a series of removal actions (1995, 1999, 2001, 2008, 2011, and 2015-2017) were conducted from 1995-2017, totaling 54,000 tons. At the CSXT Bramlett Road Site, after investigation occurred from 1992-1999, 5073 tons were removed in 2000, and 61,0000 tons of soil was removed in 2001. So, the MGP Plant portion of the sites of both were removed in similar timeframes and the Bramlett removal was approximately 12,000 tons more material than the Broad Street site. Also, there has been no groundwater remediation at the Broad Street Site. Concentrations in groundwater have reduced since the removal action was completed. Annual groundwater monitoring is still required to this date. Additionally, the Broad Street Site has significant restrictions in place on the parcel deeds that limit types of development, uses of groundwater, requires exposure barriers, and requires vapor mitigation measures for any built structures.

As to the timeframe for the remedial action, that is to be determined based on the site conditions. With much of the remedial action taking place in wetland areas, there are many aspects that may slow down remedial activities. Sheet piling and dewatering will have to be used to allow for a complete excavation. Remedial activities must be conducted in stages to prevent the spread of contamination and assure the work is done in a protective manner for the workers and residents in the area. The 7-year time frame is just an estimate.

As SCDES stated in the public meeting, coal ash and coal tar are not the same compounds, nor do they act the same way in the environment. Coal ash basins typically involve large 100+ acre ponds that are easily accessible and require minimal engineering design to excavate, resulting in large volumes of material that can be excavated mainly limited only by the number of dump trucks available. Coal Tar sites are typically in urban areas, near busy streets, and are in much tighter confines. The CSXT Bramlett Site has the added difficulties of the C&D landfill and wetlands issues that must be addressed. As was stated in the meeting to compare the two in any way is simply wrong.

There will be significant water management and water treatment during the excavation process. Areas will need to be dewatered and the water will be treated through a treatment system. The volumes will depend on site conditions. Installing an active groundwater system before the excavation would be using poor engineering practices. Most of the monitoring wells will have to be abandoned during the remedial action. After the action is completed, new wells will be installed to monitor site conditions post removal. All work will be conducted under a monitoring plan approved by SCDES. The remedy as proposed by SCDES in the Proposed Plan is not intended to be the final remedy for the site. After removal is complete, the need for groundwater remediation will be evaluated as Operable Unit 3. During the excavation process dewatering and water management will be required. This is not intended to be the groundwater remedy for the site. However, the removal of the source material by excavation is expected to result in significantly improved groundwater quality.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public+Comment+on+Bramlett+Site

russell oglesby <whiteoakpastor@outlook.com>
Wed 8/7/2024 7:02 AM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Good Morning Mr. Cassidy,

I was informed yesterday of the delayed clean-up caused decades ago. When Duke Power owned and operated a Natural Gas facility which ultimately left a tar like substance. Back in those days, there wasn't any knowledge of human endangerment being created to the ground water. Every institution and/or individual is responsible for past and present actions. The danger imposed to the citizens of the West Greenville Area and those unknown. It is absolutely impossible for anyone to know the magnitude of Health Risk and Impact. That which I fully understand, is that unless this known toxic hazard is completely removed, lives are in danger. This deferral is indicative of institution's reluctance to admit learned health risk. It is past time to resolve the known silent executioner.

I employ you (DES Project Manager) to expeditiously order Duke Energy and CSX to clean up this site. NOT, it can never be restored to its natural origin, but the problem must be removed immediately.

Thank You in advance.

Russell M. Oglesby
(864) 934-0082
"*Charity sees the need not the cause.*" German Proverb

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Russell Oglesby
whiteoakpastor@outlook.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Oglesby,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 7, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

REQUIRE FULL CLEAN UP OF BRAMLETT SITE

Carol Harrison <cetharrison13@gmail.com>

Tue 8/6/2024 11:53 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Mr. Cassidy,

As you know, the proposed clean-up plan for the Bramlett site is woefully inadequate and falls far short of a complete cleanup--which would stop the flow of contaminated water into the Reedy River, where toxins are carried through downtown Greenville to Lake Conestee.

Duke and CSXT should be required by DHEC to fully excavate all contaminated sediment and restore the wetlands on the Bramlett site. Yes, all of this should have been done years ago. But we can't keep ignoring the problem and putting it off. No matter how much it costs and how much time it takes, it's not too late to remedy this blight on our community. Greenville deserves better.

Sincerely,

Carol Harrison
111 E. Augusta Place
Greenville SC 29605

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Carol Harrison
Ceharrison13@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Harrison,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Tara Stevenson <clemsontigergirl@gmail.com>

Tue 8/6/2024 9:28 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

It's well beyond time that the coal tar issue is permanently handled in a way that puts this community first! Thanks for being open to make a difference.

Sincerely,
Tara Stevenson
1 Bellfort Dr, Taylors, SC 29687

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Tara Stevenson
clemsontigergirl@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Stevenson,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Rd Cleanup

Jean Martin <mjgm205@gmail.com>

Tue 8/6/2024 5:48 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I know that the plan for cleaning up this toxic site is up for your judgement and I do hope you will do the right thing by our community and state and require that Duke Energy and CSXT FULLY clean up the toxic mess that has been the subject of discussion and unhappiness for a very long time now. A ruling requiring this would be the happy ending we all want and will put the matter to rest. I know we all want that.

Regards,
Jean Martin
Greenville, SC

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Jean Martin
Mjgm205@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Martin,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

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Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment for CSXT Bramlett Rd Site

Chandra Dillard <chandra.dillard@furman.edu>

Tue 8/6/2024 5:20 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

Thank you so much for your dedication to the clean-up of the CSXT Bramlett Rd. site. As the state representative for the area. I wanted to weigh-in and provide my public comment (via this email)

I am in full support of Alternative #5 which calls for excavation and complete removal of the Vaughn landfill. As presented in the public meeting to include natural attenuation and land use controls.

Thank you for allowing me the opportunity to record my support for this project.

Chandra

Chandra Dillard
Director of Community Relations and
SC State Representative
O: 864/294-2503
C: 864/915-1276

Clearly Furman: The Campaign for our Third Century
To learn more, visit https://www.furman.edu/clearly-furman/

FURMAN UNIVERSITY

SC DEPARTMENT *of* ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Chandra Dillard
Chandra.Dillard@furman.edu

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Dillard,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

COAL TAR CONTAMINATED

Ma'ta Crawford <queendomship@gmail.com>
Tue 8/6/2024 3:46 PM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>
*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I remember in 1995 when the coal tar contaminated site on Broad Street (where the luxury Ellison apartments now stand) was excavated to the bedrock to remove the toxins in the soil.

It was not until 2019 that I learned that there is a second site that is contaminated from a former manufactured gas plant AND an illegal dump. DHEC has been reviewing testing done by Duke Energy at the Bramlett site, near Unity Park, for 3 decades now. In 2019 testing performed by Aquilogic showed that the Bramlett site is STILL leaking cancer-causing contaminate into the Reedy River. This contamination flows through our community all the way to Conestee and beyond.

I am aware that a proposed cleanup plan has been submitted to DHEC for this site. However, this plan does not go far enough for a full clean up.

I urge that DHEC require Duke and CSXT to implement a cleanup plan that will fully remedy the groundwater contamination. Such a plan will need to include a pump and treat process to prevent continued discharge of contaminated water into the Reedy.

ALL the wetlands contained on the property should be restored and all contaminated sediment found in ALL parcels (including the drainage ditch) should be fully excavated.

This contamination is a blight on our community and has been harming our neighbors in the Southernside community for over 30 years. Toxins travel far beyond the contaminated parcels and harm people and wildlife all along the Reedy River.

I urge you to REQUIRE that Duke and CSXT FULLY remediate this contamination for the betterment of the Greenville community

Respectfully,

Ma'ta Crawford, CHW
Phone: 864.399.7974

SC DEPARTMENT *of* ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Ma'ta Crawford
queendomship@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Crawford,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Please REQUIRE Duke Power and CSXT to FULLY CLEAN UP the Bramlett Site

Traci Barr <traci.lynne.barr@gmail.com>

Tue 8/6/2024 2:47 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

In the fall of 2019, as an employee of a nonprofit called Village Engage, I helped produce a very large community event at Mountainview Baptist Church in Greenville—the subject of which was the terrible problem of a contaminated site in the Southernside Community, along Bramlett Road, close to where the church is located. The toxic contamination that exists there is from a former Duke Energy manufactured gas plant, as well as an illegal dump.

An aspect of that community gathering pointed out that a similarly contaminated site once existed in a different, more affluent neighborhood of Greenville: a section of Broad Street where the luxury Ellison apartments now stand. In that case ... the site was excavated down to the bedrock in order to remove the toxins in the soil.

For three decades now, DHEC has been reviewing testing done by Duke Energy at the Southernside/Bramlett site, which is also near Unity Park. In 2019, testing performed by Aquilogic showed that the Bramlett site is still leaking cancer-causing contaminate into the Reedy River. This contamination flows through our community—all the way to Conestee and beyond. Toxins from the Bramlett site travel far beyond the contaminated parcels in Southernside—harming people and wildlife all along the Reedy River.

I am aware that a proposed cleanup plan has been submitted to DHEC for this site. However, this plan does not go far enough for a full clean-up.

I urge that DHEC require Duke and CSXT to implement a clean-up plan that will fully remedy the groundwater contamination. We've learned that such a plan will need to include a pump-and-treat process to prevent continued discharge of contaminated water into the Reedy River. Additionally, all the wetlands contained on the property should be restored and all contaminated sediment found in all parcels—including the drainage ditch—should be fully excavated.

This contamination is a blight on our entire community and has been harming our neighbors in the Southernside Community for over 30 years. I urge you to require that Duke and CSXT fully remediate this contamination for the betterment of all of Greenville's citizens.

Respectfully,

Traci Barr
Greenville, SC

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Traci Barr
Traci.lynne@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Barr,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

John Huggett <tjhugg1@gmail.com>

Tue 8/6/2024 12:26 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

For far too many years the Bramlett Site has been ignored, overlooked and disregarded. It is past time to embrace a more comprehensive approach to the cleanup of this site. I urge you, as a resident of Greenville County, to adopt the proposed solutions of SCELP.

The citizens living nearby have been seriously impacted by this site's toxicity. Please act now to protect our residents and communities from this toxic waste.

Respectfully, John Huggett 204 Lord Byron Lane, Travelers Rest SC 29690

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. John Huggett
Tjhugg1@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Huggett,

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Cole Shealy <cole.shealy@yahoo.com>
Tue 8/6/2024 12:09 PM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I strongly urge DES to act NOW in ordering that Duke and CSXT finally clean up and restore this site, which is 30 years overdue.

Thanks,
Cole

SC DEPARTMENT *of* ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Cole Shealy
Cole.shealy@yahoo.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Shealy,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

donna cole <dpcole1954@yahoo.com>

Tue 8/6/2024 10:45 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

You know that out of sight out of mind is NOT a remedy.
In this situation- all polluters of the past need to step up and do all they can to correct their mistakes. If the polluting was due to lack of technology 30 years ago or ignorance or laziness- it does not matter. The consequences are far reaching and proven to be detrimental 30 years later in so many ways.
Doing all that can and should be done to rectify for the sake of our fragile planet is mandatory.
Just covering it up would be another example of extended stupidity and carelessness!
Donna P Cole, Beaufort SC

Yahoo Mail: Search, Organize, Conquer

SC DEPARTMENT of
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Donna Cole
Dpcole1954@yahoo.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Cole,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Bess Lochocki <bess@waccamawlawllc.com>
Tue 8/6/2024 10:37 AM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hello,

This site, and neighborhood, has been plagued by coal tar contamination for decades. DES's proposed cleanup plan falls short by neglecting the contaminated groundwater. This oversight threatens to spread the pollution further into the Reedy River.

The circumstances demand a complete cleanup, including groundwater treatment, and hold Duke and CSXT accountable.

Thanks,
Bess

Bess D. Lochocki
Waccamaw Law
10172 Ocean Highway Suite 2
PO Box 2307
Pawleys Island, SC 29585
843-237-5299
bess@waccamawlawllc.com

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Bess Lochocki
bess@waccamawlawllc.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Lochnocki,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Fwd: Duke Power and CSXT MUST fully Clean up the Bramlett Site

lastmile7@yahoo.com <lastmile7@yahoo.com>

Tue 8/6/2024 9:02 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Warmly, Deb

Dear Mr. Cassidy,
The second Duke site that is contaminated is from a former manufactured gas plant AND an illegal dump. DHEC has been reviewing testing done by Duke Energy at the Bramlett site, near Unity Park, for 3 decades now. In 2019 testing performed by Aquilogic showed that the Bramlett site is STILL leaking cancer-causing contaminate into the Reedy River. This contamination flows through our community all the way to Conestee and beyond.
I am aware that a proposed cleanup plan has been submitted to DHEC for this site. However, this plan does not go far enough for a full clean up.
I urge that DHEC require Duke and CSXT to implement a cleanup plan that will fully remedy the groundwater contamination, including a pump and treat process to prevent continued discharge of contaminated water into the Reedy.
ALL the wetlands contained on the property should be restored and all contaminated sediment found in ALL parcels (including the drainage ditch) should be fully excavated.
This contamination has been harming our neighbors in the Southernside community for over 30 years. Toxins travel far beyond the contaminated parcels and harm people and wildlife all along the Reedy River. Further, it destroys my faith in the fairness of governments, utilities, and public institutions in the Upstate area.
I urge you to REQUIRE that Duke and CSXT FULLY remediate this contamination.
Respectfully,--
Deb Grove

15 choppee Court, Simpsonville SC 29681

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Deb Grove
Lastmile7@yahoo.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Grove,

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After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable

Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public+Comment+on+Bramlett+Site

janet welch <welchj990@gmail.com>
Tue 8/6/2024 9:01 AM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Mr. Cassidy
I urge you to enforce the cleanup that Duke Power is obligated to do in the Bramlette Road area. It has been a hazard far too long. The contamination of the Reedy River is unacceptable. Our citizens deserve a clean and healthy environment. Thank you.
Janet Welch
864-420-4409

Sent from my iPhone

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Janet Welch
Welch990@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Welch,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public+Comment+on+Bramlett+Site

Linda Hostetler <hh57tea@gmail.com>

Tue 8/6/2024 8:57 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Good morning Mr. Cassidy. Has there been anything actually done besides testing the last 15 years on the Southernside/Bramlett site? Please do what can be done in order for the people to have clean ground water or whatever they need there environmentally. Get the railroad to work with you if they are involved. Thank you,Linda Hostetler

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Linda Hostetler
Hh57tea@gmailc.om

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Hostetler,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

DUKE Power & CSXT must clean up the Bramlett site

Leigh Berman <leebee.leigh@gmail.com>

Mon 8/5/2024 10:50 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I am writing to you about the Bramlett site near Unity Park

I am aware that the area is contaminated from a former manufactured gas plant AND an illegal dump. DHEC has been reviewing testing done by Duke Energy at the Bramlett site, near Unity Park, for 3 decades now. In 2019 testing performed by Aquilogic showed that the Bramlett site is STILL leaking cancer-causing contaminate into the Reedy River. This contamination flows through our community all the way to Conestee and beyond.

I am aware that a **proposed cleanup plan has been submitted to DHEC for this site**. However, this plan **does not go far enough for a full clean up.**

I urge that DHEC require Duke and CSXT to implement *a cleanup plan that will fully remedy the groundwater contamination. Such a plan will need to include a pump and treat process to prevent continued discharge of contaminated water into the Reedy.*

ALL the wetlands contained on the property should be restored and all contaminated sediment found in ALL parcels (including the drainage ditch) should be fully excavated.

