BROWNFIELDS CLEANUP COOPERATIVE AGREEMENT WORK PLAN

May 1, 2018
Final Approved

Submitted by:
Lifecycle Building Center
1116 Murphy Avenue SW, Atlanta, GA 30310

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Cooperative Agreement Number:
(#BF - 00D59717 - 0)

A Brownfields cooperative agreement recipient (CAR) must develop a work plan prior to the award of any funds. The purpose of this work plan is for the CAR to describe the tasks necessary to implement the project(s) identified in the proposal submitted in the Fiscal Year (FY) 2017 competition for Brownfields cleanup grants. The work plan should be consistent with the outline below; however the CAR may modify as appropriate to fit the activities identified in its proposal. The EPA project officer will review and work with the CAR to finalize the work plan and the CAR may not expend any funds to carry out the agreement until the EPA approves the final work plan. Pre-award activities and costs can be identified in the work plan if conducted within 90 days of award (July 1 based on an October 1, 2017 start date), and must be eligible activities necessary to implement the project and incurred directly pursuant to negotiation and in anticipation of an award. However, the cost incurred in preparing this work plan is not an eligible expense under the Cooperative Agreement.

TABLE OF CONTENTS

Attachments

1.0 PROJECT OVERVIEW

The purpose of this work plan is to facilitate the cleanup of the Lifecycle Building Center (LBC) site located at 1116 Murphy Avenue in Atlanta, Georgia under a FY 2017 U.S. EPA Brownfields cleanup grant. The Lifecycle Building Center was founded in 2011 for the purpose of maximizing resource efficiency in the built environment. The primary way that this is achieved is through the reclamation of materials from demolition, deconstruction and renovation projects that would have otherwise been thrown away. Since 2011, LBC (the Cooperative Agreement Recipient, CAR) has diverted over 3.2 million pounds of building materials from landfills and saved the local community over $1.7 million by providing deep discounts on material purchases, avoiding disposal costs, and donating to over 115 nonprofit organizations. LBC's mission is accomplished through 4 programs: 1) a material reuse center, which is open 5 days per week and allows the public to purchase materials for 50-85% less than retail, 2) deconstruction and material pickup services, through which trained staff members remove and collect usable materials from residential and commercial properties, 3) free educational workshops on material reuse and home performance, and 4) a nonprofit material donation program through which qualifying groups receive free materials to lower their project costs and enable them to apply more of their operating dollars toward their mission.

LBC was founded by a group of passionate volunteers who wanted to help Atlanta tackle its overwhelming solid waste stream problem by building the infrastructure needed to redirect usable materials away from demolition projects and back into the local community. In late 2011, the organization was given access to a large salvage project opportunity at a federal facility as well as $10,000 of seed funding, despite not yet having a warehouse facility. The discovery of a 70,000 square-foot, 100 year-old warehouse on 3.6 acres located in the area of Atlanta known as "Murphy Triangle" was the catalyst that brought the organization to life. Since the area surrounding the property was facing significant economic struggles due to systemic mortgage fraud and a chronic lack of investment, LBC could lease the property for far below market value and negotiate what ultimately became an extremely favorable purchase option. After growing the organization's capacity over several years, LBC positioned itself to access the City of Atlanta's EPA area-wide assessment grant (Cooperative Agreement No.: BF 00-D12413-0) and complete environmental assessments to quantify the liabilities of ownership before moving forward with purchasing the warehouse. The property acquisition was achieved through a strong showing of community support that included the organization's Board of Directors, Advisory Board, longtime supporters as well as corporate support in the amount of $115,000 in pro bono legal services and over 1,000 hours of donated design and construction consulting. The information derived from the referenced assessments also allowed LBC to apply and be accepted into the State of Georgia's Brownfield Program.

The prior landlord of the brownfield was not required to maintain the property or make any improvements. Identified areas of concern inside the LBC building are closed off from access due to exposure to hazardous substances including asbestos and lead-based paint. Additionally, an area of soils impacted with heavy metals exists on that property. This area will become a connector spur to the Atlanta BeltLine and will need to meet higher levels of cleanup under Georgia's brownfield risk reduction standards. With the funding from this EPA cleanup grant, LBC will abate and remediate the identified contamination over the next three years as we raise and expend millions of dollars for significant facility improvements.

1.1 Project Description

The LBC is located at 1116 Murphy Avenue, Atlanta, GA 30310 and is located south of I-20 and along the Murphy Avenue Corridor in the heart of an old industrial area. The property is also in the center of six neighborhoods including Adair Park, West End, Capitol View, Sylvan Hills, Oakland City and Bush Manor. These primarily minority neighborhoods are plagued by blight, gang activity, high unemployment, and the decline of local industry. This area is not unlike similar blighted mixed industrial and residential neighborhoods in Chicago or Detroit. Decades of industrial decline have created the current need for brownfield remediation and reuse of large obsolete, underutilized buildings, including the current home of Lifecycle Building Center.

U.S. EPA awarded an Area-Wide Grant in 2010 for the City of Atlanta Brownfields Area-Wide Planning Program (AWP) completed in 2012 (BF 95461210-0). This study identified 30 known or suspected brownfields including many in Murphy Triangle. The brownfield at 1116 Murphy Avenue was considered a catalytic property. U.S. EPA recognized that the area-wide approach would extend beyond individual sites and catalyze area revitalization, economic development and job creation by overcoming area-wide barriers to sustainable brownfield redevelopment. EPA's support was again provided through an City of Atlanta Assessment Grant in 2013. Funding from this grant provided the necessary environmental assessments ($83,000 investment) which enabled LBC to move forward in acquiring the property.

Developers have neglected Murphy Triangle for years. The socioeconomics and demographics, along with the industrial history and resulting contamination, makes financing the purchase of brownfield properties like 1116 Murphy Avenue SW very difficult. However, with the support of the U.S. EPA, the State of Georgia's Environmental Protection Division's Brownfield program, and the City of Atlanta, properties in this area that have long been neglected are being positioned for revitalization. For example, the 22-mile BeltLine trail and transit corridor circling downtown Atlanta and connecting 45 Atlanta neighborhoods passes near the LBC. The Westside Trail is the closest BeltLine section to LBC and it is nearly complete. As part of the area's development along the Westside Trail, the BeltLine non-profit recently purchased the 16-acre historic State Farmers Market adjacent to LBC with the intent to redevelop the property for economic development. The BeltLine has included the LBC property in the master plan for the State Farmers Market and Westside Trail. The LBC property will also subsequently have direct access to the future BeltLine Westside Trail spur—connecting the LBC warehouse to the exciting redevelopment opportunities along the BeltLine. LBC is partnering with other like-minded non-profits, community and neighborhood organizations and assuming active roles the revitalization of the Murphy Triangle area.

Existing Brownfield Conditions

LBC leased the brownfield property since the inception of the non-profit organization in 2011, and purchased the property in September of 2016. The site consists of two large industrial buildings with a total footprint of roughly 70,000 sf on 3.592 acres of land. Prior to LBC taking occupancy, the facility was used as conveyor belt and associated machinery manufacturer (Link-Belt and FMC Sprocket) and as an on-site lead and/or iron foundry (Bailey Burruss). The facility continued to be used as a manufacturing facility through the 1980s. After that time, the buildings alternated between vacant periods and being occupied with various commercial businesses, including D&D Diesel Service through the early 2000s.

LBC hired Atlanta Environmental Management in the fall of 2011 to conduct a Phase I Environmental Site Assessment as part of its due diligence prior to leasing the property. This Phase I is included in this Work Plan as an attachment. It should be noted, that this report references and includes a copy of the Phase I and preliminary Phase II report prepared by MACTEC in 2006 for the previously owner. The 2006 environmental work also includes limited soil excavation in areas identified by MACTEC to be a recognized environmental condition.

Environmental due diligence completed to facilitate the purchase was performed through the City of Atlanta's Brownfield Grant administered under USEPA Brownfield Grant Cooperative Agreement # BF 00-D12413-0. The due diligence related documents developed under the referenced grant include:

- Phase I Environmental Site Assessment -1116 Murphy Avenue SW, May 2015.
- Limited Asbestos and Lead-Based Paint Inspection Report, February 2016
- Limited Phase II Environmental Site Assessment – Sump Areas, May 2016
- Phase II Environmental Site Assessment, June 2016.
- Analysis of Brownfield Cleanup Alternatives (ABCA), August 2016

The referenced reports indicated that a discrete area very close to the northern most corner of the site is impacted by heavy metals at concentrations in excess of Georgia State risk reduction standards to depths of at least two feet. In addition to this condition, the buildings onsite that are currently used as LBC's building material warehouse, retail operation, and educational facility, contain a significant quantity of asbestos and lead paint coated surfaces that both impede building renovations and represent a potential health hazard to LBC employees and the public. The referenced due diligence also indicated that limited impact to ground water was identified. However, prior to purchase LBC filed an Application for Limitation of Liability and Prospective Purchaser Corrective Action Plan on August 30, 2016 with the Georgia Environmental Protection Division (EPD). In a September 2016 letter from EPD, pursuant to Section 12-8-207(a) Article 9 of Chapter 8 of Title 12, the Georgia Brownfield Act (Act), the agency conferred a provisional limitation of liability upon LBC as the then prospective purchaser and current owner. Contingent upon timely implementation of the approved Corrective Action plan which addresses the soil impact, LBC is exempt from the requirement to address the identified ground water impacts.

These documents were developed by Cardno under contract with the City of Atlanta. LBC also directly contracted Cardno in 2016 for additional limited environmental analysis to better understand the potential for employee and visitor exposure to environmental concerns related to asbestos, floor dust, lead base paint and wood block floor. In addition, a draft updated ABCA was completed by Resolute Environmental & Water Resources Consulting to include the abatement of asbestos and lead paint associated with the on-site buildings, as well as the remediation of localized soils contaminated with heavy metals. The *Draft Updated Analysis of Brownfield Cleanup Alternatives Report* prepared for the EPA Brownfield Cleanup Grant Proposal by Resolute dated November 2016 is included as an attachment to this Work Plan (see Attachment 5). Cardno documents submitted with LBC's grant proposal are also included as an attachment (see Attachment 6, including 6a-6d).

1.2 Project Team Structure and Responsibilities

LBC's Executive Director, Shannon Goodman, will serve as the Program Director for the cleanup grant. Shannon has served as Executive Director since 2012. She is an architect by education and training. Ms. Goodman is also a founding member of LBC, so she has a wealth of experience and knowledge about LBC's operations, mission and connection with Atlanta's communities. As a not-for-profit organization, LBC has and will continue to leverage its broad network of professionals to execute the project under this Work Plan. LBC will issue a request for proposals in May 2018 to environmental contractors/consulting firms with both technical experience to design, implement and oversee the soil remediation and indoor air quality improvement/abatement activities specified herein, and past experience administering U.S. EPA Brownfield grants. The selected environmental remediation service contractor will be a key member of LBC's project team and will work closely with LBC's Executive Director, Shannon Goodman, and LBC's Special Projects Manager, Nate Hoelzel, who are sharing the responsibilities of managing all aspects of the cleanup grant under the U.S. EPA grant. All of the funding will be utilized at the LBC site and no sub-awards will be granted by LBC. LBC will make available the terms and conditions of the Cooperative Agreement and this Work Plan during the RFP process to all interested respondents. The supporting documents will also be available throughout the cleanup to all project team members, including the selected consultant and contractor(s), and LBC's Board of Directors and Board of Advisors.

The Executive Director will be supported by a very well-connected and experienced Board of Directors and Advisory Board (see http://www.lifecyclebuildingcenter.org/about/). These Boards will provide additional project oversight and the administrative, financial, technical and legal support that will be used to manage this EPA-funded brownfield cleanup. LBC has also received considerable help and technical expertise from its volunteers. In particular, Nate Hoelzel, who previously managed the brownfield program for the City of Cleveland, Ohio and led the City of Atlanta's AWP efforts during EPA's pilot grant round program will provide advice and hands-on management for LBC's brownfield grant. Additionally, LBC has developed strong relationships with Georgia's Environmental Protection Division (EPD) and EPA Regional 4 brownfield staff. LBC has already enrolled the brownfield site in Georgia's Brownfield Program and has the ability to seek technical advice during the brownfield project (see Attachment 4). As such, LBC will provide Georgia EPD opportunities to review all technical reports, including Quality Assurance Project Plans (QAPPs) and Analysis of Brownfields Cleanup Alternatives (ABCA) documents. LBC and its selected consultant will also work with EPD to meet applicable cleanup and risk standards.

1.3 Measuring Environmental Results: Outputs/Outcomes

Welfare, Environmental, and Public Health Benefits

The execution of this Work Plan will greatly improve the LBC brownfield property as well as catalyze the revitalization of other brownfields or potential brownfields in the Murphy Triangle area. In fact, the EPA Brownfield Cleanup grant awarded under this Work Plan and Cooperative Agreement directly advances the EPA-City of Atlanta AWP project goals by redeveloping one of the identified priority brownfields. The LBC property was identified during the AWP process to be a catalyst for revitalizing Murphy Triangle into a mixed-use area with a strong industrial and manufacturing base of employment.

Under this EPA Cleanup grant, the Lifecycle Building Center will also expand its community outreach programs and continue its education efforts in the community which help create healthier homes. LBC

brings the community together to create opportunities for overall community development and makes the surrounding community a better place to live by changing one home at a time through the salvage and reuse of building materials. LBC's facility plays a huge part in improving public health in the community. As such, dealing with environmental risks, including removing heavy metals in soil and reducing potentially harmful dust on the property will better protect LBC workers, visitors, and neighbors.

The scope of the proposed cleanup is very specific to eliminating environmental risks which may be encountered during planned, future renovations of the LBC buildings, including the potential use of LBC's new Northern entrance and drive as a pedestrian access point to BeltLine Westside Trail. The abatement of asbestos containing materials and abatement/encapsulation of lead paint coated surfaces within the building will accomplish several objectives. First, the abatement and/or encapsulation of these materials will improve indoor air quality and eliminate potential exposure to employees and the public in the LBC warehouse. Second, the abatement/encapsulation activities will enable access to portions of the building that are currently not utilized to their fullest potential. As an example, the two-story office portion of the building located closest to Murphy Avenue is largely vacant in part due to the presence of lead paint and asbestos.

Cleanup under this Work Plan will ultimately address both indoor air quality and outdoor soil conditions.

First, the cleanup will address indoor air quality associated with asbestos and lead paint hazards in LBC's office and warehouse areas.

In addition to indoor air quality improvements from the lead and asbestos abatement, additional anticipated environmental outputs will be the removal of the estimated 70 cubic yards of impacted soils within an area of LBC's future Northern entrance which will directly connect to the BeltLine's Westside Trail spur. The outcomes from this cleanup activity are equally as specific: the removal of impacted soils will eliminate both a direct exposure hazard during construction and reuse, and facilitate the unencumbered connection of the LBC facility to the planned BeltLine Westside Trail spur. This spur will provide direct pedestrian and bicycle access to the facility for employees and patrons without the use of cars who might benefit from LBC's educational programs.

Since LBC focuses much of its mission on waste minimization, LBC will work with its project team and the public to find any creative solutions to minimizing waste during the brownfield cleanup project.

The Draft Updated Analysis of Brownfield Cleanup Alternatives (ABCA) consists of two distinct elements (see Attachment 5):

1. The removal and proper off-site disposal of an estimated 70 cubic yards of soil impacted with heavy metals at levels in excess of Georgia State Risk Reduction Standards.
2. The abatement of asbestos containing materials and the abatement or encapsulation of lead based paint coated surfaces associated with the indoor air quality of the on-site building which currently houses LBC's operations.

Economic and Community Benefits

It is anticipated that the cleanup under this Work Plan will facilitate job creation through the expansion of LBC's workforce and via the lease of office/work space to other not-for-profits or startups. Also, the removal of impacted soils near the connection with the BeltLine Westside Trail spur will promote pedestrian connectivity to the Murphy Avenue Corridor and adjacent industrial and residential areas. The primary benefit of the revitalization the LBC site is economic development and jobs. The efforts to identify, assess and clean up the LBC brownfield and ultimately catalyze redevelopment at other nearby brownfields is critical to local economic and community development. The Lifecycle Building Center is also exploring starting a pilot program to train construction trade employees as the brownfield redevelopment project commences. In addition to job creation, the LBC brownfield project will benefit local creation of green space and multiuse trails and transit, especially through LBC's continued close partnership with the BeltLine. All of these efforts highlight LBC's commitment to addressing local environmental injustices and engaging community members in building capacity to revitalize the surrounding neighborhoods.

2.0 PROJECT TASK DESCRIPTIONS AND BUDGET

The actions to be completed under this Work Plan are organized into four broad tasks. A budget for each task is presented and discussed below and the tasks are summarized in the budget table. LBC's required 20% cost share will in a form of a combination of in-kind services, donations and general funds. This cost share is calculated as 20% of the total federal cleanup funds awarded, in this case $40,000. LBC as the CAR will contribute money, labor, material, or services from a non-federal source. LBC's cost share portions are listed under each task below. All cost share amounts will be for eligible and allowable expense under the grant and not for ineligible expenses, such as administrative costs (see Brownfields FAQs at www.epa.gov/sites/production/files/2016-08/documents/fy17_faqs.pdf for a discussion of prohibited costs).

Note: No petroleum constituent will be addressed by the project, as a result, LBC is solely requesting reimbursement for hazardous substances cleanup activities.

Task 1: Project Management, Cleanup Planning and Reporting ($29,358 cost share is $14,000)

A. Contractor Procurement ($7,000 cost share): LBC, as the CAR, is responsible for ensuring all procurement is in accordance with 2 CFR Parts 200 and 1500, ensuring that contractors comply with the terms of their agreements with the CAR, and that agreements between the CAR and contractors comply with the terms and conditions of the cooperative agreement. Procurement is an activity that is eligible as a pre-award activity. LBC's Executive Director, Shannon Goodman, serving as the project manager for the cleanup grant, will ensure that contractor procurement activities are completed per this Work Plan and cooperative agreement. LBC has and will continue to leverage our broad network of professionals to execute the project. **LBC's cleanup approach will start with indoor air quality improvements—asbestos and lead paint abatement in the fall of 2018. Soil remediation will start sometime in 2019.** Therefore, LBC will issue an RFP during the first half of 2018. The RFP will be broad enough to attract and, ultimately, select a contractor capable of implementing both major cleanup activities. Furthermore, LBC intends to select a contractor under the RFP that demonstrates an interest and ability to pursue additional (if needed) cleanup resources, such as U.S. EPA Brownfields

Cleanup Revolving Loan Funds administered by the City of Atlanta, during the project period. More information on the City of Atlanta's Brownfields Program is at www.atlantaga.gov/government/departments/city-planning/office-of-zoning-development/brownfield-program. LBC will cover the personnel costs associated with the project manager's time and other LBC support staff under this task.

It is worth noting that LBC has strong partnerships with several community organizations that are dedicated to workforce development training and placement. LBC anticipates reaching out to partners, such as Georgia Works!, Georgia STAND-UP, and Westside Works in finding local Disadvantaged Business Enterprises (DBEs) and Minority Business Enterprise/Women-owned Business Enterprises (MBEs/WBEs) to participate in the brownfield redevelopment project since the total budgeted funds for procurement, equipment, services and supplies exceeds $150,000 under this Work Plan and Cooperative Agreement.

B. Reimbursement Request (N/A): LBC has enrolled in Automated Standard Application for Payments (ASAP). LBC will access ASAP at www.asap.gov to request payments. The ASAP payment process is designed to provide federal funds to a recipient organization within 48 hours.

C. Kick-off Meeting and Cleanup Planning ($4,000 cost share): The CAR project team, including LBC and its selected environmental contractor, the EPA Project Officer and State and other partners, will participate in a project kick-off meeting to review this Work Plan and terms and conditions of the Cooperative Agreement. This is an opportunity to review roles, responsibilities, and schedule. This kick-off meeting will occur in early summer 2018—immediately after selecting LBC's environmental contractor.

To facilitate the kick-off meeting and subsequent cleanup planning, including preparing, evaluating and selecting appropriate remediation strategies under the drafted ABCA, LBC has enrolled the brownfield project site in the State of Georgia Brownfield Program and has paid an initial application fee of $3,000 for the correction action plan (CAP) which will cover technical reviews of the cleanup planning and implementation under this Work Plan at $75/hour by Georgia Environmental Protection Division (EPD) staff (40 hours of staff review time) (see Attachment 4). If revisions due to cleanup complexities and/or revisions of ABCA or equivalent State-requirements exceed 40 hours of review by EDP staff, LBC will cover any additional fees as part of its costs share under this Work Plan and Cooperative Agreement (estimated at this time to be an additional $3,000).

CARs may conduct cleanup planning activities to evaluate and select appropriate remediation strategies. The LBC has a draft ABCA, which is a useful communication tool for the public, and review of the ABCA by the State Brownfield Program manager will help ensure that LBC's cleanup plans will ultimately be acceptable to the Georgia EPD. All ABCAs submitted in draft form as part of the cleanup grant proposal must be made final. As such, LBC and its consultant will work with EPD staff to finalize the ABCA. It is LBC's intent that documents generated to meet the state's Brownfield Program requirements can serve to meet the needs under the EPA cleanup grant provided they cover the same elements and include the information below.

The final ABCA or its equivalent must include:

1. Information about the site and contamination issues (i.e. exposure pathways,

identification of contaminants, contaminant levels and contaminant sources, source volume or other estimates as needed to compare relative costs between remedies);
2. Identification of the contaminants of concern;
3. A summary of cleanup/protectiveness standards, applicable laws and regulations;
4. A description of the alternatives considered;
5. Assessment of the effectiveness, implementability, and the cost of each alternative. As part of the evaluation of effectiveness, discuss whether/how each alternative would achieve cleanup standards, would comply with applicable laws and regulations, and the resilience of each alternative considering reasonably foreseeable changing climate conditions (e.g., sea level rise, increased frequency and intensity of flooding and/or extreme weather events, etc.);
6. A comparative analysis of the alternatives, including no action. For cleanup of brownfield petroleum-only sites, an analysis of cleanup alternatives must consider a range of proven cleanup methods;
7. A consideration of each alternatives ability to reduce greenhouse gas discharges, reduce energy use or employ alternative energy sources, reduce volume of wastewater generated/disposed, reduce volume of materials taken to landfills, and recycle and re-use materials generated during the cleanup process to the maximum extent practicable; and,
8. The selected or proposed alternative.

The Lifecycle Building Center (LBC) hosted an onsite *pre-contractor selection* kick-off meeting for the cleanup project under this EPA grant on October 11, 2017 with U.S. EPA project officer, Camilla Warren, and Georgia EDP brownfield staff, Shannon Ridley, Stephanie Horwitz, and Courtney Roberts. The meeting's primary objective was to gain a greater understanding of how LBC should prepare the RFP to select a cleanup contractor/consultant and how the cleanup planning and execution under the U.S. EPA grant will work with the existing, but more-than-likely amended, LBC's Corrective Action Plan (CAP) as detailed in the Application for Limitation of Liability and Prospective Purchaser to Georgia EPD Brownfield Program dated August 2016 (see Attachment 6a). LBC received several good recommendations on how best proceed with the RFP. LBC will finalize a draft of the RFP in May 2018 and will widely-publicize the RFP for at least 30 days starting in early May with a goal to select a cleanup contractor/consultant in June 2018. LBC will organize a group to systematically review, score and select a consultant/contractor. During the RFP selection process, the LBC will host a pre-bid meeting open to all contractors/consultants interested in the cleanup contract. LBC weighed the pros and cons of selecting one contractor/consultant that could complete both inside and outside abatement projects. LBC decided to select one contractor (or, team) that can handle both cleanup projects under one contractor during the cleanup grant period.

D. Quality Assurance Project Plans ($4,000): LBC's selected environmental contractor will develop a site-specific Quality Assurance Project Plan (QAPP) for collecting environmental samples. When environmental samples are collected as part of any brownfields cooperative agreement, recipients shall have in place an approved QAPP prior to sample collection. The QAPPs must be consistent with the EPA Region 4's *Interim Generic & Site Specific Quality Assurance Project Plan Guidance for Brownfield Site Assessments and/or Cleanups* or updated QAPP checklist. *Note: Costs incurred for sampling performed without an approved QAPP are*

not eligible for reimbursement. Different requirements apply for lead based paint and asbestos assessment.

E. Health & Safety Plans ($2,000 half cost share): LBC and its consultant will prepare and follow an OSHA-compliant Health and Safety Plan (HASP), and place a copy in the Cooperative Agreement file. LBC will also submit these to EPA and the State for the Brownfields project file. *Note: EPA approval of the HASP is not required. LBC will cover a portion of the supplies and personnel cost associated with LBC's project manager, staff and board time and training under this task. LBC may also reach out to community partners to help with health and safety planning and training.*

F. Travel ($4,358): EPA Region 4's Brownfields Program supports the use of grant funding for travel to local, state and national brownfields-related conferences. CARs should identify and budget for educational/training opportunities that enhance its program development. Travel to brownfields state association meetings, conferences or workshops provide valuable opportunities for networking which can lead to capacity building. EPA is aware of the benefits of this type of outreach travel in moving sites toward and achieving the end result of revitalization. Costs for necessary travel and transportation expenses, including local trips, are allowable programmatic costs. Travel costs approved prior to finalizing this Work Plan include Shannon Goodman and Nate Hoelzel representing LBC at brownfield-related conferences during the fall of 2017. Shannon presented on LBC's brownfield cleanup efforts during the Southeast Brownfields Workshop and both Nate and Shannon attended the National Brownfields Conference in Pittsburgh, PA. Shannon also attended the Georgia Environmental Conference per the suggestion of our EPA Project Manager.

G. Reporting ($6,000):

Quarterly Reporting

In accordance with EPA regulations 2 CFR Parts 200 and 1500 (specifically, 200.328 *monitoring and reporting program performance*), the CAR agrees to submit quarterly progress reports to the EPA Project Officer within thirty days after each reporting period. Quarterly progress reports will be due 30 days after the end of each federal fiscal quarter, except for the last quarter of the grant project period when a final performance report must be submitted (see Final Performance Reporting below). In general then, quarterly reports are due 30 days after the end of each quarter: Jan 30, April 30, July 30 and Oct 30.

The LBC will use the Example Quarterly Report Template provided by EPA (see Attachment 7). The reports will be sent electronically to both the EPA Project Officer and, if requested by the State of Georgia, to the State Brownfields Coordinator. These reports cover work status and progress, difficulties, financial expenditures, preliminary data results, anticipated activities and changes of key personnel.

Annual Reporting

1. Disadvantaged Business Enterprise Reporting: Minority Business Enterprise/Women-owned Business Enterprise (MBE/WBE) reporting is required for CARs whose total budget funds for procurement, equipment, services and supplies exceed $150,000. Disadvantaged Business Enterprise reporting must be completed annually using EPA Form 5700-52A. These forms

must be sent electronically to the EPA Project Officer and the Grants Management Office (GMO). A link to the form is at: https://www.epa.gov/grants/epa-grantee-forms. The LBC will utilize the services of DBEs, where possible. LBC as the CAR will submit the form by October 30 of each project year. *The award agreement will have further details, including the name of the EPA Grants Specialist in GMO that should receive your report.*

2. Federal Financial Reports (FFRs): LBC as the CAR will submit EPA Standard Form 425 annually to EPA by January 30 of each project year and at the close of the grant. An electronic copy should be sent to the EPA Project Officer and to the EPA Las Vegas Finance Center (LVFC) via email LVFC-grants@epa.gov or fax at 702-798-2423. A link to the form is at: http://www.epa.gov/ogd/forms/adobe/SF425.pdf.

H. Final Performance Reporting ($1,000 cost share): In accordance with EPA regulations 2 CFR Parts 200 and 1500 (specifically, 200.328 *monitoring and reporting program performance*), the CAR agrees to submit to the EPA Project Officer within 90 days after the expiration or termination of the approved project period a final technical report and at least one reproducible copy suitable for printing. This report should summarize the accomplishments (outcomes, outputs, and other leveraged resources) during the entire grant project period, including the last quarter. The Final Performance Report should include:

- A summary of funds expended and work completed;
- A list of all outreach material and any other deliverables;
- Site photographs (electronic high resolution if possible); and
- Lessons learned.

LBC, as the CAR, will ensure that the successful completion of the cleanup is properly documented. This will be done through a final report or letter from a qualified environmental professional, or other documentation provided by a state or tribe that shows the cleanup is complete. This documentation needs to be included as part of the administrative record. In the event of an incomplete cleanup, LBC will ensure that the site is secure and notify the appropriate state agency and the EPA Project Officer to ensure an orderly transition should additional activities become necessary. LBC will cover the personnel costs associated with the project manager's time and other LBC support staff under this task.

I. ACRES ($1,000 cost share): Property specific information, including the property address and cleanup completions, will be entered electronically by the LBC in EPA's Assessment Cleanup Redevelopment Exchange System (ACRES) database at https://cfext.epa.gov/acres/index.cfm. The information in the quarterly report will correlate with the information in ACRES. ACRES is a national database from which site-specific accomplishments are measured by Congress and the public. Costs to reporting through ACRES are budgeted under the other reporting costs. LBC will update ACRES when the following occur:

- 30 days after award;
- Mobilization for cleanup;
- Completion of cleanup (only after consultation with the Project Officer);
- Funds are leveraged and/or jobs created (quantities);
- Completion of the Project Period (or Final Report); and

- As significant events occur at the site, but not later than the end of the quarter in which the event occurred.

LBC will cover the personnel costs associated with the project manager's time and other LBC support staff in using ACRES for quarterly, annual and final performance reporting as well as when other updates to ACRES are needed.

Task 2: Community Involvement/Engagement ($8,000 half cost share)

It is understood that public involvement is an essential component of any brownfield project. As such, LBC intends to keep the community informed of the project's progress, and solicit input. LBC will also work with the City of Atlanta, Atlanta BeltLine and others to facilitate catalytic opportunities in and around Murphy Triangle. In all, it is anticipated that LBC and its consultant will hold at least 2 public meetings regarding the brownfield cleanup project, and participate in 1 to 3 related meetings in the community, for example BeltLine quarterly updates. Additionally, LBC staff and volunteers greet and educate hundreds of people at LBC booths/tents at several festivals around Atlanta each year. Funds under this Work Plan may be used to purchase equipment and supplies (e.g., one portable luggage cart and a show/poster display) to improve LBC's impact at these community meetings and festivals. LBC also has an active website at http://www.lifecyclebuildingcenter.org/. LBC foresees keeping the public updated on the brownfield redevelopment progress via the website. Of the $8,000 budget for this task, LBC will contribute $4,000 as a cost share and the balance will be used under the grant for costs incurred by the environmental consultant. LBC personnel costs will be involved in initially drafting a Community Engagement Plan. LBC will work off the example Community Engagement Plan found in Attachment 8.

Task 3: Implementation of Cleanup Activities ($202,642 cost share is $22,000)

Working with its consultants, contractors and State and local agencies, LBC will ensure the adequacy of the cleanup in protecting human health and the environment as it is implemented under this Work Plan and Cooperative Agreement. LBC will protect all nearby populations, including sensitive populations, from contaminants during cleanup work conducted on brownfield sites under this grant. Activities include implementing procedures necessary to mitigate any potential exposure from the contamination.

LBC, as the CAR, will comply with Federal cross-cutting requirements. These requirements include but are not limited to OSHA Worker Health & Safety Standard 29 CFR 1910.120; National Historic Preservation Act; Endangered Species Act; and Permits required by Sec. 404 of the Clean Water Act; Executive Order 11246, Equal Employment Opportunity, and implementing regulations at 41 CFR 60-4; Contract Work Hours and Safety Standards Act, as amended (40 USC § 327-333) the Anti-Kickback Act (40 USC § 276c) and Sec. 504 of the Rehabilitation Act of 1973 as implemented by Executive Orders 11914 and 11250.

Cleanups performed in whole or in part with EPA funds must also comply with all applicable federal and state laws, including the Davis-Bacon Act which requires payment of the prevailing wage rate for construction projects, including cleanup activities. The Davis-Bacon Act also requires reporting, self-monitoring by the CAR, and other requirements. The Act applies to all construction, alteration, and repair contracts and sub-contracts awarded with EPA grant funds. Recent and applicable wage rates

from the U.S. Department of Labor must be incorporated into construction, alteration, and repair solicitation and contracts. LBC will comply with these other applicable laws. LBC will consult the U.S. Department of Labor website to ensure all responsibilities are understood: https://www.dol.gov/whd/programs/dbra/.

Greener Cleanups

Lifecycle Building Center's mission is to "make the lifecycle use of the built environment increasingly efficient and sustainable." At the heart of this mission is tackling the solid waste stream problem by building the infrastructure needed to redirect usable building materials away from demolition projects and back into the local community. LBC is undertaking this brownfield project to significantly increase its capacity to divert building material waste from landfills and provide reusable building materials at deep discounts to local residents and businesses. However, due to the nature of soil remediation and asbestos and lead paint abatement for this brownfield project, there are limited opportunities to alleviate the environmental footprint of the cleanup actions. LBC will work with Georgia EPD and EPA staff and other members of the project teams (as well as community partners, such as Center for Hard to Recycle Materials (CHaRM)) during the course of the cleanup to come up with any greener alternatives, including waste minimization and other activities found at https://www.epa.gov/greenercleanups.

