

Analysis of Brownfield Cleanup Alternatives (ABCA) - DRAFT

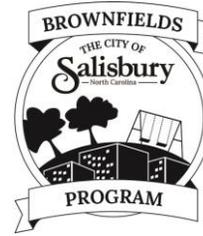
Former Kesler Mill/Fieldcrest Cannon
Plant #7



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Former Kesler Mill/Fieldcrest Cannon Plant #7

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Table of Contents

Common Abbreviations	iv
1 Introduction and Background	1
1.1 Phase I Environmental Site Assessment Report - Griffith, August 2013	2
1.2 Former Kesler Mill Debris Piles Limited Asbestos-Containing Materials Survey – Cardno, January 2016.....	3
1.3 Phase II Environmental Site Assessment (ESA) – Cardno, February 2016	3
1.4 Phase I Environmental Site Assessment (ESA) – Cardno, January 2019.....	4
1.5 Project Goal.....	5
2 Applicable Regulations and Cleanup Standards	5
2.1 Cleanup Oversight Responsibility.....	5
2.2 Cleanup Standards for Major Contaminants	6
2.3 Climate Change Considerations.....	6
3 Analysis of Brownfield Cleanup Alternatives	7
3.1 Cleanup Alternatives Considered	7
3.1.1 Alternative 1: No Action.....	7
3.1.2 Alternative 2: Site Capping	7
3.1.3 Alternative 3: Excavation and Disposal of Contaminated Soils and Off-site Disposal of Mixed ACM Debris	8
3.2 Recommended Cleanup Alternative	8
4 References	8

Tables

Table 1	Brownfield Cleanup Alternatives Balancing Factor Evaluation
Table 2	Estimated Comparative Cost for Cleanup Alternatives

Figures

Figure 1	Topographic Site Location
Figure 2	Site Map
Figure 3	February 2016 Phase II ESA Sample Locations Map

Common Abbreviations

ABCA	Analysis of Brownfield Cleanup Alternatives
ACM	Asbestos-Containing Material
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of Concern
EPA	The Environmental Protection Agency
ESA	Environmental Site Assessment
GIS	Geographic Information Systems
LBP	Lead-Based Paint
MCL	USEPA Maximum Contaminant Level
NC	North Carolina
NCDHHS	North Carolina Department of Health and Human Services
OSHA	The Occupational Health and Safety Administration
REC	Recognized Environmental Condition
RSL	USEPA Regional Screening Level
TSCA	The Toxic Substances Control Act of 1976
US	United States of America
USEPA	United States of America Environmental Protection Agency
UST	Underground Storage Tank

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1 Introduction and Background

Cardno, Inc. (Cardno) has prepared this Analysis of Brownfield Cleanup Alternatives (ABCA) on behalf of City of Salisbury, North Carolina (City) for the former Kesler Mill/Fieldcrest Cannon Plant #7 (Kesler Mill, site/subject property). The site is an abandoned former textile mill located at 423 N. Martin Luther King Jr. Ave. in a primarily residential area of Salisbury, North Carolina (**Figure 1**). The site has an approximate center location (decimal degrees) of 35.664529 latitude and -80.458049 longitude.

Parcel data provided by the Rowan County GIS website (<https://rowan2.connectgis.com/>) indicates that the site consists of six (6) tax parcels (Tax PINs: Parcel #016 183, Parcel #016 383, Parcel #016 384, Parcel #016 385, Parcel #016 386, and Parcel #016 387) totaling approximately 13.536 acres. This ABCA focuses on the main parcel associated with the former textile mill, #016 183 (**Figure 2**).

The community of Salisbury, North Carolina was first incorporated in 1753 as an economic center for Rowan County. During the industrial revolution, Salisbury became an important hub for rail travel and commerce in the state, after the founding of the North Carolina Railroad in 1855, and in conjunction with close proximity to the Southern Railway Company's repair facility in neighboring Spencer, North Carolina. During this time, industrial production increased, leading to an increased presence of factories and mills in Salisbury.

Per information provided in a 2013 Griffith Enterprises, Inc. (Griffith) Phase I report, the subject property was first developed as a textile mill circa 1895, named the Kesler Manufacturing Company. J.W. Cannon gained ownership in 1899 and expanded the mill to include several additional structures, including a second mill building. Throughout operation, mill houses surrounded the subject property to house site workers. In 1928, the site became known as Cannon Mill Plant #7. The site underwent three additional property transfers toward the end of the 20th century before eventually ceasing operations in August 2000, after the owner at the time, Pillowtex, filed for bankruptcy. Since ceasing operation, site structures have been demolished and left in large debris piles (approximately 11,000-cubic yards) centered on the former main area of operations.

According to information obtained from the North Carolina Department of Environmental Quality Underground Storage Tank Database (NCDEQ UST Database) and the 2013 Griffith Phase I ESA, three (3) USTs of approximately 500-gallon, 560-gallon, and 40,000-gallon capacity were formerly registered on the subject property, and at the time of this report all tanks have been closed via removal from the ground. Additionally, one (1) above-ground storage tank (AST) of approximately 15,000-gallon capacity was formerly present on the subject property. The AST was removed from the property after a documented petroleum release in 2007.