This contamination has been harming our neighbors in the Southernside community for over 30 years and is truly a blight on our community. Toxins travel far beyond the contaminated parcels and harm people and wildlife all along the Reedy River.

I implore you to REQUIRE that Duke and CSXT FULLY remediate this contamination for the betterment of the Greenville community. Our neighbors deserve better.

Respectfully submitted,

Leigh Berman
815 Edwards Road
Greenville, SC 29615
864.421.0576

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Leigh Berman
Leebee.leigh@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Berman,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable

Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Duke Power and CSXT MUST fully Clean up the Bramlett Site

Kerri Smith <kjscude@gmail.com>

Mon 8/5/2024 5:50 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I just recently learned about the pollution at the Bramlett site.

I am aware that a **proposed cleanup plan has been submitted to DHEC for this site.** However, this plan **does not go far enough for a full clean up.**

I urge that DHEC require Duke and CSXT to implement a cleanup plan that will fully remedy the groundwater contamination. Such a plan will need to include a pump and treat process to prevent continued discharge of contaminated water into the Reedy.

ALL the wetlands contained on the property should be restored and all contaminated sediment found in ALL parcels (including the drainage ditch) should be fully excavated.

This contamination is a blight on our community and has been harming our neighbors in the Southernside community for over 30 years. Toxins travel far beyond the contaminated parcels and harm people and wildlife all along the Reedy River.

I urge you to REQUIRE that Duke and CSXT FULLY remediate this contamination for the betterment of the Greenville community

Respectfully,
Kerri J Smith
864.419.2377

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Kerri Smith
kjscude@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Smith,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Loryn Trail <loryntrail@gmail.com>
Mon 8/5/2024 4:09 PM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>
*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Good afternoon,

I am emailing for the public comment period of the Bramlette Road site. The site has been worked on off an on for over 30 years but the site is still not fully cleaned. I would like to comment on the importance of this site being fully cleaned as it has severe consequences on not only the local environment, but also the local community of people that use the local body of water. This water could potentially have negative consequences on the people who recreate or live near it as they are constantly exposed to the waste site. At the very least, I would like to urge DES to conduct and environmental risk assessment that includes a human health risk assessment.

Thank you for your time and I appreciate your consideration.

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Loryn Trail
loryntrail@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Trail,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness. A human health risk assessment and an ecological risk assessment were both conducted as part of the Remedial Investigation Report.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett site cleanup

Anne Johnson <annetom75@gmail.com>

Mon 8/5/2024 3:25 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I urge that DHEC require Duke and CSXT to implement a cleanup plan that will fully remedy the groundwater contamination. Such a plan will need to include a pump and treat process to prevent continued discharge of contaminated water into the Reedy River.

ALL the wetlands contained on the property should be restored and all contaminated sediment found in ALL parcels (including the drainage ditch) should be fully excavated for the health of the nearby residents.

This contamination is a blight on our community and has been harming our neighbors in the Southernside community for over 30 years. Toxins travel far beyond the contaminated parcels and harm people and wildlife all along the Reedy River.

I urge you to REQUIRE that Duke and CSXT FULLY remediate this contamination for the betterment of the Greenville community.

Sincerely
Anne Johnson
14 Sugarberry dr
greenville, Sc 29615

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Anne Johnson
Annetom75@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Johnson,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Duke Power and CSXT MUST fully Clean up the Bramlett Site

Susan Stall <srstall@gmail.com>

Mon 8/5/2024 2:27 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I remember in 1995 when the coal tar contaminated site on Broad Street (where the luxury Ellison apartments now stand) was excavated to the bedrock to remove the toxins in the soil.

It was not until 2019 that I learned that there is a second site that is contaminated from a former manufactured gas plant AND an illegal dump. DHEC has been reviewing testing done by Duke Energy at the Bramlett site, near Unity Park, for 3 decades now. In 2019 testing performed by Aquilogic showed that the Bramlett site is STILL leaking cancer-causing contaminate into the Reedy River. This contamination flows through our community all the way to Conestee and beyond.

I am aware that a **proposed cleanup plan has been submitted to DHEC for this site**. However, this plan **does not go far enough for a full clean up.**

I urge that DHEC require Duke and CSXT to implement a cleanup plan that will fully remedy the groundwater contamination. Such a plan will need to include a pump and treat process to prevent continued discharge of contaminated water into the Reedy.

ALL the wetlands contained on the property should be restored and all contaminated sediment found in ALL parcels (including the drainage ditch) should be fully excavated.

This contamination is a blight on our community and has been harming our neighbors in the Southernside community for over 30 years. Toxins travel far beyond the contaminated parcels and harm people and wildlife all along the Reedy River.

I urge you to REQUIRE that Duke and CSXT FULLY remediate this contamination for the betterment of the Greenville community

Respectfully,

--

Susan Stall
17 Riverside Drive

864.430.0637

SC DEPARTMENT *of*
ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Susan Stall
srstall@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Stall,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2)

Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Site Cleanup

Chris Paredis <chris.paredis@gmail.com>

Sun 8/4/2024 4:50 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy:

I recently became aware of the proposed plan for Duke Power's clean-up of the Bramlett MGP site. I read more about the plan and its shortcomings on the South Carolina Environmental Law Project website (https://www.scelp.org/cases/bramlett).

I would strongly encourage you to revisit Duke Power's plan to address the shortcomings of the remediation plan as detailed in the following report: https://drive.google.com/file/d/1m8xynIFAlp2wj-_bEteIkAenhzdrMx0N/view?usp=sharing

It is crucial for the Southern Side community and Greenville as a whole that the leaking of carcinogenic and other pollutants from the Bramlett MGP into the Reedy river and adjacent wetlands be stopped so that we all can enjoy our natural resources without having to worry about negative long term health issues.

I respectfully request that you revisit this issue and amend the proposed plans based on the recommendations detailed in the above referenced report.

-- Chris

chris.paredis@gmail.com

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Chris Paredis
Chris.paredis@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Paredis,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 4, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett CXST Site

Nicola <nicolapage88@gmail.com>
Sun 8/4/2024 11:45 AM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hello Greg,

I am writing to ask that the plan to address coal tar contamination at the Bramlett Road site in Greenville also includes a remedy for treating the contaminated groundwater around the site. Besides giving the Newtown neighborhood and communities along the Reedy River watershed the healthy environment that they deserve, it will send a strong message to companies that South Carolina will hold them accountable for over polluting our state.

Kind Regards,
Nicola Page
Greenville, SC

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Nicola Page
Nicolapage88@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Page,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 4, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Comments on Bramlett CSDT Site Cleanup

Mary McGowan <maryrmcgowan@gmail.com>
Thu 8/1/2024 1:56 PM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Mr. Cassidy,

As a Greenville resident and neighbor to the Newtown neighborhood area, and as a public health professional, I am writing in support of the SCDES clean up. I hope that plans can include addressing groundwater contamination, as this is imperative to the longterm health of the community. Given Greenville's continuing rapid growth and development, this restoration of this part of the Reedy River watershed and thorough excavation of the contamination area is truly crucial to community stakeholders and future generations. Thorough transparency and reporting of sampling/monitoring results will help rebuild community trust and confidence in this project.

Thank you for your attention to this important matter.

Mary McGowan
12 Berkley Ave, Greenville, SC 29609

SC DEPARTMENT *of*
ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Mary McGowan
marymcgowan@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. McGowan,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 1, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Rebecca Cureton Cureton <beck.cureton@gmail.com>

Wed 7/17/2024 9:26 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I'm Rebecca Cureton and I used to live on Hampton Avenue right up form the unsafe site when I was a little girl I don't remember to much about it, but I do no my mother would not let us play down in that area are walk to school that way we had to go in around the long way.she always say it's not safe. We would come home with black stuff on our shoes we used to get old cans that was there and put some of the black stuff in it and take it home and mix it with sand and make mudcake with it. We kept it from our mom because she tell us not to go down there but we kids we didn't care we just wanted to have fun. And I think that why we was sick lot. If we have told our parents that we was playing in that area we wouldn't been able to leave the front yard. And I think we had something look like an old well that they kept cover up in our back yard we stay In a big house in cripple creek on Hampton Ave that they call the big house. And cleaning that site is great and is the best thing for all of us as we go forward.

SC DEPARTMENT *of*
ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Rebecca Cureton
Beck.cureton@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Cureton,

Thank you for your continued interest in the CSXT Bramlett Road Site and your July 17, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public+Comment+on+Bramlett+Site

lucy ault <aultlc862@gmail.com>
Wed 7/10/2024 11:41 AM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I am emailing to support the clean up of the Sunny side area which is 30 years overdue. Duke and CSXT must be held accountable and right this wrong.
Thank you
Lucy Carter Ault

Sent from my iPhone

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Lucy Ault
Aultlc862@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Ault,

Thank you for your continued interest in the CSXT Bramlett Road Site and your July 10, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

400801

ST. MICHAEL LUTHERAN CHURCH
2619 Augusta Street
Greenville, SC 29605
"Serving Christ as a welcoming community
of grace, so all may know God's love."

VERIFIED 7/1/24 BR
SCANNED 7-1-24

Pastor Andrea Bates
St. Michael Lutheran Church
2619 Augusta St.
Greenville, SC 29605

RECEIVED
JUN 28 2024
SITE ASSESSMENT, REMEDIATION, & REVITALIZATION

June 25, 2024

Greg Cassidy, Project Manager
DHEC's Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201

Re: CSXT Bramlett Road Site

Dear Mr. Cassidy,

I was in attendance at the June 6, 2024 Public Meeting and want to voice my support for Alternative 5: Excavation and Complete Removal of Vaughn Landfill, Monitored Natural Attenuation and Land Use Controls as the Preferred Cleanup Alternative.

This represents the best possible outcome for the community, and it is long overdue. In an ideal world we would have taken care of this problem decades ago. I am extremely grateful for the work you have done in recent months/years to recommend such a thorough cleanup now, however, and I am grateful to know that the community leaders, DHEC and Duke Energy are all on board with this plan moving forward. I am less grateful that there are people who have been displaced from their homes, suffered exposure to coal tar contaminants, and lost opportunities to establish generational wealth from their home equities as a result of our collective failures to accept responsibility for this environmental hazard.

I strongly endorse this cleanup alternative with the following suggestions:
1. Environmental protection for Wetlands Restoration with Native Plants
2. Preferred use of Minority owned and operated work forces
3. Local businesses hired as available
4. Current Public updates with signage of progress towards the goal on the work sites and throughout the media

Thank you for your work on this CSXT Bramlett Road Site. I look forward to seeing this project's completion.

Sincerely,

Pastor Andrea Bates

Pastor Andrea Bates
Pastor Kyle Bates
Office (864) 232-8510
www.stmichaelelca.org

150

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Pastor Andrea Bates
2619 Augusta Street
Greenville, SC 29605

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Bates,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 25, 2024, comments submitted by letter.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Any current information or documents related to the site can always be found at the SCDES website at https://des.sc.gov/community/community-engagement/environmental-sites-projects/csxt-bramlett-road-site-aka-duke-power-manufactured-gas-plant. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Thoroughly Clean Up Bramlett Road Site

Richard Artz <rickartz@msn.com>

Thu 6/20/2024 8:54 PM

To:Greg A. Cassidy <cassidga@dhec.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy:

Last week Duke Energy presented various alternatives for cleaning up the Bramlett Road Site. This action is long overdue, and it is gratifying to see that there is now potential for progress to thoroughly clean up this site. Understanding that remediation will not be cheap for any serious plan, I strongly urge you to require a thorough cleanup of the site, including removal of the contaminated sediment as well as ongoing removal of the contaminated groundwater around the site. Anything less just postpones the day when additional and even more expensive remediation will be required to address contamination of the Reedy River and contaminated groundwater from an ever-greater area. Do the right thing. Clean this mess up as well as you can, and monitor the area indefinitely to make sure it really is clean.

Thank you,
Rick Artz
Taylors, SC

Sent from Outlook

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Richard Artz
rickartz@msn.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Artz,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 20, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett site

David Pittman <esadps714@gmail.com>

Sat 6/8/2024 4:39 PM

To:Greg A. Cassidy <cassidga@dhec.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

As a retired ESH professional with expertise in the issues identified at this site the following are my conclusions

1. This is a clearly an environmental crime by the entities identified covertly and overtly through the years.
2. The cradle to grave responsibility is being potentially passed on to the residents nearby and taxpayers if not completely restored to preindustrial parameters, including but not limited to long term groundwater remediation.
3. People of color again are sacrificed by the exploitation of the White establishment.
4. Again there are and have been mechanisms to protect the public and the environment and is as always, the case in South Carolina, we fail.

David B.Pittman
652 Bailey Rd
Union SC 29379
803 571 5924
esadps714@gmail.com

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. David Pittman
Esadps714@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Pittman,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 8, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

400801

VERIFIED
6-14-24 BR SP

SCANNED
6-13-24

Valerie B. Hollinger, MSW
Wayne M. Hollinger, MD
400 N. Main St. #405
Greenville, SC 29601

June 8, 2024

Greg Cassidy, Project Manager
DHEC's Bureau of land and Waste Management
2600 Bull Street
Columbia, SC 29201

Re: CSXT Bramlett Road Site

Dear Mr. Cassidy,

We were in attendance at the June 6, 2024 Public Meeting and want to voice our support for Alternative 5: Excavation and Complete Removal of Vaughn Landfill, Monitored Natural Attenuation and Land Use Controls as the Preferred Cleanup Alternative.

This represents the best possible outcome for the community, and it is long overdue. In an ideal world we would have taken care of this problem decades ago. There are certainly people who have been displaced from their homes, suffered exposure to coal tar contaminants, and lost opportunities to establish generational wealth from their home equities as a result of our collective failures to accept responsibility for this environmental hazard.

We strongly endorse this cleanup alternative with the following suggestions:
1. Environmental protection for Wetlands Restoration with Native Plants
2. Preferred use of Minority owned and operated work forces
3. Local businesses hired as available
4. Current Public updates with signage of progress towards the goal on the work sites and throughout the media

Thank you for your work on this CSXT Bramlett Road Site. We will follow the long road expected and look forward to its' completion in our lifetimes. We are 71 years old now, close to the age of the person who spoke at the meeting of being a child who got coal tar on his shoes while living and playing on this site. We were more fortunate to live in different neighborhoods.

Sincerely,

Valerie and Wayne Hollinger

Valerie B Hollinger

RECEIVED
JUN 13 2024
SITE ASSESSMENT,
REMEDIATION, &
REVITALIZATION

149

CSXT Bramlett Road Site

VALERIE HOLLINGER <vhollinger@aol.com>
Sat 6/8/2024 12:49 PM
To:Greg A. Cassidy <cassidga@dhec.sc.gov>

1 attachments (76 KB)
CSXT Bramlett Road Site.pdf;

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,
You did an excellent job presenting the Preferred Alternative at Mountain View Baptist Church. We had to leave after about 15 minutes of the Q&A because my husband's knee surgery two weeks ago made it difficult to stay seated. Thank you for your time spent on this project, yours is not easy work.
Sincerely,

Wayne M. Hollinger, MD
Valerie B. Hollinger, MSW
400 N. Main St. #405
Greenville, SC 29601

PS: Wetland Restoration might well attract volunteers to help from our community. We have many organized groups that would support such an opportunity. Please contact us if we can be of assistance. Thank you.