Task 3a: Soil Remediation ($32,874): Environmental due diligence identified soils contaminated with heavy metals. Under this task, a limited degree of additional characterization will be completed in order to refine the design of the soil removal. The impacted soils will be appropriately excavated, containerized, and disposed. In all, it is anticipated that upwards of 70 cubic yards of impacted soils will be excavated, managed, and disposed. See Attachment 3 for a map and photographs of the approximate area of soil excavation—note the proximity to the future BeltLine Westside Trail spur, which is currently a decommissioned rail spur owned by CSX. The budget for this task is $32,874, which should cover all the contractor costs associated with removing the contaminated soil and certifying cleanup . All ABCAs submitted in draft form must be made final under this cleanup. As, such LBC and its contractor will work with Georgia EPD staff to finalize the ABCA for the soil remediation.

There are three alternatives to address soil contamination per the updated ABCA (see Attachment 5):

A. No Additional Action
B. Capping
C. Soil Excavation, Disposal and Backfill

LBC currently selects alternative C, "dig and haul", as the most efficient and cost-effective alternative.

Task 3b: Indoor Air Quality Improvements – Asbestos and Lead Paint Abatement ($167,768 cost share $20,000): Environmental due diligence also indicated asbestos and lead paint throughout areas of the LBC warehouse where future renovations will occur. Prior to renovations, over 10,000 square feet of asbestos floor tile and mastic, 300 linear feet of pipe insulation, and a significant quantity of damaged Transite wall board must be removed. As for the scope of the lead-based paint abatement, the limits of the program will be determined during the additional characterization and design of LBC's renovations. However, for the purposes of this version of the Work Plan, $50,000 is allocated to the lead based paint abatement/encapsulation component of the remedy. Approximately $44,140 is allocated towards asbestos abatement work. It should be noted that the budget for this work includes the cost of the abatement/remediation contractor plus a 20% contingency, and consultant costs for project design, management, and air monitoring and clearance. In addition, LBC will contribute to abatement costs

through in-kind services, personnel time, material and/or general fund expenditures. These costs may come during the additional characterization and design activities and/or actual abatement activities, for example LBC hourly staff will commit personnel time in moving retail stock to clear areas for asbestos and lead paint removal. At this time, LBC is budgeting $20,000 for sharing in the abatement costs. Again, LBC and its contractor will work with Georgia EPD staff to make sure the asbestos and lead paint abatement will comply with a final ABCA under the Georgia's Brownfield Program.

As per the updated ABCA prepared in November 2016 by Resolute (see Attachment 5), the recommended cleanup alternatives for the asbestos and lead paint are limited:

Asbestos

Due to the age of the building and condition of the confirmed Asbestos Containing Materials (ACM), full abatement and proper removal and disposal of confirmed damaged asbestos containing materials will be completed.

Lead Paint

For the purposes of this ABCA, LBC must encapsulate and remove loose and flaking lead paint residues associated with building structures that were not addressed earlier in 2016, prior to the purchase of the property.

Task 3c: Institutional Controls (ICs) ($2,000 cost share): If institutional controls (ICs) (administrative or legal mechanisms that help minimize the potential for human exposure to contamination or protect the integrity of a remedy) are needed, LBC and its consultant will work closely with Georgia EPD and other State and local agencies for approvals. ICs costs are an eligible cost under this Work Plan. While it is EPA's desire to see every site cleaned up to a level that requires no further action, for some sites it may not be practical. Several layers of mechanisms are often needed to achieve an institutional control objective. Zoning changes, easements, deed restrictions, etc. generally require both State and local mechanisms and approvals. Property transfers and/or property development often cannot occur until these controls are in place. The IC costs are unknown at this time, but LBC anticipates that if ICs are needed, they will be relatively negligible and LBC will cover the costs of fees through in-kind services, material or general fund expenditures.

Coordinating Cleanup Activities

Overall, LBC's cleanup planning under this Work Plan currently focuses on soil remediation and indoor air quality improvements associated with asbestos and lead paint abatement. LBC's Prospective Purchaser Corrective Action Plan (CAP) as detailed in the Application for Limitation of Liability and Prospective Purchaser to Georgia EPD Brownfield Program dated August 2016 (prepared by Resolute for LBC) is anticipated to be completed in conjunction with overall site redevelopment work. This will take place on or before the following dates: **March 1, 2019**—LBC may need to request EPD for an extension. LBC will need to submit a Compliance Status Report to EPD. It is anticipated that LBC will work with EPD and EPA to assure timely completion of CAP activities under this Work Plan and Cooperative Agreement. The Prospective Purchaser CAP ("CAP" or "PPCAP") can be found in Attachment 6a of this Work Plan.

However, the CAP activities, at this time, are limited to the soil remediation. The CAP states that asbestos and lead paint, if requiring abatement, will be done appropriately to protect human health and the environment. **LBC prepared this Work Plan with the intent of integrating indoor air improvement activities, including the asbestos and lead paint abatement into the CAP or some equivalent process to sufficiently bring LBC's property into compliance and achieve a "No Further Action" letter or equivalent assurance under EPA's brownfield cleanup grant.** LBC will work with EPA and EPD to streamline the planning and approval of any soil remediation and indoor air improvements under this Work Plan and Cooperative Agreement. LBC already started this process with a pre-contractor selection kick-off meeting with EPA and EPD in October 2017. LBC will follow the guidance of EPD to modify our CAP and retain our Limitation of Liability. However, we want to prioritize indoor air improvement activities under the EPA brownfield cleanup grant. Any technical review fees paid to EPD beyond the initial $3,000 fee paid when LBC applied for the Limitation of Liability will be a cost share.

Note, that the March 1, 2019 may be modified as LBC, EPD and EPA coordinate activities under this Work Plan and Cooperative Agreement.

3.0 SCHEDULE OF ACTIVITIES AND DELIVERABLES

Below is a schedule showing the anticipated dates of outputs and outcomes under this cleanup. LBC will continue to update this schedule for its EPA Project Manager during quarterly reports.

• Quarterly reports are due 30 days after the end of each quarter: Jan 30, April 30, July 30 and Oct 30.

• ACRES data should be entered with each project phase and after significant work completion.

• Draw down expended funds at least quarterly or more frequently as expenditures warrant. LBC, as a non-profit organization, anticipates working closely with the EPA Project Officer to draw down funds prior to our Consultant(s) and Contractor(s) invoicing for eligible activities—this way, there will be no delays in paying for contracted services rendered under the EPA cleanup grant.

Outputs and Outcomes*:*

	Time and Actions from Notice of Selection		Completed
Pre-Award	**0 month**	Notice of Selection: May 2017	yes
	0-3 months	LBC completes required grant award documents and submits to EPA	yes
	4 months	EPA executes grant award	yes
Year 1 October 2017 – September 2018	**Time and Actions from Award/Project Start**		
	Q1 Oct-Dec 2017	LBC conducts pre-contractor selection kick-off meeting with Georgia EPD and EPA ACRES Training/Entry Quarterly Report 1 is due 30 days after 1st quarter ends	yes yes yes
	Q2 Jan–Mar 2018	Quarterly Report 2 is due 30 days after 2nd quarter ends	yes
	Q3 Apr-Jun 2018	LBC works with EPA to finalize Work Plan RFP for contractor procurement is finalized Contractor/Consultant selected and hired Kick-off meeting held with Contractor, EPA, State and others on the Project Team, including hired environmental consultant LBC Completes Community Engagement Plan with Contractor Reimbursement Request Submitted Plan First Public Meeting Quarterly Report 3 is due 30 days after 3rd quarter ends	
	Q4 Jul-Sept 2018	Develop QAPP and submit to EPA/State for approval Conduct Limited Site Characterization Finalize ABCA and provide opportunity for public to review Host Public/Community Meeting #1 Reimbursement Request Submitted Quarterly Report 4 is due 30 days after 4th quarter ends Submit Federal Financial Report (SF425) and Disadvantaged Business Enterprise (DBE) report	

Outputs and Outcomes *(continue)*

	Time and Actions from Notice of Selection		Completed
Year 2 October 2018 – September 2019	**Q5 Oct-Dec 2018**	**Indoor Air Improvement - Cleanup Phase 1** Quarterly Report 5 is due 30 days after 5th quarter ends Reimbursement Request Submitted	
	Q6 Jan-Mar 2019	Community Meeting #2 on Cleanup Progress Quarterly Report 6 is due 30 days after 6th quarter ends Reimbursement Request Submitted **Half of 3-year grant is complete. Check-in with EPA/State for any modifications to work plan budget or scope of work.** **Make sure accomplishments to date are in ACRES. 35% of funds should be expended by this time.** LBC's Corrective Action Plan (CAP) as detailed in the Application for Limitation of Liability and Prospective Purchaser to Georgia EPD Brownfield Program dated August 2016 (prepared by Resolute for LBC) is anticipated to be completed in conjunction with overall site redevelopment work. This will take place on or before the following dates: **March 1, 2019**. LBC will need to submit a Compliance Status Report to EPD by this date. It is anticipated that LBC will work with EPD and EPA to assure timely completion of CAP activities under this Work Plan and Cooperative Agreement. LBC anticipates that this March 1, 2019 will be modified after the initial kick-off meeting(s) and cleanup planning activities discussed above in this Work Plan.	
	Q7 Apr-Jun 2019	**Outdoor Soil Abatement – Cleanup Phase 2** Quarterly Report 7 is due 30 days after 7th quarter ends Reimbursement Request Submitted	
	Q8 Jul-Sept 2019	Community Meeting #3 on Cleanup Progress Quarterly Report 8 is due 30 days after 8th quarter ends Reimbursement Request Submitted Submit Federal Financial Report (SF425) and Disadvantaged Business Enterprise (DBE) report	
Ongoing		Participate in regularly scheduled planning/status calls with Project Team Conduct and build on Community Engagement activities Identify financial commitments, developers, etc. Continue to leverage dollars	

Outputs and Outcomes *(continue)*

	Time and Actions from Notice of Selection		Completed
Year 3 and Closeout October 2019 – December 2020	**Q9 Oct-Dec 2019**	Quarterly Report 9 is due 30 days after 9th quarter ends Reimbursement Request Submitted	
	Q10 Jan-Mar 2020	Quarterly Report 10 is due 30 days after 10th quarter ends Reimbursement Request Submitted Community Meeting #4 on Cleanup Progress	
	Q11 Apr-Jun 2020	6 months remain on the grant; Start winding down activities in preparation for grant closing Quarterly Report 11 is due 30 days after 11th quarter ends Reimbursement Request Submitted Make sure all work has been entered in ACRES; Prepare and Submit final Cleanup Report. Enter cleanup completion in ACRES if an NFA letter or equivalent has been issued.	
	Q12 Jul-Sept 2020	Make sure all work has been entered in ACRES; Prepare and Submit final Cleanup Report. Enter cleanup completion in ACRES if an NFA letter or equivalent has been issued. Reconcile accounts; collect remaining invoices for submission; gather deliverables for final close-out report Grant project/budget period closes; no further costs can be incurred after final date Quarterly Report 12 is due 30 days after 12th quarter ends; May serve as Final Close-out Report if all project documentation is complete and ready. If so, then it is due 90 days after project period ends. DBE report due with this quarterly report.	
	Close-out Sept-Dec 2020	Submit final request for reimbursement with Final FFR (Standard Form 425) All Close-out documentation and final deliverables due within 90 days project end date.	

Attachment 1
Budget Table for Work Plan Tasks

The following budget is consistent with Standard Form 424A and our Work Plan tasks. LBC included the required 20% cost share in our Budget Table. Costs reflect the total amount of funding awarded and cost share and correlate with the tasks described in the Work Plan narrative. LBC is only receiving hazardous substance funding. LBC is providing personnel costs to be considered as part of the approved budget—LBC describe the level of effort by LBC staff, volunteers, and members of LBC Boards of Directors and Advisors related to the tasks in the Work Plan narrative. LBC project manager will track and report personnel time and related expenses as they occur.

Budget Categories		**Project Tasks**				
(Programmatic costs only)	**Task 1 Project Management, Cleanup Planning and Reporting**	**Task 2 Community Involvement/Engagement**	**Task 3a Soil Remediation**	**Task 3b Indoor Air Quality Improvement - Asbestos and Lead Paint Abatement**	**Task 3c Institutional Controls**	**Total**
Personnel	$10,000	$3,000	$0	$0	$0	$13,000
Fringe Benefits	$0	$0	$0	$0	$0	$0
Travel[1]	$4,358	$0	$0	$0	$0	$4,358
Equipment[2]	$0	$0	$0	$0	$0	$0
Supplies	$1,000	$1,000	$0	$0	$0	$2,000
Contractual[3]	$11,000	$4,000	$32,874	$147,768	$0	$195,642
Other – specify	$3,000 (Additional Georgia EPD Technical Review)	$0	$0	$20,000 (design and/or abatement activities)	$2,000 (legal, technical and agency fees)	$25,000
Total EPA Funding	**$15,358**	**$4,000**	**$32,874**	**$147,768**	**$0**	**$200,000**
Cost Share[4]	$14,000	$4,000	$0	$20,000	$2,000	$40,000
Total Budget	**$29,358**	**$8,000**	**$32,874**	**$167,768**	**$2,000**	**$240,000**

[1] Travel to brownfields-related training conferences is an acceptable use of these grant funds.

[2] EPA defines equipment as items costing $5,000 or more with a useful life of more than 1 year. Items costing less than $5,000 are considered supplies.

[3] The CAR must comply with the procurement procedures contained in 2 CFR 200 and/or 1500.

[4] If receiving a cost share waiver this can be omitted.

Attachment 2
Budget Justification Worksheets

BUDGET JUSTIFICATION WORKSHEET

You must provide a detailed cost justification for the estimated budget amounts reflected in Section B of your SF-424A application form. This detailed information will enable the EPA project officer to perform the required analysis to determine if the costs are reasonable and necessary. You may use the following format or a format of your choice to provide this information.

[NOTE: Please indicate any pre-award costs with a star (*).]

a. PERSONNEL

POSITION	NUMBER	SALARY	WORK YEARS	HAZARDOUS AMOUNT	PETROLEUM AMOUNT
a. PERSONNEL TOTAL	x	x	x	x	

b. FRINGE BENEFITS

BASE	x
RATE	**x**
b. FRINGE BENEFITS TOTAL	x

c. TRAVEL

If the grant is not for a continuing environmental program or if travel is not well documented in the work plan, provide a breakdown of the number of trips, destinations, number of travelers, etc. to document estimated travel costs.

	Hazardous Amount	Petroleum Amount
		x
Conference 1: New Grantees Workshop (2 attendees) Conference 2 : National Brownfields Conference (2 attendees)	$4,358	x
Travel Subtotals	$4,358	x
c. TRAVEL TOTAL:	$4,358	

BUDGET JUSTIFICATION WORKSHEET

d. EQUIPMENT

Tangible, non-expendable, personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit. Please list equipment items (i.e., vehicles, boats, etc.) and provide adequate detail to enable the EPA project officer to make an eligibility determination and to verify cost. For "equipment" with a cost of less than $5,000 per unit, list under supplies.

ITEM	NUMBER	COST PER UNIT	TOTAL
NA			
d. EQUIPMENT TOTAL:			$0

e. SUPPLIES

List by groups (as appropriate), such as office supplies, lab supplies, field supplies. If the cost for a particular group is over $50,000, please provide a list of the more costly items or subsets.

	Hazardous	Petroleum
Basic office supplies, community meeting print-outs, and signage for property	x	x
Presentation materials (portable luggage carts and show displays	x	x
Presentation materials (website)	x	x
Supplies Subtotal	x	x
e. SUPPLIES TOTAL	x	

BUDGET JUSTIFICATION WORKSHEET

f. CONTRACTUAL

List <u>each</u> planned contract and the type of services/project activity to be procured. Agreements/contracts with other governmental agencies (state, local or Federal) should be listed under category h. OTHER.		
	Hazardous	Petroleum
Task 1 Project Management, Cleanup Planning and Reporting	$11,000	x
Task 2 Community Involvement/Engagement	$4,000	x
Task 3a Soil Remediation	$32,874	x
Task 3b Asbestos and Lead Paint Abatement	$147,768	
Contractual Subtotal		
f. CONTRACTUAL TOTAL	$195,642	

g. CONSTRUCTION (N/A)

h. OTHER

List other items that would not be appropriately included elsewhere, such as costs for maintenance, operations, repairs, motor pools, rental, training, publication, and printing, and Intergovernmental Agreements	
Grantee Cost Share/In-kind Contributions	$40,000
h. OTHER TOTAL	$40,000

i. TOTAL DIRECT COSTS: (Sum of categories A through H)	$240,000
j. INDIRECT COSTS: (RATE: %)	$0
k. TOTAL PROPOSED COSTS: (Sum of categories I through J)	$240,000
FEDERAL FUNDS REQUESTED: A=100%; C, RLF=80%	100% ($200,000)
RECIPIENT SHARE OF TOTAL PROPOSED COSTS: AWP, A=0%; C, R= 20%	20% (40,000)

Attachment 3
Figures and Photographs of Cleanup Areas

Cardno
Shaping the Future

"This is not a map of survey."

1"=50 Ft

City of Atlanta – Lifecycle Building
1116 Murphy Avenue SW
Atlanta, Georgia
Parcel ID No. 14 011900070135
EPA Cooperative Agreement #00-D12413-0

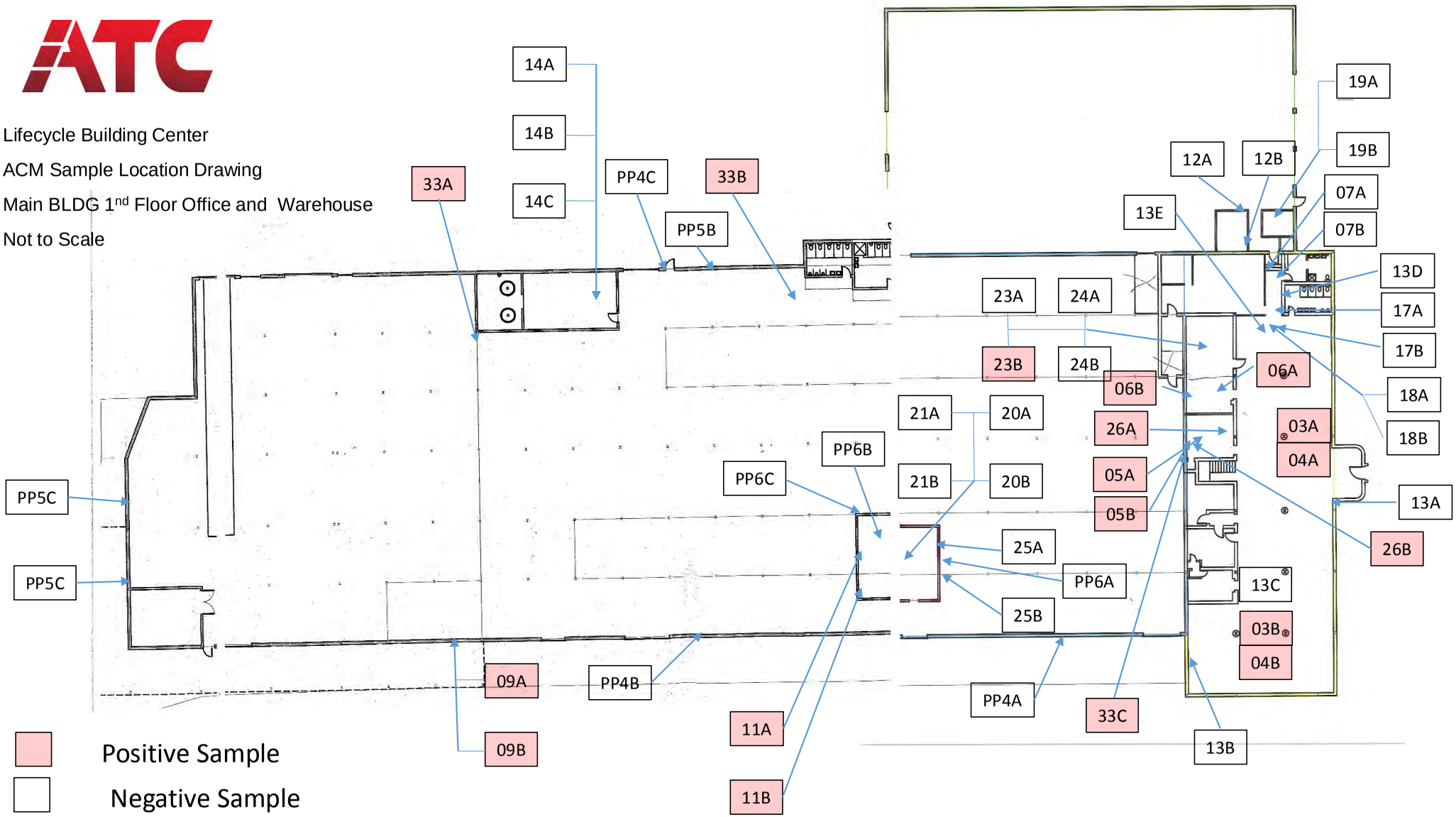
Figure 3
Proposed Excavation Area Map Extent

Lifecycle Building Center

ACM Sample Location Drawing

Main BLDG 1nd Floor Office and Warehouse

Not to Scale

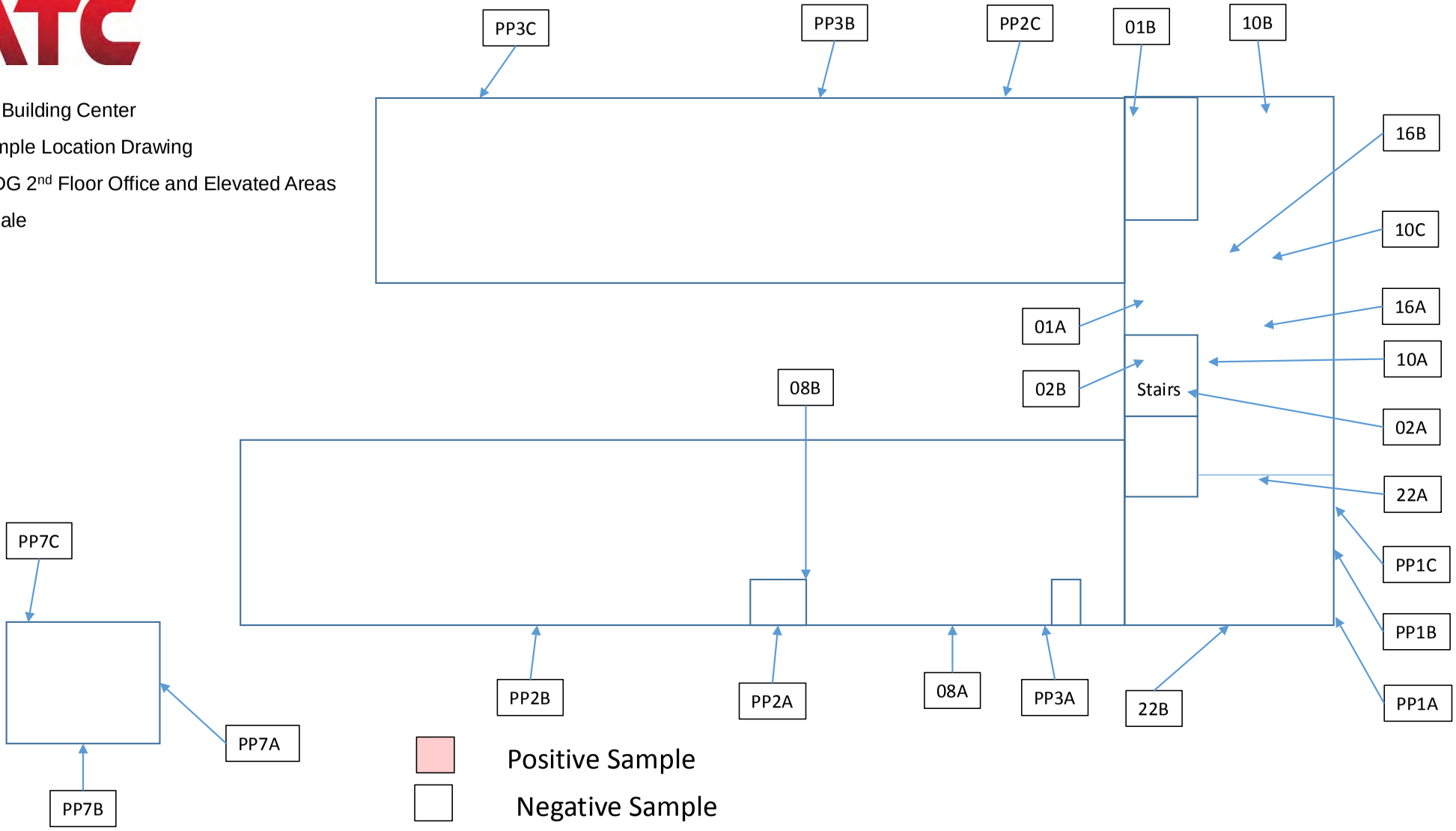


Lifecycle Building Center

ACM Sample Location Drawing

Main BLDG 2nd Floor Office and Elevated Areas

Not to Scale

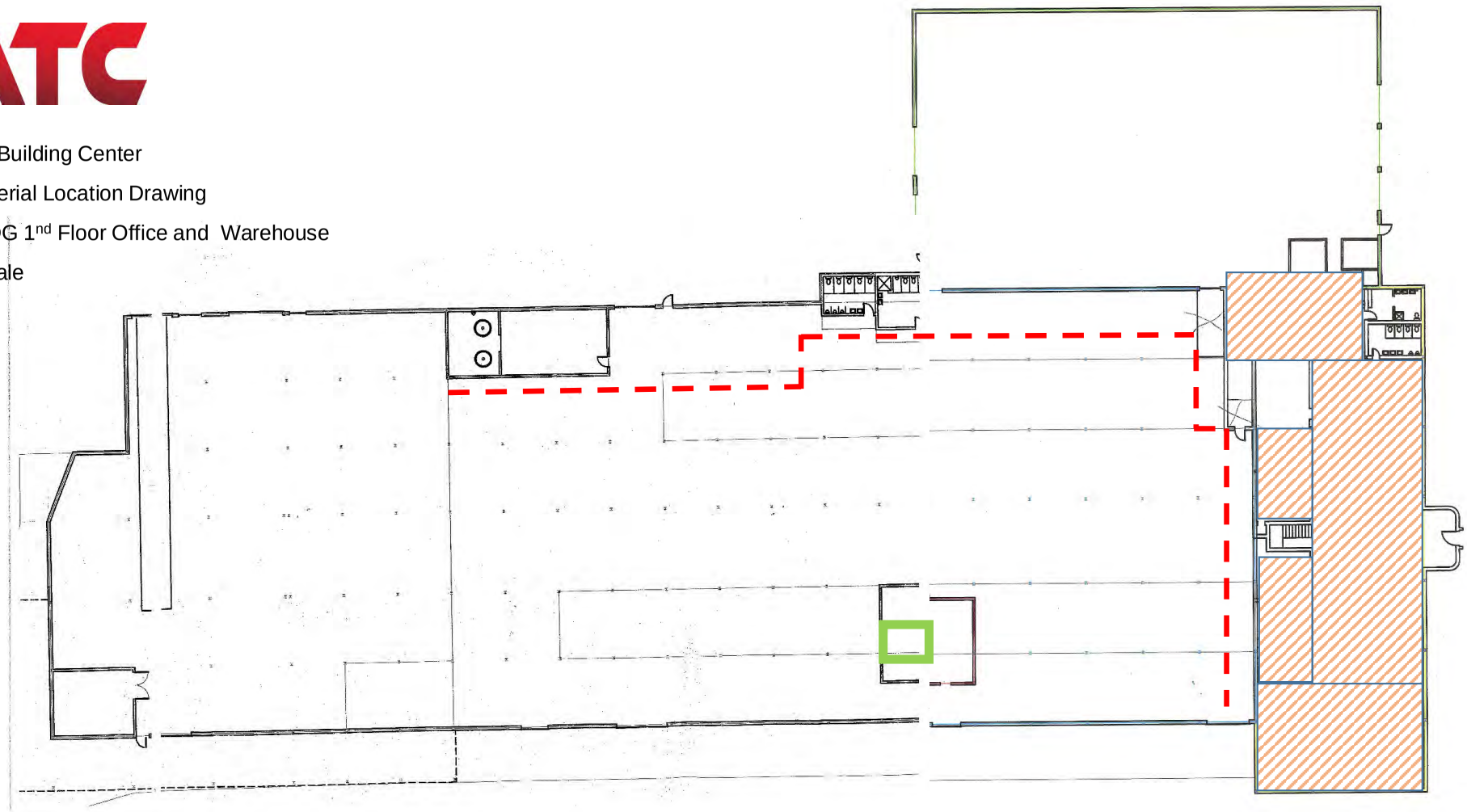


Lifecycle Building Center

ACM Material Location Drawing

Main BLDG 1nd Floor Office and Warehouse

Not to Scale



Various ACM Flooring(s) ACM Pipe Insulation ACM Gypsum Wall Board/Joint Compound

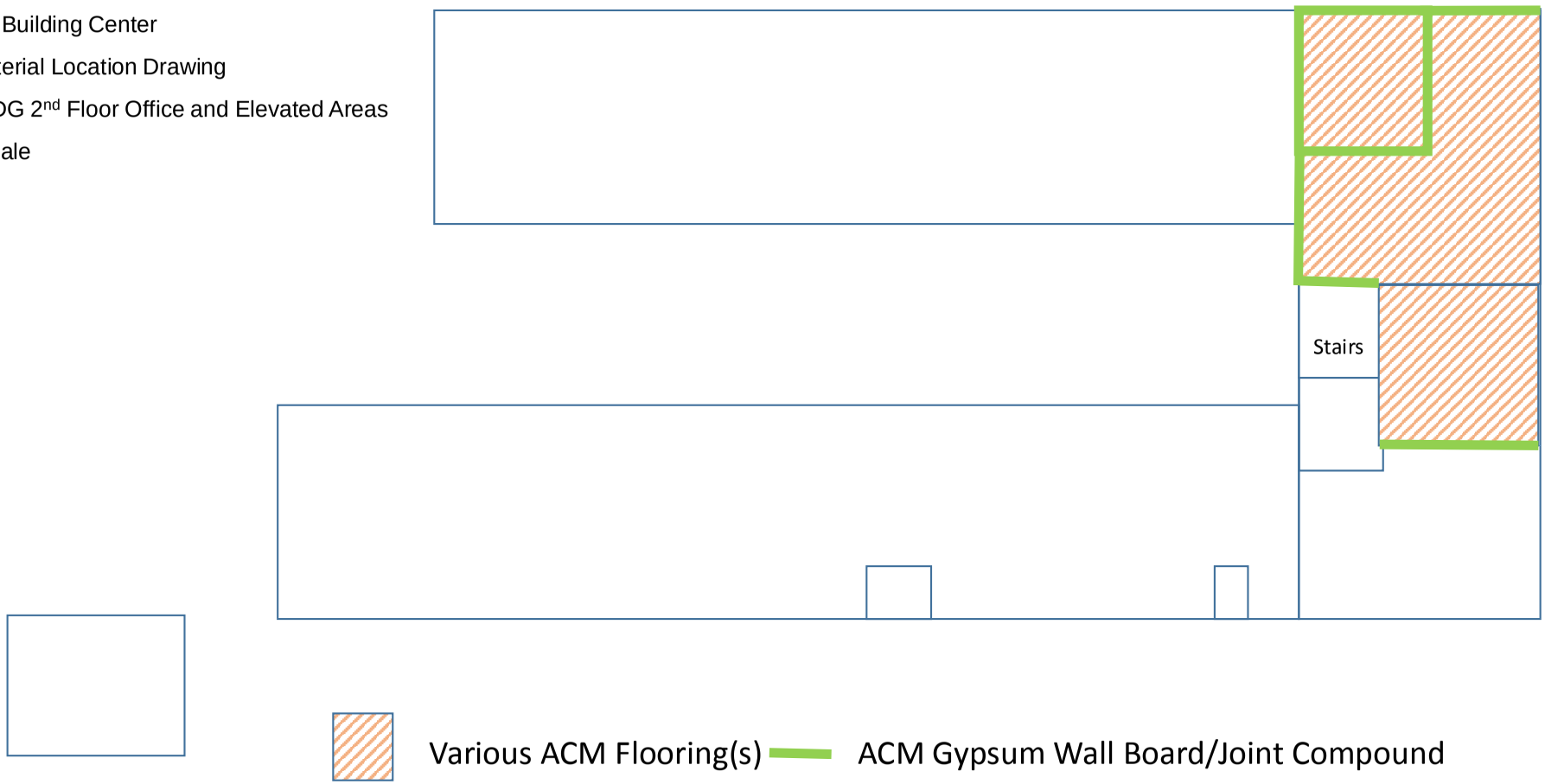
ACM Corrugated Panels on roof and exterior walls not shown

Lifecycle Building Center

ACM Material Location Drawing

Main BLDG 2nd Floor Office and Elevated Areas

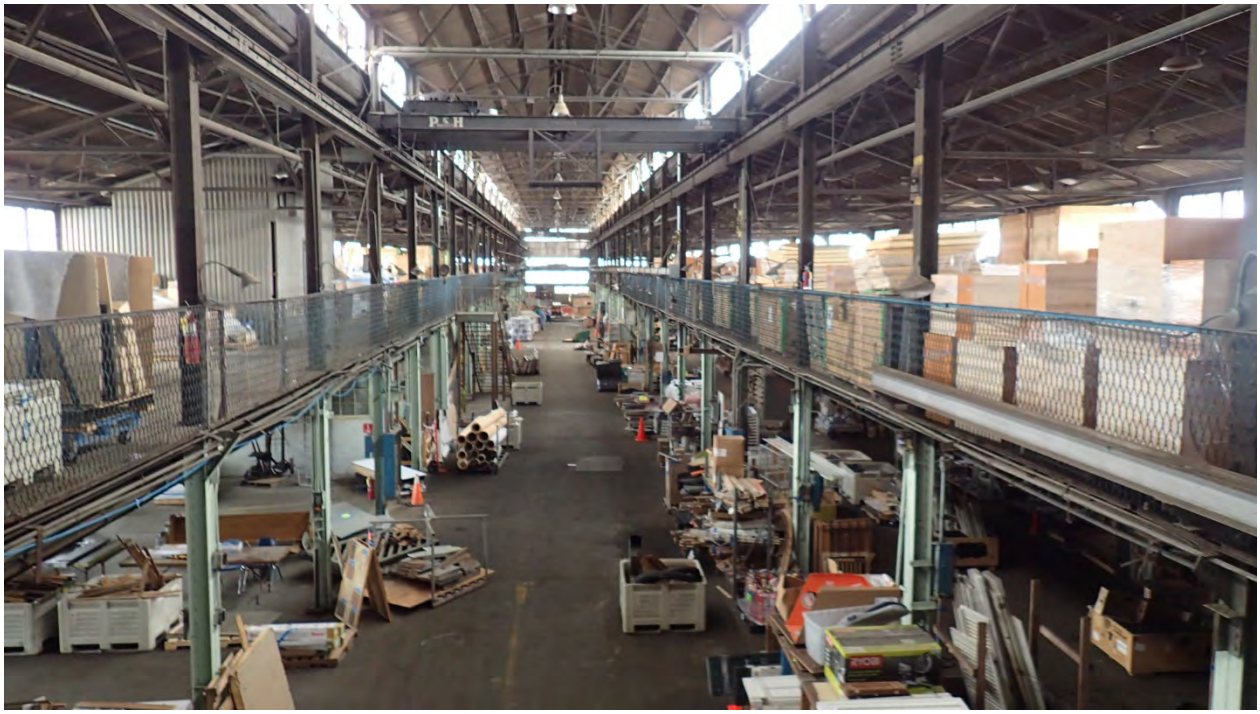
Not to Scale



ACM Corrugated Panels on roof and exterior walls not shown

LBC is located near water towers only a 5 minute walk from the Former State Farmers Market pictured here to the left. MARTA transit line pictured right.