The City of Salisbury has identified the subject property as a potential target for mixed commercial and residential development. This ABCA has been developed in in order to identify a potential cleanup strategy in conjunction with a transfer of property ownership

and the preparation and submittal of an US Environmental Protection Agency (EPA) Brownfields Cleanup Grant application.

1.1 Phase I Environmental Site Assessment Report - Griffith, August 2013

Griffith completed a Phase I ESA at the subject property in August 2013 to evaluate site conditions and identify recognized environmental conditions (RECs) present at the subject property. At the conclusion of the August 2013 Phase I report, no RECs were identified in connection with the subject property, except for the following:

- A 550-gallon gasoline UST was formerly present on the subject property and was closed via removal from the ground in September 1989. A documented petroleum release in connection with the 550-gallon gasoline UST was reported. Subsequent assessment indicated that site soils and groundwater had been impacted by elevated concentrations of total petroleum hydrocarbons (TPH). The site was issued a notice of no further action required (NFA) in connection with the 550-gallon gasoline UST in July 1992. Griffith considers this listing to be a REC given that the site had not been issued an NFA based on regulatory criteria at the time of the Phase I report.
- A 40,000-gallon fuel oil UST was formerly present on the subject property and was closed via removal from the ground in June 1994. A documented petroleum release in connection with the 40,000-gallon gasoline UST was reported. Subsequent assessment indicated that site soils, beneath the former UST, and associated product line piping, had been impacted by elevated concentrations of TPH. Soil excavation was completed in the area of the former 40,000-gallon fuel oil UST and associated product line piping in August 1994. TPH was detected in subsurface soils at elevated concentrations, after the completion of the soil excavation. The site was issued an NFA in connection with the 40,000-gallon fuel oil UST in July 2001 based on a remedial plan that included remediation by natural attenuation. Griffith considers this listing to be a REC given the potential for encountering additional petroleum constituents in the area of the 40,000-gallon fuel oil UST during future site construction activities.
- A 15,000-gallon fuel oil #6 AST was formerly present on the subject property. Specific date of removal was not provided to Cardno personnel; however, the AST was no longer present on the subject property as of December 2018. A documented release of approximately 8,000 gallons of fuel oil #6 occurred in July 2007 from the 15,000-gallon AST. Released oil flooded the area of the former boiler room and flowed in an easterly downgradient direction toward the unnamed tributary of Town Creek that dissects the subject property near the northeastern property boundary. During remediation, approximately 8,000 gallons of #6 fuel oil were removed from the area of the former boiler room, site soils, and an oil-water separator. Remediation efforts continued through August 2007. Griffith considers this listing to be a REC, given the likelihood of #6 fuel oil persisting in site media, which would likely be encountered during future site construction activities.

- During remediation efforts for the 15,000-gallon AST release, a stockpile of soils impacted by polychlorinated biphenyls (PCBs) was found in the area of a former transformer that had experienced a hazardous release approximately three weeks prior to the release of #6 fuel oil from the 15,000-gallon AST. The stockpiled soils were not secured at the time of discovery. Impacted soils have since been removed from the area of the former transformer. Griffith considers a potential for the ongoing presence of PCBs in site media to be a REC.
- A 2013 EDR Radius Report referenced by Griffith for the 2013 Phase I ESA indicated that the subject property was listed as a conditionally-exempt small quantity generator (CESQG) for historical generation of lead, benzene, tetrachloroethylene, and trichloroethylene. Griffith considers this listing to be a REC as historically-generated hazardous substances could persist in site media.

No additional RECs were identified in conjunction with the 2013 Griffith Phase I ESA.

1.2 Former Kesler Mill Debris Piles Limited Asbestos-Containing Materials Survey – Cardno, January 2016

A January 2016 Limited Asbestos-Containing Materials (ACM) Survey by Cardno revealed the presence of asbestos-containing materials in the large building demolition debris piles present on the subject property; namely, 55 suspect materials with 88 layers were collected and tested by polarized light microscopy (PLM), with the following materials being identified as ACM:

- Roofing materials: Gray fibrous layer (20% Chrysotile) – limited area
- White floor tile (3% Chrysotile) – limited area
- Green floor tile and mastic (4% Chrysotile) – limited area
 - Mastic <1 Chrysotile, but is considered ACM after coming in contact with the green floor tile.
- Transite siding/shingles (10% Chrysotile) – limited area

Cardno estimates approximately 7,000-cubic yards of the debris may contain suspected ACM. It may be possible for the debris at the site to be screened by a North Carolina licensed Asbestos Building Inspector during demolition and clean-up activities to separate ACM from non-ACM debris. There is also the possibility for additional suspect ACM to be currently hidden from view within debris piles.