SC DEPARTMENT *of*
ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mrs. Valerie Hollinger
vhollinger@aol.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mrs. Hollinger,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 8, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Yes to Proposal #5

Tony McDade <tonymcdade1@gmail.com>
Thu 6/6/2024 8:01 PM
To:Greg A. Cassidy <cassidga@dhec.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Greetings. I attended the CSXT Bramlett Road site clean-up meeting at Mountain View Baptist Church on June 6.

Alternative #5 is a commendable first step in the eventual full restoration of the Bramlett impacted area.

Thank you.

Tony McDade
Simpsonville, SC

"The question is not to describe the world but to transform it."
~ Paulo Freire, Brazilian educator & theologian

"No more a stranger, nor a guest, but like a child at home."
~ Psalm 23:6, paraphrased by Isaac Watts (1719) in "My Shepherd Will Supply My Need" (RESIGNATION - American Folk Melody, Southern Harmony, 1835)

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Tony McDade
Tonymcdade1@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. McDade,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

CSXT Bradley Road Site

Scott Johnston <Scott@johnstondesigngroup.us>
Thu 6/6/2024 6:42 PM

To:Greg A. Cassidy <cassidga@dhec.sc.gov>
Cc:Stacey D. Mills <pastorstaceymills@gmail.com>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Mr Cassidy,

I am with Johnston Design Group who were retained by Parish House CDC to facilitate a community led master plan to restore New Town.

I fully support Alternate 5, DHEC's recommended solution.

Also, I have a specific concern about Alternate 3 - increased runoff and downstream flooding resulting from the relatively impermeable cap. If this Alternate were selected, I believe FEMA would require a CLOMR (flood map amendment).

Regards,

Scott Johnston, AIA NCARB LEED AP BD+C
Johnston Design Group, LLC
864.346.2535

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Scott Johnston
Scott@johnstondesigngroup.us

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Johnston,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

Within the wetlands, water management will be a constant issue that will need to be managed under any of the proposed remedies during remediation and post-remediation. SCDES also has some concerns about Alternative 3 and how easy it will be to maintain the cap following construction. Any of the active remedies will have to meet any federal or state requirements or permits needed to conduct the work and alter the wetlands.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3;

and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Site Cleanup Process

riserlam@charter.net <riserlam@charter.net>

Tue 8/6/2024 7:43 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hello sir,

It is with deep conviction that our voices are heard concerning this cleanup process, as I stand with thousands of others, we are urging DES to adopt Alternative 5+.

This alternative allows for full restoration of all excavated portions of Parcels 3, 4 and 5 to a natural wetland and/or improved wetland, unlike Alternative 5 which just restores wetlands on one of the five parcels.

Thank you for the privilege of your time and your willingness to be a part of Making A Positive Difference in the community.

Barbara Riser

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Barbara Riser
riserlam@charter.net

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Riser,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett site contamination

ELIZABETH MEYER <bmeyer3245@bellsouth.net>

Tue 8/6/2024 5:07 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>
Cc:bmeyer3245@bellsouth.net <bmeyer3245@bellsouth.net>;Susan Stall <srstall@gmail.com>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

In 2019, while involved in a church sponsored study of environmental and social justice issues, I attended a meeting at Mountainview Baptist Church and learned of hazardous substances from a former manufactured gas plant and illegal dumping of construction trash that resulted in leakage of cancer-causing contaminate into the surrounding environment, known as the Bramlett site. It is my understanding that DHEC has been aware of this dangerous situation for over thirty years, but no action was taken until 2019 when renewed testing showed that coal tar contamination remains present. This contaminate flows through one of our communities, affecting the ground, the water, and the families who live there. Eventually the flow continues into the Reedy River, to Conestee and perhaps beyond.

I was present again more recently when representatives from DHEC presented the proposed clean up plan for the Bramlett site.
I believe the remedy presented is insufficient and urge consideration of the following:

1. that any plan must include removal of all contaminate in groundwater with pumps and treatment processes that prevent future
   discharge of contaminated water,
2. the restoration of all wetlands adjacent to the site as well as on site,
3. the continuation of monitoring, sampling and evaluating the site and adjacent areas as long as contaminate persists,
4. and that the Department of Environmental Services act with urgency in ordering Duke and CSXT to remedy this unjust and
   inexcusable situation for the good of everyone involved.

Thank you in advance for your attention to these concerns.

Sincerely,
Beth Meyer
407 Foxcroft Road
Greenville, S. C. 29615

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Elizabeth Meyer
Bmeyer3245@bellsouth.net

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Meyer,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Site Feedback

Dan Weidenbenner <dan@millcommunity.org>

Tue 8/6/2024 1:44 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Good Afternoon,

I am writing in regards to the SC Department of Environment Service's action plan for the Bramlett Site in Greenville, SC. I live and work in the surrounding area and see this project as a top priority for remediation not only for our surrounding neighborhoods, but for the entire Greenville County. I appreciate the remediation action you're already proposing. I am standing with the neighborhood, Mountain View Baptist Church and SCELP to take the remediation plan further to ensure the environmental safety of our surrounding community. We are requesting the following changes:

- A long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

I would greatly appreciate a response from DES and urge DES to act now in requiring Duke and CSX to clean up and restore this site. It's 30 years overdue and will dramatically improve the lives of the South Carolina citizens your agency is called to protect. Thank you for your leadership and supporting the community's request.

Thanks,
Dan

--

Dan Weidenbenner
Executive Director
Mill Village Ministries | (954) 579-8689
1186 Pendleton St, Greenville, SC 29611

It takes a village! Meet our social enterprises:
Mill Village Farms | Village Engage
Village Launch | Village Wrench

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Dan Weidenbenner
dan@millcommunity.org

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Weidenbenner,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Southside Neighborhood clean up and restoration k

Stephen Beller <luannesteve@yahoo.com>

Tue 8/6/2024 12:01 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I'm writing to support that all the works described below be completed soon!

- A long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

We need to correct this horrible situation with clean up and improvements! I urge DES to act NOW to ensure that both Duke Energy and CSXT finally cleanup and restore this site. It's been 30 years and we owe this community for the years they have lived in contamination. This neighborhood has been unsafe to live in and the people have suffered long enough!

Luanne Beller

SC DEPARTMENT *of*
ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Luanne Beller
luannesteve@yahoo.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Beller,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Eunice Lehmacher <eunicerkl@gmail.com>

Tue 8/6/2024 10:52 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I am writing to ask you to order Duke and CSXT to finally clean up the Southernside Bramlet site. The proposal that is already on the table does not go far enough. In addition to what you have proposed, we need a long term groundwater remedy that would include a pump and a process to treat the contaminated water and prevent the continued discharge of contaminate water. The wetlands need to be restored on all parcels around the site. Wetlands protect the water of everyone in Greenville. Please also excavate all the contaminated sediment parcel found on all the parcels, not just those immediately around the landfill. We need increased sampling and studying of the site and surrounding areas in the future.

I am a health care provider and have worked with people who lived near contaminated areas and got cancer or other diseases. There is a high cost to not cleaning up toxic waste. Unfortunately this site has not been cleaned up for 30 years. But you have a chance now to spend additional money to make the site healthier for generations of people who live on and near the site. Please order Duke and SCXT to spend the money now to save money later. This is your role and SCDES, to keep our land and water safe.

I appreciate what you are doing already and ask you to do even more.

Eunice Lehmacher, LISW-CP (she, her)
Licensed Independent Social Worker--Clinical Practice

SC DEPARTMENT *of* ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Eunice Lehmacher
eunicerkl@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Lehmacher,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Blake Brookshire <jblakebrookshire@gmail.com>
Tue 8/6/2024 10:46 AM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

My name is Blake Brookshire, I am an active and involved citizen of Greenville, and I am writing today in regards to the Bramlett site. I was made aware of the severe inequity of how 2 polluted sites in our city were dealt with in regards to their pollution not long after relocating here from Charlotte in 2014. The site on Broad Street, near downtown and near a very high income neighborhood, was FULLY cleaned and remediated and is now a desired location for a bank, apartments, restaurants, event spaces, etc. The Bramlett site, however, is proximate to a low income, historically black neighborhood, and has been neglected for YEARS, causing decades of health and environmental hazards to residents. It is time for Duke and CSXT to go above and beyond in the remediation of this land to bring environmental justice to this equally important area of Greenville. This should include, as championed by SCELP and Mountain View Baptist:

- A long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

This is in no way too much to ask for years of neglect and inequity. DES needs to act now to require these companies to honor and serve the citizens of Greenville, SC.

Sincerely,

Blake Brookshire
(she/her/hers)

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Blake Brookshire
jblakebrookshire@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Brookshire,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Comments on Bramlett Road site

Katy <katypughsmith@gmail.com>
Sun 6/16/2024 5:09 PM
To:Greg A. Cassidy <cassidga@dhec.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hi Greg -

Thanks for the detailed information provided at the June 6th session at Mountain View Baptist Church. I'm writing as a community member to share comments.

I'm glad that DHEC is interested in a strong response as evidenced by recommending alternative 5. However, this just doesn't go far enough for contaminated land on the banks of an at last beloved River in a neighborhood that finally deserves some justice and opportunity for renewal.

My comment as a Greenville County resident is in support of Alternative 5+ that is advocated for by the Mountain View community and their partners:

- Preventing further discharge of contaminated water through a pump and treatment process
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future

I would further urge CSX and Duke to be required to consider how to convey the property to Mountain View Baptist Church and/or Parish House CDC to give a new future to the property to seek some justice for the many residents who mentioned playing in that water and tar during their childhoods in the neighborhood.

Thank you for your consideration!

Katy Smith
Greenville County resident

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Katy Smith
katypughsmith@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Smith,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 16, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

SC DES - Bramlett Road Clean-up in the Newtown Community

Melanie Brown <mbrown@restoration52.com>

Tue 8/6/2024 10:30 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Good morning, Gregg
Thank you for coming out to Mountain View and speaking about the recommended clean-up plan for the Bramlett Road site. I am glad to see the recommendation is for the full remediation plan. The Newtown community has experienced many years of environmental injustice. It is our responsibility to ensure future generations will not have to continue to endure such conditions. In addition to the recommendation, please consider strengthening the plan to include the following:

- A long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

It also would be great to explore a workforce development program opportunity for job creation with the clean-up of the site.
Thank you for allowing our voices to be heard!
Thanks,
Melanie

Melanie Brown
Restoration | 52 LLC, President & CEO
R | 52
RESTORATION 52, LLC

414.460.8304
33 Market Point Drive
Greenville, SOUTH CAROLINA (SC) 29607
http://www.restoration52.com

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Melanie Brown
mbrown@restoration52.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Brown,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 6, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable

Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Mill CXST site situation

Rick Davis <rickdavis77@charter.net>

Mon 8/5/2024 3:24 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hello Greg,

As a member of Upstate Forever I wanted to encourage you and SCDES to reconsider your current plan for the cleanup of the Bramlett Mill site to include a long term remedy to prevent discharge of contaminated water, restoration of ALL wetlands, removal of all contaminated sediment including ditch to the Reedy River and increased monitoring of contaminates to the Reddy River watershed. Thank you for taking your time to read this email and I hope you can find a way to include these changes in the current proposal.

Best regards,

Rick Davis

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Rick Davis
Rickdavis77@charter.net

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Davis,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Site Clean Up

Chip Radford <cjradford2012@gmail.com>

Mon 8/5/2024 3:20 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I wanted to voice my support in Upstate Forever's proposal for additional clean up measures for this site development.

Upstate Forever is urging SCDES to make the following enhancements to their Bramlett CSXT site clean up plan.

- A long-term groundwater remedy that would prevent the discharge of contaminated water.
- Restoration of all wetlands on all parcels on the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch that drains directly into the Reedy River.
- Heightened monitoring, sampling, and studying of the site to fully characterize the extent and risk of contamination to the Reedy River Watershed.

Sincerely,

Chip Radford

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Chip Radford
Cjradford2012@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Radford,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 5, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Road Clean Up

Jerry Calvert <jermancal@msn.com>
Sat 8/3/2024 3:07 PM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Greg Cassidy, Project Manager
Dept. of Environmental Services
2600 Bull Street
Columbia, SC 29201

Dear Mr. Cassidy

I want to add my voice to others in favor of your initiative to clean up and restore the Bramlett Road site. However, SC DES' preferred clean up plan lacks a remedy to address groundwater contamination around the site. Without addressing the groundwater, the extent of contamination will only continue to grow - leaching further into the Reedy River, and beyond. So, in addition to DES's proposed Alternative 5 method, I urge you include SCELP's, **Alternative 5+:**

- Incorporate a long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Require the restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Require excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Require heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

I urge DES to act now. Order Duke and CSXT to clean up and restore the Bramlett Road site as envisioned in SC DES' Alternative 5 and the SCELP **Alternative 5+.**

Respectfully, Jerome R Calvert

100 S Hudson St, Unit B10
Greenville, SC 29601

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Jerome Calvert
jermancal@msn.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Calvert,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 3, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett CXST site

Scott Brame <sebrame@gmail.com>

Sat 8/3/2024 2:59 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Mr Cassidy-

SCDES' preferred clean up plan for the Bramlett CXST site is inadequate and needs the critical additions listed below. While the preferred plan addresses the coal tar pollutants, the lack of a comprehensive remediation strategy for contaminated groundwater at the site means that the negative impacts on the Reedy River Watershed remain unresolved.

I urge you to include these additions:

- A long-term, holistic groundwater remediation strategy that would prevent discharge of contaminated water to any surface water feature.
- Restoration of all the wetlands on all the parcels at the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including the entire length of the ditch that drains directly into the Reedy River.
- In-depth monitoring and additional sampling at the site to fully characterize the extent and risk of contamination to the Reedy River Watershed.

Please include the additions listed above in the Record of Decision for the Bramlett CSXT site.

Thank you for the opportunity to comment.

Scott Brame
207 Augusta Road
Clemson, SC 29631

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Scott Brame
sebrame@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Brame,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 3, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett CSXT Site Clean Up Plan

Sue Petkus <suepetkus@comcast.net>

Sat 8/3/2024 12:38 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Good Afternoon Mr. Cassidy,

In 1990's the Broad Street, Greenville MGP site was fully cleaned up. The Southernside Community ***deserves equal justice*** by receiving a fully restorative clean up. Please make the following enhancements to SCDES's Alternative 5 as outlined below.

- **A long-term groundwater remedy that would prevent the discharge of contaminated water.**
- **Restoration of all wetlands on all parcels on the site, not just immediately adjacent to the landfill.**
- **Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch that drains directly into the Reedy River.**
- **Heightened monitoring, sampling, and studying of the site to fully characterize the extent and risk of contamination to the Reedy River Watershed.**

Respectfully,

Susan Petkus

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Susan Petkus
suepetkus@comcast.net

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Petkus,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 3, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett CSXT site clean up plan

Melinda Davis LaFoy <lafoymd@aol.com>

Sat 8/3/2024 7:36 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I am urging SCDES to make the following enhancements to the Bramlett CSXT site clean up plan:

- A long-term groundwater remedy that would prevent the discharge of contaminated water

- Restoration of all wetlands on all parcels on the site, not just immediately adjacent to the landfill

- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch that drains directly into the Reedy River

- Heightened monitoring, sampling, and studying of the site to fully characterize the extent and risk of contamination to the Reedy River Watershed

This must be done as well as possible and as soon as possible!

Thank you for your attention,
Melinda LaFoy
Greenville SC

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Melinda LaFoy
lafoymd@aol.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. LaFoy,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 3, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett site opinion

Elizabeth Samples <csamples51@gmail.com>
Fri 8/2/2024 10:05 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>
Cc:Sherry Barrett <sbarrett@upstateforever.org>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Hi Greg,
Please go all the way with rehabilitation of the neglected site. Include the measures Upstate Forever has outlined:

Upstate Forever is urging SCDES to make the following enhancements to their Bramlett CSXT site clean up plan.