Area of soil excavation along the north side of the Lifecycle Building Center. Notice the proximity of the decommissioned CSX rail spur. This is the future BeltLine Westside Trail spur.



View of LBC warehouse with areas containing asbestos containing materials (pipe wrap and corrugated Transite) and lead paint pictured along with retail.

LBC unusable front offices with asbestos containing materials (floor tiles and gypsum board and mastic)

LBC mezzanine level with asbestos containing materials (corrugated Transite) and lead paint pictured

Atlanta BeltLine Westside Trail nearing completion about 5 minute walk from LBC (photograph taken June 29, 2017)

Attachment 4
Letter from Georgia EPD Re: Brownfield Corrective Action Plan—1116 Murphy Avenue dated September 15, 2016

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Land Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1054, East Tower
Atlanta, Georgia 30334
404-657-8600

September 15, 2016

Ms. Shannon Goodman
Lifecycle Building Center
1116 Murphy Avenue
Atlanta, Georgia 30310

RE: Brownfield Corrective Action Plan – 1116 Murphy Avenue
1116 Murphy Avenue, Atlanta, Fulton County, Georgia

Dear Ms. Goodman:

The Georgia Environmental Protection Division (EPD) was pleased to have received your September 1, 2016 application for a limitation of liability pursuant to Article 9 of Chapter 8 of Title 12, the Georgia Brownfield Act (Act). The application consists of a prospective purchaser corrective action plan (CAP) and a non-refundable $3,000 application review fee, for which this letter will serve as receipt. The initial application review fee will fund approximately forty hours of technical review at EPD's current cost of $75 per hour. Although many applications can be reviewed within this time-frame, applications that are complex or that require extensive revisions may incur additional review fees. These may be invoiced periodically and must be paid in full before a written concurrence with a certification of compliance may be issued.

The subject property is located at 1116 Murphy Avenue, Atlanta, Fulton County, Georgia. The property is described as "All that tract or parcel of land lying and being in land lot 119 of the 14th land district of Fulton County, Georgia, and..." A complete legal description of the property is provided as an attachment to this letter. The Brownfield qualifying criteria established under sections 12-8-205 and 12-8-206 of the Act have been met. The review of the CAP has been completed by EPD, and the CAP is hereby approved.

Under section 12-8-207(a) of the Act, approval of the CAP confers a provisional limitation of liability upon the prospective purchaser, contingent upon timely implementation of the approved CAP and certification of compliance with the risk reduction standards for soil and source material in accordance with the approved schedule. Should unanticipated events or site conditions warrant changes in the CAP or the approved schedule in order to achieve compliance, the prospective purchaser must notify EPD and obtain approval of the proposed modifications.

While the property is undergoing corrective action, it should be maintained in a manner that complies with all applicable environmental laws and regulations and that protects humans from exposure to hazardous constituents. If you have questions, or need further assistance, please contact Stephanie Horwitz or Courtney Roberts at 404/656-7802.

Sincerely,

/Kathleen Dunn for

Shannon Ridley
Brownfield Coordinator

Attachment: Legal Description

File: 1116 Murphy Ave\CAP Approval.doc

LAND DESCRIPTION Tract A

ALL THAT TRACT or parcel of land lying and being in land lot 119 of the 14th land district of Fulton County Georgia and more particularly described as follow:
BEGINNING AT A 1/2" REBAR found on the southerly right of way of Sylvan Rd (50' R/W) being N02°36'10"W a distance fo 450.64' from the westerly R/W of Avon Ave.; thence leaving said R/W N87°29'25"W a distance of 215.09' to a 1/2" rebar found; thence N02°47'33"E a distance of 7.48' to a 1/2" rebar found; thence along a curve to the left 180.86' having a radius of 586.71' and chord of S66°58'04"W and distance of 180.18' to a point; thence continue along a curve to the left 96.77' having a radius of 340.67' and chord of S50°40'07"W and distance of 96.45' to a 1/2" rebar found; thence N45°20'49"W a distance of 15.92' to a 1/2" rebar found; thence along a curve to the right 100.52' having a radius of 356.64' and a chord od N50°40'04"E a distance of 100.19' to a point; thence continue along a curve to the right 189.56' having a radius of 586.71' and a chord of S66°58'04"W a distance of 180.18' to a railroad spike found; thence N05°16'18"E a distance of 26.49' to a 1/2" rod found; thence N76°54'50"E a distance of 42.45' to a 1/2" rebar found; thence S45°04'33"E a distance of 7.32' to a point; thence along a curve to the left 115.62' having a radius of 295.25' and chord of S75°14'47"E a distance of 114.88' to a point; thence S87°36'12"E a distance of 56.33' to a 1/2" rebar found on the R/W of Sylvan Rd, thence along Sylvan Rd S02°42'09"W a distance of 35.29' to THE POINT OF BEGINNING

LAND DESCRIPTION Tract B

ALL THAT TRACT or parcel of land lying and being in land lot 119 of the 14th land district of Fulton County Georgia and more particularly described as follow:
TO FIND THE POINT OF BEGINNING AT A 1/2" REBAR found on the southerly right of way of Sylvan Rd (50' R/W) N02°36'10"W a distance fo 450.64' from the westerly R/W of Avon Ave.; thence leaving said R/W N87°29'25"W a distance of 215.09' to a 1/2" rebar found; thence N02°47'33"E a distance of 7.48' to a 1/2" rebar found; thence along a curve to the left 180.86' having a radius of 586.71' and chord of S66°58'04"W and distance of 180.18' to a 1/2" rebar found; thence along a curve to the left 96.77' having a radius of 340.67' and chord bearing of S50°40'07"W and distance of 96.45' to a 1/2" rebar found; thence N45°20'49"W a distance of 15.92' to a 1/2" rebar found AT THE TRUE POINT OF BEGINNING; thence N44°28'53"W a distance of 399.302' to a mag nail found on the R/W of Murphy Ave (R/W varies); thence along Murphy Ave. N44°31'00"E a distance of 10.78' to point; thence continue N40°00'26"E a distance of 120.23' to a point; thence continue N43°52'27"E a distance of 74.90' to a point thence along a curve to the right 136.02' having a radius of 552.05' and a chord od N70°21'47"E and distance of 135.68' to a 1/2" rebar found; thence S44°57'07"E a distance of 227.89' to a 1/2" rebar found; thence S45°02'40"W a distance of 5.32' to a 1/2" rebar found thence S44°57'20"E a distance of 32.88' to a 1/2" rebar found; thence N45°02'40"E a distance of 5.32' to a 1/2" rebar found; thence S44°56'56"E a distance of 177.82' to a 1/2" rebar found; thence S76°54'50"W a distance of 42.45' to a 1/2" rod found; thence S05°16'18"W a distance of 26.49' to a railroad spike found; thence along a curve to the left 189.56' having a radius of 602.67' and chord of S66°52'19"W a distance of 188.78' to a point; thence continue along a curve to the left 100.52' having a radius of 356.64' and a chord of S50°40'04"W a distance of 100.19' to THE POINT OF BEGINNING.

Attachment 5
Draft Updated Analysis of Brownfield Cleanup Alternatives dated November 2016

DRAFT UPDATED ANALYSIS OF BROWNFILD CLEANUP ALTERNATIVES REPORT

LIFECYCLE BUILDING CENTER SITE
1166 MURPHY AVENUE SW ATLANTA, GEORGIA 30310

FY 17 EPA BROWNFIELD CLEANUP GRANT PROPOSAL

SUBMITTED TO:
Shannon Goodman
Executive Director
Lifecycle Building Center
1116 Murphy Avenue SW
Atlanta, GA 30310

SUBMITTED BY:

Resolute
Environmental & Water Resources Consulting
1001 Weatherstone Parkway
Suite 410
Woodstock, GA 30188
Telephone: (678) 398-9942

November 2016

Table of Contents

List of Appendices

C. GA EPD BCP Application Approval Letter, September 15, 2016 (Soil)

D. Asbestos, Floor Dust & Lead Paint Survey, February 20, 2016

E. Lifecycle Building Center FY 17 Brownfield Programmatic Budget

I. Introduction & Background

This Draft Analysis of Brownfield Cleanup Alternatives has been prepared as a requirement of the FY2017 EPA Brownfield Cleanup Grant proposal for the Lifefecycle Building Center (LBC) site. LBC rented the property at 1116 Murphy Avenue in Atlanta since the inception of the organization in 2012, and purchased the property in October of 2016. The site consists of two large industrial buildings of approximately 82,927 square feet on approximately 3.35 acres of land. The Fulton County parcel identification number for the property 14 011900070135.

LBC is a not-for-profit organization founded in 2011. The organization's vision is to reduce the negative impacts of the built environment upon the natural environment, with a mission of making use of the built environment increasingly efficient and sustainable. LBC's programs include:

- Material Reuse Center: 70,000 sf warehouse open 5 days/week where the public can drop off material donations & purchase reclaimed materials for 50-85% less than retail.
- Deconstruction Services: material removal services (residential & commercial) typically free of charge.
- Nonprofit Material Match: in-kind material donations to nonprofits, schools & houses of faith
- Community Education Workshops: Do-It-Yourself & Home Performance classes that empower homeowners to execute projects which improve the efficiency, durability & safety of their home.
- Partnership with numerous workforce development partners totaling over man hours to date.

The organization's local and regional sustainability/social program-related impacts include:

- 2.1M pounds of reusable materials diverted from landfills.
- 11 free educational workshops (180 participants)
- Free material donations to 90 nonprofits
- 30% of customer base lives in 30310 & receive an 10% additional discount
- $1.3M total community savings through material discounts & nonprofit donations

Prior to LBC taking occupancy, the facility was used as conveyor belt and associated machinery manufacturer (Link-Belt and FMC Sprocket) and as an on-site lead and/or iron foundry (Bailey Burruss). The facility continued to be used as a manufacturing facility through the 1980s. After that time, the buildings alternated between vacant periods and being occupied with various commercial businesses such as D&D Diesel Service, through the early 2000s.

Environmental due diligence completed to facilitate the purchase was performed through the City of Atlanta's Brownfield Grant, which is administered under USEPA Brownfield Grant Cooperative Agreement # BF 00-D12413-0. The due diligence related documents developed under the referenced grant include:

- Phase I Environmental Site Assessment-1116 Murphy Avenue, Atlanta, Georgia, May 2015.
- Limited Asbestos and Lead-Based Paint Inspection Report Life Cycle Building Center, February 2016
- Limited Phase II Environmental Site Assessment – Sump Areas, May 2016
- Phase II Environmental Site Assessment - The Lifecycle Building Center Project, 1116 Murphy Ave SW, Atlanta, Georgia, June 2016.
- Analysis of Brownfield Cleanup Alternatives, August 2016

As noted above, the City of Atlanta grant funded the development of an August 2016 Analysis of Brownfield Cleanup Alternatives (ABCA) report. A copy of the August 2016 ABCA is included as Appendix A. This report focuses solely on an area of impacted soils on the property, which was found to be the primary actionable finding with respect to soil impact.

Limited impact to ground water was also identified. However, prior to purchase, LBC filed an Application for Limitation of Liability and Prospective Purchaser Corrective Action Plan on August 30, 2016 with the Georgia Environmental Protection Division (EPD). A copy of said application is included as Appendix B. The application was approved in a letter from EPD dated September 15, 2016 (Appendix C). Per this letter, and pursuant to Section 12-8-207(a) Article 9 of Chapter 8 of Title 12, the Georgia Brownfield Act (Act), the agency conferred a provisional limitation of liability upon LBC as the then prospective purchaser and current owner, contingent upon timely implementation of the approved CAP and certification of compliance with the risk reduction standards for soil and source material. This finding further exempts LBC from the requirement to address the identified ground water impacts.

The findings and recommendations presented in the 2016 ABCA are summarized in Section II of this document. However, in addition to the remediation of the impacted soils on-site, LBC also intends to fund the abatement of asbestos containing materials and lead paint coated surfaces under the cleanup grant. As such, Sections III through VI of this document address the proposed abatement of said materials under the cleanup grant.

The overall budget for the program to be funded by the proposed EPA Cleanup Grant is presented in Section VII.

II. Analysis of Brownfield Cleanup Alternatives Summary for Impacted Soils

As stated above, the complete August 2016 ABCA for the impacted soils at the LBC site is included as Appendix A. However, this summary has been developed to provide context to the overall cleanup program for the site.

Corrective action concentrations for soil are regulated under Chapter 391-3-19 of the GA EPD HSRA criteria. Additionally, the Georgia Brownfield Program affords a prospective purchaser liability protection for groundwater impact. Dissolved groundwater impacts are to be addressed but, are not the direct responsibility of the prospective purchaser. Therefore, pursuant to approval from the Georgia EPD, the cleanup objective is to remove the metal impacted soils identified in Figure 3 of Appendix A to below the HSRA notification requirements/risk reduction standards.

In summary, upon award of the grant, the overriding cleanup objective for the Site will be protective of human health and the environment and will comply with applicable State and Federal laws. As noted in Appendix A, the purpose of the ABCA was to establish a corrective action approach to remove the metal impacted soil source material. Pursuant to approval from the Georgia EPD, the cleanup objective is to remove the metal impacted soils to below the HSRA NCs.

Three (3) remedial alternatives to mitigate the risks associated with contaminated soils identified at the Site were considered, and include:

- No Additional Action
- Capping
- Soil Excavation, Disposal and Backfill

Each of these alternatives were evaluated with respect to effectiveness, implementability, and cost. The following sections provide a synopsis of each technology and the final evaluation results.

A. No Additional Action

Technology Description

The No Additional Action option involves leaving the site in essentially its current condition, with no remediation activities being performed.

Effectiveness

Because a source of metal impacted soil has been documented at the site, this option would result in future exposure potential to public health and the environment. Additionally, this exposure potential does not meet the objectives of this project; therefore, this corrective action alternative would not be effective and has been omitted from further consideration.

Implementability

The No Additional Action alternative would be simple to implement as it requires no additional remedial activities be performed at the Site. This alternative is effective in controlling the potential exposure to employees/the public as long as access limitations are maintained (i.e. fencing). The Site is only partially paved and may allow for human exposure presently. Moreover, no additional action does not contribute to the long term goals for the growth and economic development in the area.

Cost

As defined within this document, there would be minimal cost associated with implementing the No Additional Action alternative at the Site. The primary cost item would be the development of engineering controls (fencing). Costs associated with this type of effort typically range between $10,000 and $20,000, depending on the complexity of the circumstances.

B. Capping

Technology Description

Capping involves placing an impermeable cover over contaminated materials. Caps do not clean up the contaminated material. Instead, they isolate the contaminated media and keep it in place so it will not come into contact with people or the environment. Capping is considered an engineering control for impacts that remain on the site; therefore, some form of institutional control (Deed restriction) is required to document and record this engineering technology. With this approach, additional costs would be incurred to implement a long-term maintenance plan to assure the public and regulatory authorities of the effectiveness, integrity, and compliance of the engineering control.

Effectiveness

If designed appropriately, a Cap can be effective in both stopping precipitation from contacting contaminated material and carrying the contamination into groundwater or surface water features, and restricting access to people and animals from coming into direct contact with the impacted material. While construction and maintenance of a Cap is generally simple, it is not practical for the Site for three reasons. First, due to their chemical characteristics, heavy metals in soil are not subject to natural biodegradation processes. Second, the metal impacted soil would continue to migrate vertically, by leaching of absorbed metal particulates into deeper potable aquifers. Therefore, this corrective action alternative would not be effective and has been omitted from further consideration.

Implementability

Currently, the Site is only partially paved and may allow for human exposure. Additionally, engineering controls (storm water drainage) would need to be implemented to direct surface water run-off away from the impacted area.

Cost

A multi-layer capping system in the soil impacted area onsite would range from approximately $15,000 to $20,000, depending on the design. An additional $15,000 would be necessary to implement the engineering and institutional controls for the Site. While only a limited portion of the Site would be subject to capping, the limitations outlined in the effectiveness discussion and long-term maintenance required to assure integrity of the cap render further consideration of capping impracticable.

C. Excavation, Disposal and Backfill

Technology Description

This alternative includes the excavation, stockpiling and proper disposal of metal impacted soils. In this alternative, additional sampling to confirm the lateral extent of impacted soil would be conducted.

Effectiveness

Removal of contaminated material from a site is typically the most effective type of remediation, regardless of contaminant type.

Implementability

Many factors affect the implementability of a soil excavation project. Generally, excavation is limited to materials that are unconsolidated and can be removed using backhoes, excavators, and similar equipment. Source removal of the metal impacted soil is proposed by excavating approximately two feet of surficial soil in the vicinity of the area identified in Figure 3 of Appendix A.

At present it is anticipated that the excavation will be approximately 30 feet wide by 30 feet long by 2 feet deep. Access must be available to bench, remove and stock pile the metal impacted soil on-site. Once removed, the impacted soils will be properly disposed and the excavation will be backfilled with clean soil.

Cost

The cost of excavation can vary widely based on the variables discussed above. The estimated volume to be removed for disposal is 1,800 cubic feet (Figure 3). Costs are typically separated based on the excavation, stockpiling, and disposal of contaminated soil, and by the cost of backfilling and compaction. Costs associated with this type of effort typically range between $25,000 and $30,000 to implement, depending on the complexity of the circumstances. This cost estimate assumes that the metal impacted soils do not exceed 1,800 cubic feet (30 feet by 30 feet by 2 feet area).

D. Recommended Remedial Strategy for Impacted Soil

The selected remedial alternative for removal of the metal impacted soils is soil excavation and disposal. This remediation approach is designed to support closure of the Site to the desired cleanup levels established by the Georgia Brownfield Program Applicable Regulations & Cleanup Standards. For the purposes of the FY 17 grant proposal, a budget of $33,000 has been assumed for the soil removal operation.

III. Applicable Regulations and Cleanup Standards for Asbestos Containing Materials and Lead Based Paint Coated Surfaces

A. Asbestos Laws and Regulations

Asbestos is regulated by the AHERA, the Toxic Substances Control Act (TSCA), the Clean Air Act (CAA), and Georgia Environmental Rule 391-3-14 and Official Code of Georgia Annotated §12-12-1. Further, to protect asbestos abatement workers, all asbestos abatement work must be performed in accordance with Occupational Safety and Health Administration (OSHA) asbestos regulations as promulgated in Title 29 of the Code of Federal Regulations (29CFR), Section 1926.1101.

The following work practices should be followed whenever demolition/renovation activities involving asbestos-containing materials occur:

- Prepare abatement specifications by a EPA licensed Asbestos Designer;
- Notify the Georgia Environmental Protection Division of intention to demolish/renovate by the required notification form;
- Remove all asbestos-containing materials from facility being demolished or renovated before any disruptive activity begins;
- Handle and dispose of all asbestos-containing materials in an approved manner (USEPA, 2006a; Asbestos/NESHAP Regulated Asbestos-Containing Materials Guidance);
- Monitor asbestos abatement activities by a EPA Licensed Asbestos Abatement Supervisor;
- Perform air clearance testing upon completion of asbestos-containing materials abatement; and
- Prepare an asbestos abatement Compliance Report.

B. Lead Based Paint Laws and Regulations

Lead-based paint in pre-1978 housing and children-occupied buildings is regulated under the authority of the Toxic Substances and Control Act (TSCA; 15 U.S.C. 2601 et seq.), as amended by the Residential Lead-Based Paint Hazard Reduction Act of 1992, generally referred to as Title X (of The Housing and Community Act of 1992 - Public Law 102-550). Title X mandates the training, certification and licensing of lead-based paint abatement contractors, inspectors, risk assessors, and the training and certification of abatement workers and project designers. The Act also amended the Toxic Substances

Control Act section 402 & 403. The provisions of Title X apply to residential buildings and child-occupied facilities.

Georgia Environmental rules established the following clearance procedures shall be conducted on all abatement projects by a certified inspector or lead risk assessor after appropriate cleaning has been completed.

- 40 micrograms of lead in dust per square foot on floors;
- 250 micrograms of lead in dust per square foot on interior window sills;
- 400 micrograms of lead in dust per square foot in window troughs; and
- 800 micrograms of lead in dust per square foot on exterior concrete

The Georgia EPD regulates and licenses lead paint consultants and workers under Environmental Rule 391-3-24 and OCGA 31-41-1. Lead-containing debris must be handled in accordance with the USEPA RCRA Hazardous Waste Regulations (40 CFR Parts 260 through 274).

The Occupational Safety and Health Administration has published regulations regarding worker safety during activities involving lead-based paint abatement. The Construction Standards (29 CFR Part 1926) and the Occupational Safety and Health Standards (29 CFR Part 1910) promulgate a permissible exposure limit for lead construction workers, including workers performing demolition, salvage, or renovation of lead-containing materials at sections 1926.62 and 1910.1025 as follows:

> *"The employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 ug/m3) averaged over an 8-hour period." (29 CFR 1926.62)*

Additional regulations under these chapters address other worker safety precautions such as respiratory protection programs, work practices, and medical monitoring. Lead-based paint debris (material containing or surfaced with lead-based-paint) from commercial buildings may be classified as hazardous waste if lead concentrations exceed the Toxicity Characteristic Rule (40 CFR 261.24, 40 CFR 262.11) concentration limit of 5.0 mg/L in sample extract prepared according to the Toxicity Characteristic Leaching Procedure, test Method 1311 in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846.

IV. Site Condition Warranting Asbestos Containing Building Material Abatement/Cleanup

The presence of asbestos containing materials and lead based paint coated surfaces are quantified in a February 2016 report included in Appendix D. The findings, with respect to the identified presence of asbestos and lead paint, are presented and discussed below.

A. Asbestos

Laboratory analysis of the bulk samples collected from the Life Cycle Building 11 indicated that asbestos is present in quantities of 1% or greater in the following locations, detailed in Table 1.

Table 1
Identified Asbestos Containing Materials

Primary Sample Number	Material Description	Location	Quantity
01A	9"X9" Tan w/Marbling VCT and Mastic	2nd Floor Office Area	1,800 SF
03A and 04A	9"X9" Black and Grey VCT and Mastic	1st Floor Office Area	3,540 SF
05A	9"x9" Beige Marbled VCT and Mastic	1st Floor Office Area	180 SF
06A	9"X9" Black VCT and Mastic	1st Floor Office Area	144 SF
08A	Corrugated Trans. Pane 1	Wall/Ceiling Main	Not Estimated
09A	Corrugated Trans. Pane 1	Wall/Ceiling Additional-	Not Estimated
10A	Drywall, Joint Compound	2nd Floor Office Area, Room 2	800 SF
11A	Drywall, Joint Compound,	1st Floor Main, Room 25	640 SF
26A	4"X4" VAT, Mastic	1st Floor Office Area, Room 8-	3,864 SF
33A	Pipe Insulation Wrap	1st Floor Main	300 LF

The locations of these materials are depicted in the site plans included as Appendix E of the lab report, and included as Appendix D of this Draft ABCA. The materials summarized in Table 1 are regulated by State and Federal regulations and will be addressed by a licensed asbestos abatement contractor and disposed of as asbestos containing materials, in order facilitate renovation activities and to address imminent health and safety concerns.

As stated in Appendix D, there may be additional suspected asbestos containing materials in inaccessible or concealed spaces. These spaces include, but are not limited to: pipe chases, spaces between wall/ceiling cavities, underneath carpeting, interior of mechanical components such as boiler cavities, and interior ducts, among other locations. All such unidentified materials should be treated as Presumed Asbestos

Containing Material (PACM) in accordance with 29 CFR 1926.1101 and 1910.1001. During the course of the grant period, any concealed building materials discovered during maintenance or renovation or demolition activities which are suspected to contain asbestos will be sampled and analyzed to confirm the presence of asbestos prior to disturbance and will be abated as appropriate.

B. Lead Paint Coated Surfaces

As is stated in Appendix D, lead was present in levels above the EPA/HUD lead level of 0.5% by weight in the samples collected from the following materials on the main floor of the building:

- Green paint on structural steel,
- Blue paint on wood door and frames
- Yellow paint on Metal First Aid Station
- Light green paint on concrete and CMU
- Green paint on brick
- Dark Green Paint on concrete and CMU
- Yellow on concrete shower area.
- Silver on Structural Steel

All materials listed above were observed to be in damaged condition, thereby representing a potential source of lead exposure to occupants. Based on conditions, LBC completed an interim lead paint encapsulation effort during the second quarter of 2016. During the course of this effort, much of the loose paint on the structural steel was removed and properly disposed of, and the associated surfaces were coated with an appropriate material to encapsulate the structure. The cost of this effort was in excess of $30,000.

LBC intends to address a significant amount of the remaining lead paint via either abatement or encapsulation. The extent of the work to be included under this effort will be determined during the design phase of the cleanup.

V. Evaluation of Cleanup Alternatives for Asbestos Containing Materials and Lead Based Paint Coated Surfaces

This section presents and discusses the alternatives analysis and presents anticipated costs for the abatement program. Again, the primary objective of the cleanup alternatives is to reduce or prevent potential risk to human health or the environment from site contaminants or hazardous building materials used in the original construction of the LBC building. The cleanup program which is implemented should complement the renovation activities and the intended use. In addition, the phasing of the cleanup must consider any building stabilization activities.

A. No Action

The No Action alternative is included as a baseline comparison to other remedial alternatives. The No Action alternative assumes no action is taken, which is not a valid option for the site given the objectives of planned building upgrades and the inherent hazards associated with the presence of asbestos and lead associated with the building.

B. Encapsulation

1. Lead

As previously stated, a portion of the lead paint associated with the first floor of the building was abated by encapsulation, as part of an effort to address employee health and safety concern.

2. Asbestos

The confirmed asbestos containing materials are in very poor condition. Full abatement of these materials will be completed in anticipation of the planned building upgrades. Encapsulation is also not a viable option, as the presence of encapsulated materials will result in an operational hazard and delay future improvements.

C. Full Abatement

1. Lead

Full abatement would include the removal of all interior Lead based paints prior to repainting. However, given the nature and size of the building, this approach would not be practical. Instead, the removal of loose and flaking material followed by the application of an approved encapsulate will be sufficiently protective; given the commercial/warehouse use of the building.

2. Asbestos

This option would include the complete removal of identified interior ACM, including VAT, pipe insulation, wall board and joint compound, and to a lesser degree, damaged Transite panels. Due to the condition of these materials, full abatement or proper removal and disposal will be completed.

VI. Recommended Cleanup Alternatives

A. Asbestos

Due to the age of the building and condition of the confirmed Asbestos Containing Materials, full abatement and proper removal and disposal of confirmed damaged asbestos containing materials will be completed. Estimated costs for this effort are defined in Appendix E of this document.

B. Lead Paint

The Brownfield funding will facilitate the encapsulation and removal of paint residues associated with building structures that were not addressed by the program completed earlier in 2016, prior to the purchase of the property. For the purposes of this ABCA, it is anticipated that the removal of loose and flaking lead paint residues will be followed by the application of an appropriate encapsulate.

VII. Overall Program Budget

Based upon the conditions discussed above and noted in the appended documents, an overall budget for the Grant is provided in Appendix E. Upon award of the grant, additional characterization activities will be performed during the design phase of the program so that the scope of the cleanup can be defined.

Appendix A.

Analysis of Brownfield Cleanup Alternatives, August 29, 2016 (Soil)

Attachment 6
Previous Analysis of Brownfield Cleanup Alternatives and Environmental Due Diligence

Analysis of Brownfield Cleanup Alternatives (ABCA)

Prepared for: **City of Atlanta (CATL) EPA Brownfields Assessment Grant**
Conducted Under EPA Brownfields
Cooperative Agreement No. BF 00D12413-0

Project Name: **Lifecycle Building Center**
1116 Murphy Avenue
Atlanta, Georgia 30062
Cardno Project No. Z070000118

Prepared by: **Cardno, Inc.**
2000 1st Drive, Suite 220
Marietta, Georgia 30062

Date: August 29, 2016

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 Introduction

The address of the Property is 1116 Murphy Avenue, Atlanta, Fulton County, Georgia. The property, further referred to as the Site, is known as the Lifecycle Building Center and consists of two large industrial buildings containing approximately 82,927 square feet on approximately 3.35 acres of land. The Site is currently used as a retail sales facility for construction and household supplies and fixtures. According to Fulton County Tax records, the Site is currently owned by Eleven Sixteen Murphy LLC (Parcel ID No. 14 011900070135) and is identified under the USEPA Brownfield Grant Cooperative Agreement # BF 00-D12413-0 for the City of Atlanta. The Site is located within the Southwest Atlanta, Georgia Topographic Quadrangle of the U.S.G.S. 7.5- minute series as shown in **Figure 1**.

This ABCA provides information on the following:

- Information about the site and contamination issues (e.g., exposure pathways, identification of contaminant sources, etc.), cleanup standards, applicable laws, alternatives considered, and the proposed cleanup.
- A discussion of the effectiveness, implementability, and cost of the cleanup methods considered.
- An analysis of reasonable alternatives including no action.

2.0 Site Background

Historical data review indicates that the site has been historically developed as a manufacturer of conveyor systems since the early 1930s. A Phase I Environmental Site Assessment (ESA) of the property was completed in May 2015 by Cardno and funded using the City of Atlanta's USEPA assessment grant funds. The Phase I revealed evidence of recognized environmental conditions (RECs) in connection with the Property. These RECs included historic operation on-site as a lead and/or iron foundry. Subsequent soil and groundwater assessment activities completed in 2015 and 2016 indicated shallow soils impacted with metals near a railroad spur on the northeast corner of the Site. These assessment activities were also funded using the City of Atlanta's USEPA grant. A Site Boundary Map is included as **Figure 2**.

3.0 Regional Setting and Site Characterization

3.1 Physiographic Setting

The Site is located in the Piedmont Physiographic Province. The Piedmont topography is characterized by low, rolling hills in the north and a broad rolling upland or plateaus in the south. The Piedmont is comprised of metamorphic and igneous rocks that are overlain by regolith of varying thickness. The regolith beneath the Site is composed of semi-consolidated to unconsolidated saprolite (weathered bedrock), soil, and other surficial deposits.

3.2 Site Hydrogeology

Surface water flow from the Site generally appears to be to the southeast toward a storm water ditch along a railroad spur on the southern property boundary. Surface water eventually discharges into the South River approximately 3,800 feet to the southeast. The Site is located in the Low Groundwater Pollution Susceptibility Class (Georgia Geological Survey, 1992). Lithology descriptions from the site indicate that the shallow subsurface is composed primarily of sandy micaceous silts and clays (weathered saprolite). Groundwater flow was determined by historical reports to be towards the Southeast. Groundwater was encountered from 7 to 19 feet below ground surface (BGS).

3.3 Climate Change

According to the US Global Change Research Program (USGCRP), climate trends for the southeast region of the United States include increased temperatures, increased precipitation with greater variability, increased extreme precipitation events, and rises in sea level. Some of these factors, more specifically increased precipitation that may affect flood waters and storm water runoff, are most applicable to the cleanup of the Site. The climate at the Site is moist and temperate. The area receives an average of 49 inches (in.) of precipitation annually (US Climate Database). Precipitation occurs primarily during the winter and early spring. The average annual temperature is about 63 °F. Average monthly temperature ranges from about 49 °F during the winter to 93° F during the summer.

According to FEMA Flood Zone Map 13063C0025E, the Site is located within a Zone X, where minimal flooding is expected. However, greater storm frequency and intensity in a changing climate may result in more frequent and more powerful flood waters, which may result in

changes to the flood zone and increased risk of flooding of the Site. Additionally, seasonal fluctuation of the groundwater table may increase vertical and horizontal migration of the subsurface impacted media at the Site.