1.3 Phase II Environmental Site Assessment (ESA) – Cardno, February 2016

A February 2016 Phase II ESA was performed by Cardno in order to determine if contaminants exist at the site as a result of historical property uses identified during the 2013 Griffith Phase I ESA. A figure denoting locations of soil samples and groundwater monitoring wells, as described in the Phase II ESA, is included as **Figure 3**. At the conclusion of the Phase II ESA, Cardno personnel identified the following contaminants in site media:

- Naturally-occurring metals were found in soils collected in the areas of the former paint shop and mechanical shops. Concentrations of aluminum, arsenic, cobalt, iron, manganese, vanadium, calcium, potassium, and sodium in borings SB-2, SB-3, and GW-4 likely represent natural, background concentrations based on local data provided by the EPA and State of North Carolina. However, concentrations of cadmium, cobalt, selenium, silver, and thallium significantly exceeded common background ranges and additional assessment may be warranted to further delineate the extent of contamination. Concentrations of metals identified in site groundwater are potentially a result of sample turbidity and naturally-occurring, background levels.
- Concentrations of VOCs identified in site soils and sediment are not considered significant. Concentrations of multiple chlorinated solvents were identified in groundwater and surface water below screening levels. The concentration of 1,1-DCA in well GW-6 was reported above the 2L Standard. Additional assessment or pre-emptive engineering controls may be warranted at the site, particularly in the area of GW-6, to assess or minimize the potential for vapor intrusion caused by identified VOCs. Groundwater-use restrictions at the site and a receptor survey in the vicinity of the site may be warranted based on identified chlorinated solvent impact.
- Concentrations of PCBs were not identified above laboratory reporting limits or method detection limits in samples collected at the site.
- Concentrations of TPH diesel range organics (DRO) above the screening level were identified in soils near the former oil/water separator and 15,000-gallon fuel oil AST, and seem to be a result of former site use. Additional assessment in these areas is recommended to delineate the extent of impact.
- Concentrations of numerous polycyclic aromatic hydrocarbons (PAHs) above screening levels were distributed in soils across the property. Concentrations of elevated PAHs which may have originated from the site were also identified in site sediment. However, these compounds were not reported in site groundwater or surface water samples. Additional assessment of PAHs in soil and sediment may be warranted to delineate the extent of impact.

1.4 Phase I Environmental Site Assessment (ESA) – Cardno, January 2019

A January 2019 Phase I update was completed for the site by Cardno to evaluate site conditions and identify recognized environmental conditions (RECs) present at the subject property. At the conclusion of the January 2019 Phase I report, no RECs were identified in connection with the subject property, except for the following:

- The historical presence of a textile mill on the subject property, including historical generation of benzene, lead, tetrachloroethylene (PCE), and trichloroethylene (TCE) is considered a REC, and was confirmed as a REC in a 2016 Phase II ESA.
- The presence of ACM debris piles in the area of the former building foundation is considered a REC, and was confirmed as a REC in a 2016 Phase II ESA.

- The historical presence of underground storage tanks (USTs) and above-ground storage tanks (ASTs) on the subject property is considered a REC, and was confirmed as a REC in a 2016 Phase II ESA.
- Ongoing petroleum contamination in site soils, as identified in a 2016 Phase II ESA at the subject property, is considered a REC, and was confirmed as a REC in a 2016 Phase II ESA. Further discussion of the locations and extents of contamination can be found in Section 6.10.
- The historical presence of a LUST at the Rowan-Salisbury Schools Maintenance Department located on an adjacent property is considered a REC.

1.5 Project Goal

The City of Salisbury intends to facilitate a property transfer and future redevelopment efforts by remediating environmental impacts from the presence of ACM and soil contamination that have been identified in previous site assessments. Abatement and/or mitigation of the ACM on the property and soil remediation will be required to support this redevelopment strategy.

2 Applicable Regulations and Cleanup Standards

The City of Salisbury wishes to continue with a property transfer and potential redevelopment of the site via removal of ACMs throughout the subject property, and additional soil excavation in the areas surrounding SB-1, the area of SB-2, SB-3, and the grouping of SB-4, SB5, and the area of GW-7, and GW-8.

2.1 Cleanup Oversight Responsibility

Asbestos abatement in the state of North Carolina is overseen by the North Carolina Department of Health and Human Services (NCDHHS) Division of Public Health.

The NC Brownfields Program (NCBP) as issued a Letter of Eligibility (LOE) for a Brownfield Agreement (BFA) on the property. The NCBP will have regulatory authority and oversight responsibility of cleanup activities at the site.

Contractors must be licensed and/or accredited in the state of North Carolina and must abide by all federal, state, and local laws, and regulations pertaining to Asbestos abatement to perform abatement and/or renovation work for this project. Qualified, licensed personnel should coordinate and supervise any planned ACM abatement and/or renovation activities and/or perform air monitoring and visual clearance to ensure that the work is performed in compliance with applicable regulations, document the activities, and ensure that the area is clear prior to occupancy. Cleanup and abatement work will be overseen by NC licensed, qualified Professional Geologists and/or Professional Engineers.