- A long-term groundwater remedy that would prevent the discharge of contaminated water.
- Restoration of all wetlands on all parcels on the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch that drains directly into the Reedy River.
- Heightened monitoring, sampling, and studying of the site to fully characterize the extent and risk of contamination to the Reedy River Watershed.

My personal email seems to be flooded occasionally with EPA grants that fund clean up initiatives like this one. Could we not apply for one of those?

South Carolina takes the easy way out too often, and its residents pay the long-term price. This clean up done properly could start a "new normal" for other projects in the state to match.

THANKS,
E Samples

Elizabeth "Candi" Samples
318 Fairmeadow Way
Greenville SC 29617
csamples51@gmail.com
(803) 493-0564 cell

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Elizabeth Samples
csamples@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Samples,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 2, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Clean up of Bramlett Rd. CSXT

Pam Shucker <pamshucker@gmail.com>

Thu 8/1/2024 5:10 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I strongly urge SCDES to support the proposals of Upstate Forever in cleaning up this site.

- A long-term groundwater remedy that would prevent the discharge of contaminated water.
- Restoration of all wetlands on all parcels on the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch that drains directly into the Reedy River.
- Heightened monitoring, sampling, and studying of the site to fully characterize the extent and risk of contamination to the Reedy River Watershed.

That you,
Pm Shucker

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Pam Shucker
pamshucker@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Shucker,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 1, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.
After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy;

2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett Remediation

Katie Callahan <katiekayaks15@gmail.com>
Thu 8/1/2024 4:12 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>
Cc:scott@friendsofthereedyriver.org <scott@friendsofthereedyriver.org>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

The Reedy River is the economic lifeline of the city of Greenville. The area has a shrinking amount of wetlands with withering biodiversity and connected habitats. The recommendations below from Upstate Forever seem reasonable, especially in regards to all wetland restoration and removal of all contaminated sediment, especially in light of of flooding, floodplain designation, and other disturbances. I have copied in those recommendations, which I am advocating for as a Greenville County resident and former Chair of Friends of the Reedy River. Each action to improve this river counts for that area, as well as downstream collection points.

- A long-term groundwater remedy that would prevent the discharge of contaminated water.
- Restoration of all wetlands on all parcels on the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch that drains directly into the Reedy River.
- Heightened monitoring, sampling, and studying of the site to fully characterize the extent and risk of contamination to the Reedy River Watershed.

I appreciate your time and consideration.

Thank you,
Katie Callahan

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Katie Callahan
Katiekayaks15@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms, Callahan,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 1, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Bramlett CSXT site

Michael Stewart <m.christopher.stewart@gmail.com>

Thu 8/1/2024 3:07 PM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Greetings,

I recently attended the meeting at Mountain View Baptist Church and was moved by the commitment of our community to address the site clean-up. Seeing so many concerned and engaged neighbors made me hopeful for a positive resolution.

However, I believe the proposed clean-up plan needs critical enhancements. Unfortunately, SCDES' preferred clean-up plan ("Alternative 5") falls short in several areas. Alternative 5 lacks a remedy to address groundwater contamination. Without an appropriate remedy, the extent of contamination and impacts on the Reedy River Watershed remain unclear. Therefore, I support the following enhancements to the Bramlett CSXT site clean-up plan:

1. **Long-term groundwater remedy:** Implement a solution that prevents the discharge of contaminated water.
2. **Wetland restoration:** Restore all wetlands on all parcels of the site, not just those immediately adjacent to the landfill.
3. **Comprehensive sediment excavation:** Excavate all contaminated sediment on all parcels, including the entire length of the ditch that drains directly into the Reedy River.
4. **Heightened monitoring and study:** Increase monitoring, sampling, and studying of the site to fully characterize the extent and risk of contamination to the Reedy River Watershed.

Additionally, I urge that priority be given to contractors from the community or Black/Brown-owned contractors. This should include job opportunities for community members, as discussed in the most recent hearing.

The community has also expressed concerns about the contamination's long-term health impacts. I believe it is essential to provide assistance and health monitoring for surviving community members affected by this issue.

Thank you for your consideration.

Kind regards,

Mike Stewart

--

Greenville County Soil & Water Conservation District, Chair

South Carolina Association of Conservation Districts, Treasurer

National Association of Conservation Districts, Board of Directors-Alt.

E: m.christopher.stewart@gmail.com

C: (781) 640-0293

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Michael Stewart
m.christopher.stewart@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Stewart,

Thank you for your continued interest in the CSXT Bramlett Road Site and your August 1, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.

After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Brad Wyche <bwyche@upstateforever.org>

Sat 7/27/2024 9:47 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I am a lifelong resident of Greenville and live about two miles from the Bramlett site. I also had the honor of serving as Chair of the DHEC Board from 1998 to 2003.

I am writing to express my full support for the recommendations submitted by the South Carolina Environmental Law Project to make the following additions to the Department's Alternative Number 5:

- A long-term groundwater remedy, including a pump and treatment process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

In addition, I urge the Department to require the responsible parties to begin work immediately to implement Alternative No. 5, with the additions noted above, and to complete the work as expeditiously as possible.

Thank you for your consideration and for your service to our State.

Sincerely,

Brad Wyche

103 Cleveland St, Unit No. 203
Greenville, S.C. 29601
Cell: 864-270-3739

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Brad Wyche
bwyche@upstateforever.org

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Wyche,

Thank you for your continued interest in the CSXT Bramlett Road Site and your July 27, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

Diane Smock <dsmock@icloud.com>

Sat 7/13/2024 11:35 AM

To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Cassidy,

I reside in the City of Greenville and am a former at-large member of the Greenville City Council. I am shocked, appalled, and ashamed that decades after the environmental damage was discovered at the Bramlett site, it is still full of toxic sludge and other cancer-causing material. It is especially offensive given that the "sister site" in the downtown area on East Broad Street was fully excavated and cleaned in 1995—almost thirty years ago. There is NO EXCUSE for this disparate treatment of our citizens, and action must be taken immediately to remediate the site fully. Unfortunately for many individuals who grew up around the site and for those who now live in the area, the negative impacts on their health may never be fully known or addressed.

I attended the public meeting on June 6, 2024, at Mountain View Baptist Church where DHEC representatives presented the Department's alternatives for clean up of the Bramlett site.

While DHEC's proposed plan (Alternative #5) would make some improvements to the site, it does not do nearly enough. Specifically, it does not provide an effective remedy for treating the contaminated groundwater around the site. Without addressing the groundwater, the contamination will grow - further leaching into the Reedy River, and beyond.

I am writing in support of the plan recommended by the South Carolina Environmental Law Project ("SCELP"), which included the following additions to DHEC Alternative #5:

- A long-term groundwater remedy, including a pump and treatment process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

Furthermore, DHEC should not allow any further delay by the responsible parties in fully cleaning up this site—Duke Energy and CSXT must be ordered to begin work immediately to restore this site without further delay of any kind, for any reason.

This is a textbook case of environmental injustice. It is in your power to make it right. Please act now.

Thank you,
Diane Smock

103 Cleveland St, Unit #103
Greenville, SC 29601

Cell: 864.270.2025

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Diane Smock
dsmock@icloud.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Smock,

Thank you for your continued interest in the CSXT Bramlett Road Site and your July 13, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.
After reviewing all comments on the Proposed Plan, SCDES made several changes to the selected remedy which are included in the Record of Decision (ROD). These changes include 1) Shallow and transition zone groundwater are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy;

2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public+Comment+on+Bramlett+Site

Elizabeth Cazel <bitsycazel@gmail.com>
Wed 7/10/2024 1:04 PM
To:Greg A. Cassidy <Greg.Cassidy@des.sc.gov>
*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

To Whom It May Concern,

Please accept my contribution to the public comments regarding the clean up of the Bramlett Site.

As a resident of the Southernside neighborhood, I have seen first hand the devastating impact of Duke Energy's failure to address the contamination of the Bramlett site. Many long time residents have suffered adverse health consequences and the land surrounding the site itself has been rendered unusable. I join my neighbors in advocating for the following additions to DHEC's proposed plan:

- A long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

Sincerely,

Bitsy Cazel
864-230-2021

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Elizabeth Cazel
bitsycazel@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Cazel,

Thank you for your continued interest in the CSXT Bramlett Road Site and your July 10, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.
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2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov, to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

PUBLIC COMMENT ON BRAMLETT ROAD SITE CLEAN-UP - Support for ALTERNATIVE 5+

Steve Morgan <stevenmorgan1001@gmail.com>

Wed 6/19/2024 1:35 PM

To:Greg A. Cassidy <cassidga@dhec.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

TO: Greg Cassidy, Project Manager, Department of Health and Environmental Control
FROM: Steven and Phyllis Morgan
REF: Ordering of Duke and CSXT to completely restore the Bramlett Road coal tar waste site

Dear Mr.Cassidy,
We write to urge your support of **Alternative 5+** for the clean-up (at long last) of the Bramlett Road contamination site in Greenville.

We are grateful for DHEC's inclusion in its proposals of what was named "ALTERNATIVE 5", which does involve excavation of surface material. However, it does not deal with the abiding and harmful issue of the unseen contaminated soils and materials below the surface. We urge you to *order a complete clean-up of the site by adopting the counter proposal of ALTERNATIVE 5+* which provides for a proper restoration of the site.

The reasons are at least twofold:

- Morally, this is owed to the community that has for decades been affected and harmed by the contamination. It is an injustice that would not have happened to a more affluent community and was allowed to be inflicted on them for convenience and purely monetary gain. Human and community well-being should decide the issue, nothing less.
- Environmentally, the damage human beings have done to the earth was and is damage to the quality of human life and well-being. As John Muir famously said, *"When we try to pick out anything by itself, we find it hitched to everything else in the Universe."* The damage we have done and are doing to the Earth and the cycles of Nature diminishes our own lives and those of future generations. Complete clean-up and restoration would be a step toward healing humankind now and in the future.

While this opportunity to act is before you now, please act in the interest of the most far-reaching good by completely redeeming the site.

Thank you.
Steven and Phyllis Morgan

SC DEPARTMENT of
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Mr. Steve Morgan
Stevenmorgan101@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Mr. Morgan,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 19, 2024, comments submitted by email.

As you know, South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude the SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

The remedy will require the restoration of any wetlands that are damaged and require impacted sediment to be removed on Parcels 3, 4, and 5. Additionally, there will be continued refining of the impacted areas during the remedy implementation. Following the remedy completion, there will be a long-term monitoring plan established to monitor how site conditions change. Five years after remedy completion a Five Year Review is conducted to evaluate remedy effectiveness, performance, and protectiveness.
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are no longer part of Operable Unit 2. This groundwater will be evaluated as part of Operable Unit 3. Operable Unit 3 will now include all groundwater and will be evaluated following the completion of the selected remedy; 2) Along with that change, language regarding monitored natural attenuation has been removed from the remedy and replaced by a period of groundwater monitoring to determine the effects of removing the source material. Based on our experience at similar sites, SCDES expects the removal of source material to have a very positive impact on groundwater quality. SCDES will continue to evaluate potential groundwater remedies as part of Operable Unit 3; and 3) The selected remedy includes limited excavation of contaminated soil on Parcels 1 and 2 that will allow these parcels to meet residential standards for reuse with land use restrictions on the use of groundwater.

SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

(No subject)

Carol Hay <cmhay.lessmess@gmail.com>

Fri 6/14/2024 3:50 PM

To:Greg A. Cassidy <cassidga@dhec.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Alternative 5 *does not* provide a remedy for treating the contaminated groundwater around the site. Without addressing the groundwater, the extent of contamination will only continue to grow - further leaching into the Reedy River, and beyond. I am requesting what SCELP calls Alternative 5+:

- A long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

I had a dear friend in Moncure, North Carolina who fought tooth and nail to keep a coal tar dump out of their community just a few years ago. Not only did they not succeed in getting the best alternative offered by experts, but also they were lied to about what was actually happening at the dump. One of the experts was able to confirm what was really happening by sending a drone over the site taking photographs. The photos contained enough information to confirm that the rise in various cancers among residents had to have been caused by the spread of coal tar ash through the air as massive trucks transported the ash into their community. Many of those residents died.

So this is a life and death issue. CSXT and Duke must take responsibility for the toxic pollution they failed to clean up for 30 years. Please select Alternative 5+ for the lives of nearby South Carolinians.

Thank you for considering my comments.

Respectfully,
Carol Hay
Greer

--
visit www.ourmothersvoice.org

SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 29, 2025

Ms. Carol Hay
Cmhay.lessmess@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Hay,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 14, 2024, comments submitted by email.

As you know, the South Carolina Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

The SCDES's experience with groundwater at other MGP sites in the state has shown that once the source material has been removed there is improvement in groundwater quality. SCDES would like to monitor groundwater conditions for a few years after the remedy is completed and then make a better decision on whether an additional remedy for groundwater is needed. This remedy will not preclude SCDES's ability to look at a remedy for groundwater in the future if the groundwater quality is not moving toward drinking water standards.

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SCDES is committed to working to ensure that all reasonable measures are taken to minimize impacts to the community and assure that the cleanup is conducted safely and effectively. Thank you for presenting your comments on the Proposed Plan.

Please do not hesitate to contact me at (803) 898-0910, or by email at greg.cassidy@des.sc.gov to discuss the project and your concerns.

Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Public Comment on Bramlett Site

c carpenter <clarebcarpenter@gmail.com>
Fri 6/14/2024 2:20 PM
To:Greg A. Cassidy <cassidga@dhec.sc.gov>

*** Caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

I support the additional amendments proposed by SCELP regarding the Bramlett Rd site.

- A long-term groundwater remedy, including a pump and treat process that would prevent the continued discharge of contaminated water.
- Restoration of all wetlands on all parcels around the site, not just immediately adjacent to the landfill.
- Excavation of all contaminated sediment found on all parcels, including down the entire length of the ditch where the parcels drain into the Reedy River.
- Heightened monitoring, sampling, and studying of the site and surrounding areas in the future.

Clare Carpenter
BHHS C Dan Joyner
864-907-7177
ccarpenter@cdanjoyner.com

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Greg Cassidy
Bureau or Land and Waste Management
2600 Bull Street
Columbia, SC 29201

April 28, 2025

Ms. Clare Carpenter
clarebcarpenter@gmail.com

Re: Proposed Plan Comments
CSXT Bramlett Road Site
Greenville, South Carolina

Dear Ms. Carpenter,

Thank you for your continued interest in the CSXT Bramlett Road Site and your June 14, 2024, comments submitted by email.

As you know, the SC Department of Environmental Services' (SCDES) State Voluntary Cleanup Program has been studying conditions at the CSX Bramlett Road Site and evaluating cleanup options since 2016 when the voluntary cleanup contract was signed. Duke Energy has conducted multiple investigation efforts to determine the extent of coal tar impact remaining. The extent of the MGP-related residuals in sediment, soil, and groundwater were not known at the time of the original removal action. SCDES has engaged with, and carefully considered the input of all stakeholders throughout this process. Using this collaborative approach, SCDES has gained insight into the common interests of all parties involved and has decided that the best cleanup alternative for this site is Alternative 5: Excavation and Complete Removal of Vaughn Landfill. Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. It was the best remedy in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. While we appreciate the additional amendments that SCELP has pushed for SCDES feels that the remedy proposed by SCDES is more appropriate and will provide the best opportunity for the MGP-related material to be removed in a timely manner.