The Site receives storm water discharge from Murphy Avenue to the west. Under current Site conditions, increased precipitation and extreme weather could result in additional storm water runoff and potential erosion to the Site. However, based on the geography and climate of the Site, changing temperature, rising sea levels, wildfires, changing dates of ground thaw/freezing, changing ecological zone and saltwater intrusion are not likely to significantly affect the subsurface impacted media.

4.0 Previous Assessment Activities

The history of assessment and remedial activities at the Site is based on available historic reports prepared by other consultants. Historical reports are provided in Appendix A.

Report of Environmental Consulting Services - 1116 Murphy Avenue, Atlanta, Georgia - Former Rexnord Facility dated February 28, 2006, MACTEC Engineering and Consulting, Inc.

The report documents the historical use and tenants of the property. At the time of the site visit, the property had been operated as a truck repair business on-site. The building was also used as storage for a variety of items including: automobiles, auto parts, computers, fork lifts, fork lift battery chargers, pallets of soda ash, drums of resin, air compressors, books, car batteries and furniture. Steel plates were noted in the floor area that appeared to be covering the locations of former machinery associated with the historic manufacturing operations. A large amount of surficial staining was observed throughout the building interior and numerous vehicles were noted on the exterior, several of which also had surficial staining on the ground beneath them. Numerous manufacturing operations were performed on the property from at least 1915 and the earliest included an on-site foundry and paint booth for Sprocket Manufacturing and Painting. The report documents several previous Phase I Site Assessments including a 1986 Phase I which documented asbestos (transite) roofing and siding on the main building. The previous Phase I also documented the removal of approximately 246.29 tons of soil impacted by lead, above the Hazardous Site Response Act (HSRA) Notification Concentration (NC), from the property in 1992 through 2006. The report recommended notification to the State for the elevated concentrations in soil above HSRA NC and removal of relict automobiles/general clean-up of the exterior yard.

Soil Removal and Soil Disposal Activities - 1116 Murphy Avenue Atlanta, Georgia - Former Rexnord Facility dated May 12, 2006, MACTEC Engineering and Consulting, Inc.

The report documents the excavation and removal of soil impacted by lead, from the property, in two areas measuring 17 feet x 19 feet and 10 feet x 10 feet that were subsequently backfilled with concrete and crusher run. A total of 65.64 tons of soil were removed and disposed into Eagle Point Landfill in Ball Ground, Georgia.

Phase I Environmental Site Assessment -1116 Murphy Avenue, Atlanta, Georgia dated October 14, 2011, Atlanta Environmental Management, Inc.

The report documents a Phase I performed at the Site and the following RECs:

1. Several unknown use floor pits reportedly containing an oily soil/sludge.
2. Unknown origin of historically stored soil/demolition debris piles observed during the Site reconnaissance.
3. Surficial soil staining outside the southwestern portion of the Butler building.
4. Stained soil, with elevated lead concentrations, was excavated from the northeastern and western portion of the Site in 1993 and 2006 to a depth of approximately 5 feet bgs.
5. Northeast adjacent and upgradient oil and paint facility existing from at least 1932 to 1992. Subsequent use of the same property as an automotive salvage yard.

Condition Assessment - 1116 Murphy Avenue Building, Atlanta, Georgia dated October 13, 2011, Walter P. Moore and Associates, Inc.

The report documented the physical condition of building and recommended immediate repairs which included the following:

1. Load bearing building columns that are out of plumb and offset from bearing pads.
2. Roof truss chords weakened by torch cutting and corrosion.
3. Clean and coat corroded steel members.
4. Address water intrusion creating structural deterioration.

Existing Conditions and Recommendations Report - Fire Protection and Electrical Systems 1116 Murphy Avenue, Atlanta, Georgia dated September 30, 2011, Newcomb & Boyd.

The report identified that the building was partially protected by automatic sprinklers in the mezzanines, the areas directly below the mezzanines, and the office areas, which were installed circa 1946. During the assessment, it appeared that the systems had been shut off for some time. The recommendation was to replace the sprinkler systems, which were more than 50 years old. The current building code would require the new system to be constructed via piping that is sized by hydraulic calculations instead of the original system, which was designed on a pipe schedule, as this method is no longer permitted for a building of this size. No backflow preventer was present and would be required pursuant to current building code.

Phase I Environmental Site Assessment -1116 Murphy Avenue, Atlanta, Georgia dated May 2015, Cardno, Inc.

The report documents a Phase I performed at the Site and the following RECs:

- Operation of on-site historic lead and/or iron foundry.
- Operation of on-site historic paint spray booth.
- On-site historic use and storage of large quantities of unknown solvents and petroleum products.
- Former diesel engine/vehicle repair activities on-site and hydraulic lifts/subsurface equipment.
- Historically observed sludge/residue in floor pits, in the warehouse area, during a previous environmental evaluation.
- Identified lead impact to on-site soil above regulatory standards from either on-site activities or east-northeast adjacent off-site facilities.

Recommendations indicated additional assessment was warranted. Further recommendations included the performance of an asbestos and lead based paint survey based on the age of the facility.

Asbestos, Floor Dust and Lead Based Paint Survey Services - The Lifecycle Building Center Project, 1116 Murphy Avenue Atlanta, Georgia dated February 12, 2016, Cardno, Inc.

Bulk samples collected for asbestos-containing material (ACM) from the Life Cycle Building did indicate that asbestos is present in quantities of 1% or greater. The asbestos containing material included 9”x9” vinyl floor tiles and mastic, corrugated transit roof panels, drywall joint compound, 4”x4” vinyl floor tiles and mastic and pipe insulation wrap.

Lead based paint (LBP) was present in levels above the EPA/HUD level of 0.5% by weight. The lead was identified in samples from; 1) green and silver paint on structural steel, main area; 2) blue paint on wood door and frames, main area; 3) light green paint on concrete and CMU, main area; 4) yellow paint on first aid station and concrete shower area, main area; 5) green paint on bricks, main area; and 6) dark green on concrete and CMU, main area.

These ACMs and LBPs are regulated by State and Federal regulations. In the event of renovation or demolition, the ACM and LBP should be removed by a licensed abatement contractor and disposed of accordingly. Additional recommendations regarding the floor dust exposure included 1) cease all dry sweeping operations and 2) utilize a High Efficiency Particulate Air (HEPA) filter vacuum.

Summary of Sump Areas - Limited Phase II Environmental Site Assessment - The Lifecycle Building Center Project,1116 Murphy Ave SW, Atlanta, Georgia dated May 2016, Cardno, Inc.

Five sump areas were identified during previous assessments by others (as previously referenced above) as historically containing freestanding liquids, but are currently filled with debris (soil, saw dust and potentially other fill types). Soil sampling results in these five sump areas detected Barium, Chromium, and Lead. The concentration amounts of Barium, Chromium, and Lead detected in these soil sample were below the Georgia HSRA Notification Concentrations (NCs). Therefore, based on the findings of the sump investigation, no additional assessment was recommended.

Phase II Environmental Site Assessment - The Lifecycle Building Center Project, 1116 Murphy Ave SW, Atlanta, Georgia dated June 2016, Cardno, Inc.

Subsequent soil and groundwater assessment activities were completed in May and July 2015. Results of the subsurface investigation identified metal concentrations in soil above the Georgia HSRA NCs. Specifically, arsenic and lead were detected, in soil boring SB-3, at a depth of zero (0) to two (2) feet BGS on the northeast corner of the Site. Recommendations indicated preparation of a Prospective Purchaser Corrective Action Plan (PPCAP) and submittal to the Georgia EPD to included excavation of these metal impacted soils.

Copies of the select previous reports are provided as **Appendix A**.

5.0 Proposed Confirmatory Sampling Activities

Confirmation sampling will be performed to determine the extent of the metal impacted soil. Specifically, based on the age of the latest soil data in the vicinity of SB-3 (greater than 365 days), confirmatory soil borings/sampling is required to delineate the horizontal extent of the impacted soils in this area (Georgia EPD requirement for corrective action). The confirmatory sampling will include the installation of up to six (6) soil borings around the perimeter of the metal impacted area. Soil borings will be installed using direct-push technology (DPT) to a depth of six (6) feet (approximate depth to groundwater in MW-3). Three (3) soil samples will be collected from each soil boring (total 18 samples) and submit for laboratory analysis of Resource Conservation & Recovery Act (RCRA) 8 metals by EPA Method 6010C and mercury by EPA Method 7471B.

6.0 Exposure Analysis

6.1 Risk Evaluation

Preparation of an ABCA requires an evaluation be made as to the possible corrective actions and their respective costs to remedy effected areas. Not all remedies are physical or chemical and may include other types of remedies such as institutional controls (e.g. restriction on residential development recorded on the deed). Excess public risk requires four factors, all of which must be present to produce excess risk from contaminants at a site. These are:

- A chemical with sufficient toxicity to do harm (whether acute or chronic).
- A sufficient quantity of the chemical to be toxic and do harm.
- A receptor on which to do harm, and;
- A pathway by which a sufficient amount of the contaminant can actually reach a receptor and do harm

Corrective action, to remedy affected areas, rarely eliminate all chemicals of concern. It is generally the intent to remove, treat or immobilize the concentrations of chemicals of concern to levels producing an acceptable risk to human health and the environment. The degree of acceptable risk has to be determined by the public through legislative and regulatory processes. This has been accomplished by the development and implementation of Georgia EPD's

regulatory programs to implement State standards (Hazardous Site Response Act, Chapter 391-3-19).

6.2 Exposure Pathways

In order for the metal impacted soil to do harm to public health or the environment, there must be a point of exposure accessible to the population at risk. Contaminants to which populations are not currently, or likely to be exposed, do not constitute a probable condition of elevated risk.

The three potential receptor populations are:

- Construction worker – persons involved in future renovation of the property.
- Commercial employees – persons who currently occupy the property under conditions of part time or full-time employment.
- Residents – persons who reside near the property.

Based on assessment data detailed above, the primary contaminants are shallow soils impacted with metals (arsenic and lead). The source of the metal impacted soil is suspected to be from historic operations at the Site as a foundry. Consequently, the confirmatory soil sampling and subsequent source removal activities (excavation) are designed to remediate the metal impacted soils. Risk of exposure to the metal impacted soils were examined for three potential receptor populations. Full-time and part-time employees are considered to be the most susceptible receptor population.

Based on a Phase I ESA database search performed by Cardno in May 2015, no public and non-public water wells are located within one-half mile radius of the site. No potable wells exist on the subject or adjacent properties and no irrigation wells are planned at the Site. Surface water flow from the Site generally appears to be to the southeast toward a storm water ditch, running along the railroad spur, which borders the site to the southeast. Therefore, the primary exposure pathways identified at the Site include; 1) ingestion of soils or 2) inhalation or ingestion of the potentially impacted storm water.

7.0 Cleanup Objectives / Applicable Regulations

Corrective action concentrations for soil are regulated under Chapter 391-3-19 of the GA EPD HSRA criteria. Additionally, the Georgia Brownfield Program affords a prospective purchaser liability protection for groundwater impact. Dissolved groundwater impacts are to be addressed but, are not the direct responsibility of the prospective purchaser. Therefore, pursuant to approval from the Georgia EPD, the cleanup objective is to remove the metal impacted soils in the vicinity of SB-3 to below the HSRA NCs.

This ABCA document summarizes historical site assessment activities and evaluates several alternatives for site remediation. Based on the evaluations included within this document, a recommended strategy for site remediation is provided. In summary, the overriding cleanup objectives for the Site will be designed to be protective of human health and the environment and will comply with applicable State and Federal laws.

8.0 Evaluation of Cleanup Alternatives

The purpose of this document is to establish a corrective action approach to remove the metal impacted soil source material. Pursuant to approval from the Georgia EPD, the cleanup objective is to remove the metal impacted soils in the vicinity of SB-3 to below the HSRA NCs.

8.1 Remedial Alternatives

Three (3) remedial alternatives, to mitigate the risks associated with contaminated soils identified at the Site, are provided below.

- No Additional Action
- Capping
- Soil Excavation, Disposal and Backfill

Each of these alternatives has been evaluated with respect to effectiveness, implementability, and cost. The following sections provide a synopsis of each technology and the final evaluation results.

8.2.1 No Additional Action

Technology Description

The No Additional Action option involves leaving the Site in essentially its current condition, with no remediation activities being performed.

Effectiveness

Because a source of metal impacted soil has been documented at the site, this option would result in future exposure potential to public health and the environment. Additionally, this exposure potential does not meet the objectives of this project; therefore, this corrective action alternative would not be effective and has been omitted from further consideration.

Implementability

The No Additional Action alternative would be easy to implement because it requires no additional remedial activities be performed at the Site. This alternative is effective in controlling the potential exposure to employees as long as access limitations are maintained (i.e. fencing). The Site is only partially paved and may allow for human exposure presently. Moreover, no additional action, does not contribute to the long term goals for the growth and economic development in the area.

Cost

As defined within this document, there would be minimal cost associated with implementing the No Additional Action alternative at the Site. The primary cost item would be the development of engineering controls (fencing). Costs associated with this type of effort typically requires between $10,000 and $20,000 to implement depending on the complexity of the circumstances.

8.2.2 Capping

Technology Description

Capping involves placing an impermeable cover over contaminated materials. Caps do not clean up the contaminated material. Instead, they isolate the contaminated media and keep it in place so it will not come into contact with people or the environment. Capping is considered an engineering control for impacts that remain on the site; therefore, some form of institutional control (Deed restriction) is required to document and record this engineering technology. With this approach additional costs would be incurred to implement a long-term maintenance plan to assure the public and regulatory authorities of the effectiveness, integrity and compliance of the engineering control.

Effectiveness

If designed appropriately, a Cap can be effective in 1) stopping rainwater from seeping through contaminated material and carrying the contamination into groundwater or surface water features, and 2) keeping people and animals from coming into direct contact with the impacted material. While construction and maintenance of a Cap is generally simple to implement, it is not practical for this Site for three reasons. First, the chemical characteristics of heavy metals in soil are not subject to natural biodegradation processes. Second, the metal impacted soil would continue to migrate vertically, by leaching of absorbed metal particulates, into deeper potable

aquifers. Therefore, this corrective action alternative would not be effective and has been omitted from further consideration.

Implementability

Currently, the Site is only partially paved and may allow for human exposure. A Cap design can range from the simple placement of a single layer of asphalt over the impacted media to the construction of a multi-layer / multi-component Cap system. For un-paved areas, the Cap typically consists of a top layer that is comprised of soil and vegetation to stabilize the Site, uptake moisture, and prevent erosion. The second (underlying) layer is typically comprised of a drainage system (pipes, gravel, etc.) to manage water the seeps through the top layer. A soil gas venting system may also be placed beneath the drainage system, to mitigate soil gas vapors. The bottom layer of a multi-layer Cap system is typically comprised of impermeable material; either clay or a geotextile barrier. Additionally, engineering controls (storm water drainage) would need to be implemented to direct surface water run-off away from the impacted area.

Cost

A multi-layer capping system in the soil impacted area onsite would range from approximately $15,000 to $20,000, depending on the design. An additional $15,000 would be necessary to implement the engineering and institutional controls for the Site. While only a limited portion of the Site would be subject to capping, the limitations outlined in the effectiveness discussion and long-term maintenance required to assure integrity of the Cap render further consideration of capping impracticable.

8.2.3 Excavation, Disposal and Backfill

Technology Description

This alternative includes the excavation, stockpiling and proper disposal of metal impacted soils. In this alternative, additional sampling to confirm the lateral extent of impacted soil would have to be conducted (Section 5.0).

Effectiveness

Removal of contaminated material from a Site is typically the most effective type of remediation, regardless of contaminant type.

Implementability

Many factors affect the implementability of a soil excavation project. Generally, excavation is limited to materials that are unconsolidated and can be removed using backhoes, excavators, and similar equipment. Source removal of the metal impacted soil is proposed by excavating approximately two feet of surficial soil in the vicinity of soil boring B-3 (Figure 3). Specifically, based on the Phase II report performed by Cardno in June 2016, excavation in the vicinity of B-3 will be approximately 30 feet wide by 30 feet long and 2 feet deep. Access must be available to bench, remove and stock pile the metal impacted soil on-site. Once removed, the impacted soils will be properly disposed and the excavation will be backfilled with clean soil.

Cost

The cost of excavation can vary widely based on the variables discussed above. The estimated volume to be removed for disposal is 1,800 cubic feet (Figure 3). Costs are typically separated based on the following tasks: 1) excavation, stockpiling and disposal 2) backfilling and compaction. Costs associated with this type of effort typically range between $25,000 and $30,000 to implement, depending on the complexity of the circumstances. This cost estimate assumes that the metal impacted soils do not exceed 1,800 cubic feet (30 feet by 30 feet by 2 feet area).

9.0 Selected Remedial Strategy

Option Number	Brownfield Cleanup Alternative	Estimated Budget Range	Estimated Schedule	Deliverable	Select Remedial Alternative
1	No Additional Action	$10,000 to $20,000	30 Days	N/A	Omitted
2	Capping	$30,000 to $35,000	30 Days	Environmental Covenant	Omitted
3	Soil Excavation, Disposal and Backfill	$25,000 to $30,000	120 Days	Compliance Status Report	Viable

The selected remedial alternative for removal of the metal impacted soils is soil excavation and disposal. This remediation approach is designed to support closure of the Site to the desired cleanup levels established by the Georgia Brownfield Program.

10.0 Certification

I, Gregg Stephens, Professional Geologist (PG) # 1421, certify that I currently hold an active license in the State of Georgia and am competent through education and experience to provide the geologic services contained in this report. I further certify that this report was prepared by me or under my direct responsible supervision.

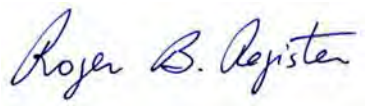
Prepared by:

Gregg Stephens, PG
Georgia License No. 1421

Professional Seal Only

I declare this "*Phase I Environmental Site Assessment*" Report for the Lifecycle Building Center, in Atlanta, Georgia meets or exceeds Cardno's standards for editorial content, technical accuracy, and quality assurance verification. All data and calculations presented herein have been checked for accuracy and the basis for all conclusions and recommendations have been described.

for Cardno



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Roger Register
National Brownfields Practice Leader

11.0 References

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Phase I Environmental Site Assessment - 1116 Murphy Avenue, Atlanta, Georgia dated May 2015, Cardno

Phase II Environmental Site Assessment - The Lifecycle Building Center Project, 1116 Murphy Ave SW, Atlanta, Georgia dated June 2016, Cardno, Inc.

*Report of Environmental Consulting Service*s - 1116 Murphy Avenue, Atlanta, Georgia- Former Rexnord Facility dated February 28, 2006, MACTEC Engineering and Consulting, Inc.

Soil Removal and Soil Disposal Activities - 1116 Murphy Avenue Atlanta, Georgia-Former Rexnord Facility dated May 12, 2006, MACTEC Engineering and Consulting, Inc.

Summary of Sump Areas-Limited Phase II Environmental Site Assessment - The Lifecycle Building Center Project,1116 Murphy Ave SW, Atlanta, Georgia dated May 2016, Cardno, Inc.

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US Global Change Research Program (USGCRP), via the internet database "*GlobalChange.gov*"

US Climate Data, via the internet database, Climate Data for Atlanta, Georgia (1981-2010)

FIGURES

Cardno
Shaping the Future

600 0 600

City of Atlanta – Lifecycle Building
1116 Murphy Avenue SW
Atlanta, Georgia
Parcel ID No. 14 011900070135
EPA Cooperative Agreement #00-D12413-0

Figure 1
USGS Topographic Map

Cardno
Shaping the Future

"This is not a map of survey."

60 0 60

City of Atlanta – Lifecycle Building
1116 Murphy Avenue SW
Atlanta, Georgia
Parcel ID No. 14 011900070135
EPA Cooperative Agreement #00-D12413-0

Figure 2
Site Boundary Map

Cardno
Shaping the Future

"This is not a map of survey."

1"=50 Ft

City of Atlanta – Lifecycle Building
1116 Murphy Avenue SW
Atlanta, Georgia
Parcel ID No. 14 011900070135
EPA Cooperative Agreement #00-D12413-0

Figure 3
Proposed Excavation Area Map Extent

APPENDIX A

- Phase I Environmental Site Assessment-1116 Murphy Avenue, Atlanta, Georgia dated May 2015, Cardno, Inc.

- Phase II Environmental Site Assessment- The Lifecycle Building Center Project, 1116 Murphy Ave SW, Atlanta, Georgia dated June 2016, Cardno, Inc.

Phase I Environmental Site Assessment

Lifecycle Building
1116 Murphy Avenue, SW
Parcel ID No. 14 01 19000700135
Atlanta, Fulton County, Georgia

May 2015

Prepared for: City of Atlanta
EPA Cooperative Agreement No. BF 00-D12413-0

Cardno
Shaping the Future

Phase I Environmental Site Assessment

Prepared for: City of Atlanta
55 Trinity Avenue, SW
Atlanta, Georgia 30303

Project Name: **Phase I Environmental Site Assessment**
Lifecycle Building
1116 Murphy Avenue, SW
Parcel ID No. 14 011900070135
Atlanta, Fulton County, Georgia

Date: May 2015

Table of Contents

Figures

Appendices

1 Executive Summary

Cardno (Cardno) has completed a Phase I Environmental Site Assessment (ESA) of the property located at 1116 Murphy Avenue, SW in Atlanta, Georgia. The study area is herein referred to as "the subject site/property" or "the site." The site consists of approximately 3.35 acres of land classified in County records as “commercial land.”

This assessment was performed to satisfy the requirements of the Client (City of Atlanta) and their assign(s) and Lifecycle Building Center with respect to potential environmental impairment and liabilities associated with the property due to contamination by hazardous substances, controlled substances or petroleum products on or near the site. This report meets the general requirements for conducting all appropriate inquiry into the previous ownership, uses, and environmental conditions of a property, as specified in 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries. Furthermore, this work was conducted by or under the responsible charge of an environmental professional as defined in 40 CFR §312.10.

Findings/Opinions:

This assessment has revealed recognized environmental conditions (RECs) at the subject property as defined by ASTM International, formerly known as the American Society for Testing and Materials (ASTM), *Standard Practice for Environmental Site Assessments E1527-13* as follows:

- On-site historic lead and/or iron foundry
- On-site historic paint booth
- On-site historic use and storage of large quantities solvents and petroleum products
- Former diesel repair activities on-site and hydraulic lifts/subsurface equipment; historic observed sludge/residue in floor pits in the warehouse area during a previous environmental evaluation.
- Identified lead impact to on-site soil above regulatory standards from either on-site activities or east-northeast adjacent off-site facilities.

Based on the findings of this investigation, additional assessment appears warranted to determine if the RECs identified above have impacted the site.

Furthermore, though an asbestos and lead based paint survey were not conducted as part of this Phase I ESA (non-scope item) since they are not considered as RECs, it should be noted there is a potential for asbestos and lead based paint to be present within the building. Therefore, if demolition or renovation activities are anticipated, an asbestos and lead based paint survey is recommended (likely required by local and state regulatory agencies) before commencement.

Please note: This is a cursory summary of findings. The full report must be read in its entirety for a comprehensive understanding of these Findings/Opinions.

PHASE II SUBSURFACE INVESTIGATION

Lifecycle Building Center – 1116 Murphy Avenue, Atlanta, Georgia
City of Atlanta (CATL) EPA Brownfields Assessment Grant

Conducted Under EPA Brownfields
Cooperative Agreement No. BF 00D12413-0

Prepared for:

City of Atlanta

Prepared by:

2000 1st Drive, Suite 220
Marietta, Georgia 30062

June 23, 2016

PHASE II SUBSURFACE INVESTIGATION

LIFECYCLE BUILDING CENTER

1116 MURPHY AVENUE
ATLANTA, GEORGIA

CARDNO PROJECT NO. Z070000118

Revised June 22, 2016

Prepared by:

Cardno
2000 1st Drive, Suite 220
Marietta Georgia 30062
Phone: (678) 433 1199

Prepared for:

City of Atlanta
EPA Cooperative Agreement #BF 00-D12413-0

AND

Lifecycle Building Center
1116 Murphy Avenue
Atlanta, Georgia

TABLE OF CONTENTS

1.0 INTRODUCTION

The address of the Property is 1116 Murphy Avenue, Atlanta, Fulton County, Georgia. The Property is known as the Lifecycle Building Center and consists of one large industrial building containing approximately 82,927 square feet on approximately 3.35 acres of land. According to Fulton County Tax records, the Property is currently owned by Eleven Sixteen Murphy LLC and is currently identified under the USEPA Brownfield Grant Cooperative Agreement # BF 00-D12413-0 for the City of Atlanta. A Site Map is included in **Appendix A**.

Cardno performed a Phase I Environmental Site Assessment (ESA) of the property in May 2015 in conformance with the scope and limitations of ASTM Standard Practice E 1527-13 and All Appropriate Inquiry (AAI) (as that term is defined by the U.S. EPA in 40 C.F.R. Part 312). Additional Phase I tasks were also performed in accordance with the "non-scope considerations" including visual asbestos containing materials (ACM) survey, radon documentation review, visual lead-based paint survey, lead in drinking water documentation review, wetlands, regulatory compliance, cultural and historical resources documentation review, visual mold survey and vapor intrusion documentation review of screening evaluation. This assessment has revealed evidence of *recognized environmental conditions* (RECs) in connection with the Property. This Prospective Purchaser Correction Action Plan (PPCAP) and Brownfield Application are being submitted to the Georgia Environmental Protection Division (GAEPD), Brownfields Development to obtain limitation of liability protection on behalf of Lifecycle Building Center at 1116 Murphy Avenue, Atlanta, Georgia pursuant to Article 9 of Chapter 8 of Title 12, the Georgia Hazardous Site Reuse and Redevelopment Act.

1.1 Property Location and Description

The Property consists of one (1) parcel of land totaling approximately 3.35 acres identified by parcel identification number 14 011900070135, Fulton County, Georgia. The property is addressed as 1116 Murphy Avenue and is currently developed with one large, industrial office warehouse currently used as a retail sales facility for construction and household supplies and fixtures. A copy of the Tax card and Tax map documentation is provided in **Appendix B**.

The Property lies on the United States Geological Survey (USGS) 7.5-Minute Series Topographic Map of the *Southwest Atlanta, Georgia* dated 1997. Based on available information, the elevation

of the Property is approximately 1,040 feet above mean sea level (AMSL). Topography of the Property slopes to the south-southeast. Review of the Ground Water Pollution Susceptibility Map of Georgia, Hydrologic Atlas 20 further indicates that the Property is within the low pollution susceptibility area.

The approximate site location and property boundaries are shown in **Appendix A**, **Figures 1** and **2**.

1.2 Background

Cardno personnel conducted interviews with the current occupant for historic information on the property.

- The property has been historically a manufacturer of conveyor systems and a foundry since the early 1930s.
- Significant damage to the interior was discussed (water damage, etc.)
- Reportedly, ACMs have been identified in the building.
- Reportedly, significant amounts of lead impacted soil was removed from the southern end of the building in the 1990s and 2000s.

Cardno identified the following previous assessment activities performed at the Property:

- *Phase I Environmental Site Assessment, 1116 Murphy Avenue* October 14, 2011, Atlanta Environmental Management, Inc. (AEM)

  The report documents the Phase I performed at the property and identified the following RECs:

  1. Several unknown use floor pits reportedly containing an oily soil/sludge. Concentrations of lead in soil in one of these locations exceeded the HSRA Notification Concentrations (NCs) for Georgia.
  2. Unknown origin of historically stored soil/demolition debris piles observed during the site reconnaissance.
  3. Surficial soil staining outside the southwestern portion of the building.
  4. Stained soil with elevated lead concentrations was excavated from the northwestern portion of the property in 1993 and 2006 to a depth of approximately 5 feet bgs. The extent of the lead contamination was never fully delineated. Soil samples collected in 2006, post excavation, continued to exceed the NCs for lead and a second

excavation was performed. No post excavation samples for this removal were obtained.

5. Northeast adjacent and upgradient oil and paint companies/facilities existing from at least 1932 to 1992. Subsequent use of the same property as an automotive salvage yard.

No recommendations for further actions or investigations were included in the AEM report.

- *Report of Environmental Consulting Services, Former Rexnord Facility* February 28, 2006, MACTEC Engineering and Consulting, Inc.

  The report documents the historical use and tenants of the property. At the time of the site visit, the property had been leased by Mr. Larry Owens since 1991 and had operated a truck repair business on-site. The building was also used as storage for a variety of items including: automobiles, auto parts, computers, fork lifts, fork lift battery chargers, pallets of soda ash, drums of resin, air compressors, books, car batteries and furniture. Steel plates were noted in the floor area that appeared to be covering the locations of former machinery associated with the historic manufacturing operations. A large amount of surficial staining was observed throughout the building interior and numerous vehicles were noted on the exterior, several of which also had surficial staining on the ground beneath them.

  Numerous manufacturing operations were performed on the property from at least 1915 and the earliest included an on-site metal foundry and paint spray booth for sprocket manufacturing and painting.

  The report documents several previous Phase I Site assessments including a 1986 Phase I which documented asbestos (transite) roofing and siding at the building. It also documented the removal of approximately 246.29 lead impacted soils from the property in 1992 through 2006 and included analytical data/results on MACTECs sampling of soil and groundwater for VOCs, SVOCs, RCRA Metals and PCBs. While the soil contained lead concentrations that exceeded HSRA Notification Concentrations, no groundwater samples contained constituents that exceeded the HSRA maximum contaminant levels (MCLs). The report recommended notification to the State for the elevated concentrations in soil above HSRA standards in addition to the removal of relict automobiles/general clean-up of the exterior yard.

- *Soil Removal and Soil Disposal Activities, Former Rexnord Facility,* May 12, 2006, MACTEC Engineering and Consulting, Inc.

  The report documents the excavation and removal of lead impacted soil from the property from two areas measuring 17’ x 19’ and 10’ x 10’ that were subsequently backfilled with concrete and crusher run. A total of 65.64 tons of soil were removed and disposed into Eagle Point Landfill in Ball Ground, GA.

- *Condition Assessment, 1116 Murphy Avenue Building,* October 13, 2011, Walter P. Moore and Associates, Inc.

The report documented the physical condition of building and recommended immediate repairs which included the following:

1. Load bearing building columns that are out of plumb and offset from bearing pads
2. Roof truss chords weakened by torch cutting and corrosion
3. Clean and coat corroded steel members
4. Address water intrusion areas on the ceiling tiles

- *Existing Conditions and Recommendations Report, Fire Protection and Electrical Systems, 1116 Murphy Avenue Building,* September 30, 2011, Newcomb & Boyd.

  The report identified that the building was partially protected by automatic sprinklers in the mezzanines, the areas directly below the mezzanines and the office areas that were installed circa 1946. During the assessment, it appeared that the systems had been shut off for some time. Recommendation included that the sprinkler systems were more than 50 years old, obsolete, had reached the end of their useful service life and should be replaced. Current building codes would require the new system to be constructed via piping that is sized by hydraulic calculations instead of the original system which was designed on a pipe schedule as this method is no longer permitted for a building of this size. No backflow preventer was present and would be required per current codes.

- Cardno conducted a Phase I ESA at the Property in May, 2015 and identified the following RECs at the subject property as defined by ASTM International, formerly known as the American Society for Testing and Materials (ASTM), *Standard Practice for Environmental Site Assessments E1527-13* as follows:

  1. On-site historic lead and/or iron foundry
  2. On-site historic paint spray booth
  3. On-site historic use and storage of large quantities of unknown solvents and petroleum products
  4. Former diesel engine/vehicle repair activities on-site and hydraulic lifts/subsurface equipment; historic observed sludge/residue in floor pits in the warehouse area during a previous environmental evaluation.
  5. Identified lead impact to on-site soil above regulatory standards from either on-site activities or east-northeast adjacent off-site facilities.

  Furthermore, though an asbestos and lead based paint survey were not conducted as part of this Phase I ESA (non-scope item), it should be noted there is a potential for asbestos and lead based paint to be present within the building. Therefore, if demolition or renovation activities are anticipated, an asbestos and lead based paint survey is recommended and required by local and state regulatory agencies before demolition and/or renovation commencement.

2.0 QUALIFICATION OF SITE AND PURCHASER

The Hazardous Site Reuse and Redevelopment Act has set forth certain criteria in order to qualify for the Brownfield Limitation of Liability (LOL). Based on our understanding of the subject property, we conclude that both the property and Lifecycle Building Center meet the Act's requirements as summarized below.

2.1 Subject Property

1. Has had a preexisting release,
2. Does not have liens filed under subsection (e) of Code Section 12-8-96 against it,
3. Is not listed on the Federal National Priority List,
4. Is not undergoing response activities by an order of the Environmental Protection Agency, and
5. Is not a hazardous waste facility as defined in Code Section 12-8-62.

2.2 Lifecycle Building Center

1. Is not a person or entity who has contributed or is contributing to a release at the property,
2. Is not related to, or is otherwise affiliated with the current owner of the subject property or any person who has contributed or is contributing to a release at the site,
3. Has not found evidence of liens filed under subsection (e) of Code Section 12-8-96 against the property, and
4. Is not in violation of any order, judgment, stature, rule or regulation subject to the enforcement authority of the direction.

3.0 SITE ASSESSMENT ACTIVITIES COMPLETED TO DATE

As indicated in Section 1.2, previous investigation activities at the Property included sampling and laboratory analyses, as well as removal of lead impacted soil by various consultants. However, no confirmation sampling was conducted post soil excavation and to address the requirements of the USEPA Brownfield Grant Cooperative Agreement # BF 00-D12413-0 for the City of Atlanta,

Cardno subsequently completed additional assessment activities at the Property in May and July 2015. These activities included the following:

- Completion of a Phase I ESA for the Property.

- Installation of ten (10) soil borings with soil sampling and laboratory analyses throughout the property.