2.2 Cleanup Standards for Major Contaminants

Soils

The site will be subject to the cleanup standards issued by the NCBP in the BFA. The remediation goals for the site will be based on the IHSB Remediation Goals and the EPA Regional Screening Levels (RSLs), in effect at the time of cleanup.

Groundwater

It is anticipated that through the BFA, a groundwater use restriction will be placed on the property by a restrictive covenant (RC) attached to the deed; and, therefore, groundwater cleanup standards do not apply to this ABCA.

ACM

ACM abatement and standards are governed by NC General Statute §130A-444 through 452 (Asbestos Hazard Management). Additionally, this work must be performed in accordance with OSHA asbestos regulations 29 CFR 1910 & 1926 and the National Emission Standards for Hazardous Air Pollutants (NESHAP) asbestos regulations 40 CFR 61, subpart M.

2.3 Climate Change Considerations

The US EPA has directed grant recipients to “evaluate the resilience of the remedial options in light of reasonably foreseeable changing climate conditions (e.g., sea level rise, increased frequency and intensity of flooding and/or extreme weather events, etc.).

The climate of the Southeast is uniquely warm and wet, with mild winters and high humidity. Based on a regional analysis by the South Carolina Department of Natural Resources (SCDNR), the average annual temperature has exhibited natural variation for most of the past century; however during the past forty years annual average temperature has increased about 2° F. Changes in precipitation have occurred over the past three decades with increases in heavy downpours in many parts of the Southeast, even though much of the region has experienced moderate to severe droughts during the same period.

Current climate models predict continued warming across the Southeast with the rate of warming more than twice the current rate over the next seventy years. The frequency, duration and intensity of droughts are likely to continue to increase with higher average temperatures and a higher rate of evapotranspiration. Extreme weather events are of concern and it is postulated that climate change can influence the intensity and number of storm events.

Although supporting data are not entirely conclusive, the physics behind models are well understood. Warmer ocean temperatures potentially can provide more energy to hurricanes, leading to more intense storms. Increased precipitation patterns could have an adverse effect on flooding issues. High intensity rainfalls could lead to greater flooding hazards and mud - or landslides.

3 Analysis of Brownfield Cleanup Alternatives

A discussion of the cleanup objectives and an evaluation of remedial alternatives for the site are provided below.

3.1 Cleanup Alternatives Considered

Asbestos-Containing Materials (ACM), heavy metals, polycyclic aromatic hydrocarbons (PAHs), and petroleum products are the contaminants of concern (COC) for this project. Site assessment identified contaminated soils in three localized areas on the site. Specifically, soil in the area around SB-2, SB-3, and GW-7 had elevated levels of the metals Arsenic, Cobalt, and Thallium, as well as elevated levels of PAHs from 0' to 4' below ground surface. Soils in the areas surrounding SB-1 and the grouping of SB-4, SB5, and GW-8 had elevated levels of petroleum constituents and PAHs. Additionally, an estimated 7,000 cubic yards of debris is suspected to contain ACM. Because of the nature of the contaminants, ACM abatement and additional remediation of site soils are needed.

The Phase II ESA identified limited impacts to groundwater at this site. However, as a result of these limited impacts, this ABCA makes the base assumption that all alternatives will include a deed restriction prohibiting use of groundwater from the property for drinking or irrigation purposes.

Each of the following remedial alternatives is compared with respect to: effectiveness, long-term reliability, implementability, and general cost implications, within **Table 1**. A comparison of potential costs to implement is provided in **Table 2**.

3.1.1 Alternative 1: No Action

The No-Action alternative (Alternative 1) is included as a baseline comparison to the other remedial alternatives. The No-Action alternative assumes no action is taken and represents the current site conditions.

3.1.2 Alternative 2: Site Capping

Alternative 2 would involve installing a soil cover consisting of 2 feet of clean low permeability soils to protect future users from direct contact with the contaminated soils and ACM contaminated debris. This alternative assumes the contaminated soils can be sufficiently isolated from receptors so that the soils can be retained on site. Capping the contaminants is an effective means of limiting exposure to nearby residents; however, leaving contaminants in place may render the site not suitable for certain future redevelopment options. Two separate capping areas would be proposed for the site:

- Area 1: Approximately 0.1-acre in the area of boring SB-1
- Area 2: Approximately 2.0-acres which would include the mixed ACM debris and the areas around borings SB-4, SB-5, and GW-8

3.1.3 Alternative 3: Excavation and Disposal of Contaminated Soils and Off-site Disposal of Mixed ACM Debris

Alternative 3 would involve excavating impacted soils in the areas surrounding SB-1, the area of SB-2, SB-3, and the grouping of SB-4, SB5, and the area of GW-7 and GW-8, disposal of impacted soils in an approved off-site landfill, and backfilling the areas of excavation with off-site soils.

Additionally Alternatives 3 would involve the design and execution of an ACM abatement plan to remove and properly dispose of the comingled ACM debris at the site. This option addresses both the ongoing presence of the COCs and the ACM, thereby by removing the exposure threat to nearby residents in the short term and making the site suitable for redevelopment in the long term.