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Sincerely,

Greg Cassidy, Project Manager
State Voluntary Cleanup Program
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management

cc: File 400801
Lucas Berresford, BLWM

Appendix C

Proposed Plan

S.C. Department of Health and Environmental Control

Proposed Plan for Operable Units 1 and 2
CSXT Bramlett Road Site
400 East Bramlett Road, Greenville, South Carolina

May 2024

ANNOUNCEMENT OF PROPOSED PLAN

The South Carolina Department of Health and Environmental Control (DHEC or the Department) has completed an evaluation of cleanup alternatives to address contamination at the CSXT Bramlett Road Site, Greenville, South Carolina (the Site). This Proposed Plan identifies DHEC's Preferred Alternative for cleaning up the contaminated areas and provides the rationale for this preference. In addition, this Plan includes summaries of the other cleanup alternatives evaluated.

The Department is presenting this Proposed Plan to inform the public of our activities, gain public input, and fulfill the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Proposed Plan summarizes information that can be found in greater detail in the 2020 Remedial Investigation Report (RIR), the 2020 Forensics Analysis of NAPL, Sediments, and Soil Samples, the 2021 Remedial Investigation Report Addendum (RIR-A), the 2022 Focused Feasibility Study Work Plan, the 2023 Focused Feasibility Study (FFS), and other documents contained in the Administrative Record. The Department encourages the public to review these documents to gain an understanding of the Site and the activities that have been completed.

The Department will select the final cleanup remedy after reviewing and considering comments submitted during the 60-day public comment period. The Department may modify the Preferred Alternative or select another response action presented in this Proposed Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the Alternatives presented in this Proposed Plan.

DHEC's Preferred Cleanup Alternative
Alternative 5: Excavation and Complete Removal of Vaughn Landfill, Monitored Natural Attenuation, and Land Use Controls

DHEC's preferred remedial option includes:

- Excavation of the Vaughn Construction and Debris (C&D) Landfill;
- Excavation of impacted sediments on Parcels 3, 4, 5, and the Legacy School Property;
- Monitored Natural Attenuation (MNA) and Land Use Controls (LUCs) will be utilized to restrict development and groundwater use.

MARK YOUR CALENDAR

❑ **PUBLIC MEETING:**

When: June 6, 2024 at 6:00 PM

Where: Mountain View Baptist Church
111 Cagle St
Greenville, SC 29601

DHEC will hold a meeting to discuss the Proposed Plan and all of the Alternatives presented in the FFS. After the Proposed Plan presentation, DHEC will respond to your questions. Oral and written comments will be accepted at the meeting.

❑ **PUBLIC COMMENT PERIOD:**

June 6, 2024 – August 6, 2024

DHEC will accept written comments on the Proposed Plan during the public comment period. Please submit your written comments to:

Greg Cassidy, Project Manager
DHEC's Bureau of Land & Waste Management
2600 Bull Street
Columbia, SC 29201
cassidga@dhec.sc.gov

❑ **FOR MORE INFORMATION:**

Call: Greg Cassidy, 803-898-0910

See: DHEC's website at:
http://www.scdhec.gov/publicnotices

View: The Administrative Record at the following locations:

DHEC website
https://scdhec.gov/Bramlett

DHEC Freedom of Information Office
2600 Bull Street, Columbia, SC
(803) 898-3817
Hours: Monday - Friday: 8:30 AM - 5:00 PM

SITE HISTORY

The Site is defined by five parcels (Figure 1) and a portion of the Legacy Early College Elementary School (LECE) property that total approximately 35 acres. The site is bounded by the CSX Transportation (CSXT) railroad corridor to the north, west, and south and by West Washington Street to the east. In addition to the railroad corridor, the Reedy River and the Swamp Rabbit Trail also define the western boundary.

Southern Public Utilities built the Manufactured Gas Plant (MGP) on East Bramlett Road in 1917. Duke Energy assumed ownership of the MGP in 1939 but then sold it to Piedmont Natural Gas in 1951. Between 1963 and 1967, ownership of Parcels 1-5 was transferred to Seaboard Coast Line Railroad, a predecessor of CSXT.

Gas was manufactured at the Bramlett MGP from 1917 to 1952, producing a total of 5.5 billion cubic feet of gas. Coal tar was a byproduct waste stream of the MGP process. Coal tar moved through historic ditch channels from the MGP to a wetland area across Bramlett Road. Volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) associated with coal tar are the main constituents of concern (COCs) identified in the investigation.

Beginning in 1988, Vaughn Construction created an unpermitted construction and debris (C&D) landfill and spread waste (including concrete, brick, wood, plastic, roofing materials, insulation, and glass) up to 10 feet deep over 6.3 acres on Parcel 3. It is estimated around 84,000 cubic yards of C&D debris exist within the Vaughn landfill. In 1993, DHEC advised Mr. Vaughn that landfilling activities were improper. In 1994, the United State Army Corps of Engineers notified CSX Transportation (CSXT) that the landfill was located on a wetlands area and CSXT ordered Mr. Vaughn to cease operation and close the unpermitted landfill. Mr. Vaughn did not remove the C&D debris or remediate any environmental impacts.

An interim removal action was implemented in 2001, focusing on the 3.8 acres where the MGP plant operated. 61,000 tons of contaminated soil and debris were excavated, screened, and shipped off-site for treatment and/or disposal. 34,000 tons of this soil was sent for thermal treatment and returned to the site to use as clean backfill.

Duke Energy entered a Voluntary Cleanup Contract with DHEC in 2016 to determine the extent of coal tar impact remaining. The 2020 RIR and the 2021 RIR-A provided data which expanded the site characterization and focused on several important elements, including the location of the historic drainage ditch system and the extent and distribution of non-aqueous phase liquid (NAPL) impacts. NAPLs are organic liquid contaminants that do not mix with water like coal tar and chlorinated solvents. The extent of MGP-related residuals in sediment, soil, and groundwater media was not known at the time of the original removal action.

Data collected as part of the RIR-A included polycyclic aromatic hydrocarbon (PAH) forensics analysis. The forensic analysis found that MGP-related impacts were observed in some on-site sediments in ditch assessment samples from Parcels 3, 4, and 5; ditches upgradient of the site were consistent with urban background concentrations attributable to urban runoff; and PAHs detected in the Reedy River or off-site sediment samples can be attributed to urban runoff unrelated to the former MGP plant.

In 2021, DHEC addressed concerns about possible contamination in the community near Mountain View Baptist Church from the former MGP plant by sampling various properties in that area. The results indicate there has not been any impact from the MGP on surface soils.

AREAS OF CONCERN

The assessment separated the Site into three operable units. Operable unit one (OU-1) is defined as soil and sediments. Operable unit two (OU-2) is defined as surface water, shallow-zone groundwater, and transition-zone groundwater. Operable unit three (OU-3) is defined as the deeper, fractured bedrock groundwater. This remedy will only address impacts to OU-1 and OU-2.

OU-1 includes soil and sediment on Parcels 1 through 5 and a portion of the LECE School Property. NAPL (Figure 2) has been observed in shallow soil at various places throughout the Site, including within historical drainage ditches on the LECE School property and below the Vaughn Landfill debris material. Parcels 1 and 2 are currently zoned for industrial use and meet the risk-based thresholds for industrial/commercial use with LUCs. Parcels 4 and 5 are defined by impacts from MGP residuals to the sediment within a defined drainage ditch that runs from Parcel 3 to Parcel 4 to Parcel 5 to the outfall to the Reedy River.

OU-2 includes COCs in the shallow and transition zone groundwater which include benzene, naphthalene, benzo(a)pyrene, and toluene above drinking water maximum contaminant levels (MCLs). NAPL is also a COC because NAPL contains VOCs and SVOCs. NAPL has been visually observed in monitoring wells and measurable amounts have accumulated in two monitoring wells. NAPL is present in the soils, saprolite, and bedrock media underlying the Vaughn Landfill.

Groundwater sampling since 2019 has provided data to delineate the extent of impacted shallow-zone groundwater impacts to Parcels 1 and 3 and a small portion of the LECE School property. Transition zone groundwater has also been delineated and impacts a portion of Parcels 2 and 3.

During the assessment, surface water COC concentrations above respective screening levels were only identified at one location. The most recent surface water sampling results (March 2022, September 2022, and March 2023) indicate no current COC exceedances.

SUMMARY OF SITE RISKS

The primary risks identified are potential human exposure to MGP-related contaminants in soil, shallow and transition zone groundwater, surface water, sediment, and deep bedrock groundwater. Additionally, there are risks from the uncharacterized Vaughn Landfill material which could pose both a physical and chemical hazard. Except for a small area on Parcel 2 which can be addressed by a shallow soil excavation, most risk is within Parcels 3, 4, 5, and a portion of the LECE School Property. The risk to someone on those parcels is primarily from dermal exposure and vapor inhalation. While a

construction worker would likely be using protective equipment such as gloves, boots, and safety glasses, the trespasser to the site would not. These risks would need to be addressed with some form of treatment, cover, or removal that would limit exposure.

CLEANUP GOALS

Remedial Action Objectives (RAOs) are developed to set goals for protecting human health and the environment. The goals should be as specific as possible but should not unduly limit the range of Alternatives that can be developed. For the Bramlett Site, RAOs have been developed for the two operable units being addressed in this Proposed Plan. OU-1 addresses soil and sediment at the Site. OU-2 addresses shallow and transition zone groundwater and surface water.

For the FFS, soils are weathering profiles that develop in place and sediments are from depositional environments or locations where standing water was routinely observed. The Site's operational history and CSM for Parcels 3, 4, 5, and LECE School property indicate these areas have previously been formed by deposition and that the sorbed COCs and NAPL are in the vicinity of the historical ditch footprint that transported the COCs and NAPL. Therefore, the media contained within these areas is considered sediment rather than soil. For Parcels 1 and 2, the media present developed in place or was placed during backfilling of the remedial efforts on Parcel 1 and is considered soil.

The RAOs for OU-1 are:

RAO 1: Soils

Parcels 1 and 2: Prevention of construction worker human exposure through dermal exposure and inhalation of vapor will be achieved when LUCs are enacted. Parcels 1 and 2 in their current condition, without remedial activities, meet the criteria for Industrial/Commercial (I/C) use with LUCs. Based on the risk estimation, this RAO will be achieved with the formalization of LUCs.

RAO 2: Sediment

Parcels 3, 4, 5 and LECE School Property (Fig.1): Remediate sediment to US Environmental Protection Agency Region 4 sediment regional screening values and comply with current land use by removing sediment containing visual NAPL.

The RAOs for OU-2 are:

RAO 1: Prevent ingestion and/or contact with groundwater or surface water containing COCs at concentrations exceeding applicable MCLs or site-specific remediation standards and restore the groundwater to a standard for unrestricted use, where practicable.

RAO 2: Prevent groundwater containing COCs from impacting surface water at concentrations exceeding applicable MCLs or site-specific remediation standards.

SCOPE AND ROLE OF THE ACTION

The proposed action in this plan will be the final cleanup action for OU-1 and OU-2 for the Site. The remedial action objectives for this proposed action include removing sediment containing visual NAPL, preventing human ingestion of groundwater, minimizing the time required for groundwater COC concentrations to reduce below MCLs, and restoring shallow and transition zone groundwater to drinking water standards.

The risk estimate indicated that the surficial soils for the combined area of Parcels 1 and 2, have an acceptable total hazard index and cancer risk for the construction worker scenario. There are no preliminary remediation goals (PRGs) for soil on Parcels 1 and 2. Soils will meet I/C use standards once LUCs are enacted.

NAPL is visibly present in the drainage ditches and the wetlands on Parcels 3, 4, 5, and the LECE School Property. Based on sampling completed during the RIR-A, visible NAPL is an indicator that there may be USEPA Region 4 sediment RSVs exceedances in sediment. Therefore, removal of visual NAPL from sediment will achieve the RAO and is considered the PRG.

NAPL is visibly present within the shallow-zone, transition-zone, and bedrock groundwater systems. Groundwater is classified as Class GB, or suitable for drinking water without treatment. Unless site-specific remediation standards are developed utilizing South Carolina's Amendment to Section 44-56-200, Hazardous Waste Cleanup, the PRGs for Class GB groundwater for organic and inorganic chemicals are the drinking water MCLs as set forth in R.61-58, State Primary Drinking Water Regulations, R.61-68, Water Classifications and Standards, or concentration promulgated by DHEC, if no PRG is available.

The surface water is classified as freshwater in accordance with DHEC regulation document R.61-68, Water Classifications and Standards. Human health MCLs for freshwater are provided in R.61-68 E.14.b(1). Since 2019, only benzo(a)pyrene was detected at a concentration greater than the freshwater human health MCL, in one sampling location near the Vaughn Landfill. In the last two years, no analytes have been detected in the surface water at concentrations above the freshwater human health MCL. A PRG for benzo(a)pyrene of 0.2 micrograms per liter is proposed for surface water. Surface water currently meets this PRG.

Operable Unit 3, fractured bedrock groundwater, will be evaluated and addressed separately, if necessary.

SUMMARY OF REMEDIAL ALTERNATIVES

Based on information collected during site investigations, a FFS was conducted to identify, develop, and evaluate cleanup options and remedial alternatives. The FFS process used the information gathered during the previous investigations and other assessments to develop and evaluate potential remedial alternatives. Each remedial alternative evaluated by the Department is described briefly below. Note: A Final Remedial Design will be developed prior to implementation.

SUMMARY OF REMEDIAL ALTERNATIVES

Alternative	Description
1: No Action	• Site is left in its current condition • This is a baseline for comparison to other alternatives • Estimated Cost: $22,000
2: Monitored Natural Attenuation (MNA) and Land Use Controls (LUCs)	• Maintains the Site in its current condition with continued monitoring for a period of 30 years • LUCs will be implemented on soil, sediment, and groundwater • Estimated Cost: $1,350,000
3: Selective Excavation	• Selective excavation on Parcels 3, 4, 5, and LECE School Property • Installation of a barrier wall in combination with capping of a portion of the Vaughn Landfill • Hydraulic control of the shallow and transition zone groundwater via mechanical pumping (5 years) and engineered phytoremediation on the capped portion of the Vaughn Landfill • MNA of groundwater and implementation of LUCs for long-term effectiveness • Estimated Cost: $18,600,000
4: Excavation and Partial Vaughn Landfill Removal, MNA, and LUCs	• Excavation of the portion of the Vaughn Landfill with underlying NAPL • Excavation of the impacted sediments on Parcels 3, 4, and 5 and LECE School Property • MNA of groundwater and implementation of LUCs for long-term effectiveness • Estimated Cost: $33,300,000
5. Excavation and Complete Vaughn Landfill Removal, MNA and LUCs	• Excavation of the overall Vaughn Landfill (areas with and without underlying NAPL) • Excavation of the impacted sediments on Parcels 3, 4, 5 and LECE School Property • MNA of groundwater and implementation of LUCs for long-term effectiveness • Estimated Cost: $39,500,000

DESCRIPTION OF ALTERNATIVES

Alternative 1 - No Action

No Action is included as a baseline for comparison with other alternatives. Under Alternative 1, no action is taken to treat or prevent potential exposure to contaminated groundwater, soil, or sediments. There is also no reduction in volume, toxicity, or the mobility of contaminants. This alternative would rely on natural attenuation processes to reduce contaminant concentrations over time. This alternative does not include any institutional controls (e.g., deed restrictions) or monitoring to evaluate natural attenuation or COC extent. The Site would be left uncontrolled. Alternative 1 would not be protective of human health or the environment and would likely not reach RAOs in less than 30 years. The expected cost for this alternative is $22,000.