- Construction of nine (9), 2-inch diameter, permanent, polyvinyl chloride (PVC) groundwater monitoring wells, within the soil borings, with the exception of SB-5, located inside the building. This boring encountered refusal at 5 beet bgs. The wells were installed to a.) collect groundwater samples, b.) provide reproducible groundwater sampling points for future analyses, and c.) measure groundwater levels to aid in creating a generalized groundwater flow map. Tables summarizing the analytical findings are presented in **Appendix D** and laboratory analytical results are presented in **Appendix E**. The soil boring logs are presented in **Appendix F**. Well construction detail are presented in **Appendix F**.

- The following sections summarize the results of Cardno's investigation.

3.1 Soil Sampling

Cardno's investigation included the installation of ten (10) soil borings (SB-01 thru SB-10) at the site. Specifically, soil borings were placed in a general grid pattern throughout the site to provide the most effective area of coverage in evaluating on-site and off-site environmental concerns. In general, borings, B-1, B-6, B-7 and B-8 were installed along the southeast border of the property to evaluate a release from loading and unloading along a railroad spur. Furthermore, borings, S-2, B-3, B-4, B-5, B-9 and B-10 were installed around the perimeter and center of the site to evaluate historic operation on-site and off-site.

The justification for soil sample collection depth was based on the nature of the contaminant of concern. Specifically, shallow soil samples (0-5 feet) were collected to evaluate metal contaminants, which migrate slowly in soil, associated with historic operations as a lead/iron foundry and spray paint booths. Deeper soil samples (10-17 feet) were collected to evaluate impact from petroleum/solvents, which migrate more rapid in soils, as well as potential impact to groundwater.

These borings were installed by GeoLab, a Georgia-licensed drilling firm, using a conventional drill rig and hollow stem augers (HSA). Soil samples were collected from each boring location for laboratory analyses of volatile organic compounds (VOCs) by EPA Method 8260B, semivolatile organic compounds (SVOCs) by EPA Method 8270D, polychlorinated biphenyls (PCBs) by EPA Method 8082A, Resource Conservation & Recovery Act (RCRA) 8 metals by EPA Method 6010C and mercury by EPA Method 7471B.

The HSA soil borings (SB-01 through SB-04 and BS-06 through SB-10) were advanced to depths ranging from twenty (20) feet to thirty (30) feet below ground surface (BGS) and were terminated after encountering the unconfined water table. Soil samples were collected continuously from the ground surface to approximately ten (10) feet BGS and then approximately every five (5) feet until termination. Groundwater was encountered in all borings at varying depths except for SB-05, where refusal was encountered above the water table. Soils were field screened in each boring for the presence of organic vapors using an organic vapor analyzer (OVA). A portion of soil was collected at each sample interval and placed directly into a new, zip-style plastic bag. The pre-labeled bag was then allowed to rest at ambient room temperature (out of direct sunlight) for a minimum of fifteen (15) minutes. The OVA probe was then inserted into each bag and the maximum organic vapor measurement was recorded. The soil interval exhibiting the highest OVA reading was selected for laboratory analyses. To assess the surface impact of historically identified metals at the property, a surface soil sample ranging in depth from two (2) to five (5) feet BGS was collected for metals analysis at each location. A complete list of soil sample locations, boring logs, depth interval(s) sampled, and laboratory results are provided in the **Appendix E** and boring logs in **Appendix F**.

The laboratory results indicated detectable concentrations of metals and VOCs in the soil samples collected from several of the boring locations. No PCBs or SVOCs were noted above laboratory method detection limits (MDLs). However, only soil boring location SB-03 exhibited concentrations of two metals above the Georgia Environmental Protection Division (GA EPD), Hazardous Sites Response Act (HSRA), Soil notification trigger values outlined in Chapter 391-3-19. Arsenic was detected at 52.4 milligrams per kilogram (mg/Kg) in SB-03 at a depth of zero (0) to two (2) feet BGS. The HSRA Soil trigger notification value for arsenic is 41 mg/Kg. Lead was detected at 800 mg/Kg in SB-03 also at a depth of zero (0) to two (2) feet BGS. The HSRA Soil trigger notification value for lead is 400 mg/Kg. These detections are considered reportable by the landowner to GA EPD. However, GA EPD review and approval of the PPCAP would likely address this item with no additional reporting required. The following is a summary of metal concentrations detected in shallow soil at the site:

RCRA Metals (6010C & 7471B)											
Sample I.D.	SB-01 (0-2)	SB-02 (0-2)	SB-03 (0-2)	SB-04 (0-2)	SB-05 (2-5)	SB-06 (0-2)	SB-07 (0-2)	SB-08 (2-5)	SB-09 (2-5)	SB-10 (0-2)	HSRA Notification Concentrations[1]
Sample Matrix	soil	soil	soil	soil	soil	soil	soil	soil	soil	soil	Soil
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Date	7/22/15	7/22/15	7/21/15	7/21/15	7/22/15	7/22/15	7/21/15	7/20/15	7/20/15	7/20/15	
Arsenic	<5.83	**9.28**	**52.4**	<5.28	<4.68	**14.7**	**24.8**	<5.97	<5.14	<7.94	41
Barium	**84.8**	**276**	**243**	**81.7**	**226**	**260**	**147**	**108**	**21.4**	**28.7**	500
Cadmium	**1.79**	**2.83**	**3.77**	**2.41**	**1.22**	**1.88**	**1.73**	**3.68**	<0.514	**3.1**	39
Chromium	**29.3**	**52.3**	**35.1**	**33.7**	**39.2**	**35.4**	**37.4**	**32.5**	<5.14	**60.1**	1200
Lead	**190**	**332**	**800**	**79**	**12.6**	**199**	**243**	**90.2**	**21.5**	**18.7**	400
Mercury	<0.0638	**0.0803**	**0.174**	**0.0944**	<0.0464	NS	<0.0625	<0.0527	<0.0565	<0.0794	17
Selenium	<5.83	<5.17	<5.39	<5.28	<4.68	<5.83	<6.49	<5.97	<5.14	<7.94	36
Silver	<5.83	<5.17	<5.39	<5.28	<4.68	<5.83	<6.49	<5.97	<5.14	<7.94	10

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NA - Not Applicable. No standard exists for this compound
ND - Not Detected
--- Data Not Available

25 Indicates detection of compound greater than laboratory detection limits
62 Indicates detection of compound equal to or greater than regulatory standards

The detected soil concentrations exceeding HSRA Soil trigger notification values are presented on **Figure 3** of **Appendix A**. **Appendix D** presents the results for VOCs in **Table 1,** the results for the 8 RCRA metals in **Table 2,** and the results for SVOCs are in **Table 3**. The results for PCBs are presented in **Table 4** in **Appendix D**.

3.2 Groundwater Sampling

Cardno's investigation also included the construction of nine (9), 2-inch diameter (PVC) monitoring wells within each of the ten (10) soil borings, except for SB-05 due to refusal at five (5) feet BGS. Upon completion of soil sampling in each boring, new, decontaminated 2-inch diameter, flush-threaded, PVC well casing and screen (0.010" machine slotted) sections were installed through the interior of the augers and new, silica sandpack material was applied to the annulus as the augers were withdrawn. Sandpack material was applied to a minimum of two (2) feet above each well screen and bentonite seals (minimum two (2) feet thick) were placed above the sandpack with Portland cement grout placed up to the surface. Each groundwater monitoring well was finished at the surface using a traffic-rated, flush-mount protector in a 2' x 2' concrete pad with a lockable, expanding cap and padlock.

Following completion, the wells were undisturbed for forty-eight (48) hours before well development proceeded. Well development consisted of aggressive groundwater removal in each well using a peristaltic pump and dedicated polyethylene tubing for well development. The intent of the well development was to remove suspended fines and materials resulting from the soil boring activities and to encourage formation groundwater to enter the well screens. Following well development, groundwater samples were collected from the wells using a peristaltic pump and new, decontaminated tubing under "low-flow" protocol. Groundwater samples were submitted for analyses of VOCs by EPA Method 8260B, SVOCs by EPA Method 8270D, PCBs by EPA Method 8082A, RCRA 8 metals by EPA Method 6010C and mercury by EPA Method 7470A.

No PCBs or PAHs were noted above laboratory method detection limits (MDLs) in the groundwater samples analyzed. The analytical results identified detectable concentrations of barium in groundwater from seven (7) of the nine (9) constructed wells. None of these exceeded the HSRA Target Concentration for Groundwater Media. However, a concentration of arsenic (0.0137 milligrams per liter (mg/L)) was detected in monitoring well MW-1 and a concentration of cadmium (0.00896 mg/L) was detected in monitoring well MW-2 above their Target Concentration for Groundwater of 0.010 mg/L and 0.005 mg/L, respectively. Detectable concentrations of VOCs included chloroform in monitoring wells MW-04 (0.0107 mg/L) and MW-09 (0.00468 mg/L), neither of which exceeded the HSRA Target Concentration for Groundwater Media of 0.008 mg/L for the compound. VOCs detected above HSRA Target Concentrations for Groundwater are presented on **Figure 4** of **Appendix A** and the analytical results for VOCs are summarized in **Table 5** of **Appendix D**. **Table 6** presents the results for 8 RCRA metals. **Tables 7** and **8** present the results of SVOCs and PCBs, respectively.

Table 9 includes the groundwater elevations. Well construction details are presented in **Appendix F**. Groundwater sampling logs are presented in **Appendix H**.

Since the Brownfield Program affords prospective purchaser liability protection for groundwater impact, these groundwater impacts are to be addressed but are not the direct responsibility of the prospective purchaser under the program.

Following completion of sampling activities, the top of casing of all nine (9) permanent monitoring wells were surveyed against an arbitrary datum of 100 feet for calculation of top of well casing

elevations. These elevations were then used to prepare a potentiometric surface map for the Property. A copy of the map is presented as **Figure 5** in **Appendix A**. Elevation data for the Property indicates that groundwater flow is toward the south-southeast at the property.

4.0 ADDITIONAL ASSESSMENT

Cardno recommends the property enter into the Georgia Brownfield Program to obtain limitation of liability for the detections of arsenic and cadmium identified above HSRA guidance values in the groundwater at the site. Cardno also recommends that the detection of lead in soil at MW-3 be addressed by the excavation, removal and proper disposal of surface soil to a depth of approximately two (2) feet (see Figure 6). Linear extent of the excavation would be determined by the building exterior on the west. This area is estimated to measure approximately 30' wide x 30' long x 2' feet and total approximately 1,800 cubic feet of soil.

Following excavation, Cardno recommends the collection of confirmation soil samples, at the excavation limits, to determine if additional excavation would be necessary. At verification of lead and arsenic in soil below respective NCs of 41 mg/kg and 400 mg/kg, replacement of the soil with clean fill material from a known source, re-compaction of the area, and re-dressing the surface with native grass seed to prevent erosion is recommended.

5.0 CORRECTIVE ACTION PLAN (CAP) – CARDNO

Laboratory analytical results from Cardno's July 2015 Phase II investigation identified the presence of lead and arsenic impact to soil, and arsenic and cadmium impact to groundwater confined along the western property boundary. Since planned redevelopment activities at the property would be limited in nature and consist primarily of renovation of the existing building, the less invasive soil removal strategy outlined in Section 4.0 is recommended. Also, since the location of the metals detections is beyond the existing footprint of the building, with no VOC detections noted, and since no plans for extending that footprint exist, no recommendation for the application of an engineered vapor barrier and possible venting system is offered.

The excavation, handling, transport, and disposal of the impacted material/soil will be performed by methods that: (i) prevent contamination of the surrounding environment (soil, water, air), (ii) are in accordance with federal, state, and local laws, and (iii) protect personnel in the excavation area and

adjacent areas. Analytical results from Cardno's July subsurface investigation will be utilized for soil characterization and verified to be in accordance with the selected permitted disposal facility's requirements. Excavated materials with be hauled off site at the time of excavation. The excavated impacted soil will be transported in compliance with all applicable regulations for transporting such waste and disposal at a pre-approved disposal facility permitted to accept designated waste. Pre-treatment of the impacted soil may be required prior to transport.

The work will be performed in compliance with applicable Occupational Safety and Health Administration (OSHA) regulations, and in accordance with a project specific Health, Safety, and Emergency Response Plan.

6.0 SCHEDULE

Cardno anticipates that the PP CAP activities including the additional delineation activities, excavation and removal of the subsurface soils and vapor barrier construction will be completed within approximately 180 days from the date Lifecycle Building Center acquires legal ownership of the property. The estimated soil excavation/ removal schedule is as follows:

- Soil removal start date – September 1, 2016
- Completion of excavation for soil removal – October 1, 2016
- Sampling and laboratory analysis – October 15, 2016
- Install clean soil, compaction and re-dress surface – January 31, 2017

The estimated completion date for submittal of a Completion Report/CSR for the property is March 31, 2017.

7.0 PREPARATION OF CSR/Completion Report

A CSR/Completion Report for the Lifecycle Building Center should be prepared upon the completion of the corrective action activities as outlined in Section 4 and 5. The written report should consist of information in the format required for submission to the GAEPD and should include the following:

- A legal description of the qualifying property;

- A description of geologic and hydrogeologic conditions at the site;
- A description of existing or potential human or environmental receptors;
- A summary of actions taken to characterize, eliminate, control, or minimize the potential risk at the site;
- A summary of all pertinent field and laboratory data;
- Documentation of the proper characterization, transportation, and disposal of impacted soils;
- An evaluation of onsite and offsite sources contributing to the release;
- A summary of groundwater characteristics including potentiometric information;
- A summary of all corrective action, to bring the site into compliance with applicable soil risk reduction standards; and
- Certification of compliance with the applicable RRS.

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8.0 CERTIFICATION STATEMENT

I certify I have reviewed the technical information presented in this document, in accordance with State Rules and Regulations. As a Registered Professional Geologist, I certify that I am a qualified groundwater professional. The information and laboratory data in this plan/report and attachments are true, accurate, complete and in accordance with applicable State Rules and Regulations.

Gregg Stephens, PG
Senior Project Manager
Georgia No. 1421

Date 6/22/16

APPENDIX A

FIGURES

Cardno
Shaping the Future

City of Atlanta – Lifecycle Building
1116 Murphy Avenue SW
Atlanta, Georgia
Parcel ID No. 14 011900070135
EPA Cooperative Agreement #00-D12413-0

Figure 1
USGS/Site Vicinity Map

FILENAME: COA LIFECYCLE BLDG - SITE PLAN

Cardno
Shaping the Future

CITY OF ATLANTA - LIFECYCLE BUILDING
1116 MURPHY AVENUE SW
ATLANTA, GEORGIA
PARCEL ID No. 14 011900070135

SITE PLAN

FIGURE: 2

DRWN BY:	ED
CHK'D BY:	JK
DATE:	SEPT 2015
REFERENCE:	

FILENAME: COA LIFECYCLE BLDG - SITE PLAN

Cardno
Shaping the Future

CITY OF ATLANTA - LIFECYCLE BUILDING
1116 MURPHY AVENUE SW
ATLANTA, GEORGIA
PARCEL ID No. 14 011900070135

SOIL ANALYTICAL RESULTS

FIGURE: 3

DRWN BY:	ED
CHK'D BY:	JK
DATE:	SEPT 2015
REFERENCE:	

FILENAME: COA LIFECYCLE BLDG - SITE PLAN

Cardno
Shaping the Future

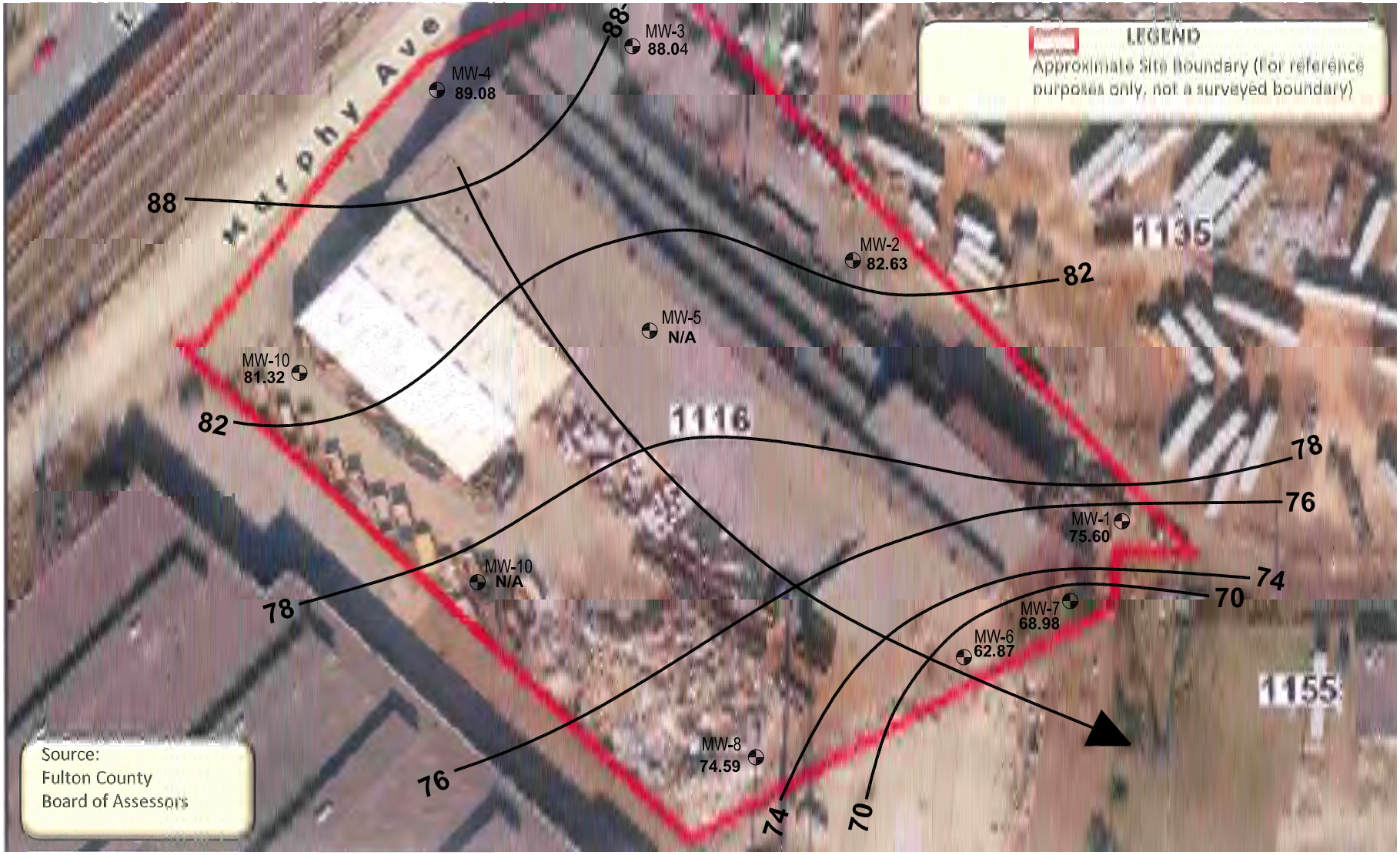
CITY OF ATLANTA - LIFECYCLE BUILDING
1116 MURPHY AVENUE SW
ATLANTA, GEORGIA
PARCEL ID No. 14 011900070135

GROUNDWATER
ANALYTICAL RESULTS

FIGURE: 4

DRWN BY:	ED
CHK'D BY:	JK
DATE:	SEPT 2015
REFERENCE:	

FILENAME: COA LIFECYCLE BLDG - SITE PLAN



Cardno
Shaping the Future

CITY OF ATLANTA - LIFECYCLE BUILDING
1116 MURPHY AVENUE SW
ATLANTA, GEORGIA
PARCEL ID No. 14 011900070135

POTENTIOMETRIC SURFACE MAP

FIGURE: 5

DRWN BY:	ED
CHK'D BY:	JK
DATE:	SEPT 2015
REFERENCE:	

Cardno
Shaping the Future

"This is not a map of survey."

1"=50 Ft

City of Atlanta – Lifecycle Building
1116 Murphy Avenue SW
Atlanta, Georgia
Parcel ID No. 14 011900070135
EPA Cooperative Agreement #00-D12413-0

Figure 6
Approximate Soil Excavation Extent

APPENDIX B

LEGAL DESCRIPTION AND DOCUMENTATION

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search | Fulton Home

Owner and Parcel Information				
Owner Name	ELEVEN SIXTEEN MURPHY LLC	Today's Date	May 18, 2015	
Mailing Address	4351 QUAIL RIDGE WAY	Parcel Number	14 011900070135	
	NORCROSS, GA 30092	Tax District	05T	
Location Address	1116 MURPHY AVE			
Zoning	I2	I2	Acres	3.35
Property Class	I4-Industrial Small Tracts	Parcel Map	Show Parcel Map	
Neighborhood	C604	Homestead	N	
Legal Description				

Assessment Information					Show Historical Assessments	Show Assessment Notice
Year	LUC	CLASS	Land Value	Building Value	Total Value	Assessed Value
2014	401	I4	$ 418,800	$ 132,480	$ 551,280	$ 220,510

Land Information					
Land Type	Land Code	Description	Square Feet	Acreage	Price
A	21		145,926	3.35	$ 418,750

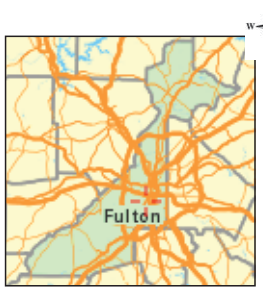
Commercial Improvement Information					
Card	Building Type	Structure Code/Desc	Units	Year Built	Total Square Footage
1	01	401-401 MFG/PROCESSING		1942	70,457
2	02	398-398 WAREHOUSE		1966	12,470

Accessory Information				
Description	Year Built	Area	Grade	Value
PAVING-ASPHALT PARK	1966	25000		$ 3,117
	1966	6 X 700 4200		$ 334

Sale Information								
Sale Date	Sale Price	Instrument	Deed Book	Deed Page	Sale Qualification	Validity	Grantee	Grantor
2006-12-29			44312	672	Unqualified	T-Sale < = 1000	EVELEN SIXTEEN MURPHY LLC	REXNORD INDUSTRIES LLC
2006-03-10	$ 325,000	LW	42280	428	Unqualified	8-Not Typical of Market Conditions	ELEVEN SIXTEEN MURPHY LLC	GPI INTERIM INC
2002-08-20		QUIT CLAIM DEED	33193	619	Unqualified	T-Sale < = 1000	U S S CORP	REXNORD CORPORATION
1981-10-21	$ 500,000		07983	81	Unqualified	9-Unvalidated/Deed Stamps		

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search Page | Fulton Home

Fulton County Assessor			
Parcel: 14 011900070135 Acres: 3.35			
Name:	ELEVEN SIXTEEN MURPHY LLC	Land Value:	418800
Site:	1116 MURPHY AVE	Building Value:	132480
Sale:	$0 on 2006-12-29 Reason=T Qual=U	Misc Value:	
Mail:	4351 QUAIL RIDGE WAY NORCROSS, GA 30092	Total Value:	551280



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APPENDIX C

PREVIOUS REPORTS

MACTEC

engineering and constructing a better tomorrow

February 28, 2006

Mr. Harry Jenkins
1116 Murphy, LLC
c/o Stowers & Company
5000 Burnt Hickory Road
Kennesaw, Georgia 30152

Subject: **Report of Environmental Consulting Services**
Former Rexnord Facility
Fulton County, Georgia
MACTEC Project: 6305-06-0436

Dear Mr. Jenkins:

MACTEC Engineering and Consulting Inc., (MACTEC) is pleased to submit this Report of Environmental Consulting Services which includes a Phase I and Phase II Environmental Site Assessment of the Former Rexnord Facility in Fulton County, Georgia. The purpose of our services was to identify environmental concerns, recognized environmental conditions and business environmental risks.

This report is intended for the use of 1116 Murphy, LLC, subject to the contractual terms agreed to for this project. Reliance on this document by any other party is prohibited without the express written consent of MACTEC and that party's acceptance of the attached Secondary Client Agreement or other mutually agreeable terms and conditions. Use of this report for purposes beyond those reasonably intended by 1116 Murphy, LLC and MACTEC will be at the sole risk of the user.

This report presents project information, which includes survey procedures and limitations, along with our findings, conclusions and recommendations. We appreciate your selection of MACTEC for this project and look forward to assisting you further on this and other projects. If you have any questions, please do not hesitate to contact us.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

Whitney R. Gaines
Staff Engineer

William H. Murdy, P.G.
Principal Geologist

1.0 EXECUTIVE SUMMARY

PROPERTY NAME: Former Rexnord Facility
LOCATION: Atlanta, Fulton County, Georgia

This executive summary is provided for convenience and should not substitute for review of the complete report, including all attachments.

Based on the data collected during the assessment, our findings and conclusions are summarized as follows:

1.1 ON-SITE

The subject property consists of a 3.3-acre property with approximately 97,700 square feet of building space. The building contains a large warehouse that was originally built in 1914, an office space that was added in 1935, and then a Butler type structure that was added in 1972. There is a former railroad spur that runs along the southeastern portion of the subject site and then extends toward Sylvan Road located east of the subject property. There was also a former railroad spur located along the eastern side of the site that has since been removed. The site is currently owned by Invensys, although it has been leased by Mr. Larry Owens, Jr., since 1991. Mr. Owens formerly operated DMC Atlanta, a truck repair business, in the Butler-type structure on the subject property. DMC no longer operates on-site, although Mr. Owens sub-leases the Butler-type structure to another truck repair business, D&D Diesel Service, Inc. Mr. Owens also subleases the warehouse space to a private tenant who uses it for the storage of a very large quantity of miscellaneous items. These items include but are not limited to: automobiles, automobile parts, computers, electronic equipment, fork lifts, fork lift battery chargers, voting booths, pallets of soda ash, drums of resin, air compressors, pallets of books, old car batteries, and furniture. These items are scattered throughout the main floor of the warehouse building, and also on the mezzanine structure that extends above both sides of the warehouse. During the site reconnaissance, there were three steel plates observed on the concrete floor of the central portion of the warehouse. The plates appeared to be covering voids in the concrete floor where the machines from the former manufacturing operation on-site may have been located. When the plates were removed, two of the voids, or pits, were filled with oil and the third was filled with soil that also had some oil staining. These three pits were identified as a potential environmental concern in relation to the subject site. A former paint booth was also observed during the site reconnaissance inside the southeastern portion of the building on-site. A large vertical sliding

door, located next to the paint booth, led to a dock outside the building where a substantial quantity of paint staining was observed. There was also evidence of substantial paint staining down the sides of the dock extending to the ground below.

A portion of the office space at the northwestern portion of the site is currently sub-leased by D&D Diesel Service, Inc. and the remainder of the office space contains miscellaneous trash and old electronic equipment. As previously mentioned, the Butler type structure is also currently sub-leased by D&D Diesel Service, Inc. and is being used as an auto repair garage. The repair activities at D&D include retrofits of truck chassis/engines, vehicle preventive maintenance, engine overhauls, and general auto repair. A large amount of surficial staining was observed outside of the southwestern portion of the building surrounding the D&D garage area. A storm drain with significant visual staining was located outside the southeastern portion of the garage area. This drain captures water from periodic pressure washings of the floor of the D&D repair shop. An aboveground storage tank (AST) used by D&D for the collection of waste oil was located on the southeastern portion of the garage area. Surficial staining was observed on the soil and concrete surrounding the AST. Numerous vehicles were scattered on the southern portion of the site outside the D&D garage area, and several of the vehicles had surficial staining on the ground beneath them. This auto repair area represents an environmental concern to the subject site.

Based on historical sources reviewed, the original occupant of the warehouse on-site was Dowman-Dozier Manufacturing Company in 1915 according to Atlanta City Directories. Dowman-Dozier was a machinery manufacturer that primarily produced sprockets. In 1920, the subject property was purchased by Bailey-Burrus Manufacturing Company and in 1973 the subject site was purchased by Link-Belt Company. According to the historic Sanborn maps from 1932, 1950, and 1978, the southeastern portion of the warehouse building on-site operated as a foundary for the sprocket manufacturing operation. There was also a paint booth located in the southeastern corner of the warehouse where the manufactured sprockets were painted. In 1975, the subject site was purchased by FMC Corporation (Link-Belt Division) Machinery Manufacturers, according to Atlanta City Directories. In 1986 the company name was shown as Power Transmission (PT) Components (Chain Division) Sprocket Manufacturers in Atlanta City Directories, although the property was still owned by FMC Corporation. PT Components ceased operations on-site in July 1986 and manufacturing operations have not been conducted at the

subject property since the facility shut down. According to Mr. Ken Witter, Director of Real Estate at Rexnord Corporation, Rexnord purchased PT Components in August 1988 and took ownership of the subject site. Rexnord sold the subject property to BTR in 1994 and then in 2000, BTR sold the subject site to Invensys, the current property owner.

Based on information provided by Invensys, a previous Phase I Assessment was conducted for the subject site by SECOR in 1998. At the time of the Phase I, Industrial Metals was sub-leasing a portion of the warehouse building on-site on a month to month basis to store steel. It is unknown exactly how long Industrial Metals utilized the subject property, however, SECOR confirmed that "the environmental impact from this (Industrial Metals) storage area appeared to be negligible." The previous Phase I also mentioned that lead-contaminated soil resulting from a previous painting operation on-site had been removed in June 1993. Rust Remedial Services, Inc. (RRS) was responsible for the removal, transport, and disposal of the contaminated soil. The soil that was removed was located on the north-northeastern portion of the subject site along the former location of a buried railroad spur. According to a report issued by RRS, "the soils on-site were determined to exhibit hazardous waste characteristics as defined by the United States Environmental Protection Agency (USEPA) under the Toxicity Characteristic Leaching Procedure (TCLP). The TCLP analysis of soil indicated lead contamination in ranges from 7.6 mg/L to approximately 25 mg/L." The dimensions of the excavated area were defined as being "an area visually stained by oily residue measuring approximately 120 feet long, 15 feet wide and approximately 6 inches deep." A total of 246.29 tons of material was excavated for disposal from the subject site.

Based on additional information provided by Invensys, a site investigation was conducted by Professional Technical Support Services, Inc. (Pro-Tech) in November 1992. The investigation consisted of hand auger borings and soil sampling on the northeastern portion of the site where a former railroad spur was located. A total of eight borings were advanced along the ground beside the concrete loading dock that extended down the length of the northeastern side of the warehouse building. Pro-Tech reported that oil odors were encountered during the advancement of five of the eight boreholes at depths ranging from 0 to 18 inches. Two soil samples were collected based on the results of the hand auger boring activities at depths of 20 and 24 inches respectively. The samples were analyzed for PCB's, Total Petroleum Hydrocarbons (TPH), Benzene, Ethyl Benzene, Toluene, and Xylenes (BTEX). All measurements were below

detection limits except for one sample that contained 261 mg/kg of TPH at a depth of 24 inches. This sample was taken outside the northern-central portion of the warehouse building.

An asbestos abatement was completed on the subject site in March 1995 by Winter Environmental Services, Inc. Asbestos-containing insulation surrounding a small heating boiler and associated piping located in the northwestern portion of the warehouse building was removed as a result of the abatement.

The previous Phase I conducted by SECOR mentioned above also noted that in October 1986, various building materials from the site were sampled and evaluated for the presence of asbestos by polarized light microscopy. Chrysotile asbestos (transite) was positively identified in exterior siding, roof exterior, and the electrical crib on the mezzanine in the warehouse building. Interior walls and ceilings and thermal system insulation were also categorized as suspected asbestos-containing materials.

The subject property is listed as a Resource Conservation and Recovery Act (RCRA), Small Quantity Generator (SQG), and is also on the Facility Index System (FINDS) list.

1.2 OFF-SITE

The subject site is bounded to the north-northwest by Murphy Avenue and farther northwest by a MARTA rapid rail line, CSX railroad, and then Lee Street. East of the subject site is a cleared, vacant lot where a former warehouse once stood. The warehouse burned approximately two years ago and the debris has since been cleared. Farther northeast of the subject site is the Cut Rate Box Company and farther east of the subject site is Sylvan Road. South-southeast of the subject property is the Georgia Department of Administrative Services.

There are eighteen regulatory listed facilities identified within the general site vicinity. Due to their distances and/or hydrologic positions in relation to the subject site, none of these listed facilities represent an environmental concern to the subject site, in our opinion.

1.3 PHASE II ASSESSMENT

Several environmental concerns were noted as a result of the Phase I Assessment conducted at the subject site. The former sprocket manufacturing that occurred on the subject property from approximately 1914 until 1986 was the initial environmental concern. The sprockets were

SECTION 1.0
EXECUTIVE SUMMARY

As discussed in the following report, Atlanta Environmental Management, Inc. (AEM) conducted a Phase I Environmental Site Assessment (ESA) of property ("the subject property") located at 1116 Murphy Avenue in Atlanta, Fulton County, Georgia (see Attachment A—Site Location). The subject property is located in the Oakland City neighborhood of the City of Atlanta (Neighborhood Planning Unit S) on the southeast side of Murphy Avenue, approximately 1,000 feet southwest of the intersection of Murphy Avenue and Sylvan Road and approximately 1,000 feet northeast of the intersection of Murphy Avenue and Avon Avenue (see Attachment B —Site Sketch). The subject property is owned by Eleven Sixteen Murphy, LLC.

Vehicles can access the subject property via an entry drive from Murphy Avenue (see Attachment B). The subject property's surroundings are primarily commercial and light industrial.

The assessment was conducted for the Lifecycle Building Center (LBC) in conformity with the standards and practices established for All Appropriate Inquiry (AAI) investigations as adopted by the U.S. Environmental Protection Agency (EPA) and codified in 40 CFR 312, the standards established by the American Society for Testing and Materials in ASTM E 1527-05, and the terms of the contract between LBC and AEM dated October 3, 2011.