3.2 Recommended Cleanup Alternative

The primary objective of site remediation is to reduce or prevent potential risk to human health and the environment from site contaminants by properly addressing the ACM and soil contamination identified at the site. As seen from a review of **Tables 1 and 2**, the “No Action” option (Alternative 1) is not considered a viable option since it does not meet the redevelopment objectives and protect from future exposure to site contaminants.

Alternative 2, Capping, provides an excellent barrier to potential exposure, however it leaves contaminants in place and makes the site unsuitable for certain future redevelopment options. Additionally, Alternative 2 comes with long term maintenance and future engineering costs associated with maintaining the cap.

Therefore, Excavation and Disposal of Contaminated Soils and Off-site Disposal of Mixed ACM Debris (Alternative 3) is the recommended cleanup alternative. Alternative 3 addresses both the short and long term goals of the city in removing the contaminants from the site and allowing for future redevelopment of the property.

4 References

Cardno, Inc. *Former Kessler Mill Debris Piles Limited Asbestos-Containing Materials Survey*. January 2016.

Cardno, Inc. *Phase I Environmental Site Assessment (ESA), Former Kesler Mill (Mill)/Fieldcrest Cannon Plant #7*. January 2019.

Cardno, Inc. *Phase II Environmental Site Assessment (ESA), Former Kesler Mill (Mill)/Fieldcrest Cannon Plant #7*. February 2016.

Environmental Data Resources. *The EDR Radius Map Report with GeoCheck, Former Kesler Mill/Fieldcrest Cannon Plant #7*. December 2018.

Griffith Enterprises, Inc., *Phase I Environmental Site Assessment Report, Former Kesler Mill/Fieldcrest Cannon Plant #7*. August 2013.

Lewis, J. D., *A History of Salisbury, North Carolina, 2007*, http://www.carolana.com/NC/Towns/Salisbury_NC.html

North Carolina Department of Health and Human Services, NC General Statute §130A-444 through 452, *Asbestos Hazard Management*.

United States Department of the Interior, National Park Service. *National Register of Historic Places Inventory – Nomination Form*. October 1984.

United States Occupational Health and Safety Administration, *29 CFR 1910 – Occupational Safety and Health Standards*.

United States Occupational Health and Safety Administration, *29 CFR 1926 – Safety and Health Regulations for Construction*.

United States Occupational Health and Safety Administration, *40 CFR 61 – Protection of Environment – National Emission Standards for Hazardous Air Pollutants*.

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TABLES

Table 1 Brownfield Cleanup Alternatives Balancing Factor Evaluation

Remedial Alternative	Effectiveness	Long-Term Reliability	Implementability	Cost Implications
1. No-Action	Does not address potential risks.	Does not address potential risks	Not applicable for No-Action	No cost to implement. Potential cost implications on property value and future liabilities associated with contaminant exposure.
2. Capping	Effectively manages contaminated soils if the cap is appropriately maintained and future actions in capped areas are controlled. Does not eliminate the contaminated soils.	Does not fully realize redevelopment potential on the subject property and could impede future site construction activities. Reduces the risk associated with direct exposures to contaminated soils at the site. Requires maintenance and inspection, and controls on construction activities within capped area(s).	Minor to major implementation risks associated with site topography and existing foundations. Will limit types of future land uses within capped area, resulting in risk. NCBP will have to approve plans associated with the cap on the property. 2 capping areas (Area 1: 0.1-acre; Area 2: 2.0-acres) are proposed for the site which would also leave existing foundation structures in place across the property.	Moderate to high costs for implementation of the barrier depending on selected barrier. Moderate to low long-term costs associated with maintenance and inspections. *Est. \$146,124 + Unknown long-term O&M expenses
3. Excavation and Disposal of Contaminated Soils and Off-site Disposal of Mixed ACM Debris	Effectively removes contaminants from the site, allowing full redevelopment potential.	Removes ACM and soil contaminants from the site, therefore no long-term monitoring or planning is needed.	Given the quantities of ACM present, there is moderate difficulty for implementation. Abatement planning, oversight of execution, and monitoring is required.	Moderate to high costs associated with hiring qualified, trained personnel to complete the abatement. Moderate to high costs associated with off-site disposal. However, the City is in consultation with the County Landfill on deferral of the tipping fees *Est. \$447,000