Alternative 2 – Monitored Natural Attenuation (MNA) and Land Use Controls (LUCs)

MNA is a passive approach that monitors the natural degradation or reductions of COCs in groundwater. Additionally, soil, sediment, and groundwater LUCs will be put in place on the parcels and the LECE School Property. A typical MNA approach centers on monitoring groundwater regularly to evaluate and confirm that site conditions are supportive of COC degradation. LUCs would be implemented to protect human health and the environment by restricting development and groundwater use. MNA would likely not reach RAOs in less than 30 years and have a cost of $1,350,000.

Active Remedies

Alternatives 3 through 5 are the active remedies for the Site. This means that these alternatives will utilize a treatment process or a source removal to remediate the Site. Alternatives 3 through 5 are identical in how they will remediate the LECE School Property, Parcel 4, and Parcel 5. They will all utilize MNA and LUCs as part of the alternative. The difference with alternatives 3 through 5 is how they approach the cleanup of Parcel 3 which includes the Vaughn Landfill. The following paragraphs will summarize the components in Alternatives 3 through 5 that will be the same for each followed by descriptions of how each of the active alternatives will address Parcel 3.

On the LECE School Property, each alternative includes the excavation of the sediments within the wetlands with visible NAPL which includes a portion of the turnaround/parking area to a depth of up to 16 feet. To excavate to this depth, it is likely that a 1,000 foot long temporary, sheet-pile wall would be installed to an estimated depth of 25 feet. The estimated volume of excavated sediment is 26,300 cubic yards. Measures will be taken to limit dust, odor, and noise during excavation activities.

The drainage ditches on Parcels 4 and 5 would be excavated. The removal volumes would be 2,800 and 2,300 cubic yards, respectively.

MNA would be used as an alternative for the remediation of the shallow and transition zone groundwater. LUCs would be required to prevent or limit the use of groundwater; protect and maintain the barrier, cap, and hydraulic control; and to ensure the property is safe for its intended use.

Alternative 3 – Selective Excavation/Capping

The primary components of Alternative 3 (Figure 3) are selective excavations on Parcels 3, 4, 5, and the LECE School Property; installation of a barrier wall in combination with capping of a portion of the Vaughn Landfill; hydraulic control of the shallow and transition zone groundwater via mechanical pumping (5 years); engineered phytoremediation on the capped portion of the Vaughn Landfill; and MNA of groundwater and implementation of LUCs for long-term effectiveness.

Parcel 3 would be divided into northern and southern excavation areas. The Southern excavation area includes approximately 0.3 acres of the Vaughn Landfill and includes 15,300 cubic yards of removal. The Northern excavation area includes approximately 5,700 cubic yards of removal.

To prevent remaining sorbed COCs and NAPL, which would remain in place, from migrating from beneath the Vaughn Landfill, an approximately 1,425-foot-long permanent barrier wall would be installed in the northwestern portion of the Vaughn Landfill. The barrier wall would be utilized for the installation of a groundwater hydraulic control system. To control infiltration of precipitation within the barrier wall, a low permeability engineered cap would be installed inside of the barrier wall. A groundwater extraction system would be installed to prevent the buildup of groundwater within the barrier wall and create an upward hydraulic head on the transition and bedrock zones of groundwater. This would consist of approximately 100 TreeWell phytoremediation installations and two groundwater extraction wells which would be utilized until the trees are established.

Alternative 3 would take about 2-3 years to install but would take greater than 30 years to reach remedial goals. The biggest advantage to this alternative is that it would be completed in less than half the time of the other active alternatives and have less than half of the number of truck trips needed to complete. The Selective Excavation alternative would cost about $18,600,000.

Alternative 4 – Excavation and Partial Vaughn Landfill Removal, MNA, and LUCs

Alternative 4 (Figure 4) would include the excavation of the portion of the Vaughn Landfill with underlying NAPL; excavation of the impacted sediments on Parcels 3, 4, 5, and the LECE School Property; MNA of groundwater; and implementation of LUCs for long-term effectiveness.

Alternative 4 would include the excavation of NAPL impacted areas on Parcel 3, including the portion of the Vaughn Landfill with underlying NAPL. Approximately 30,000 cubic yards of the Vaughn Landfill not over NAPL contaminated areas would stay in place. The areal extent of Parcel 3's excavation is approximately 4.8 acres. The estimated volume of excavated C&D Debris and NAPL is estimated to be 101,400 cubic yards.

Total excavation volume for Alternative 4 is approximately 153,900 cubic yards of material and it would take 5-6 years to complete. The cost of this alternative would be $33,300,000.

Alternative 5 – Excavation and Complete Removal of Vaughn Landfill, MNA, and LUCs

Alternative 5 (Figure 5) would include the excavation of the overall Vaughn Landfill; excavation of the impacted sediments on Parcels 3, 4, 5, and LECE School Property; MNA of groundwater; and implementation of LUCs for long-term effectiveness.

Alternative 5 would include the excavation of the NAPL on Parcel 3 along with the rest of the Vaughn Landfill C&D area. The areal extent of excavations would be 7.92 acres. It is estimated that the excavation volume for Parcel 3 would be 150,000 cubic yards.

Total excavation volume for Alternative 5 is approximately 183,800 cubic yards of material and it would take 6-7 years to complete. The cost of this alternative would be $39,500,000.

EVALUATION OF ALTERNATIVES

The National Contingency Plan requires the use of specific criteria to evaluate and compare the different remedial alternatives to select a remedy. The criteria are:

1. Overall protection of human health and the environment;
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs);

3. Long-term effectiveness and permanence;
4. Reduction of toxicity, mobility, or volume through treatment;
5. Short-term effectiveness;
6. Implementability;
7. Cost; and
8. Community acceptance

The main objectives for the preferred remedial action are to be protective of human health and the environment and to comply with State and Federal regulations. These two objectives are considered *threshold criteria*. For an alternative to be considered as final, these two threshold criteria must be met.

The following measures are considered *balancing criteria*: long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; implementability; and cost. These criteria are used to weigh the major technical feasibility and cost advantages and disadvantages.

Community acceptance of the preferred Alternative and the other considered Alternatives is a *modifying criterion* that will be carefully considered by the Department prior to final remedy selection.

COMPARATIVE ANALYSIS OF ALTERNATIVES

A comparative analysis of each Alternative was performed. In this type of analysis, the Alternatives were evaluated in relation to one another for each of the evaluation criteria. The purpose of the analysis is to identify the relative advantages and disadvantages of each Alternative.

Overall Protection of Human Health and the Environment

The assessment for this criterion describes how each alternative achieves and maintains adequate protection of human health and the environment. The five alternatives provide varying levels of human health protection. Alternative 1 would not achieve the RAOs and provides the least protection of all the alternatives. Alternative 1 would provide no reduction in risks to human health and the environment because no measures would be implemented to eliminate potential pathways for human exposure. Alternative 2 would provide limited protection of human health and the environment using MNA and LUCs to minimize the potential for contact with NAPL. Alternative 3 would provide several layers (selective excavation, capping, and LUC) of protection for human health and the environment but would leave NAPL-impacted sediments in place within the containment area on the Vaughn Landfill. Alternative 4 would provide the complete removal of delineated NAPL-impacted sediments from the site but does not address any protections for human health and the environment from the remaining Vaughn C&D Landfill material. Alternative 5 would provide for the complete removal of NAPL-impacted sediments and the complete removal of the Vaughn C&D Landfill material. In terms of overall protection of human health and the environment, the Alternatives ranked from most protective to least: Alternative 5, Alternatives 4, Alternative3, Alternative 2, Alternative1.

Compliance with ARARs

The assessment for this criterion describes how each alternative complies with potential federal and state ARARs. Alternative 1 would not comply with chemical specific ARARs because no action would be taken to reduce contaminant concentrations. Alternative 2 would not comply with chemical specific ARARs because no action would be taken to remove NAPL. Alternatives 3 through 5 would meet the location and action specific ARARs. Alternative 3 would take longer to meet chemical specific ARARs than Alternatives 4 and 5 since NAPL would be left in place. Alternatives 4 and 5 would meet chemical-specific ARARS for soil and sediment by removing NAPL and that should reduce concentrations in groundwater which would see continued reduction through MNA. In terms of compliance with ARARs, the alternatives ranked from most likely to least: Alternate 5, Alternative 4, Alternative 3, Alternative 2, and Alternative 1. All of the active treatments would comply with the ARARs.

Long-Term Effectiveness and Permanence

The assessment for this criterion evaluates the long-term effectiveness of alternatives in maintaining protection of human health and the environment after response objectives have been met. Alternative 1 would have minimal long-term effectiveness since NAPL would not be removed, monitored, or contained. Alternative 2 would have minimal long-term effectiveness since NAPL would not be removed or contained but would have the capability of monitoring natural reduction effectiveness. With Alternative 3, while a majority of NAPL would be excavated, there is a limited area of NAPL that would be contained within the barrier wall and visually observed trace NAPL would be left under a portion of the Vaughn Landfill. Alternative 3 would have a barrier wall, cap, and hydraulic control systems that would require operation and maintenance for many years. In Alternative 4 the excavations would permanently remove the NAPL on Parcels 3, 4, 5, and the LECE School property. Alternative 4 would leave a portion of the Vaughn C&D Debris Landfill which would limit its ability to return to a natural wetland area. Alternative 5 would permanently remove the NAPL on Parcels 3, 4, 5, and the LECE Property as well as completely remove the C&D debris material. In terms of long-term effectiveness and permanence, the alternatives ranked from most permanent to least: Alternative 5, Alternative 4, Alternative 3, Alternative 2, and Alternative 1. All three active alternatives (Alternatives 3 through 5) would require some level of long-term management until RAOs are achieved.

Reduction of Toxicity, Mobility, and Volume through Treatment

The assessment for this criterion evaluates the alternative with respect to how well it can permanently and significantly reduce toxicity, mobility, and volume of impacted media. Alternatives 1 and 2 would not reduce toxicity, mobility, or volume through treatment. In Alternative 3, the toxicity, mobility, and volume would be reduced at the Site through selective excavation and groundwater extraction and treatment within the capped area. In Alternative 3, the mobility would be reduced due to placement in an engineered waste containment cell at a permitted landfill and the reduction in mobility provided by the barrier wall and cap. Alternative 3 leaves a limited area of NAPL within the barrier wall and leaves trace NAPL under a portion of the Vaughn Landfill. Alternatives 4 and 5 reduce the toxicity, mobility, and volume of waste through excavation. Alternatives 4 and 5 would

allow for the reduction of toxicity and volume in groundwater through natural attenuation over an extended period. Alternative 5 removes the additional C&D debris from the Vaughn Landfill that would not be removed in Alternative 4. In terms of reducing toxicity, mobility, and volume, the alternatives ranked most reduction to least: Alternative 5, Alternative 4, Alternative 3, Alternative 2, and Alternative 1.

Short-Term Effectiveness

The assessment for this criterion evaluates the alternative with respect to its effects on human health and the environment during construction and implementation of the remedial action. Alternative 1 is not effective over a short-term period but would have no risk to the community or workers due to implementation. Alternative 2 would have some required routine groundwater monitoring but risk is minimal to the community or workers. Alternatives 3 through 5 pose higher risks to the community and workers during implementation due to the active remedial technologies (e.g., heavy equipment, trucking) being utilized. The active remedies each pose a slightly higher risk to the community or workers as you move from Alternatives 3 up to Alternative 5 due to each requiring a longer implementation time. However, these risks would be minimized through appropriate health and safety planning. In terms of short-term effectiveness, the Alternatives ranked from most to least: Alternative 3, Alternative 4, Alternative 5, Alternative 2, and Alternative 1.

Implementability

The assessment for this criterion evaluates the technical and administrative feasibility of each alternative and the availability of materials and services required during its implementation. All of the action alternatives would be implementable. The three action alternatives (Alternatives 3 through 5) would require some specialized wetlands terrain equipment, sheet-piling, dewatering and treatment systems, and the use of a sprung structure to work in on the LECE School Property. In the order of increasing difficulty, the Alternatives are ranked: Alternative 1, Alternative 2, Alternative 3, Alternative 4, and Alternative 5. Each of the alternatives discussed are common applications, have been historically used in the environmental industry, and have specifically been used at former MGP sites.

Cost

The following table presents the estimated cost for each Alternative:

Alternative	Cost
1. No Action	$0
2. MNA and LUCs	$22,000
3. Selective Excavation with MNA/LUCs	$18,600,000
4. Excavation with Partial Vaughn Landfill Removal; MNA; LUCs	$33,300,000
5. Excavation with Complete Vaughn Landfill Removal; MNA; LUCS	$39,500,000

Community Acceptance

Community acceptance of the preferred remedy will be evaluated after the public comment period. Public comments will be summarized and responses provided in the Responsiveness Summary Section of the Record of Decision document that will present the Department's final Alternative selection. The Department may choose to modify the preferred Alternative or select another remedy based on public comments or new information.

Alternative Criteria Scoring

The Table in Figure 6 shows how well each alternative would perform in meeting the evaluation criteria. The alternatives are rated from 1 to 6 on how well they complete the evaluation criteria. A rating of one would not meet the bare minimum requirements of the evaluation criteria. A rating of 6 would provide excellent performance in satisfying the evaluation criteria. Alternatives 4 and 5 achieved the highest scores of the alternatives evaluated.

SUMMARY OF THE DEPARTMENT'S PREFERRED ALTERNATIVE

The Department has identified Alternative 5 (Excavation and Removal of Vaughn Landfill, MNA, and LUCs) as the preferred remedy for the Site.

Alternative 5 would include the excavation of the entire Vaughn Landfill; excavation of the impacted sediments on Parcels 3, 4, 5, and the LECE School property; MNA of groundwater; and implementation of LUCs for long-term effectiveness.

On Parcel 3, Alternative 5 would include the excavation of the NAPL and the entire Vaughn C&D Landfill. The areal extent of excavation includes the impacted wetlands areas, the areas underlain by NAPL, and the Vaughn Landfill C&D debris area. The excavations would be backfilled with clean soil and sediment along with the restoration of the wetland vegetation. During restoration, the Vaughn Landfill footprint would be backfilled to match the existing contours of the surrounding wetlands area. Best Management Practices (e.g. silt fences, sediment tubes, rock ditch check dams, and turbidity curtains) would be placed to prevent sediment from migrating off-Site during construction.

The total areal extent of the excavation for Parcels 4 and 5 encompasses 0.44 acres. The proposed sediment excavation would be completed based on the estimated depth determined from work completed during the Remedial Investigation and by visual observation. Best Management Practices (e.g., silt fences, sediment tubes, rock ditch check dams, and turbidity curtains) would be placed to prevent sediment from migrating off-Site during construction.

On the LECE School Property, the excavation would remove sediments within the wetlands and uplands that are visibly stained with NAPL. This would include a portion of the turnaround and parking area to a depth of 16 feet on the LECE School property. To excavate to this depth, it is expected that a 1000-foot long temporary, sheet pile wall would be installed to an estimated depth of 25 feet. The total excavation is approximately 1.02 acres with an estimated volume of 26,400 cubic yards. The excavation would require the implementation of an Air, Noise, and Fugitive Emissions Monitoring and Mitigation Plan

to address noise, air, and fugitive dust emissions. Additionally, the use of a temporary sprung structure, if needed, would be used over the excavation area to further reduce potential impacts during the excavation. Dewatering and surface water management would likely be required during the excavation. The excavation would be backfilled with soil to match the existing elevations and restored to its preconstruction condition.