Records reviewed (see Attachment C—Supporting Documentation) indicate that the Fulton County Parcel Identification Number for the property is 14-0119-0007-013-5. Assessor's records indicate that the site comprises 3.35 acres and is currently occupied by a manufacturing building and an attached multi-use storage building (Butler building).

Based on a review of aerial photographs, Sanborn maps, topographic maps, previous environmental reports, Fulton County Tax Assessor's records, and interviews with Mr. Harry Jenkins (see Attachment D—Record of Communication), the main manufacturing building was constructed on the subject property in 1914. The original building was expanded over the years, and an attached Butler building was constructed adjacent (southwest) to the main manufacturing building in 1966. Manufacturing ceased at the subject property in September 1986, but the property or portions of the property have been leased to various tenants, including a diesel repair company and a waste management company. The subject property is currently vacant and idle, with no businesses operating on site.

The primary feature of the subject property is the main manufacturing building totaling approximately 50,318 square feet (see Attachment B and also Attachment E—Site Photographs). The attached Butler building is approximately 12,150 square feet. The subject property is currently unoccupied and vacant.

Most of the northeastern half of the subject property is under the roof of the main manufacturing building, whereas most of the southwestern half of the subject property is open space (see Attachments B and E). A narrow strip along the southeastern property boundary is

lightly vegetated (see Attachment E). Other than a streetfront parking area northwest of the main manufacturing building, the subject property is fenced.

Based on the investigation detailed in the following report, AEM has identified the following recognized environmental conditions (RECs):

- Several pits were identified in the floor of the main manufacturing building (see Photos 11 through 13 in Attachment E) of varying shapes and sizes. All were filled with sand. The pits are assumed to be the former locations of manufacturing machines in the warehouse. As discussed in Section 5.4.1, the pits were reported to have contained an oil and oily soil sludge, which was sampled as part of a prior Phase II ESA. The concentration of lead (1,200 milligrams per kilogram [mg/kg]) in one of the three sludge samples exceeded the Georgia Hazardous Site Response Act (HSRA) Notification Concentration (NC), and various organic hazardous substances were also detected in the sludge sample, although at concentrations below the HSRA NCs (see Attachment C). According to the owner of the subject property, the sludge was removed from the pits following the 2006 sampling. Reports or other documentation of the sludge removal were requested but have not been provided to date; the only evidence of sludge removal, other than the owner's account, is the documented generation of unspecified hazardous waste in 2006 by Eleven Sixteen Murphy, LLC (the waste may have included the sludge from the pits). However, without documentation of the sludge removal, including analytical results of post-removal sampling, it cannot be concluded that hazardous substances or petroleum products no longer occur in the pits. Therefore, the pits are considered to be an REC with regard to the subject property.
- MBA Waste, the last tenant on the subject property, had placed soil and demolition debris from an unknown source on the open yard southwest of the main manufacturing building (see Attachment B). The material had been placed in piles on the ground and concrete surface, and it has covered and blocked storm water drains on the property. The material was reportedly a coarse soil with fragments and blocks of concrete and brick. According to the owner of the subject property, the tenant has removed the piles (see Attachment D), but the concrete and asphalt surface were observed during AEM's reconnaissance to still be covered with soil (see Photo 20 in Attachment E), the storm drains were still covered and could not be located, and one pile of demolition debris was still observed on site (see Photos 19 and 21 in Attachment E). Therefore, AEM cannot confirm the completeness of the soil removal. To AEM's knowledge, no analytical data are available to characterize the material. Given the unknown provenance of the material, the debris observed in the one remaining pile, and the nature of the former tenant's business (waste management), there is a possibility that the material may contain hazardous substances or petroleum products, and it is therefore considered to be an REC with regard to the subject property.
- A "large amount" of surficial soil staining was previously observed by others outside the southeastern portion of the Butler building. A storm drain with "significant" soil staining was located in this area; however, the storm drain was covered with soil, apparently from a subsequent tenant, at the time of AEM's site reconnaissance and any residual soil staining could not be observed. The storm drain reportedly captured water from periodic pressure washing of the floor inside the Butler building. Surficial soil staining was also reported surrounding a waste-oil tank

southeast of the Butler building and beneath several vehicles scattered on the southern portion of the subject property. Four soil samples were advanced in the affected areas; however, the samples closest to the Butler building where the surficial staining was reported were obtained at a depth of 8 feet below ground surface (see Attachment C). Although subsequent samples were obtained from these locations at a depth of 2 feet, the subsequent samples were analyzed for lead only and not for the petroleum products or volatile organic compounds (VOCs) most likely associated with the staining and past operations. Therefore, the previously reported staining has never been properly characterized, and it is considered an REC with regard to the subject property.

- Oil-stained soil with elevated concentrations of lead was excavated from the north-northeastern portion of the subject property in 1993 and again in 2006 (see Attachment B). The oil-stained soil reportedly resulted from a prior on-site painting operation, and the area is adjacent to the automotive salvage yard northeast of the subject property (former Superior Sealants/Huguley Oil facility). Oil-stained soil was removed from a 120-foot by 15-foot area to a depth of 0.5 foot, and, based on post-excavation sampling, additional excavation was performed within selected areas of the original excavation to depths of 1.5 to 3 feet. Soil sampling in 1993 following the second round of excavation indicated that soil met the remedial goal of 10 to 70 mg/kg (see Attachment C).

  Two soil samples were obtained from this area in 2006 as part of a prior Phase II ESA performed by MACTEC Engineering and Consulting, Inc. (MACTEC). The concentration of lead (417 mg/kg) in sample SB-5 exceeded the HSRA NC (400 mg/kg). As a result, two additional soil samples were obtained at the same depth (4 feet) within 10 feet of soil sample SB-5; lead was detected in the two additional samples at concentrations (14.1 and 17.1 mg/kg) well below the NC. No deeper samples were obtained to evaluate the vertical extent of lead at concentrations exceeding the NC.

  Soil at SB-5 was excavated and disposed off site by MACTEC in March 2006. According to MACTEC's May 2006 soil removal report, soil was excavated over an approximately 10-foot by 10-foot area surrounding sample location SB-5 to a depth of 5 feet, and the soil from a depth of approximately 3.5 to 5 feet below grade was sent off site to a permitted facility (Eagle Point Landfill in Ballground, Georgia) for disposal. Analytical results of post-excavation soil samples were not reported, and it does not appear that any post-excavation soil samples were obtained.

  There is no indication that the original 1993 sampling and excavation addressed soil at depths greater than 3 feet, and the 2006 sampling and excavation did not address lead in soil at depths greater than 5 feet. Therefore, it is not known whether lead contamination exists in soil at depths below 5 feet. Because a release to the environment has been documented in this area, because this area may continue to be impacted by off-site releases from the adjacent automotive salvage yard, because sampling has documented the presence of lead in this area, and because the vertical extent of lead in this area has not been vertically delineated, it is considered an REC with regard to the subject property.

- Soil samples were also obtained southwest of the main manufacturing building in 2006, as part of MACTEC's prior Phase II ESA, because of staining observed in surficial soil. The concentration of lead (711 mg/kg) in soil sample SB-9 exceeded

the HSRA NC (400 mg/kg). As a result, two additional soil samples were obtained at the same depth (2 feet) to the west and to the northwest of soil sample SB-9; lead was detected in the two additional samples at concentrations (8.98 and 16.5 mg/kg) well below the NC. A deeper (4 feet) soil sample was also obtained at SB-9 to evaluate the vertical extent of lead exceeding the NC; the concentration of lead (22.2 mg/kg) was below the NC in the deeper soil sample. An additional deep (5 feet) soil sample was obtained to the northeast of sample SB-9; the concentration of lead (14.1 mg/kg) in the sample was also below the NC. The extent of the lead detected at SB-9 was not laterally delineated toward the north or the east (see Attachment C).

Soil at SB-9 was also excavated and disposed off site by MACTEC in March 2006. According to MACTEC's May 2006 soil removal report (see Attachment C), soil was excavated over an approximately 17-foot by 19-foot area to a depth of 4 feet and was sent off site to a permitted facility (Eagle Point Landfill in Ballground, Georgia) for disposal. The excavation did not extend to the surrounding soil samples, and analytical results of post-excavation soil samples were not reported and it does not appear that any post-excavation soil samples were obtained. Therefore, it is not known whether lead contamination still exists beyond the excavation boundaries.

Given the documented releases in the area, the presence of lead in soil samples, and the unknown extent of the lead contamination in soil, the area is considered to be an REC with regard to the subject property.

- Since at least 1932, the adjacent property to the northeast of the subject property has been used by various oil and paint companies. Pennsylvania Oil & Grease Company, Valvoline Oil Company, Glena Oil Company, and Power Oil Company successively operated at 1134 Sylvan Road until at least 1961, Southern Paint Products Co., Southern Protective Products, and Superior Sealants successively operated at 1135 Sylvan Road until at least 1991, and Huguley Oil Company operated at 1139 Sylvan Road until at least 1976. Despite the different street addresses, all of these operations appear to have been in one building, based on historical Sanborn maps. As discussed in Section 5.3.2, a Preliminary Assessment was completed at the site in September 1985, and an Emergency Removal was performed by the Responsible Party in November 2001. No further remedial action is planned. The site was not listed on the National Priority List (NPL); however, this does not mean that contamination does not exist at the site, only that the levels of contamination and threat of human exposure do not constitute a national priority. Following closure of the paint and sealant operations, the building was demolished between 2003 and 2005 and the site was subsequently used as a scrap and automotive salvage yard.

  Given the nearly 60-year history of paint mixing and oil and paint storage and handling, as well as the subsequent use of the site as an automotive salvage yard, it appears likely that petroleum products and hazardous chemicals have been released to the environment. Although a warehouse building formerly stood between the subject property and these operations, there is currently no barrier to prevent storm water run-off from the salvage yard (and possibly past operations) from impacting the subject property. The area of oil-stained soil with elevated concentrations of lead in the north-northeastern portion of the subject property is immediately adjacent to the salvage yard. Given the proximity of these operations to the subject property, historical impacts from these operations to the subject

property cannot be discounted. Therefore, the adjacent property (1135 Sylvan Avenue) is considered an REC with regard to the subject property. However, it should be noted that the owners of off-site properties bear the responsibility for cleanup of potentially impacted soils or groundwater as a result of their activities.

APPENDIX D

DATA TABLES

TABLE 1
Soil Analytical Data - VOCs
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

Volatile Organic Compounds (EPA 8260B)																				
Sample I.D.	**SB-01 (0-2)**	**SB-01 (10-12)**	**SB-02 (0-2)**	**SB-02 (10-12)**	**SB-03 (0-2)**	**SB-03 (5-7)**	**SB-04 (0-2)**	**SB-04 (7-10)**	**SB-05 (2-5)**	**SB-06 (0-2)**	**SB-06 (10-12)**	**SB-07 (0-2)**	**SB-07 (10-12)**	**SB-08 (2-5)**	**SB-08 (15-17)**	**SB-09 (2-5)**	**SB-09 (10-12)**	**SB-10 (0-2)**	**SB-10 (10-12)**	**HSRA Notification Concentrations[1]**
Sample Matrix	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**Soil**
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Sample Date	7/22/15	7/22/15	7/22/15	7/22/15	7/21/15	7/21/15	7/21/15	7/21/15	7/22/15	7/22/15	7/23/15	7/21/15	7/21/15	7/20/15	7/20/15	7/20/15	7/20/15	7/20/15	7/20/15	
1,1,1-Trichloroethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	5.44
1,1,2,2-Tetrachloroethene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.13
1,1,2-Trichloroethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.5
1,1-Dichloroethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.03
1,1-Dichloroethene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.36
1,2,4-Trichlorobenzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	10.83
1,2-Dibromo-3-Chloropropane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.003
1,2-Dibromoethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.01
1,2-Dichlorobenzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	25
1,2-Dichloroethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.02
1,2-Dichloropropane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.02
1,3-Dichlorobenzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	2.22
1,4-Dichlorobenzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	6.84
2-Butanone (MEK)	NS	<0.0604	NS	<0.0766	NS	<0.0536	NS	<0.0454	<0.0503	NS	<0.0680	NS	<0.0596	NS	<0.0519	NS	<0.0460	NS	<0.0474	0.79
2-Hexanone	NS	<0.0604	NS	<0.0766	NS	<0.0536	NS	<0.0454	<0.0503	NS	<0.0680	NS	<0.0596	NS	<0.0519	NS	<0.0460	NS	<0.0474	NA
4-Methyl-2-pentanone (MIBK)	NS	<0.0604	NS	<0.0766	NS	<0.0536	NS	<0.0454	<0.0503	NS	<0.0680	NS	<0.0596	NS	<0.0519	NS	<0.0460	NS	<0.0474	3.3
Acetone	NS	<0.0604	NS	<0.0766	NS	<0.0536	NS	<0.0454	<0.0503	NS	<0.0680	NS	<0.0596	NS	<0.0519	NS	<0.0460	NS	<0.0474	2.74
Benzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.0680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.02
Bromodichloromethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	1.18
Bromoform	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	1
Bromomethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.8
Carbon disulfide	NS	<0.0483	NS	<0.0613	NS	<0.0429	NS	<0.0363	<0.0402	NS	<0.0544	NS	<0.0476	NS	<0.0415	NS	<0.0368	NS	<0.0379	DL
Carbon tetrachloride	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.17
Chlorobenzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	4.18
Chloroethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.17
Chloroform	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.68
Chloromethane	NS	<0.0121	NS	<0.0153	NS	<0.00908	NS	<0.00908	<0.0101	NS	<0.0136	NS	<0.0119	NS	<0.0104	NS	<0.00919	NS	<0.00949	0.04
cis-1,2-Dichloroethene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.53
cis-1,3-Dichloropropene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	1000
Cyclohexane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	20
Dibromochloromethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	1.63
Dichlorodifluoromethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	1.49
Ethylbenzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	20
Isopropylbenzene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	21.88
m,p-xylene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	20
Methyl acetate	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	**0.00856**	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	NA
Methyl tert-butyl ether (MTBE)	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	NA
Methylcyclohexane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	NA
Methylene Chloride	NS	<0.0242	NS	<0.0306	NS	<0.0214	NS	<0.0182	<0.0201	NS	<0.0272	NS	<0.0238	NS	<0.0208	NS	<0.0184	NS	<0.0190	0.08
o-xylene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	20
Styrene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	14
Tetrachloroethene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.18
Toluene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	14.4
trans-1,2-Dichloroethene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.53
trans-1,3-Dichloropropene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	1000
Trichloroethene	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.13
Trichlorofluoromethane	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.7
Total Xylenes	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	20
Vinyl chloride	NS	<0.00604	NS	<0.00766	NS	<0.00536	NS	<0.00454	<0.00503	NS	<0.00680	NS	<0.00596	NS	<0.00519	NS	<0.00460	NS	<0.00474	0.04

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NA - Not Applicable. No standard exists for this compound
ND - Not Detected
--- Data Not Available

25 Indicates detection of compound greater than laboratory detection limits
62 Indicates detection of compound equal to or greater than regulatory standards

TABLE 2
Soil Analytical Data - RCRA Metals
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

	RCRA Metals (6010C & 7471B)																			
Sample I.D.	**SB-01 (0-2)**	**SB-01 (10-12)**	**SB-02 (0-2)**	**SB-02 (10-12)**	**SB-03 (0-2)**	**SB-03 (5-7)**	**SB-04 (0-2)**	**SB-04 (7-10)**	**SB-05 (2-5)**	**SB-06 (0-2)**	**SB-06 (10-12)**	**SB-07 (0-2)**	**SB-07 (10-12)**	**SB-08 (2-5)**	**SB-08 (15-17)**	**SB-09 (2-5)**	**SB-09 (10-12)**	**SB-10 (0-2)**	**SB-10 (10-12)**	**HSRA Notification Concentrations[1]**
Sample Matrix	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**Soil**
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Sample Date	7/22/15	7/22/15	7/22/15	7/22/15	7/21/15	7/21/15	7/21/15	7/21/15	7/22/15	7/22/15	7/23/15	7/21/15	7/21/15	7/20/15	7/20/15	7/20/15	7/20/15	7/20/15	7/20/15	
Arsenic	<5.83	<6.00	**9.28**	<6.06	**52.4**	<5.88	<5.28	<5.86	<4.68	**14.7**	<8.08	**24.8**	**9.52**	<5.97	<5.82	<5.14	<5.19	<7.94	<6.10	41
Barium	**84.8**	**105**	**276**	**19.7**	**243**	**18.5**	**81.7**	**121**	**226**	**260**	**95.4**	**147**	**289**	**108**	**173**	**21.4**	**188**	**28.7**	**134**	500
Cadmium	**1.79**	**0.96**	**2.83**	<0.606	**3.77**	**1.62**	**2.41**	**1.74**	**1.22**	**1.88**	**1.5**	**1.73**	**2.03**	**3.68**	**1.3**	<0.514	**1.9**	**3.1**	**1.9**	39
Chromium	**29.3**	**10.9**	**52.3**	<6.06	**35.1**	**26**	**33.7**	**50.8**	**39.2**	**35.4**	**24.9**	**37.4**	**21.7**	**32.5**	**35.5**	<5.14	**79**	**60.1**	**52**	1200
Lead	**190**	**13.1**	**332**	**18.1**	**800**	**18.5**	**79**	**18.5**	**12.6**	**199**	**28.3**	**243**	<5.72	**90.2**	<5.82	**21.5**	**35.7**	**18.7**	**6.65**	400
Mercury	<0.0638	<0.0525	**0.0803**	<0.0682	**0.174**	<0.0569	**0.0944**	<0.0512	<0.0464	NS	<0.0824	<0.0625	<0.0628	<0.0527	<0.0645	<0.0565	<0.0515	<0.0794	<0.0491	17
Selenium	<5.83	<6.00	<5.17	<6.06	<5.39	<5.88	<5.28	<5.86	<4.68	<5.83	<8.08	<6.49	<5.72	<5.97	<5.82	<5.14	<5.19	<7.94	<6.10	36
Silver	<5.83	<6.00	<5.17	<6.06	<5.39	<5.88	<5.28	<5.86	<4.68	<5.83	<8.08	<6.49	<5.72	<5.97	<5.82	<5.14	<5.19	<7.94	<6.10	10

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NA - Not Applicable. No standard exists for this compound
ND - Not Detected
--- Data Not Available

25 Indicates detection of compound greater than laboratory detection limits
62 Indicates detection of compound equal to or greater than regulatory standards

TABLE 3
Soil Analytical Data - SVOCs (EPA 8270D)
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgi

SVOCs (EPA 8270D)											
Sample I.D.	**SB-01 (10-12)**	**SB-02 (10-12)**	**SB-03 (5-7)**	**SB-04 (7-10)**	**SB-05 (2-5)**	**SB-06 (10-12)**	**SB-07 (10-12)**	**SB-08 (15-17)**	**SB-09 (10-12)**	**SB-10 (10-12)**	**HSRA Notification Concentrations[1]**
Sample Matrix	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/Kg**
Sample Date	7/22/15	7/22/15	7/21/15	7/21/15	7/22/15	7/23/15	7/21/15	7/20/15	7/20/15	7/20/15	
1,1-Biphenyl (Diphenyl)	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	100
1,2,4,5-Tetrachlorobenzene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	130
2,3,4,6-Tetrachorophenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	NS
2,4,5-Trichlorophenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	NS
2,4,6-Trichlorophenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	300
2,4-Dichlorophenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	500
2,4-Dimethylphenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	500
2,4-Dinitrophenol	<0.948	<0.944	<0.938	<0.805	<0.717	<1.10	<0.854	<0.438	<0.810	<0.418	110
2,4-Dinitrotoluene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
2,6-Dinotrotoluene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
2-Chloronaphthalene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
2-Chlorophenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
2-Methylnaphthalene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	NS
2-methylphenol	<0.948	<0.472	<0.938	<0.805	<0.717	<1.10	<0.854	<0.438	<0.405	<0.836	5
2-Nitroaniline	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	500
2-Nitrophenol	<0.948	<0.472	<0.938	<0.805	<0.717	<1.10	<0.854	<0.438	<0.810	<0.8.36	5
3&4-Methylphenol	<2.37	<2.36	<2.35	<2.01	<1.79	<2.75	<2.13	<2.19	<2.02	<2.09	
3,3-Dicholorbenzidine	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
3-Nitroaniline	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
4,6-dinitro-2-methyl phenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
4-Bromophenyl-phenylether	<0.237	<0.236	<0.235	<0.201	<0.179	<0.275	<0.213	<0.219	<0.202	<0.209	
4-chloro-3-methylphenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
4-Chloroaniline	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
4-Chlorophenyl-phenyl ether	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
4-Nitroaniline	<0.948	<0.944	<0.938	<0.805	<0.717	<1.10	<0.854	<0.876	<0.810	<0.836	
4-Nitrophenol	<0.948	<0.944	<0.938	<0.805	<0.717	<1.10	<0.854	<0.876	<0.810	<0.836	
Acenaphthene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	300
Acenaphthylene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	130
Acetophenone	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Acetophenone	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Anthracene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Antrazine	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Benzaldeyde	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Benzo (a) anthracene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
Benzo (a) pyrene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	1.64
Benzo (b) fluoranthene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
Benzo (g,h,i) perylene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	500
Benzo (k) fluoranthene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
Benzyl Butyl Phthalate	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
bis(2-chloroethoxy) Methane	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
bis(2-chloroethyl) ethyl	<0.237	<0.236	<0.235	<0.201	<0.179	<0.275	<0.213	<0.219	<0.202	<0.209	
bis(2-chlorosopropyl) Ether	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
bis(2-ethylhexyl) phthalate	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Caprolactam	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Carbazole	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Chrysene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
Dibenz (a,h) anthracene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
Dibenzofuran	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Diethyl Phthalate	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Dimethyl Phthalate	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
di-n-Butyl Phthalate	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
di-n-Octyl Phthalate	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Fluoranthene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	500
Fluorene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Hexachlorobenzene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Hexachlorobutadiene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Hexachlorocyclopentadiene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Hexachloroethane	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Indeno (1,2,3-cd) pyrene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	5
Isophorone	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Naphthalene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	100
Nitrobenzene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
N-Nitrosodi-n-Propylamine	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
N-Nitrosodiphenylamine	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Pentachlorophenol	<0.948	<0.944	<0.938	<0.805	<0.717	<1.10	<0.854	<0.876	<0.810	<0.836	
Phenanthrene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	110
Phenol	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	
Pyrene	<0.474	<0.472	<0.469	<0.403	<0.359	<0.550	<0.427	<0.438	<0.405	<0.418	500

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NA - Not Applicable. No standard exists for this compound
ND - Not Detected
--- Data Not Available

25 Indicates detection of compound greater than laboratory detection limits

62 Indicates detection of compound equal to or greater than regulatory standards

TABLE 4
Soil Analytical Data - PCBs
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

PCBs (8082A)											
Sample I.D.	**SB-01 (10-12)**	**SB-02 (10-12)**	**SB-03 (5-7)**	**SB-04 (7-10)**	**SB-05 (2-5)**	**SB-06 (10-12)**	**SB-07 (10-12)**	**SB-08 (15-17)**	**SB-09 (10-12)**	**SB-10 (10-12)**	**HSRA Notification Concentrations[1]**
Sample Matrix	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**	**soil**
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/Kg**
Sample Date	7/22/15	7/22/15	7/21/15	7/21/15	7/22/15	7/23/15	7/21/15	7/20/15	7/20/15	7/20/15	
PCB-1016	<0.0476	<0.0472	<0.0469	<0.0401	<0.0358	<0.0548	<0.0426	<0.0438	<0.0405	<0.0419	1.55
PCB-1221	<0.0476	<0.0472	<0.0469	<0.0401	<0.0358	<0.0548	<0.0426	<0.0438	<0.0405	<0.0419	1.55
PCB-1232	<0.0476	<0.0472	<0.0469	<0.0401	<0.0358	<0.0548	<0.0426	<0.0438	<0.0405	<0.0419	1.55
PCB-1242	<0.0476	<0.0472	<0.0469	<0.0401	<0.0358	<0.0548	<0.0426	<0.0438	<0.0405	<0.0419	1.55
PCB-1248	<0.0476	<0.0472	<0.0469	<0.0401	<0.0358	<0.0548	<0.0426	<0.0438	<0.0405	<0.0419	1.55
PCB-1254	<0.0476	<0.0472	<0.0469	<0.0401	<0.0358	<0.0548	<0.0426	<0.0438	<0.0405	<0.0419	1.55
PCB-1260	<0.0476	<0.0472	<0.0469	<0.0401	<0.0358	<0.0548	<0.0426	<0.0438	<0.0405	<0.0419	1.55

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NA - Not Applicable. No standard exists for this compound
ND - Not Detected
--- Data Not Available

25 Indicates detection of compound greater than laboratory detection limits

62 Indicates detection of compound equal to or greater than regulatory standards

TABLE 5
Analytical Data for VOCs in Groundwater
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

Volatile Organic Compounds (EPA 8260B)											
Sample I.D.	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**	**MW-06**	**MW-07**	**MW-08**	**MW-09**	**MW-10**	**HSRA Media Target Concentrations[2]**
Sample Matrix	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Water**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Sample Date	7/28/15	7/28/15	7/27/15	7/27/15	NS	7/28/15	7/28/15	7/27/15	7/27/15	7/27/15	
1,1,1-Trichloroethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.2
1,1,2,2-Tetrachloroethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0002
1,1,2-Trichloroethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
1,1-Dichloroethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	4
1,1-Dichloroethene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.007
1,2,4-Trichlorobenzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.07
1,2-Dibromo-3-Chloropropane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
1,2-Dibromoethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
1,2-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
1,2-Dichloroethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
1,2-Dichloropropane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
1,3-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
1,4-Dichlorobenzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
2-Butanone (MEK)	<0.05	<0.05	<0.05	<0.05	NS	<0.05	<0.05	<0.05	<0.05	<0.05	2
2-Hexanone	<0.05	<0.05	<0.05	<0.05	NS	<0.05	<0.05	<0.05	<0.05	<0.05	NS
4-Methyl-2-pentanone (MIBK)	<0.05	<0.05	<0.05	<0.05	NS	<0.05	<0.05	<0.05	<0.05	<0.05	NS
Acetone	<0.05	<0.05	<0.05	<0.05	NS	<0.05	<0.05	<0.05	<0.05	<0.05	4
Benzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
Bromodichloromethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
Bromoform	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.08
Bromomethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
Carbon disulfide	<0.05	<0.05	<0.05	<0.05	NS	<0.05	<0.05	<0.05	<0.05	<0.05	4
Carbon tetrachloride	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
Chlorobenzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.1
Chloroethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
Chloroform	<0.001	<0.001	<0.001	0.0107	NS	<0.001	<0.001	<0.001	**0.00488**	<0.001	0.08
Chloromethane	<0.003	<0.003	<0.003	<0.003	NS	<0.003	<0.003	<0.003	<0.003	<0.003	NS
cis-1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.070
cis-1,3-Dichloropropene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Cyclohexane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
Dibromochloromethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.08
Dichlorodifluoromethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	1
Ethylbenzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.7
Isopropylbenzene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
m,p-xylene	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	<0.005	<0.005	<0.005	10
Methyl acetate	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	NS
Methyl tert-butyl ether (MTBE)	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	<0.005	<0.005	<0.005	NS
Methylcyclohexane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	NS
Methylene Chloride	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
o-xylene	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	<0.005	<0.005	<0.005	10
Styrene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.1
Tetrachloroethene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
Toluene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	1
trans-1,2-Dichloroethene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.1
trans-1,3-Dichloropropene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Total Xylenes	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	10
Trichloroethene	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
Trichlorofluoromethane	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.001	<0.001	<0.001	2
Vinyl chloride	<0.002	<0.002	<0.002	<0.002	NS	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
Arsenic	**0.0137**	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<0.01	<0.01	<0.01	0.010
Barium	**0.2540**	**0.19**	**0.0822**	<0.0500	NS	**0.117**	**0.159**	**0.101**	**0.0544**	<0.0500	2
Cadmium	<0.00500	**0.00896**	<0.00500	<0.00500	NS	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.005
Chromium	<0.0500	<0.0500	<0.0500	<0.0500	NS	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.1
Lead	<0.0100	<0.0100	<0.0100	<0.0100	NS	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.015
Mercury	<0.00200	<0.00200	<0.00200	<0.00200	NS	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.002
Selenium	<0.0500	<0.0500	<0.0500	<0.0500	NS	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.05
Silver	<0.0500	<0.0500	<0.0500	<0.0500	NS	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.1

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NA - Not Applicable. No standard exists for this compound
ND - Not Detected
--- Data Not Available

25 Indicates detection of compound greater than laboratory detection limits
62 Indicates detection of compound equal to or greater than regulatory standards

TABLE 6
Analytical Data for Metals in Groundwater
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

RCRA Metals (6010C & 7471B)											
Sample I.D.	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**	**MW-06**	**MW-07**	**MW-08**	**MW-09**	**MW-10**	**HSRA Media Target Concentrations[2]**
Sample Matrix	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Water**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Sample Date	7/28/15	7/28/15	7/27/15	7/27/15	NS	7/28/15	7/28/15	7/27/15	7/27/15	7/27/15	
Arsenic	**0.0137**	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<0.01	<0.01	<0.01	0.050
Barium	**0.2540**	**0.19**	**0.0822**	<0.0500	NS	**0.117**	**0.159**	**0.101**	**0.0544**	<0.0500	2
Cadmium	<0.00500	**0.00896**	<0.00500	<0.00500	NS	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.005
Chromium	<0.0500	<0.0500	<0.0500	<0.0500	NS	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.1
Lead	<0.0100	<0.0100	<0.0100	<0.0100	NS	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.015
Mercury	<0.00200	<0.00200	<0.00200	<0.00200	NS	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.002
Selenium	<0.0500	<0.0500	<0.0500	<0.0500	NS	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.05
Silver	<0.0500	<0.0500	<0.0500	<0.0500	NS	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.1

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NA - Not Applicable. No standard exists for this compound
ND - Not Detected
--- Data Not Available

25 Indicates detection of compound greater than laboratory detection limits
62 Indicates detection of compound equal to or greater than regulatory standards

TABLE 7
Analytical Data for SVOCs in Groundwater
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

SVOCs (EPA 8270D)											
Sample I.D.	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**	**MW-06**	**MW-07**	**MW-08**	**MW-09**	**MW-10**	**HSRA Media Target Concentrations[2]**
Sample Matrix	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Water**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Sample Date	7/28/15	7/28/15	7/27/15	7/27/15	NS	7/28/15	7/28/15	7/27/15	7/27/15	7/27/15	
1,1-Biphenyl (Diphenyl)	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
1,2,4,5-Tetrachlorobenzene	<.051	<.051	<.051	<.053	NS	<.051	<.051	<.051	<.051	<.051	
2,3,4,6-Tetrachorophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2,4,5-Trichlorophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2,4,6-Trichlorophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2,4-Dichlorophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2,4-Dimethylphenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2,4-Dinitrophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2,4-Dinitrotoluene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2,6-Dinotrotoluene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2-Chloronaphthalene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2-Chlorophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2-Methylnaphthalene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	NS
2-methylphenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2-Nitroaniline	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
2-Nitrophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
3&4-Methylphenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
3,3-Dicholorbenzidine	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
3-Nitroaniline	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
4,6-dinitro-2-methyl phenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
4-Bromophenyl-phenylether	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
4-chloro-3-methylphenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
4-Chloroaniline	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
4-Chlorophenyl-phenyl ether	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
4-Nitroaniline	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
4-Nitrophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Acenaphthene	<0.010	**0.0364**	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	2000
Acenaphthylene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	NS
Acetophenone	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Acetophenone	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Anthracene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Antrazine	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Benzaldeyde	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Benzo (a) anthracene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	0.0001
Benzo (a) pyrene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Benzo (b) fluoranthene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	0.0002
Benzo (g,h,i) perylene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	NS
Benzo (k) fluoranthene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	NS
Benzyl Butyl Phthalate	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
bis(2-chloroethoxy) Methane	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
bis(2-chloroethyl) ethyl	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
bis(2-chlorosopropyl) Ether	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
bis(2-ethylhexyl) phthalate	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Caprolactam	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Carbazole	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Chrysene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	0.0002
Dibenz (a,h) anthracene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	0.0003
Dibenzofuran	<0.010	**0.0166**	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Diethyl Phthalate	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Dimethyl Phthalate	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
di-n-Butyl Phthalate	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
di-n-Octyl Phthalate	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Fluoranthene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	1
Fluorene	<0.010	**0.0178**	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Hexachlorobenzene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Hexachlorobutadiene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Hexachlorocyclopentadiene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Hexachloroethane	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Indeno (1,2,3-cd) pyrene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	0.0004
Isophorone	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Naphthalene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	0.02
Nitrobenzene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
N-Nitrosodi-n-Propylamine	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
N-Nitrosodiphenylamine	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Pentachlorophenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Phenanthrene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	NS
Phenol	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	
Pyrene	<0.010	<0.010	<0.010	<0.010	NS	<0.010	<0.010	<0.010	<0.010	<0.010	1

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NS - No standard exists for this compound

25	Indicates detection of compound greater than laboratory detection limits
62	Indicates detection of compound equal to or greater than regulatory standards

TABLE 8
Analytical Data for PCBs in Groundwater
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

PCBs (8082A)											
Sample I.D.	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**	**MW-06**	**MW-07**	**MW-08**	**MW-09**	**MW-10**	**HSRA Media Target Concentrations[2]**
Sample Matrix	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Water**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Sample Date	7/28/15	7/28/15	7/27/15	7/27/15	NS	7/28/15	7/28/15	7/27/15	7/27/15	7/27/15	
PCB-1016	<0.0005	<0.0005	<0.0005	<0.0005	NS	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1221	<0.0005	<0.0005	<0.0005	<0.0005	NS	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1232	<0.0005	<0.0005	<0.0005	<0.0005	NS	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1242	<0.0005	<0.0005	<0.0005	<0.0005	NS	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1248	<0.0005	<0.0005	<0.0005	<0.0005	NS	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1254	<0.0005	<0.0005	<0.0005	<0.0005	NS	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1260	<0.0005	<0.0005	<0.0005	<0.0005	NS	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

NOTES:
Analyses performed by Xenco Laboratories
[1] Chapter 391-3-19 GEPD Rules for Hazardous Site Response
NS - No standard exists for this compound

25 Indicates detection of compound greater than laboratory detection limits
62 Indicates detection of compound equal to or greater than regulatory standards

TABLE 9
Groundwater Elevation Data
Lifecycle Building
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

Well Number	Date of Measurement	Top of Casing (ft)	Screened Interval (ft)	Depth to Water (ft)	Groundwater Elev. (ft)
MW-01	7/23/2015	88.60	5-20	13.00	75.60
MW-02	7/23/2015	94.10	5-20	11.47	82.63
MW-03	7/23/2015	96.00	5-20	7.96	88.04
MW-04	7/23/2015	98.20	5-20	9.12	89.08
MW-06	7/23/2015	76.89	5-20	14.02	62.87
MW-07	7/23/2015	82.70	5-20	13.72	68.98
MW-08	7/23/2015	94.25	10-25	19.66	74.59
MW-09	7/23/2015	93.90	15-30	16.57	77.33
MW-10	7/23/2015	93.90	10-25	12.58	81.32

NOTES: Wells surveyed to an arbitary datum 100.00 ft amsl

Appendix B.