* - Estimate from Table 2

Table 2 Estimated Comparative Cost for Cleanup Alternatives

Cleanup Alternative	Total Estimated Cost	Notes
1. No-Action	\$0*	Not a viable option.
2. Capping	\$146,124 + Unknown long-term O&M expenses	<p>Engineering/Permitting Cost Estimate Area 1 and Area 2: \$58,500</p> <p>Construction Area 1 (0.1-acre): Assuming a 2-ft compacted clay cover at \$12/CYD (323 CYD x \$10 = \$3,876). Topsoil and vegetative cover at \$3,000/acre (0.1-acre x \$3,000 = \$300)</p> <p>Construction Area 2 (2.0-acres): Assuming a 2-ft compacted clay cover at \$12/CYD (6,454 CYD x \$10 = \$77,448). Topsoil and vegetative cover at \$3,000/acre (2.0-acres x \$3,000 = \$6,000)</p> <p>Long Term O&M: Unknown at this time</p>
3. Excavation and Disposal of Contaminated Soils and Off-site Disposal of Mixed ACM Debris	\$447,000	<p>Excavation and Disposal of Contaminated Soil: Assuming 1,500 CYD of soil to be removed at \$60/CYD (1,500 CYD x \$60 = \$90,000)</p> <p>Transportation and Disposal of ACM Contaminated Debris – Tipping Fee deferred: Est. 7,000 CYD at \$51/CYD (7,000 CYD x \$51 = \$357,000)</p> <p><i>Disposal of ACM Contaminated Debris: Est. 7,000 CYD of debris at \$18/CYD (7,000 CYD x \$18 = \$126,000) – cost deferred per MOU with Rowan County</i></p>

*- Figure does not account for potential future costs related to property value and liabilities associated with contaminant exposure.

- CYD = Cubic Yard

- ft = foot

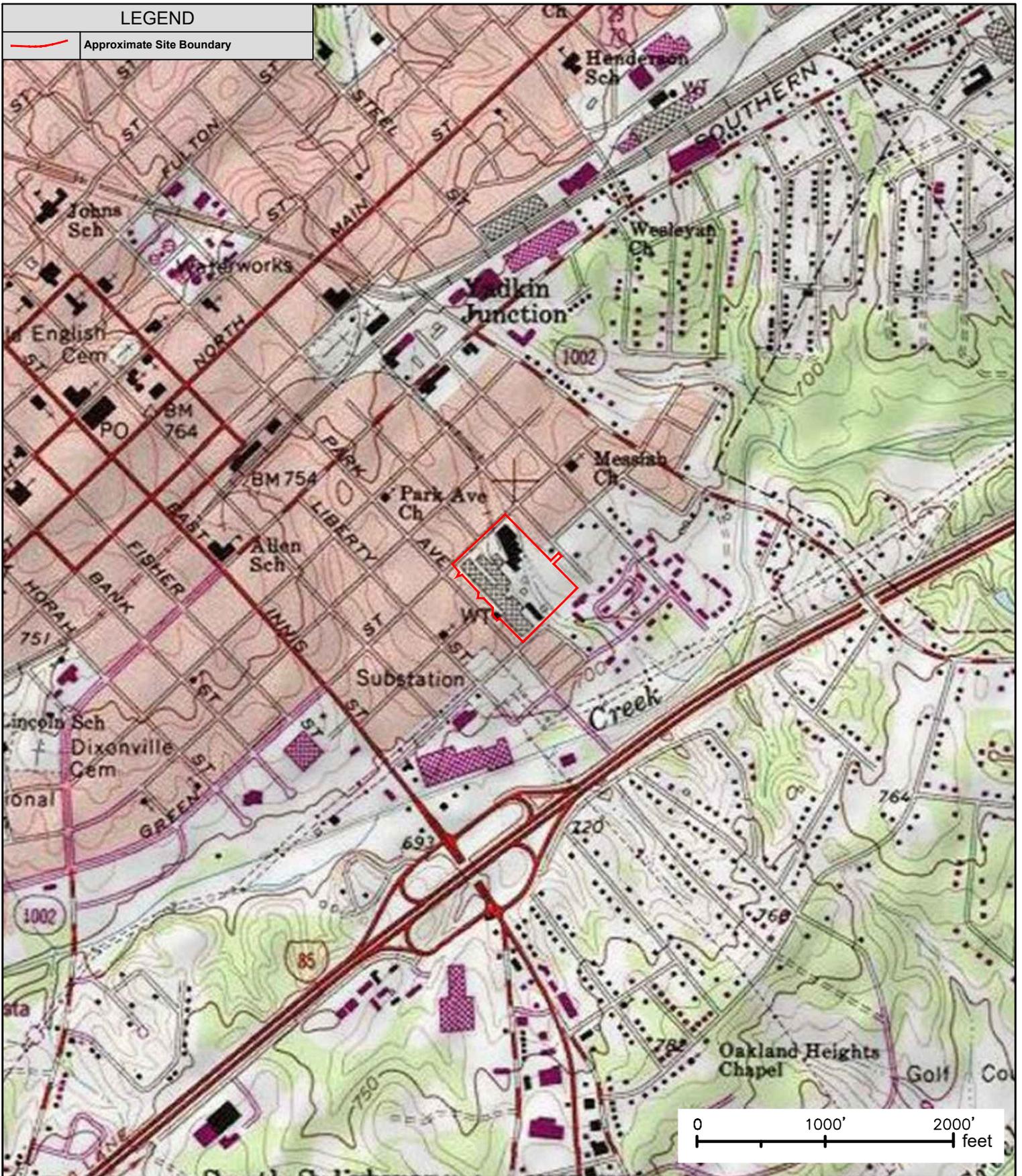
- O&M = Operations and Maintenance

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FIGURES

LEGEND

— Approximate Site Boundary



Notes:

FIGURE 1 - TOPOGRAPHIC SITE LOCATION

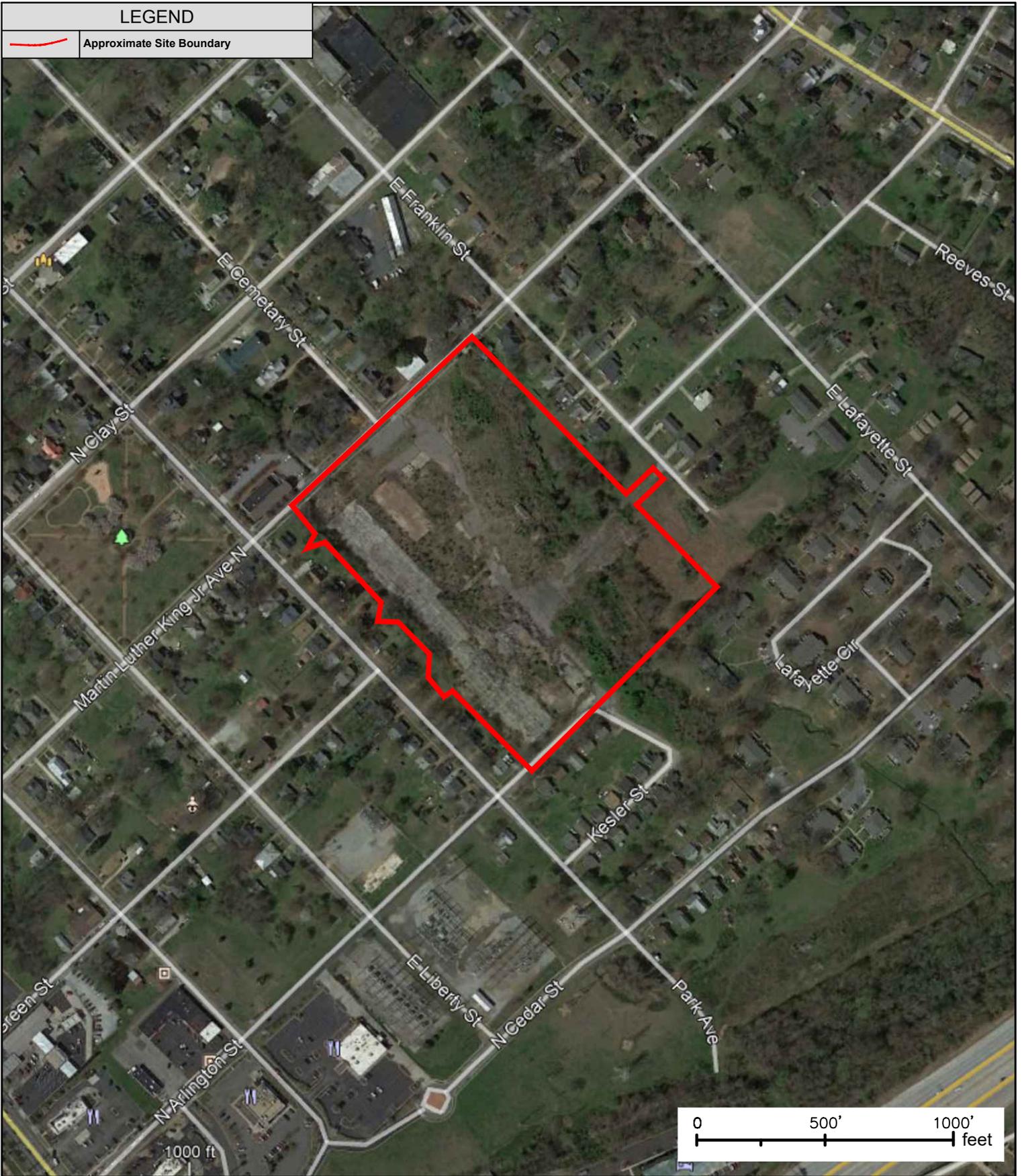
Former Kesler Mill/Fieldcrest Cannon Plant #7
423 N. Martin Luther King Jr. Ave.
Salisbury, NC