The remedy for the shallow and transition zone groundwater would be MNA; however, with the footprint of the Vaughn Landfill being returned to wetlands, the monitoring well network would need to be focused on the Site periphery. Based on the results of groundwater sampling and the proposed removal of NAPL-impacted soil and sediments, MNA is a viable alternative for groundwater remediation over the course of an extended period (likely greater than 30 years). LUCs would be required to prevent or limit the use of groundwater until the groundwater reaches remedial goals and to maintain current property zoning.

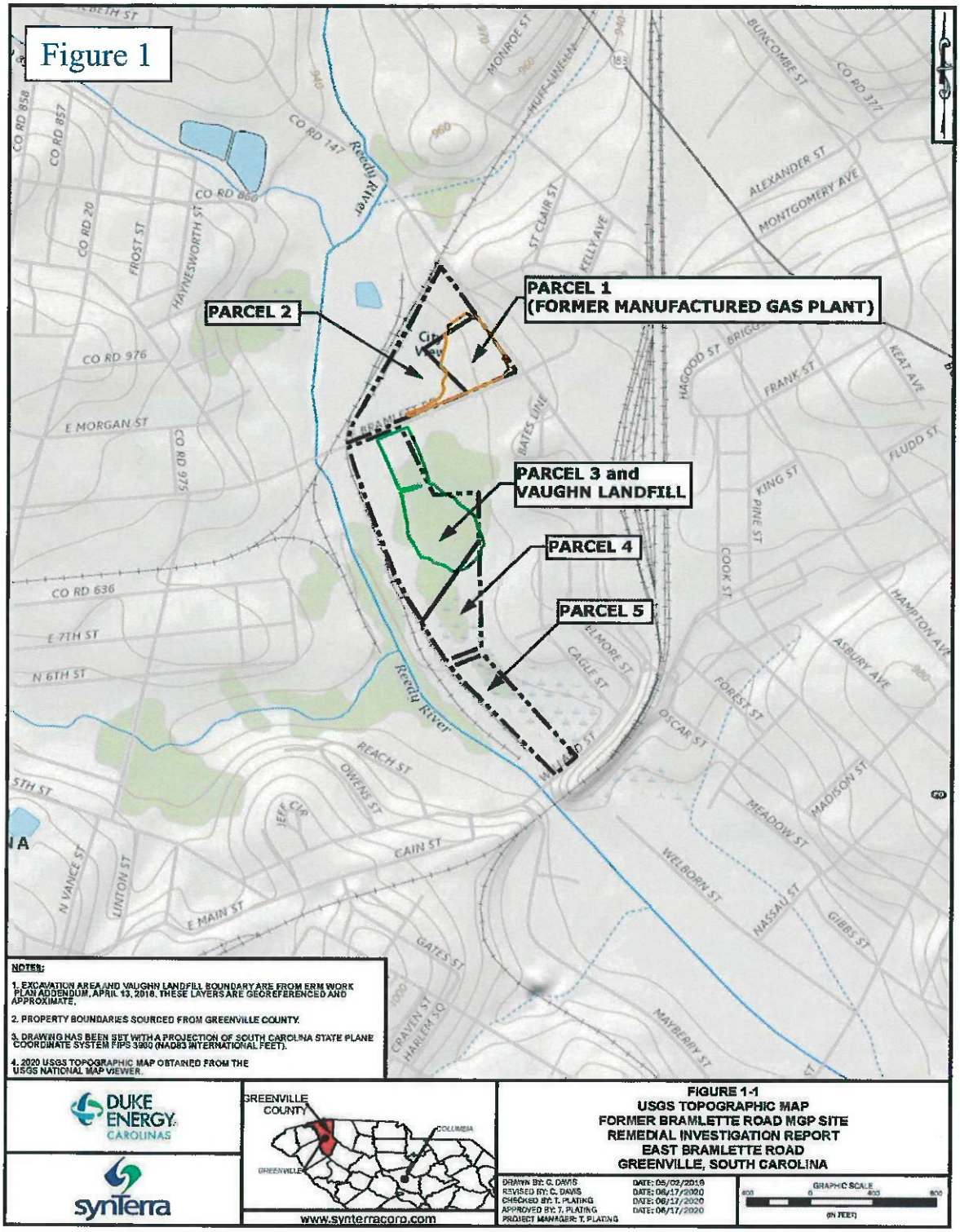
Alternative 5 protects human health and the environment by removing NAPL-impacted material and C&D material from the Site. LUCs would provide an additional layer of protection. It is best in terms of its long-term effectiveness and permanence and its reduction of toxicity, mobility, and volume. Removing the NAPL-impacted material and construction and debris material from the site is permanent and mitigates further groundwater impact.

The estimated volume of excavated material for this alternative is 183,800 cubic yards. Excavation, transportation, and disposal has been successfully implemented to remediate other MGP Sites. There are many qualified contractors capable of performing the work. Some specialized equipment for working in the wetlands, the installation of sheet piling, dewatering operations, and treatment systems would be required.

The schedule assumes that only approximately 8 months of each year would be available for alternative implementation due to seasonal weather and flooding conditions. This puts the full implementation timeframe at approximately 6 to 7 years. To complete this project, it is estimated that approximately 22,700 truck trips would be required.

The estimated capital construction costs for the implementation of the remedy is $39,500,000.

Figure 1


PARCEL 1
(FORMER MANUFACTURED GAS PLANT)
PARCEL 2
PARCEL 3 and
VAUGHN LANDFILL
PARCEL 4
PARCEL 5
Reedy River
CO RD 147
CO RD 860
CO RD 858
CO RD 857
CO RD 20
FROST ST
HAYNESWORTH ST
CO RD 976
E MORGAN ST
CO RD 975
CO RD 636
E 7TH ST
N 6TH ST
5TH ST
N VANCE ST
LINTON ST
E MAIN ST
CAIN ST
REACH ST
OWENS ST
GATES ST
CRAVEN ST
HARLEM SQ
MAYBERRY ST
WELBORN ST
NASSAU ST
MEADOW ST
MADISON ST
GIBBS ST
OSCAR ST
FOREST ST
ASBURY AVE
HAMPTON AVE
ELMORE ST
EAGLE ST
COOK ST
KING ST
PINE ST
FLUDD ST
KEAT AVE
FRANK ST
HAGOOD ST
BRIGGS
BATES LINE
ST CLAIR ST
KELLY AVE
ALEXANDER ST
MONTGOMERY AVE
BUNCOMBE ST
CO RD 377
MONROE ST
HUFF-LINEHAN
NOTES:
1. EXCAVATION AREA AND VAUGHN LANDFILL BOUNDARY ARE FROM ERM WORK PLAN ADDENDUM, APRIL 13, 2018. THESE LAYERS ARE GEOREFERENCED AND APPROXIMATE.
2. PROPERTY BOUNDARIES SOURCED FROM GREENVILLE COUNTY.
3. DRAWING HAS BEEN SET WITH A PROJECTION OF SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3900 (NAD83 INTERNATIONAL FEET).
4. 2020 USGS TOPOGRAPHIC MAP OBTAINED FROM THE USGS NATIONAL MAP VIEWER.
DUKE ENERGY CAROLINAS
synterra
GREENVILLE COUNTY
COLUMBIA
GREENVILLE
www.synterracorp.com
FIGURE 1-1
USGS TOPOGRAPHIC MAP
FORMER BRAMLETTE ROAD MGP SITE
REMEDIAL INVESTIGATION REPORT
EAST BRAMLETTE ROAD
GREENVILLE, SOUTH CAROLINA
DRAWN BY: C. DAVIS DATE: 05/02/2018
REVISED BY: C. DAVIS DATE: 06/17/2020
CHECKED BY: T. PLATING DATE: 06/17/2020
APPROVED BY: T. PLATING DATE: 06/17/2020
PROJECT MANAGER: T. PLATING
GRAPHIC SCALE
400 0 400 800
(IN FEET)

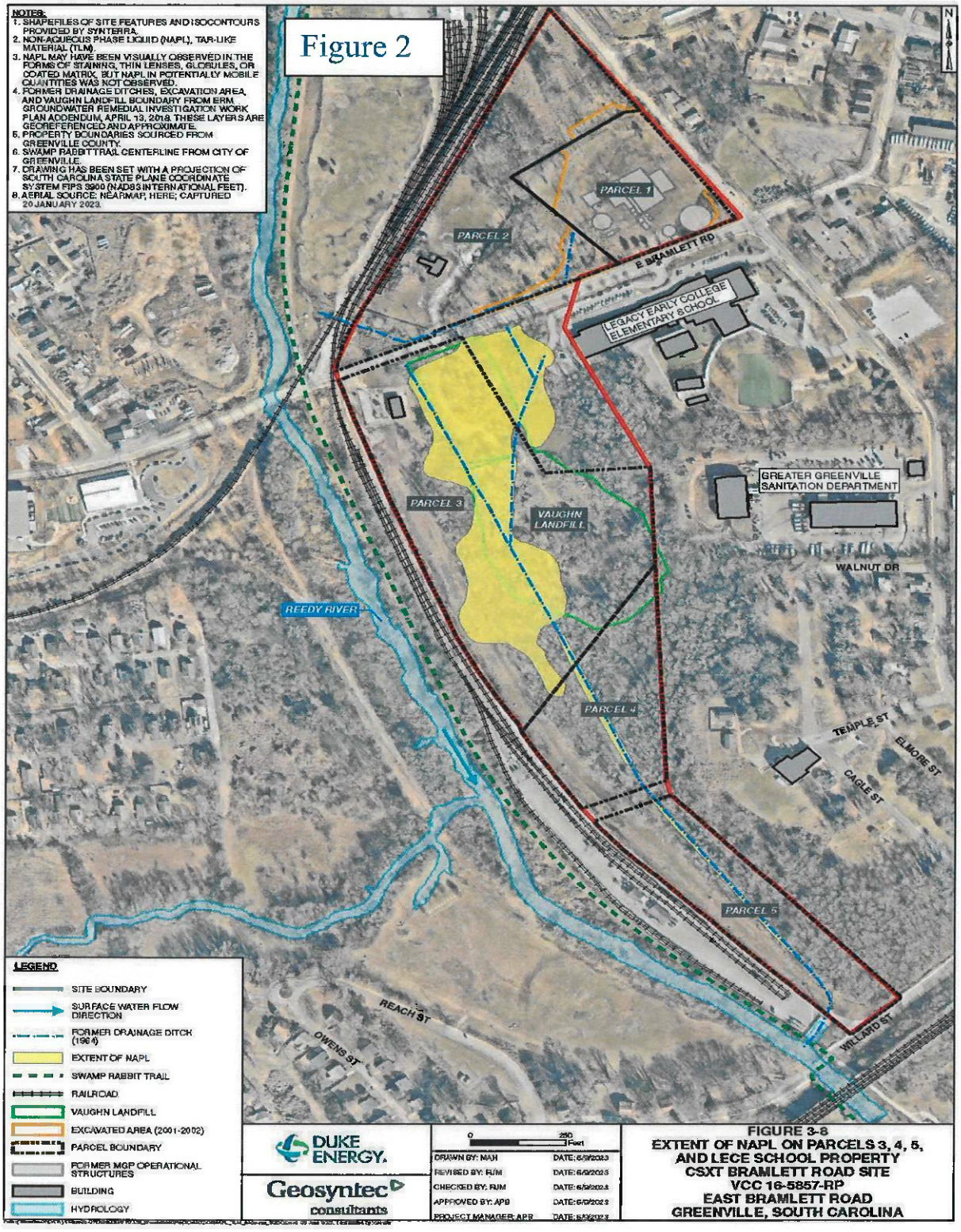


Figure 2
NOTES:
1. SHAPEFILES OF SITE FEATURES AND ISOCONTOURS PROVIDED BY SYNTERRA.
2. NON-AQUEOUS PHASE LIQUID (NAPL), TAR-LIKE MATERIAL (TLM).
3. NAPL MAY HAVE BEEN VISUALLY OBSERVED IN THE FORMS OF STAINING, THIN LENSES, GLOBULES, OR COATED MATRIX, BUT NAPL IN POTENTIALLY MOBILE QUANTITIES WAS NOT OBSERVED.
4. FORMER DRAINAGE DITCHES, EXCAVATION AREA, AND VAUGHN LANDFILL BOUNDARY FROM ERM, GROUNDWATER REMEDIAL INVESTIGATION WORK PLAN ADDENDUM, APRIL 13, 2018. THESE LAYERS ARE GEOREFERENCED AND APPROXIMATE.
5. PROPERTY BOUNDARIES SOURCED FROM GREENVILLE COUNTY.
6. SWAMP RABBIT TRAIL CENTERLINE FROM CITY OF GREENVILLE.
7. DRAWING HAS BEEN SET WITH A PROJECTION OF SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3900 (NAD83 INTERNATIONAL FEET).
8. AERIAL SOURCE: NEARMAP, HERE; CAPTURED 20 JANUARY 2023.
N
PARCEL 1
PARCEL 2
PARCEL 3
PARCEL 4
PARCEL 5
E BRAMLETT RD
LEGACY EARLY COLLEGE ELEMENTARY SCHOOL
GREATER GREENVILLE SANITATION DEPARTMENT
VAUGHN LANDFILL
WALNUT DR
REEDY RIVER
TEMPLE ST
ELMORE ST
CAGLE ST
REACH ST
OWENS ST
WILLARD ST
LEGEND
SITE BOUNDARY
SURFACE WATER FLOW DIRECTION
FORMER DRAINAGE DITCH (1964)
EXTENT OF NAPL
SWAMP RABBIT TRAIL
RAILROAD
VAUGHN LANDFILL
EXCAVATED AREA (2001-2002)
PARCEL BOUNDARY
FORMER MGP OPERATIONAL STRUCTURES
BUILDING
HYDROLOGY
DUKE ENERGY.
Geosyntec consultants
0
250
Feet
DRAWN BY: MAH DATE: 6/9/2023
REVISED BY: RJM DATE: 6/9/2023
CHECKED BY: RJM DATE: 6/9/2023
APPROVED BY: APB DATE: 6/9/2023
PROJECT MANAGER: APB DATE: 6/9/2023
FIGURE 3-8
EXTENT OF NAPL ON PARCELS 3, 4, 5, AND LECE SCHOOL PROPERTY
CSXT BRAMLETT ROAD SITE
VCC 16-5857-RP
EAST BRAMLETT ROAD
GREENVILLE, SOUTH CAROLINA