Application for Limitation of Liability and Prospective Purchaser Corrective Action Plan, August 30, 2016 (Soil)

Application for Limitation of Liability
Pursuant to the Georgia Hazardous Site Reuse & Redevelopment Act

Applicant: Lifecycle Building Center
1116 Murphy Avenue
Atlanta, Georgia 30310

Contact Person: Shannon Goodman
Executive Director
Lifecycle Building Center
1116 Murphy Avenue
Atlanta, Georgia 30310
Telephone: 678-592-0417
shannon@lifecyclebuildingcenter.org

Property: The approximate site boundary of District/Land lot 14-11900070135 (the "Property") is shown on Exhibit A, Appendix A, Figure 1 of the Prospective Purchaser Corrective Action Plan ("PPCAP")

Current Property Owner: Eleven Sixteen Murphy LLC
4351 Quail Ridge Way
Norcross, Georgia 30092

Size: The property is approximately 3.5 acres.

Location: The parcel is located on Murphy Avenue south of the the intersection of Sylvan Road in southwest Atlanta, Fulton County, Georgia (See Exhibit A, Section 1.1 of the PPCAP for additional location detail).

Eligibility: a) The Property meets the criteria to be considered a "qualifying property" as specified in O.C.G.A. § 12-8-205 for the following reasons:

1) The Property has a preexisting release of regulated constituents in soil as demonstrated by the PPCAP;

2) There are no liens filed against the Property under O.C.G.A. § 12-8-96(e) or O.C.G.A § 12-13-12(b);

3) No funds have been expended by EPD from the federal Leaking Underground Storage Tank Trust Fund;

4) The Property is not listed on the Comprehensive Environmental Response, Compensation and Liability Act National Priorities List;

5) The Property is not currently undergoing response activities required by an order of the U.S. Environmental Protection Agency Regional Administrator;

6) The Property is not a hazardous waste facility as defined by O.C.G.A. § 12-8-62; and

7) The Property meets such other criteria established by the Board of Natural Resources as provided in Article 9 and Article 3.

b) the prospective purchaser meets the criteria specified in O.C.G.A. § 12-8-206 for the following reasons:

1) The prospective purchaser does not fall within the definition of “person who has contributed or who is contributing to a release” of regulated substances at the Property in that it is not the current owner or operator; it did not own or operate the facility at the time of disposal; it did not arrange for disposal; and it did not transport any regulated substances to the site.

2) The prospective purchaser is not a current or former subsidiary, division, parent company, partner, employer or former employer and have not otherwise been affiliated with any person who has contributed or is contributing to a release at the Property;

3) The prospective purchaser is not in violation of any order, judgement, statute, rule or regulation subject to the enforcement authority of the Director of EPD; and

4) The prospective purchaser meets such other criteria as has been established by the Board pursuant to O.C.G.A. § 12-8-203.

c) A Georgia Brownfield Eligibility Form and PPCAP is being submitted to the Director in support of this application for a limitation of liability. Accordingly, the PPCAP and any modification thereto is included in this application by reference.

d) the $3,000 initial review fee pursuant to O.C.G.A. § 12-8-209 is enclosed and the applicant agrees to reimburse the EPD for any costs of the Division in reviewing the application for a limitation of liability

APPLICATION FOR LIMITATION OF LIABILITY AND PROSPECTIVE PURCHASER CORRECTIVE ACTION PLAN

1116 Murphy Avenue, SW
Atlanta, Georgia 30310

Prepared for:

Lifecycle Building Center

August 30 , 2016

TABLE OF CONTENTS

1. Introduction

This Prospective Purchaser Corrective Action Plan and Application for Limitation of Liability is submitted pursuant to the Georgia Brownfield Act.

The address of the property is 1116 Murphy Avenue, located in southwest Atlanta, Fulton County, Georgia (the "Property"). The Property is approximately 3.35 acres with one large industrial building of approximately 71,000 square feet. The documented uses of the building were primarily manufacturing, dating back to at least 1915. A Phase I Environmental Assessment of the property was completed in May 2015, a copy of which is included in the enclosed compact disk as Exhibit A. Additional information about the history of the property is contained in the Phase I.

2. Qualification of Site and Purchaser

As noted on the Application for Limitation of Liability and certified on the Georgia Brownfield Eligibility Form, both the property and Lifecycle Building Center meet the criteria of the Hazardous Site Reuse and Redevelopment Act and qualify for the Georgia Brownfield program. The Act's requirements are summarized below.

Subject Property

1. Has had a preexisting release.
2. Does not have liens filed under subsection (e) of O.C.G.A. §12-8-96 against it.
3. Is not listed on the Federal National Priority List
4. Is not undergoing response activities by an order of the EPA.
5. Is not a hazardous waste facility as defined in O.C.G.A. §12-8-62.

Lifecycle Building Center

1. Is not a person or entity who has contributed or is contributing to a release at the property.
2. Is not related to, or is otherwise affiliated with, the current owner of the subject property or any person who has contributed or is contributing to a release at the site.
3. Has not found evidence of liens file under subsection (e) of Code Section 12-8-96 against the property.
4. Is not in violation of any order, judgment, statue, rule or regulation subject to the enforcement authority of the Director.

3. Site Assessment Activities Completed to Date

Previous investigation activities included sampling, laboratory analyses and removal of lead impacted soil by various consultants. The prior investigations and removal actions are summarized in Section 3.0 of the Phase I enclosed as **Exhibit A.**

The May 2015 Phase I report identified several recognized environmental conditions. As a result, a Phase II Subsurface Investigation was completed in September 2015. That report was revised and resubmitted on June 22, 2016. The Revised Phase II report is also included on the enclosed disc to this PPCAP as **Exhibit B.**

An additional assessment of several sump areas in the building was completed in May 2016. This report is included on the enclosed disc as **Exhibit C.**

4. Additional Assessment

Based on the previous site assessment activities, and detailed in **Exhibit A, Section 4.0**, it was recommended the property enter into the Georgia Brownfield Program to obtain limitation of liability for detections of arsenic and cadmium identified in the groundwater at the site. It was also recommended that the detection of lead in soil at MW-3 be addressed by the excavation, removal and proper disposal of surface soil to a depth of approximately two (2) feet. LBC will work with the Georgia EPD to determine if additional site characterization is necessary.

Following excavation, confirmation soil samples will be collected to determine if additional excavation will be necessary. Replacement of the soil with clean fill material from a known source will occur following the soil excavation and confirmatory sampling.

In the course of implementing the Corrective Action Plan, sampling will be performed in accordance with applicable laws and regulations to determine whether asbestos and lead-based paint are present in the building.

5. Corrective Action Plan (CAP)

Based on the July 2015 Phase II investigation **(Exhibit B)** soil containing lead and arsenic above applicable standards is confined to an area along the western property boundary. The area is approximately 30’ wide x 30’ long x 2’ feet deep, and includes approximately 1,800 cubic feet of soil.

The corrective action approach will consist of removing the on-site impacted soil that exceeds notification concentrations or non-residential Risk Reduction Standards (RRS). The impacted soil will be transported to an appropriate disposal facility, approved and permitted to accept the waste. Disposal characterization will be based on the analytical results. Transportation and disposal of the soil will be executed in

compliance with appropriate regulations. The corrective action work will be performed in compliance with applicable OSHA regulations, and in accordance with a project specific Health and Safety Plan. Any soil and/or source material generated during corrective action will be managed in such a way to prevent contamination of the surrounding environment and be in accordance with federal site and local laws.

Confirmatory samples will be collected every 25 linear feet per excavation sidewall with a minimum of four (4) samples per excavation walls and one (1) per 500 square feet in the excavation base. Analytical data will determine if additional excavation is necessary. Following excavation and sampling, replacement with clean fill material which has been sampled and determined to below the applicable RRS will be placed in the excavated area. This remediation will be conducted in coordination with the overall site redevelopment.

Based on the results of the asbestos and lead-based paint surveys, encapsulation, abatement or other measures may be required. If so, these activities will be done in compliance with applicable laws and regulations.

6. Preparation of Compliance Status Report

A Compliance Status Report (CSR) will be prepared upon completion of the delineation activities as outlined in Section 5. The written report will be prepared in the format required by the Georgia Environmental Protection Division and include the following information:

- Legal description of the property
- Survey plat
- Summary of all pertinent field and analytical laboratory data
- Description of each known release
- Definition of the horizontal and vertical extent of any contamination in soil and groundwater
- Analytical results with chain-of-custody records
- Description of existing or potential human or environmental receptors
- Summary of previous actions taken to eliminate, control, or minimize the potential risks at the property
- Description of the corrective action used to bring the property into compliance with the risk reduction standards
- Documentation of the characterization, transport, and disposal of soil cuttings, contaminated soil and/or hazardous waste, and purge water generated during delineation
- Statement of findings of the CSR including compliance with the appropriate RRS.
- Evaluation of the vapor intrusion pathway.

7. Schedule

The Corrective Action Plan as detailed, is anticipated to be completed in conjunction with additional site redevelopment work. This will take place on or before the following dates.

Submit Compliance Status Report - March 1, 2019

Appendix C.

GA EPD BCP Application Approval Letter, September 15, 2016 (Soil)

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Land Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1054, East Tower
Atlanta, Georgia 30334
404-657-8600

September 15, 2016

Ms. Shannon Goodman
Lifecycle Building Center
1116 Murphy Avenue
Atlanta, Georgia 30310

RE: Brownfield Corrective Action Plan – 1116 Murphy Avenue
1116 Murphy Avenue, Atlanta, Fulton County, Georgia

Dear Ms. Goodman:

The Georgia Environmental Protection Division (EPD) was pleased to have received your September 1, 2016 application for a limitation of liability pursuant to Article 9 of Chapter 8 of Title 12, the Georgia Brownfield Act (Act). The application consists of a prospective purchaser corrective action plan (CAP) and a non-refundable $3,000 application review fee, for which this letter will serve as receipt. The initial application review fee will fund approximately forty hours of technical review at EPD's current cost of $75 per hour. Although many applications can be reviewed within this time-frame, applications that are complex or that require extensive revisions may incur additional review fees. These may be invoiced periodically and must be paid in full before a written concurrence with a certification of compliance may be issued.

The subject property is located at 1116 Murphy Avenue, Atlanta, Fulton County, Georgia. The property is described as "All that tract or parcel of land lying and being in land lot 119 of the 14th land district of Fulton County, Georgia, and..." A complete legal description of the property is provided as an attachment to this letter. The Brownfield qualifying criteria established under sections 12-8-205 and 12-8-206 of the Act have been met. The review of the CAP has been completed by EPD, and the CAP is hereby approved.

Under section 12-8-207(a) of the Act, approval of the CAP confers a provisional limitation of liability upon the prospective purchaser, contingent upon timely implementation of the approved CAP and certification of compliance with the risk reduction standards for soil and source material in accordance with the approved schedule. Should unanticipated events or site conditions warrant changes in the CAP or the approved schedule in order to achieve compliance, the prospective purchaser must notify EPD and obtain approval of the proposed modifications.

While the property is undergoing corrective action, it should be maintained in a manner that complies with all applicable environmental laws and regulations and that protects humans from exposure to hazardous constituents. If you have questions, or need further assistance, please contact Stephanie Horwitz or Courtney Roberts at 404/656-7802.

Sincerely,

/Kathleen Dunn for

Shannon Ridley
Brownfield Coordinator

Attachment: Legal Description

File: 1116 Murphy Ave\CAP Approval.doc

LAND DESCRIPTION Tract A

ALL THAT TRACT or parcel of land lying and being in land lot 119 of the 14th land district of Fulton County Georgia and more particularly described as follow:
BEGINNING AT A 1/2" REBAR found on the southerly right of way of Sylvan Rd (50' R/W) being N02°36'10"W a distance fo 450.64' from the westerly R/W of Avon Ave.; thence leaving said R/W N87°29'25"W a distance of 215.09' to a 1/2" rebar found; thence N02°47'33"E a distance of 7.48' to a 1/2" rebar found; thence along a curve to the left 180.86' having a radius of 586.71' and chord of S66°58'04"W and distance of 180.18' to a point; thence continue along a curve to the left 96.77' having a radius of 340.67' and chord of S50°40'07"W and distance of 96.45' to a 1/2" rebar found; thence N45°20'49"W a distance of 15.92' to a 1/2" rebar found; thence along a curve to the right 100.52' having a radius of 356.64' and a chord od N50°40'04"E a distance of 100.19' to a point; thence continue along a curve to the right 189.56' having a radius of 586.71' and a chord of S66°58'04"W a distance of 180.18' to a railroad spike found; thence N05°16'18"E a distance of 26.49' to a 1/2" rod found; thence N76°54'50"E a distance of 42.45' to a 1/2" rebar found; thence S45°04'33"E a distance of 7.32' to a point; thence along a curve to the left 115.62' having a radius of 295.25' and chord of S75°14'47"E a distance of 114.88' to a point; thence S87°36'12"E a distance of 56.33' to a 1/2" rebar found on the R/W of Sylvan Rd, thence along Sylvan Rd S02°42'09"W a distance of 35.29' to THE POINT OF BEGINNING

LAND DESCRIPTION Tract B

ALL THAT TRACT or parcel of land lying and being in land lot 119 of the 14th land district of Fulton County Georgia and more particularly described as follow:
TO FIND THE POINT OF BEGINNING AT A 1/2" REBAR found on the southerly right of way of Sylvan Rd (50' R/W) N02°36'10"W a distance fo 450.64' from the westerly R/W of Avon Ave.; thence leaving said R/W N87°29'25"W a distance of 215.09' to a 1/2" rebar found; thence N02°47'33"E a distance of 7.48' to a 1/2" rebar found; thence along a curve to the left 180.86' having a radius of 586.71' and chord of S66°58'04"W and distance of 180.18' to a 1/2" rebar found; thence along a curve to the left 96.77' having a radius of 340.67' and chord bearing of S50°40'07"W and distance of 96.45' to a 1/2" rebar found; thence N45°20'49"W a distance of 15.92' to a 1/2" rebar found AT THE TRUE POINT OF BEGINNING; thence N44°28'53"W a distance of 399.302' to a mag nail found on the R/W of Murphy Ave (R/W varies); thence along Murphy Ave. N44°31'00"E a distance of 10.78' to point; thence continue N40°00'26"E a distance of 120.23' to a point; thence continue N43°52'27"E a distance of 74.90' to a point thence along a curve to the right 136.02' having a radius of 552.05' and a chord od N70°21'47"E and distance of 135.68' to a 1/2" rebar found; thence S44°57'07"E a distance of 227.89' to a 1/2" rebar found; thence S45°02'40"W a distance of 5.32' to a 1/2" rebar found thence S44°57'20"E a distance of 32.88' to a 1/2" rebar found; thence N45°02'40"E a distance of 5.32' to a 1/2" rebar found; thence S44°56'56"E a distance of 177.82' to a 1/2" rebar found; thence S76°54'50"W a distance of 42.45' to a 1/2" rod found; thence S05°16'18"W a distance of 26.49' to a railroad spike found; thence along a curve to the left 189.56' having a radius of 602.67' and chord of S66°52'19"W a distance of 188.78' to a point; thence continue along a curve to the left 100.52' having a radius of 356.64' and a chord of S50°40'04"W a distance of 100.19' to THE POINT OF BEGINNING.

Appendix D.

Asbestos, Floor Dust & Lead Paint Survey, February 20, 2016

February 12, 2016

Shannon Goodman
Executive Director
Lifecycle Building Center
1116 Murphy Ave SW
Atlanta, GA 30310

Cardno

1841 West Oak Street
Suite F
Marietta, GA 30062

Phone +1 770 427 9456
Fax +1 770 427 1907
www.cardno.com

www.cardno.com

RE: **Asbestos, Floor Dust and Lead Base Paint Survey Services**
The Lifecycle Building Center Project
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

Dear Ms. Goodman:

Cardno is pleased to present the findings and recommendations of the asbestos, floor dust and lead-based paint (LBP) inspections for the Lifecycle Building Center located at 1116 Murphy Avenue, SW, East Point, Georiga. Cardno through its subcontractor ATC Group Services. LLC performed the inspections in December 2015 and January 2016 and wooden floor block sampling in December 2015. The scope of services were performed in accordance with past discussions with Mr. Jimmy Mitchell, board member of the Lifecycle Building Center and yourself.

This scope of services evaluated the potential for employee and visitor exposure to potential environmental concerns that may exist at the site. The environmental concerns included asbestos containing materials (ACM), floor dust, and lead based paint.

For a summary of the conclusions and recommendations, please see below. The full reports are attached for your review at your convenience.

Asbestos Inspections Conclusion:

Eleven (11) labortory analyses of the bulk samples collected from the Life Cycle Building did indicate that asbestos is present in quanities of 1% or greater. The asbestos containing material included 9”x9” vinyl floor tiles and mastic, corrugtated transit roof panels, drywall joint compound, 4”x4” vinyl floor tiles and mastic and pipe insulation wrap.

These materials are regulated by State and Federal regulations and should be removed by a licensed asbestos abatement contractor and disposed of as asbestos containing materials.

Any concealed building materials discovered during maintenance or renovation or demolition activities, which are suspected to contain asbestos, should be sampled and analyzed to confirm the presence of asbestos prior to disturbing.

A building owner is required under OSHA regulation to communicate information regarding the location of ACM to outside contractors, tenants and employees who occupy areas containing ACM. Subcontractors and employees working within the structures at the site should be made aware of the locations of the ACM and the possibility of concealed ACM that could be found during renovation/demolition activities in accordance with the rules and regulations of the Georgia Environmental Protection Division (GAEPD).

Abestos Recommendations:

The following recommendations should be followed for demolition projects including contracting the services of an environmental consultant to monitor/document that the demolition contractor activities comply with the GEPD, OSHA, EPA, and NESHAP requirements.

Written notification is required by state and local regulations prior to beginning any renovation or demolition work. Send written notification, as required by the EPA NESHAP Asbestos Regulations (40 CFR 61. Sub part m.), to the designated regional Asbestos NESHAP notification office at least 10 working days prior to beginning any renovation or demolition work. Send notification to the following address:

Department of Natural Resources Environmental Protection
Division Asbestos Licensing and Certification
4244 International Parkway, Suite 104
Atlanta, Georgia 30354
(404) 363-7026

There may be additional suspect asbestos containing materials in inaccessible or concealed spaces. These spaces include, but are not limited to, pipe chases, spaces between wall/ceiling cavities, underneath carpeting, interior of mechanical components such as boiler cavities, interior ducts, etc. All such unidentified materials should be treated as Presumed Asbestos Containing Material (PACM) in accordance with 29 CFR 1926.1101 and 1910.1001.

LBP Inspection Conclusion:

Lead was present in levels above the EPA/HUD lead level of 0.5% by weight in the samples collected from the following materials and areas:

1) green and silver paint on structural steel, main area;
2) blue paint on wood door and frames, main area;
3) light green paint on concrete and CMU, main area;

4) yellow paint on first aid station and concrete shower area, main area:
5) green paint on bricks, main area; and
6) dark green on concrete and CMU, main area;/

Note all material listed above were observed to be in damaged condition.

LBP Recommendations:

In the event this building is to be demolished it is recommended TCLP samples for lead analysis be collected to determine if the waste stream exceeds the regulatory threshold of 5 milligrams per kilogram and is defined as a hazardous waste, or if it is below the threshold of 5 milligrams per kilogram and may be disposed of in a permitted MSW Landfill or a permitted C&D Landfill.

The remaining analytical results did indicate “lead content” and all demolition of renovation activities that may disturb these painted surfaces should be conducted in compliance with the OSHA “Lead in Construction Standard” (29 CFR 1926.62).

Floor Dust Conclusion:

The presence of lead in the floor dust indicates that the delaminating lead based paint on the structure steel members and other materials in the main warehouse area is impacting dust and debris and accumulating on the facility floors.

Floor Dust Recommendations:

While there are no directly applicable surface or soil compliance regulations, it is recommended taking the following precautions to limit airborne exposure until the existing lead based paint conditions can be stabilized or abated.

- Cease all dry sweeping operations.
- Utilize a High Efficiency Particulate Air (HEPA) filter vacuum.

The collection of airborne lead dust samples following stabilization or abatement to verify conditions.

We appreciate the opportunity to provide you with our services. Should you have any questions regarding the results and recommendations, or wish to arrange convenient time to meet, please feel free to contact me at 850.556.1369.

Sincerely,

Roger Register
Branch Manager / South Area Brownfields Practice Leader
Cardno
Direct Line +1 678.581.7550
Email: roger.register@cardno.com

Attachment:
(1) *Limited Abestos and Lead-Based Paint Inspection Report*, ATC Group Services, LLC, dated 2/11/2016

Limited Asbestos and Lead-Based Paint Inspection Report
Life Cycle Building Center
Atlanta, Georgia

February 11, 2016

Mr. Roger Register
Branch Manager, Environmental
Brownfields Practice Leader
EES Division, CARDNO
1841 West Oak Parkway Suite F
Marietta, Georgia 30062

RE: **Limited Asbestos and Lead-Based Paint Inspection Report**
Life Cycle Building Center
1116 Murphy Avenue, SW
Parcel ID No. 14 011900070135
Atlanta, Fulton County, Georgia
ATC Group Services LLC Project No: Z070000229

Dear Mr. Register:

At the request of Cardno, on behalf of the Life Cycle Building Center (LBC) (the Client), ATC conducted asbestos and lead-based paint inspections of the Lifecycle Building located at 1116 Murphy Avenue, SW, East Point Georgia. ATC's Industrial Hygienist, Mr. Peter Pietrowski and ATC's Manager of Industrial Hygiene, Mr. Darryl Watson Esq., CIH, CSP conducted the site inspection and sample collection in December 2015 and January 2016. The inspection involved the collection of samples of accessible suspect asbestos-containing building materials (ACBM) and lead-based paint chips (LBP) in the building which are likely to be impacted during demolition/redevelopment activities. Copies of Mr. Peter Pietrowski's and Darryl Watson's certifications are located in **Attachment A (Certifications).**

1.0 PROPERTY DESCRIPTION

The site is currently a privately owned commercial property that is used as a retail/wholesale construction material business that historically was used as conveyor belt and associated machinery manufacturer with an on-site lead and/or iron foundry. The facility includes approximately 82,927 square-feet of office and industrial space with metal frame and masonry, slab on grade construction. Exterior finishes consist of primarily corrugated cement panels with metal framed windows. Interior finishes include plaster and gypsum walls, lay in and glue on ceiling tiles, various vinyl tile flooring, concrete flooring, and wood block flooring.

2.0 ASBESTOS METHODOLOGY

Asbestos is a collective term given to a group of six commercial fibrous silicate minerals: Chrysotile (a serpentine mineral), crocidolite, amosite, anthophyllite, tremolite, and actinolite (amphiboles). In addition to their inherent noncombustible property, asbestos products make excellent thermal insulators, are effective at condensate control, and are resistant to corrosive chemicals. To date, over 3,600 asbestos-containing commercial and consumer products have been identified. Some of the high-tonnage asbestos production is in flooring products, asbestos cement pipes, roofing products, friction products, asbestos cement sheets, packing and gaskets, insulation, paper products, textiles, etc.

The building was visually inspected for the presence of building materials that are suspected to contain asbestos. Bulk samples of identified suspect ACBM were collected and placed into individual containers and transported to EMSL Analytical, Inc. (EMSL) laboratory for analysis. EMSL is accredited by the National Institute of Standards and Technology (NIST) National Voluntary

Accreditation Program (NVLAP) for laboratories analyzing bulk materials by polarized light microscopy (accreditation #101048-1). Building materials visibly identified as non-asbestos (fibrous glass, foam rubber, wood, etc.) were not sampled. The asbestos survey consisted of three basic procedures: **1)** conducting a visual inspection of the structures; **2)** identifying homogeneous areas of suspect surfacing, thermal system insulation, and miscellaneous materials; and **3)** sampling accessible, friable and non-friable suspect materials.

Homogenous Areas

Prior to collecting any samples, homogeneous areas (HAs) were identified to develop a sampling strategy. A homogeneous sampling area can be described as one or more areas of material that are similar in appearance and texture and that have the same installation date and function. Homogenous areas were established for each building during the course of this survey. The actual number of samples collected from each homogeneous sampling area varied, based on the type of material and the professional judgment of the inspector.

Each suspect material observed was further classified into one of three categories, which have specific sampling requirements for each category.

Surfacing Materials:	Refers to spray-applied or toweled surfaces such as plaster ceilings and walls, fireproofing, textured paints, textured plasters and spray-applied acoustical surfaces.
Thermal System Insulation:	Refers to insulation used to inhibit heat gain or loss on pipes, boilers, tanks, ducts, and various other building components.
Miscellaneous Materials:	Refers to friable and non-friable products and materials that do not fit in any of the above two categories such as resilient floor covering, baseboards, mastics, adhesives, roofing material, caulking, glazing and siding. This category also contains wallboard and ceiling tile.

All confirmed ACBMs were then assessed by their condition as good, damaged, or significantly damaged per Title 40 Code of Federal Regulations Part 763. Material with localized significant damage was also assessed when observed. A physical assessment includes evaluating the condition, assessing the potential for disturbance, and determining the friability of each material.

Sampling Strategy

The asbestos inspection was conducted according to modified Asbestos Hazard Emergency Response Act (AHERA) guidelines using a minimum number of samples collected from each HA, which also meets the sampling requirement found in 29 CFR 1926.1101.

Sample collection depends on the category that the HA falls into and the amount of material present, as follows:

GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO TAKE		
HA CATEGORY	**HA SIZE**	**SAMPLES REQUIRED**
Surfacing Materials	<1,000 SF	3
	1,000-5,000 SF	5
	>5,000 SF	7 or more
Thermal System Insulation	No Stipulation	3+ (Must also sample all repair patches)
Miscellaneous Materials	No Stipulation	Per AHERA, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically 2-7 samples based upon inspector judgment.

If the analytical results indicated that none of the samples collected per homogeneous area contain asbestos, then the homogeneous area (material) would be considered non-ACM. However, if the analytical results of one or more of the

samples collected per homogeneous area indicate that asbestos is present in quantities of greater than one percent asbestos, all of the homogeneous area (material) would be treated as ACM regardless of any other analytical results. Materials that can visually be determined to be non-asbestos (i.e., fibrous glass, foam rubber, etc.) by the accredited inspector are not required to be sampled.

Miscellaneous materials require adequately representative sampling, which is typically done by collecting from one to three samples per material. Inspectors typically rely on other survey observations such as the condition, friability, and quantity of material to determine what would be a sufficient amount of samples to accurately evaluate the presence or absence of asbestos content.

Actual collection of a bulk asbestos sample involves physically removing a small piece of material and placing it in a marked, airtight container. Sample containers are marked with a unique identification number, which is also noted in the field notes.

3.0 ASBESTOS

Analysis of bulk samples for asbestos content, was performed by Polarized Light Microscopy (PLM) according to the EPA test method entitled, "Method for the Determination of Asbestos in Bulk Building Materials (EPA 600/R-93/116) PLM analysis requires the microscopist to take a portion of the bulk sample and treat it with light refractive oils. The prepared slide is then subjected to a variety of tests while being viewed under the microscope. This method of analysis requires the microscopist to make visual estimations and results are subject to errors inherent to visual estimations. In addition, false negative results may be caused by method limitations in separating closely bound fibers from matrix material and in detecting fibers of small length or diameter (i.e., floor tile/mastic). Such fibers may be detected using analysis if so desired. As necessary, samples yielding from trace (<1%) to ten percent (10%) asbestos as determined by PLM should be further analyzed using the PLM point counting methodology. This is a technique for confirming the presence, or absence, of asbestos, as outlined in the National Emission Standard for Hazardous Air Pollutants (NESHAPS) regulations. The laboratory results and chain of custody are included in **Attachment B (Asbestos Laboratory Report and Chain of Custody)** of this report.

4.0 ASBESTOS FINDINGS

Seventy-nine (79) bulk samples were collected from the building and ninety (90) samples were analyzed by Polarized Light Microscopy (PLM) based on seventeen (17) homogeneous areas and the distinct number of layers (materials) associated with each bulk sample. For example, floor tile and associated mastic are collected as one bulk sample but are Administration (OSHA). The materials that were sampled included, gypsum wallboard, joint compound, vinyl floor tiles and mastic, wall plaster, sink undercoating carpet mastic, wiring insulation, duct coating and mastic, exterior door and window caulk and window glazing.