1812 Lincoln St., Suite 301
Columbia, SC 29201
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LEGEND

— Approximate Site Boundary



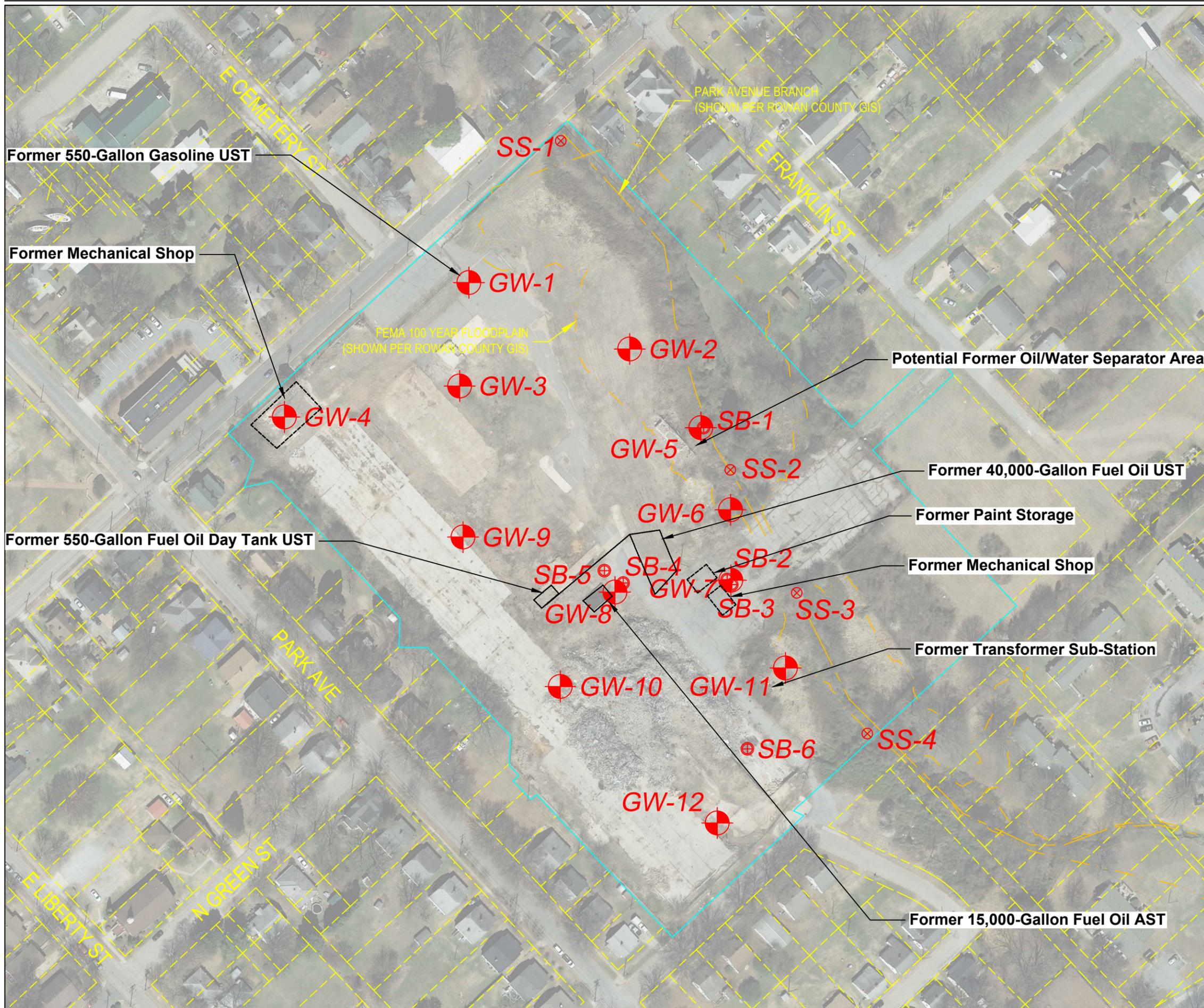
Notes:

FIGURE 2 - SITE MAP

Former Kesler Mill/Fieldcrest Cannon Plant #7
423 N. Martin Luther King Jr. Ave.
Salisbury, NC



1812 Lincoln St., Suite 301
Columbia, SC 29201
803-929-6060



LEGEND

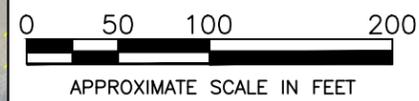
	SUBJECT PROPERTY LINE
	ADJOINER PROPERTY LINE
	CENTERLINE BRANCH (GIS)
	GROUND WATER MONITORING WELL LOCATION
	SOIL BORING LOCATION
	CREEK SAMPLE LOCATION



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FIGURE 3
 SAMPLE LOCATIONS MAP
 FORMER KESLER MILL
 423 NORTH MARTIN LUTHER KING JR. AVENUE
 SALISBURY, NORTH CAROLINA

CAD FILE PB0010900	SITE ID	PREP. BY CS	REV. BY JM	SCALE AS SHOWN	DATE 12.28.2015	PROJECT NO. PB0010900
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NOTES:

About Cardno

Cardno is an ASX-200 professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage, and deliver sustainable projects and community programs. Cardno is an international company listed on the Australian Securities Exchange [ASX:CDD].

Cardno Zero Harm

Cardno
**ZERO
HARM**
EVERY JOB. EVERY DAY.

At Cardno, our primary concern is to develop and maintain safe and healthy conditions for anyone involved at our project worksites. We require full compliance with our Health and Safety Policy Manual and established work procedures and expect the same protocol from our subcontractors. We are committed to achieving our Zero Harm goal by continually improving our safety systems, education, and vigilance at the workplace and in the field. Safety is a Cardno core value and through strong leadership and active employee participation, we seek to implement and reinforce these leading actions on every job, every day.