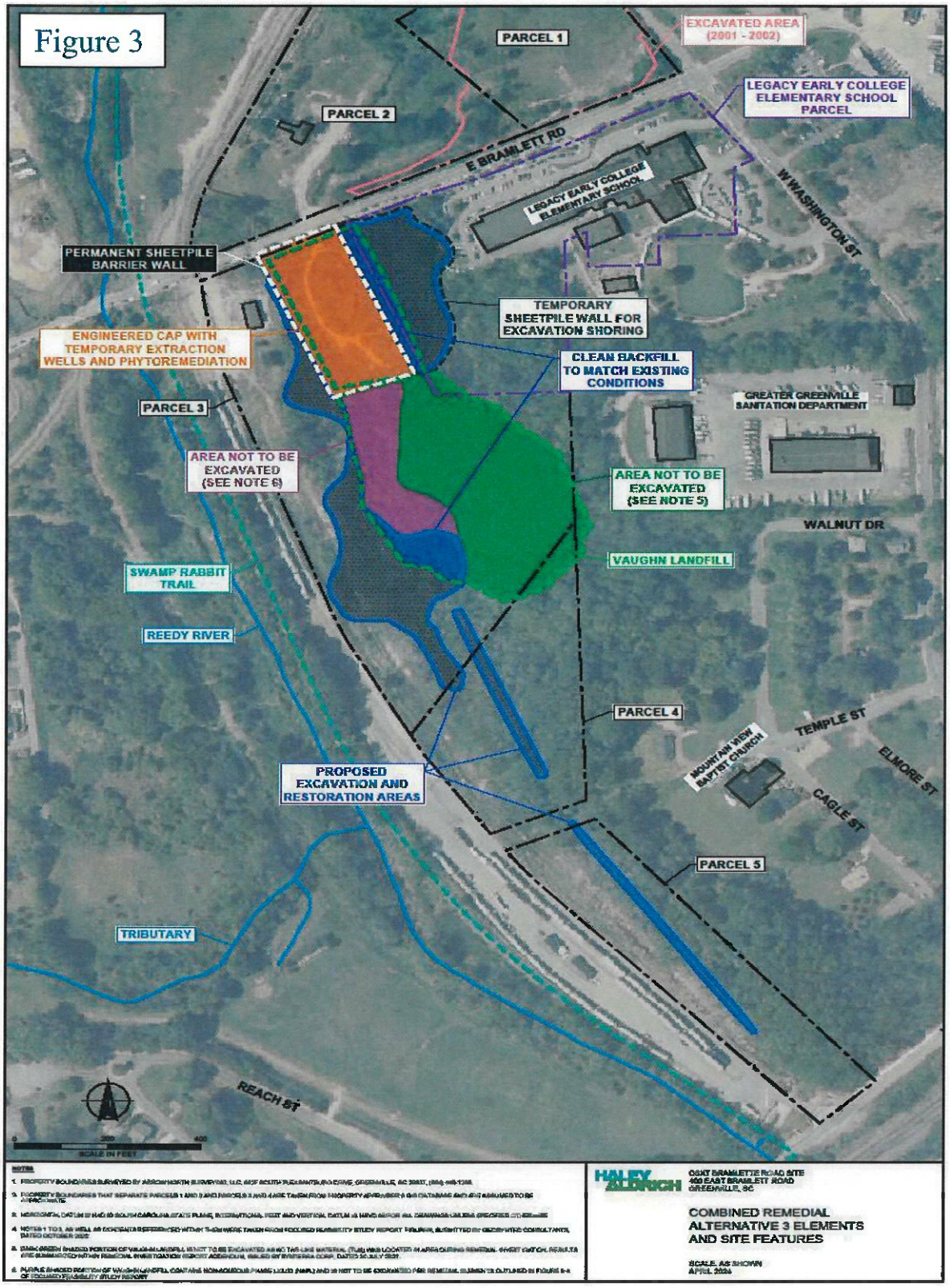


Figure 3
PARCEL 1
EXCAVATED AREA (2001 - 2002)
PARCEL 2
LEGACY EARLY COLLEGE ELEMENTARY SCHOOL PARCEL
E BRAMLETT RD
LEGACY EARLY COLLEGE ELEMENTARY SCHOOL
W WASHINGTON ST
PERMANENT SHEETPILE BARRIER WALL
TEMPORARY SHEETPILE WALL FOR EXCAVATION SHORING
ENGINEERED CAP WITH TEMPORARY EXTRACTION WELLS AND PHYTOREMEDIATION
CLEAN BACKFILL TO MATCH EXISTING CONDITIONS
PARCEL 3
GREATER GREENVILLE SANITATION DEPARTMENT
AREA NOT TO BE EXCAVATED (SEE NOTE 6)
AREA NOT TO BE EXCAVATED (SEE NOTE 5)
WALNUT DR
VAUGHN LANDFILL
SWAMP RABBIT TRAIL
REEDY RIVER
PARCEL 4
TEMPLE ST
MOUNTAIN VIEW BAPTIST CHURCH
ELMORE ST
CAGLE ST
PROPOSED EXCAVATION AND RESTORATION AREAS
PARCEL 5
TRIBUTARY
REACH ST
SCALE IN FEET
HALEY ALDRICH
0317 BRAMLETTE ROAD SITE
400 EAST BRAMLETT ROAD
GREENVILLE, SC
COMBINED REMEDIAL ALTERNATIVE 3 ELEMENTS AND SITE FEATURES
SCALE: AS SHOWN
APRIL 2024

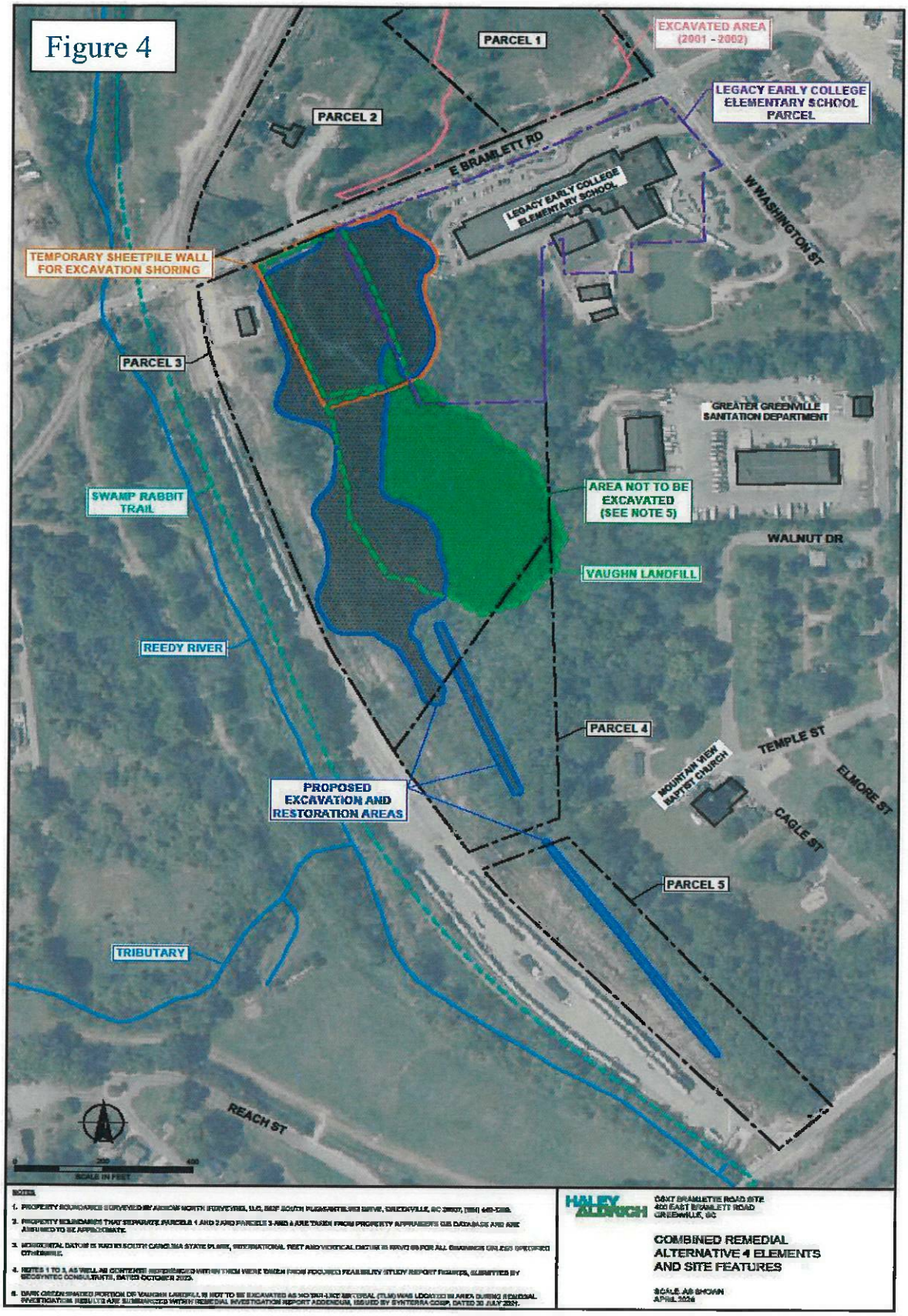
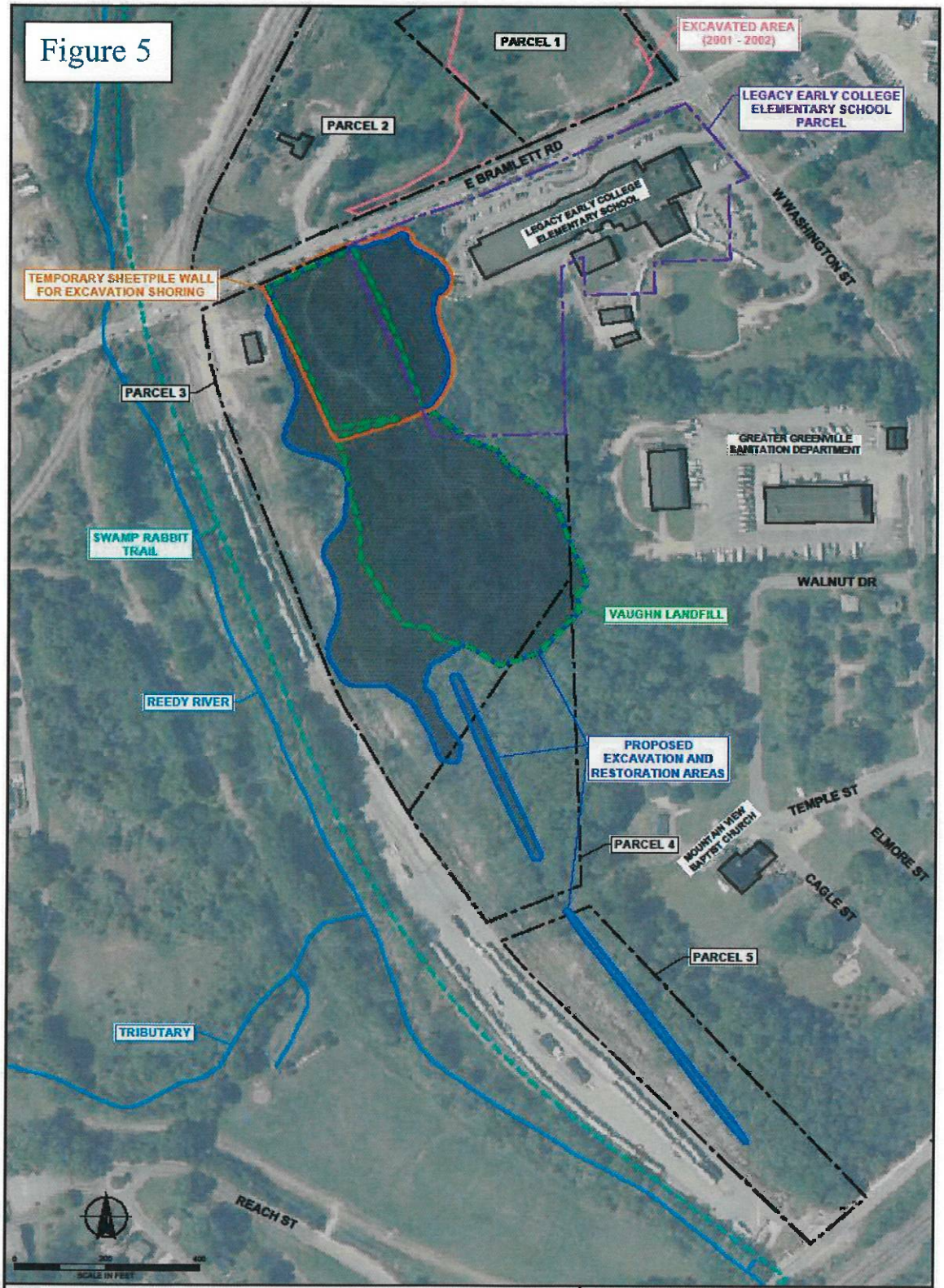


Figure 4
PARCEL 1
EXCAVATED AREA (2001 - 2002)
LEGACY EARLY COLLEGE ELEMENTARY SCHOOL PARCEL
PARCEL 2
E BRAMLETT RD
LEGACY EARLY COLLEGE ELEMENTARY SCHOOL
W WASHINGTON ST
TEMPORARY SHEETPILE WALL FOR EXCAVATION SHORING
PARCEL 3
GREATER GREENVILLE SANITATION DEPARTMENT
SWAMP RABBIT TRAIL
AREA NOT TO BE EXCAVATED (SEE NOTE 5)
WALNUT DR
VAUGHN LANDFILL
REEDY RIVER
PARCEL 4
TEMPLE ST
MOUNTAIN VIEW BAPTIST CHURCH
ELMORE ST
CAGLE ST
PROPOSED EXCAVATION AND RESTORATION AREAS
PARCEL 5
TRIBUTARY
REACH ST
SCALE IN FEET
HALEY ALDRICH
GMT BRAMLETTE ROAD SITE
400 EAST BRAMLETTE ROAD
GREENVILLE, SC
COMBINED REMEDIAL ALTERNATIVE 4 ELEMENTS AND SITE FEATURES
SCALE AS SHOWN
April 2024

Figure 5



NOTES:

1. PROPERTY BOUNDARIES SURVEYED BY ARROW NORTH SURVEYING, LLC, 9607 SOUTH PLEASANTBURG DRIVE, GREENVILLE, SC 29607, (864) 448-1288.
2. PROPERTY BOUNDARIES THAT SEPARATE PARCELS 1 AND 2 AND PARCELS 3 AND 4 ARE TAKEN FROM PROPERTY APPRAISER'S GIS DATABASE AND ARE ASSUMED TO BE APPROXIMATE.
3. HORIZONTAL DATUM IS NAD 83 SOUTH CAROLINA STATE PLANE, INTERNATIONAL FEET AND VERTICAL DATUM IS NAVD 88 FOR ALL DRAWINGS UNLESS SPECIFIED OTHERWISE.
4. NOTES 1 TO 3, AS WELL AS CONTENTS REFERENCED WITHIN THEM WERE TAKEN FROM FOCUSED FEASIBILITY STUDY REPORT FIGURES, SUBMITTED BY GEOSYNTEC CONSULTANTS, DATED OCTOBER 2023.

HALEY ALDRICH

CSXT BRAMLETTE ROAD SITE
400 EAST BRAMLETT ROAD
GREENVILLE, SC

COMBINED REMEDIAL ALTERNATIVE 5 ELEMENTS AND SITE FEATURES

SCALE: AS SHOWN
APRIL 2024

Figure 6 Evaluation Criteria Scoring

Criteria	Alternative 1 No Action	Alternative 2 MNA and LUCs	Alternative 3 Selective Excavation/Capping, MNA, and LUCs	Alternative 4 Excavation and Partial Vaughn Landfill Removal, MNA, and LUCs	Alternative 5 Excavation and Complete Removal of Vaughn Landfill, MNA, and LUCs
Overall Protection of Human Health and the Environment	1	2	4	6	6
Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)	1	1	5	6	6
Long-Term Effectiveness and Permanence	1	2	3	5	5
Reduction of Toxicity, Mobility, and Volume through Treatment	1	1	3	5	5
Short-Term Effectiveness	1	3	4	4	4
Implementability	6	6	4	4	4
Total Score	**11**	**15**	**23**	**30**	**30**

Scoring Scale (1 to 6)

1 – Would not meet criterion
2 – Low criterion performance
3 – Fair criterion performance
4 – Good criterion performance
5 – Very Good criterion performance
6 – Excellent criterion performance