Asbestos sample location drawings and asbestos material location drawings are included in **Attachment E (Asbestos Sample Location Drawings and Asbestos Material Location Drawings).**

Table 1 provides a summary of materials sampled, and determined to be asbestos containing based on laboratory analytical results, and approximate quantities of asbestos-containing materials visually observed within the areas that were sampled. Laboratory analytical data is located in **Attachment B (Asbestos Laboratory Report and Chain of Custody).**

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
01A	**9”X9” Tan w/Marbling VCT Mastic**	**Room R, 2nd Floor, Office Area**	**7% Chry. (Tile) 5% Chry. (Mastic)**	**N/A**
01B	**9”X9” Tan w/Marbling VCT Mastic**	**Room 3, 2nd Floor, Office Area**	**See 01A Stop Positive**	**N/A**
02A	Stair, Tread, Brown, Mastic	Room 4, 2nd Floor, Office Area	Tread -NAD Mastic-NAD	N/A
02B	Stair, Tread, Brown, Mastic	Room 4, 2nd Floor, Office Area	NAD	N/A
03A	**9”X9” Black VCT, Mastic**	**Room 8, 1st Floor, Office Area**	**7% Chry. (Tile) 3% Chry. (Mastic)**	**N/A**
03B	**9”X9” Black VCT, Mastic**	**Room 8, 1st Floor, Office Area**	**See 03A Stop Positive**	**N/A**
04A	**9”X9” Gray VCT, Mastic**	**Room 8, 1st Floor, Office Area**	**7% Chry. (Tile) NAD (Mastic)**	**N/A**

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
04B	**9”X9”Gray VCT, Mastic**	**Room 8, 1st Floor Office Area**	**See 04A Stop Positive NAD-Mastic**	**N/A**
05A	**9”X9” Beige Marbled VCT, Mastic**	**Room 13, 1st Floor Office Area**	**6% Chry. (Tile) 2% Chry. (Mastic)**	**N/A**
05B	**9”X9” Beige Marbled VCT-Mastic**	**Room 13, 1st Floor, Office Area**	**See 05A Stop Positive**	**N/A**
06A	**9”X9” Black**	**Room 14, 1st Floor, Office Area**	**7% Chry.**	**N/A**
06B	**9”X9” Black**	**Room 14, 1st Floor, Office Area**	**See 06A Stop Positive**	**N/A**
07A	Gray Stair Tread, Mastic	Room 18a, 1st Floor, Office Area	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
07B	Gray Stair Tread, Mastic	Room 18a, 1st Floor, Office Area	NAD	N/A
08A	**Corrugated Trans. Pane 1 Wall/Ceiling Main**	**2nd Floor Main**	**30% Chry.**	N/A
08B	**Corrugated Trans. Pane 1 Wall/Ceiling Main**	**2nd Floor Main**	**See 08A Stop Positive**	N/A
09A	**Corrugated Trans. Pane 1 Wall/Ceiling Additional**	**Room 22, 2nd Floor Main**	**30% Chry.**	N/A
09B	**Corrugated Trans. Pane 1 Wall/Ceiling Additional**	**Room 22, 2nd Floor Main**	**See 09A Stop Positive**	N/A
10A	**Drywall-(DW) Joint Compound – (JC)**	**Room 2 Wall, 2nd Floor Office Area**	**2% Chry. (JC) NAD (JC)**	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
10B	**Drywall-(DW) Joint Compound – (JC)**	**Room 2 Wall, 2nd Floor Office Area**	**See 10A Stop Positive NAD (JC)**	N/A
10C	**Drywall Joint Compound**	**Room 2 column, 2nd Floor Office Area**	**Stop Positive (Not Analyzed) NAD**	N/A
11A	**Drywall, Joint Compound**	**Room 25, 1st Floor Main**	**2% Chry. NAD**	**N/A**
11B	**Drywall, Joint Compound**	**Room 25, 2st Floor Main**	**Stop Positive (Not Analyzed) (NAD)**	**N/A**
12A	Drywall, Joint Compound, Addition 2	Outside Wall, Room 20, 1st Floor Addition 2	NAD	N/A
12B	Drywall, Joint Compound, Addition 2	Outside Wall, Room 20, 1st Floor Addition2	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
13A	Plaster on Main Bldg. Office/1st Floor, Wall & Ceiling	Room 8, 1st Floor Office Area	NAD	N/A
13B	Plaster on Main Bldg. Office/1st Floor, Wall & Ceiling	Room 8, 1st Floor Office Area	NAD	N/A
13C	Plaster on Main Bldg. Office/1st Floor, Wall & Ceiling	Room 8, 1st Floor Office Area	NAD	N/A
13D	Plaster on Main Bldg. Office/1st Floor, Wall & Ceiling	Room 18a, 1st Floor, Office Area	NAD	N/A
13E	Plaster on Main Bldg. Office/1st Floor, Wall & Ceiling	Room 8, 1st Floor Office Area	NAD	N/A
14A	Plaster on Main Bldg. Warehouse, Both Rooms	Room 29, 1st Floor Main	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
14B	Plaster on Main Bldg. Warehouse, Both Rooms	Room 29, 1st Floor Main	NAD	N/A
14C	Plaster on Main Bldg. Warehouse, Both Rooms	Room 29, 1st Floor Main	NAD	N/A
16A	CT-2'X4', Fissured with Dots	Room 2, 2nd Floor Office Area	NAD	N/A
16B	CT-2'X2', Fissured with Dots	Room 2, 2ndFloor	NAD	N/A
17A	1'X1' CT Glued to Plaster	Room 18a, 1st Floor Office Area	NAD	N/A
17B	1'X1" Ct Glued to Plaster	Room 8, 1st Floor Office Area	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
18A	Glue Dobb with HA17	Room 8, 1st Floor Office Main	NAD	N/A
18B	Glue Dobb with HA17	Room 8, 1st Floor Office Main	NAD	N/A
19A	1'X1' CT Nailed to Wooden Frame	Room 19, 1st Floor Addition 2	NAD	N/A
19B	1'X1' CT Nailed to Wooden Frame	Room 19. 1st Floor Addition 2	NAD	N/A
20A	Glue Dobb	Room 23, 1st Floor Main	NAD	N/A
20B	Glue Dobb	Room 23, 1st Floor Main	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
21A	Drywall Associated w/HA20-/No Joint Compound	Room 23, 1st Floor Main	NAD	N/A
21B	Drywall Associated w/ HA20/No Joint Compound	Room 23, 1st Floor Main	NAD	N/A
22A	4" Brown Base Coat + Mastic	Room 2, 2nd Floor Office Area	NAD	N/A
22B	4" Brown Base Coat + Mastic	Room 1, 2nd Floor Office Area	NAD	N/A
23A	Vibration Damper – 1 Black	Room 15, 1st Floor Office Area	NAD	N/A
23B	**Vibration Damper – 1 Black**	**Room 15, 1st Floor Office Area**	**Not Submitted**	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
24A	Vibration per – 2 White	Room 15, 1st Floor Office Area	NAD	N/A
24B	Vibration Damper – 2 White	Room 15, 1st Floor Office Area	NAD	N/A
25A	Remnant Mastic on Base Coat	Room 23, 1st Floor Main	NAD	N/A
25B	Remnant Mastic on Base Coat	Room 23, 1st Floor Main	NAD	N/A
26A	**4"X4" VAT, Mastic Under All Office Area**	**Room 8, 1st Floor Office Area**	**5% Chry.**	**N/A**
26B	**4"X4" VAT, Mastic Under All Office Area**	**Room 13, 1st Floor Office Area**	**Stop Positive See 26A**	**N/A**

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
33A	**Pipe Insulation Wrap**	**Room 22, 1st Floor Main**	**65% Chry.**	**N/A**
33B	**Pipe Insulation Wrap**	**Room 22, 1st Floor Main**	**Stop Positive See 33A**	**N/A**
33C	**Pipe Insulation Wrap**	**Room 22, 1st Floor Main**	**Stop Positive See 33B**	**N/A**
PP1A	Window Glaze 1	Room 1, 2nd Floor Office Area	NAD	N/A
PP1B	Window Glaze 1	Room 1, 2nd Floor Office Area	NAD	N/A
PP1C	Window Glaze 1	Room 1, 2nd Floor Office Area	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
PP2A	Window Glaze 2	2nd Floor Main	NAD	N/A
PP2B	Window Glaze 2	2nd Floor Main	NAD	N/A
PP2C	Window Glaze 2	2nd Floor Main	NAD	N/A
PP3A	Window Glaze 3	2nd Floor Main	NAD	N/A
PP3B	Window Glaze 3	2nd Floor Main	NAD	N/A
PP3C	Window Glaze 3	2nd Floor Main	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
PP4A	Window Glaze 4	Room 22, 1st Floor Main	NAD	N/A
PP4B	Window Glaze 4	Room 22, 1st Floor Main	NAD	N/A
PP4C	Window Glaze 4	Room 22, 1st Floor Main	NAD	N/A
PP5A	Window Glaze 5	Room 22, 1st Floor Main	NAD	N/A
PP5B	Window Glaze 5	Room 22, 1st Floor Main	NAD	N/A
PP5C	Window Glaze 5	Room 22, 1st Floor, Addition 2	NAD	N/A

Table 1
Asbestos Bulk Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Asbestos Content	Approx. Quantity
PP6A	Window Glaze 6	Room 25, 1st Floor Main	NAD	N/A
PP6B	Window Glaze 6	Room 23, 1st Floor Main	NAD	N/A
PP6C	Window Glaze 6	Room 23, 1st Floor Main	NAD	N/A
PP7A	Window Glaze 7	2nd Floor Main	NAD	N/A
PP7B	Window Glaze 7	2nd Floor Main	NAD	N/A
PP7C	Window Glaze 7	2nd Floor Main	NAD	N/A

Note: * Sample Description on Analysis results corrected to match information on Chain of Custody.
NAD = No Asbestos Detected, NA = Not applicable, Chry = Chrysotile, SF = Square Feet,
LF = Linear Feet

BOLD = Text indicates homogenous areas greater than 1% asbestos.

5.0 LEAD METHODOLOGY

ATC utilized the collection of paint chips to determine the presence of lead in paint on the assessable building components in accordance with the Occupational Safety and Health Administration (OSHA). The Occupational Safety and Health Administration (OSHA) have a "Lead in Construction Standard" (29 CRF 1926.62) for persons who are likely to come in contact with airborne lead during construction/renovation activities. OSHA does not recognize XRF analytical results for concentration of lead in paint. Bulk paint samples are the only recognized method for testing concentration of lead in paint. For OSHA compliance purposes, OSHA's "Lead in Construction Standard" (29 CRF 1926.62) addresses **any** concentration of lead in paint. The inspection was performed by ATC's, Peter Pietrowski, Industrial Hygienist.

Lead Analytical Results

All of the collected samples were placed in sealed containers and shipped under standard chain-of-custody protocol to EMSL Analytical, Inc. (EMSL) of Kernersville, North Carolina. Lead paint chip samples were analyzed by EMSL using methodology prescribed in Total Lead in Paint (N7082). EMSL is accredited under the American Industrial Hygiene Association (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP, Laboratory ID# 102564). A laboratory report is included in **Attachment C (Lead Laboratory Report and Chain of Custody).** The following table provides a listing of components sampled, locations, and laboratory results for lead analyses.

Table 2: Lead Paint Sample Summary
Life Cycle Building Center

Sample Number	Sample Description	Sample Location	Lead Content (% by weight)	Location In Building
Pb-1	**Green on Structural Steel**	**Main**	**1.6%**	**Throughout Main on Structural Steel**
Pb-2	Blue on Metal Utility Stations	Main	0.31%	N/A
Pb-3	**Blue on Wood Door and Frames**	**Main**	**9.1%**	**Throughout Main on Blue Door Frames**
Pb-4	**Yellow on Metal Met.**	**Stations**	**18%**	**Throughout Main-Various Locations**
Pb-5	**Lt. Green on concrete and CMU**	**Main**	**0.96%**	**Throughout Main-Perimeter Walls**
Pb-6	**Green on Brick**	**Main**	**0.57%**	**Office Area in Main Bldg. N/A**
Pb-7	**Dk. Green on Concrete and CMU**	**Main**	**0.54%**	**Office Area in Main Bldg.**
Pb-8	Yellow on Brick	Main	0.31%	N/A
Pb-9	Lt. Blue on CMU	Main	0.012%	N/A

Table 2: Lead Paint Sample Summary Life Cycle Building Center				
Sample Number	**Sample Description**	**Sample Location**	**Lead Content (% by weight)**	**Location In Building**
Pb-10	**Yellow on Concrete Shower Area**	**Main**	**1.7%**	**Shower Room-Main Bldg.**
Pb-11	**Silver on Structural Steel**	**Main**	**3.1%**	**Throughout Main**
Pb-12	Tan on Glass Blocks	Office Area	0.11%	N/A
Pb-13	Red on Structural Steel	Addition 2	0.061%	N/A
Pb-14	Grey on Metal Door/Frames	Addition 2	0.18%	N/A
Pb-15	Beige on Plaster	Office Area	0.41%	N/A
HUD and EPA establishes that LBP is paint that contains more than 1.0 mg\cm^2, 5,000 parts per million (ppm) or 0.5% of lead in paint.				

The Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA) have established LBP guidelines for target housing and child occupied facilities. The State of Georgia has adopted those same guidelines (in part) and initiated their own State LBP regulations for target housing and child occupied facilities. However, the regulations do not apply to this project for compliance purposes. The Occupational Safety and Health Administration (OSHA) "Lead in Construction Standard" (29 CRF 1926.62) for persons who are likely to come in contact with airborne lead during construction/renovation activities. HUD and EPA establishes that LBP is paint that contains more than 1.0 mg\cm^2, 5,000 parts per million (ppm) or 0.5% of lead in paint. OSHA's "Lead in Construction Standard" addresses any concentration of lead in paint.

6.0 FLOOR DUST METHODOLOGY

ATC utilized the collection of two dust samples as a screens to determine the presence or absence of asbestos fibers and/or of lead in floor dust from the warehouse portion of the facility. Samples were collect by placing approximately 30 cc's of floor dust in separate sample container for analysis of Total Asbestos and Total Lead. All of the collected samples were placed in sealed containers and shipped under standard chain-of-custody protocol to EMSL Analytical, Inc. (EMSL) of Kernersville, North Carolina. Lead samples were analyzed by EMSL using methodology prescribed in Total Lead (N7082). Analysis of bulk samples for asbestos content, was performed by Polarized Light Microscopy (PLM) according to the EPA test method entitled, "Method for the Determination of Asbestos in Bulk Building Materials (EPA 600/R-93/116). EMSL is accredited under the American Industrial Hygiene Association (AIHA) Environmental Laboratory Accreditation Program. A laboratory report is included in **Attachment D (Dust Laboratory Report and Chain of Custody).** Table 3 provides a summary of the laboratory results for lead analyses.

Table 3: Asbestos and Lead Floor Dust Sample Analysis Life Cycle Building Center				
Sample Number	**Sample Description**	**Sample Location**	**Asbestos Content (% by weight)**	**Approximate Material Quantity**
Dust 1	Floor Main Warehouse	1st Floor Main	NAD	N/A
Sample Number	**Sample Description**	**Sample Location**	**Lead Content (% by weight)**	**Approximate Material Quantity**
Dust 2	Floor Main Warehouse	1st Floor Main	820 mg/Kg	N/A

Floor Dust Analytical Results

Asbestos

Analysis of the floor dust for asbestos content **did not** indicate the presence of asbestos in the screening sample.

Lead

Analysis of the floor dust for lead indicated the presence of lead in the screening sample. The Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA) have established LBP on surface and lead in soil guidelines for target housing and child occupied facilities. The State of Georgia has adopted those same guidelines (in part) and initiated their own State LBP regulations for target housing and child occupied facilities. However, the regulations do not apply to this project for compliance purposes. The Occupational Safety and Health Administration (OSHA) "Lead in Construction Standard" (29 CRF 1926.62) for persons who are likely to come in contact with airborne lead during construction/renovation activities with a permissible exposure limit for an 8 hour day of 0.05 mg/m3 in air.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Asbestos Conclusion

Laboratory analysis of the bulk samples collected from the Life Cycle Building 11 did indicated that asbestos is present in quantities of 1% or greater in the following materials.

- **HA- 01 9”X9” Tan w/Marbling VCT Mastic, located in the 2nd Floor Office Area – 1,800 SF.**
- **HA- 03 9”X9” Black VCT, Mastic, 1st Floor Office Area – 3,540 SF.**
- **HA- 04 9”X9” Gray VCT, Mastic, 1st Floor Office Area-Included in HA 03.**
- **HA-05 9”x9” Beige Marbled VCT, 1st Floor Office Area – 180 SF.**
- **HA- 06 9”X9” Black, 1st Floor Office Area - 144 SF.**
- **HA- 08 Corrugated Trans. Pane 1, Wall/Ceiling Main – Not Estimated.**
- **HA- 09 Corrugated Trans. Pane 1, Wall/Ceiling Additional- Not Estimated.**
- **HA- 10 Drywall, Joint Compound, 2nd Floor Office Area, Room 2 – 800 SF.**
- **HA- 11 Drywall, Joint Compound, 1st Floor Main, Room 25 – 640 SF.**
- **HA- 26 4”X4” VAT, Mastic, 1st Floor Office Area, Room 8-3,864 SF.**
- **HA- 33 Pipe Insulation Wrap, 1st Floor Main, 300 LF.**

These materials are regulated by State and Federal regulations and should be removed by a licensed asbestos abatement contractor and disposed of as asbestos containing materials.

Any concealed building materials discovered during maintenance or renovation or demolition activities, which are suspected to contain asbestos, should be sampled and analyzed to confirm the presence of asbestos prior to disturbing.

A building owner is required under OSHA regulation to communicate information regarding the location of ACM to outside contractors, tenants and employees who occupy areas containing ACM. Subcontractors and employees working within the structures at the site should be made aware of the locations of the ACM and the possibility of concealed ACM that could be found during renovation/demolition activities in accordance with the rules and regulations of the Georgia Environmental Protection Division (GAEPD).

Asbestos Recommendations

The following recommendations should be followed for demolition projects including contracting the services of an environmental consultant to monitor/document that the demolition contractor activities comply with the GEPD, OSHA, EPA, and NESHAP requirements.

Written notification is required by state and local regulations prior to beginning any renovation or demolition work. Send written notification, as required by the EPA NESHAP Asbestos Regulations (40 CFR 61. Sub part m.), to the designated regional Asbestos NESHAP notification office at least 10 working days prior to beginning any renovation or demolition work. Send notification to the following address:

Department of Natural Resources
Environmental Protection Division Asbestos
Licensing and Certification 4244 International
Parkway, Suite 104
Atlanta, Georgia 30354
(404) 363-7026

There may be additional suspect asbestos containing materials in inaccessible or concealed spaces. These spaces include, but are not limited to, pipe chases, spaces between wall/ceiling cavities, underneath carpeting, interior of mechanical components such as boiler cavities, interior ducts, etc. All such unidentified materials should be treated as Presumed Asbestos Containing Material (PACM) in accordance with 29 CFR 1926.1101 and 1910.1001.

Lead Conclusion

Lead was present in levels above the EPA/HUD lead level of 0.5% by weight in the samples collected from the following materials:

- **Green on Structural Steel, Main.**
- **Blue on Wood Door and Frames, Main.**
- **Yellow on Metal First Aid Station, Main.**
- **Lt. Green on concrete and CMU, Main.**
- **Green on Brick, Main.**
- **Dk. Green on Concrete and CMU, Main.**
- **Yellow on Concrete Shower Area, Main.**
- **Silver on Structural Steel, Main.**

Note all material listed above were observed to be in damaged condition.

Lead Recommendations

In the event this building is to be demolished ATC recommends collection of TCLP samples for lead analysis to determine if the waste stream exceeds the regulatory threshold of 5 milligrams per kilogram and is defined as a hazardous waste, or if it is below the threshold of 5 milligrams per kilogram and may be disposed of in a permitted MSW Landfill or a permitted C&D Landfill.

The remaining analytical results did indicate “lead content” and all demolition of renovation activities that may disturb these painted surfaces should be conducted in compliance with the OSHA “Lead in Construction Standard” (29 CFR 1926.62).

Floor Dust Conclusion

The presence of lead in the floor dust indicates that the delaminating lead based paint on the structure steel members and other materials in the main warehouse area is impacting dust and debris and accumulating on the facility floors.

Floor Dust Recommendations

While there are no directly applicable surface or soil compliance regulations, ATC recommends taking the follow precautions to limit airborne exposure until the existing lead based paint conditions can be stabilized or abated.

- Cease all dry sweeping operations.
- Utilize a High Efficiency Particulate Air (HEPA) filter vacuum.
- The collection of airborne lead dust samples following stabilization or abatement to verify conditions.

8.0 LIMITATIONS

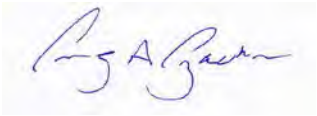
This report is intended for the sole use of CARDNO and the Life Cycle Building Center, the Client. The intent of the report is to aid the building owner, architect, construction manager, general contractors, and potential demolition and abatement contractors in locating asbestos and lead-based paint containing materials. **As actual site conditions and quantities should be field verified, this report is not intended to serve as a bidding document or as a project specification document.** The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user. Although every attempt has been made to identify suspect asbestos containing materials in the areas identified, the destructive inspection technique used is inherently limited in the sense that only full demolition procedures will reveal all building materials of a structure.

Additionally, the passage of time may result in a change in the environmental characteristics at this site. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions and recommendations expressed in this report are based only on conditions that were observed during inspection of the site.

We appreciate the opportunity to be of service to CARDNO for this project and look forward to working with you on future assignments. In the meantime, if you have any questions about information in this report or if we can be of further assistance, please feel free to contact us.

Sincerely,

ATC Group Services LLC



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ATTACHMENT A

CERTIFICATIONS

The

American Board of Industrial Hygiene®

ABIH®

organized to improve the practice of Industrial Hygiene
proclaims that

Darryl Lark Watson

having met all requirements through
education, experience and examination,
is hereby certified in the

COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH

THIS CERTIFICATE IS SCHEDULED FOR RENEWAL
CERTIFICATE
7602
BY DECEMBER 31, 2003

November 12, 1997
date

J. Kenneth Conner
Chair ABIH

CP 7602
certificate
number

Secretary ABIH

Vern Roberts Environmental Training, Inc.

13987 94th Avenue N Seminole, FL 33776

727-593-3067

Asbestos Survey & Mechanical (inspector) Refresher Training

This is to Certify that

Peter Pietrowski

Has completed the requisite training for asbestos accreditation under TSCA TITLE II

Date of Examination 8/25/15

Date of Course: 8/25/15 Expiration Date 8/25/16

Certificate # 8251504

Course # FL49-0006322 Provider # FL49-0003810

Vernon H Roberts

Instructor

ATTACHMENT B

ASBESTOS LABORATORY REPORT AND CHAIN OF CUSTODY

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http://www.EMSL.com / atlantalab@emsl.com

EMSL Order: 071600268
Customer ID: ATEC51
Customer PO:
Project ID:

Attention: Darryl Watson
ATC Group Services LLC
1841 West Oak Parkway
Suite F
Marietta, GA 30062
Project:

Phone: (770) 316-7742
Fax: (770) 427-1907
Received Date: 1/14/2016 12:25 PM
Analysis Date: 1/15/2016
Collected Date:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01A-Floor Tile *071600268-0001*	9"x9" Tan W/ Marbling VCT Mastic - Room 2, 2nd Floor Office Area	Tan Non-Fibrous Homogeneous	HA: 01	93% Non-fibrous (Other)	7% Chrysotile
01A-Mastic *071600268-0001A*	9"x9" Tan W/ Marbling VCT Mastic - Room 2, 2nd Floor Office Area	Black Non-Fibrous Homogeneous	HA: 01	95% Non-fibrous (Other)	5% Chrysotile
01B *071600268-0002*	9"x9" Tan W/ Marbling VCT Mastic - Room 3, 2nd Floor Office Area		HA: 01		Stop Positive (Not Analyzed)
02A-Stair Tread *071600268-0003*	Stair, Tread, Brown, Mastic - Room 4, 2nd Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 02	100% Non-fibrous (Other)	None Detected
02A-Mastic *071600268-0003A*	Stair, Tread, Brown, Mastic - Room 4, 2nd Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 02	100% Non-fibrous (Other)	None Detected
02B-Stair Tread *071600268-0004*	Stair, Tread, Brown, Mastic - Room 4, 2nd Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 02	100% Non-fibrous (Other)	None Detected
02B-Mastic *071600268-0004A*	Stair, Tread, Brown, Mastic - Room 4, 2nd Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 02	100% Non-fibrous (Other)	None Detected
03A-Floor Tile *071600268-0005*	9"x9" Black VCT, Mastic - Room 8, 1st Floor Office Area	Black Non-Fibrous Homogeneous	HA: 03	93% Non-fibrous (Other)	7% Chrysotile
03A-Mastic *071600268-0005A*	9"x9" Black VCT, Mastic - Room 8, 1st Floor Office Area	Black Non-Fibrous Homogeneous	HA: 03	97% Non-fibrous (Other)	3% Chrysotile
03B *071600268-0006*	9"x9" Black VCT, Mastic - Room 8, 1st Floor Office Area		HA: 03		Stop Positive (Not Analyzed)
04A-Floor Tile *071600268-0007*	9"x9" Gray VCT, Mastic - Room 8, 1st Floor Office Area	Gray Non-Fibrous Homogeneous	HA: 04	93% Non-fibrous (Other)	7% Chrysotile
04A-Mastic *071600268-0007A*	9"x9" Gray VCT, Mastic - Room 8, 1st Floor Office Area	Black Non-Fibrous Homogeneous	HA: 04	100% Non-fibrous (Other)	None Detected
04B-Floor Tile *071600268-0008*	9"x9" Gray VCT, Mastic - Room 8, 1st Floor Office Area		HA: 04		Stop Positive (Not Analyzed)

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04B-Mastic *071600268-0008A*	9"x9" Gray VCT, Mastic - Room 8, 1st Floor Office Area	Black Non-Fibrous Homogeneous	HA: 04	100% Non-fibrous (Other)	None Detected
05A-Floor Tile *071600268-0009*	9"x9" Beige Marbled VCT Mastic - Room 13, 1st Floor Office Area	Tan Non-Fibrous Homogeneous	HA: 05	94% Non-fibrous (Other)	6% Chrysotile
05A-Mastic *071600268-0009A*	9"x9" Beige Marbled VCT Mastic - Room 13, 1st Floor Office Area	Black Non-Fibrous Homogeneous	HA: 05	98% Non-fibrous (Other)	2% Chrysotile
05B *071600268-0010*	9"x9" Beige Marbled VCT Mastic - Room 13, 1st Floor Office Area		HA: 05		Stop Positive (Not Analyzed)
06A *071600268-0011*	9"x9" Black - Room 14, 1st Floor Office Area	Black Non-Fibrous Homogeneous	HA: 06	93% Non-fibrous (Other)	7% Chrysotile
06B *071600268-0012*	9"x9" Black - Room 14, 1st Floor Office Area		HA: 06		Stop Positive (Not Analyzed)
07A-Stair Tread *071600268-0013*	Gray Stairtread, Mastic - Room 18a, 1st Floor Office Area	Gray Non-Fibrous Homogeneous	HA: 07	100% Non-fibrous (Other)	None Detected
07A-Mastic *071600268-0013A*	Gray Stairtread, Mastic - Room 18a, 1st Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 07	100% Non-fibrous (Other)	None Detected
07B-Stair Tread *071600268-0014*	Gray Stairtread, Mastic - Room 18a, 1st Floor Office Area	Gray Non-Fibrous Homogeneous	HA: 07	100% Non-fibrous (Other)	None Detected
07B-Mastic *071600268-0014A*	Gray Stairtread, Mastic - Room 18a, 1st Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 07	100% Non-fibrous (Other)	None Detected
08A *071600268-0015*	Corrugated Trans. Panel Wall/ Ceiling Main - 2nd Floor Main	Gray Fibrous Homogeneous	HA: 08	70% Non-fibrous (Other)	30% Chrysotile
08B *071600268-0016*	Corrugated Trans. Panel Wall/ Ceiling Main - 2nd Floor Main		HA: 08		Stop Positive (Not Analyzed)
09A *071600268-0017*	Corrugated Trans. Panel Wall/ Ceiling Additional - Room 22 2nd Floor Main	Gray Fibrous Homogeneous	HA: 09	70% Non-fibrous (Other)	30% Chrysotile
09B *071600268-0018*	Corrugated Trans. Panel Wall/ Ceiling Additional - Room 22 2nd Floor Main		HA: 09		Stop Positive (Not Analyzed)

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Customer ID: ATEC51
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
10A-Joint Compound *071600268-0019*	Drywall, Joint Compound, 2nd FL. Main - Room 2 Wall, 2nd Floor Office Area	White Non-Fibrous Homogeneous	HA: 10	98% Non-fibrous (Other)	2% Chrysotile
10A-Drywall *071600268-0019A*	Drywall, Joint Compound, 2nd FL. Main - Room 2 Wall, 2nd Floor Office Area	Gray Fibrous Homogeneous	15% Cellulose HA: 10	35% Gypsum 50% Non-fibrous (Other)	None Detected
10B-Joint Compound *071600268-0020*	Drywall, Joint Compound, 2nd FL. Main - Room 2 Wall, 2nd Floor Office Area		HA: 10		Stop Positive (Not Analyzed)
10B-Drywall *071600268-0020A*	Drywall, Joint Compound, 2nd FL. Main - Room 2 Wall, 2nd Floor Office Area	Gray Fibrous Homogeneous	15% Cellulose HA: 10	35% Gypsum 50% Non-fibrous (Other)	None Detected
10C-Joint Compound *071600268-0021*	Drywall, Joint Compound, 2nd FL. Main - Room 2 Column, 2nd Floor Office Area		HA: 10		Stop Positive (Not Analyzed)
10C-Drywall *071600268-0021A*	Drywall, Joint Compound, 2nd FL. Main - Room 2 Column, 2nd Floor Office Area	Various Fibrous Homogeneous	15% Cellulose HA: 10	35% Gypsum 50% Non-fibrous (Other)	None Detected
11A-Joint Compound *071600268-0022*	Drywall, Joint Compound, 2nd FL. Main - Room 25 1st Floor Main	Tan Non-Fibrous Homogeneous	HA: 11	98% Non-fibrous (Other)	2% Chrysotile
11A-Drywall *071600268-0022A*	Drywall, Joint Compound, 2nd FL. Main - Room 25 1st Floor Main	Gray Fibrous Homogeneous	15% Cellulose HA: 11	35% Gypsum 50% Non-fibrous (Other)	None Detected
11B-Joint Compound *071600268-0023*	Drywall, Joint Compound, 2nd FL. Main - Room 25 1st Floor Main		HA: 11		Stop Positive (Not Analyzed)
11B-Drywall *071600268-0023A*	Drywall, Joint Compound, 2nd FL. Main - Room 25 1st Floor Main	Various Fibrous Homogeneous	15% Cellulose HA: 11	35% Gypsum 50% Non-fibrous (Other)	None Detected
12A-Joint Compound *071600268-0024*	Drywall, Joint Compound, Addition - Outside Wall Room 20, 1st Floor Addition 2	White Non-Fibrous Homogeneous	HA: 12	100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
12A-Drywall *071600268-0024A*	Drywall, Joint Compound, Addition - Outside Wall Room 20, 1st Floor Addition 2	Gray Fibrous Homogeneous	5% Cellulose HA: 12	40% Gypsum 55% Non-fibrous (Other)	None Detected
12B-Joint Compound *071600268-0025*	Drywall, Joint Compound, Addition - Outside Wall Room 20, 1st Floor Addition 2	White Non-Fibrous Homogeneous	HA: 12	100% Non-fibrous (Other)	None Detected
12B-Drywall *071600268-0025A*	Drywall, Joint Compound, Addition - Outside Wall Room 20, 1st Floor Addition 2	Various Fibrous Homogeneous	15% Cellulose HA: 12	30% Gypsum 55% Non-fibrous (Other)	None Detected
13A-Skim Coat *071600268-0026*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 8, 1st Floor Office Area	White Non-Fibrous Homogeneous	HA: 13	100% Non-fibrous (Other)	None Detected
13A-Base Coat *071600268-0026A*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 8, 1st Floor Office Area	Gray Non-Fibrous Homogeneous	HA: 13	10% Quartz 90% Non-fibrous (Other)	None Detected
13B-Skim Coat *071600268-0027*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 8, 1st Floor Office Area	White Non-Fibrous Homogeneous	HA: 13	100% Non-fibrous (Other)	None Detected
13B-Base Coat *071600268-0027A*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 8, 1st Floor Office Area	Gray Non-Fibrous Homogeneous	HA: 13	10% Quartz 90% Non-fibrous (Other)	None Detected
13C *071600268-0028*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 8, 1st Floor Office Area	White Non-Fibrous Homogeneous	HA: 13	100% Non-fibrous (Other)	None Detected
13D-Skim Coat *071600268-0029*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 18a, 1st Floor Office Area	White Non-Fibrous Homogeneous	HA: 13	100% Non-fibrous (Other)	None Detected
13D-Base Coat *071600268-0029A*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 18a, 1st Floor Office Area	Gray Non-Fibrous Homogeneous	HA: 13	100% Non-fibrous (Other)	None Detected
13E-Skim Coat *071600268-0030*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 8, 1st Floor Office Area	White Non-Fibrous Homogeneous	HA: 13	100% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
13E-Base Coat *071600268-0030A*	Plaster On Main Bldg Office/1st Fl. Wall & Ceiling - Room 8, 1st Floor Office Area	Gray Non-Fibrous Homogeneous	HA: 13	100% Non-fibrous (Other)	None Detected
14A-Skim Coat *071600268-0031*	Plaster, Main Bldg Warehouse Bathroom - Room 29, 1st Floor Main	White Non-Fibrous Homogeneous	HA: 14	100% Non-fibrous (Other)	None Detected
14A-Base Coat *071600268-0031A*	Plaster, Main Bldg Warehouse Bathroom - Room 29, 1st Floor Main	Gray Non-Fibrous Homogeneous	HA: 14	100% Non-fibrous (Other)	None Detected
14B-Skim Coat *071600268-0032*	Plaster, Main Bldg Warehouse Bathroom - Room 29, 1st Floor Main	White Non-Fibrous Homogeneous	HA: 14	100% Non-fibrous (Other)	None Detected
14B-Base Coat *071600268-0032A*	Plaster, Main Bldg Warehouse Bathroom - Room 29, 1st Floor Main	Gray Non-Fibrous Homogeneous	HA: 14	100% Non-fibrous (Other)	None Detected
14C-Skim Coat *071600268-0033*	Plaster, Main Bldg Warehouse Bathroom - Room 29, 1st Floor Main	Tan Non-Fibrous Homogeneous	HA: 14	100% Non-fibrous (Other)	None Detected
14C-Base Coat *071600268-0033A*	Plaster, Main Bldg Warehouse Bathroom - Room 29, 1st Floor Main	Gray Non-Fibrous Homogeneous	HA: 14	100% Non-fibrous (Other)	None Detected
16A *071600268-0034*	CT- 2'x4', Fissured W/ Dots - Room 2, 2nd Floor Office Area	Tan Fibrous Homogeneous	60% Cellulose 5% Min. Wool HA: 16	35% Non-fibrous (Other)	None Detected
16B *071600268-0035*	CT- 2'x4', Fissured W/ Dots - Room 2, 2nd Floor Office Area	Gray Fibrous Homogeneous	60% Cellulose 5% Min. Wool HA: 16	35% Non-fibrous (Other)	None Detected
17A *071600268-0036*	1'x1' CT Glued To Plaster - Room 18a, 1st Floor Office Area	Brown Fibrous Homogeneous	80% Cellulose HA: 17	20% Non-fibrous (Other)	None Detected
17B *071600268-0037*	1'x1' CT Glued To Plaster - Room 8, 1st Floor Office Area	Brown Fibrous Homogeneous	80% Cellulose HA: 17	20% Non-fibrous (Other)	None Detected
18A *071600268-0038*	Glue Dobb W HA17 - Room 8, 1st Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected
18B *071600268-0039*	Glue Dobb W HA17 - Room 8, 1st Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
19A *071600268-0040*	1'x1' CT Nailed To Wooden Frame - Room 19, 1st Floor Addition 2	Brown Fibrous Homogeneous	80% Cellulose HA: 19	20% Non-fibrous (Other)	None Detected
19B *071600268-0041*	1'x1' CT Nailed To Wooden Frame - Room 19, 1st Floor Addition 2	Brown Fibrous Homogeneous	80% Cellulose HA: 19	20% Non-fibrous (Other)	None Detected
20A *071600268-0042*	Glue Dobb - Room 23, 1st Floor Main	Brown Non-Fibrous Homogeneous	HA: 20	100% Non-fibrous (Other)	None Detected
20B *071600268-0043*	Glue Dobb - Room 23, 1st Floor Main	Brown Non-Fibrous Homogeneous	HA: 20	100% Non-fibrous (Other)	None Detected
21A *071600268-0044*	Drywall Assoc. W/HA20 No Joint Compound - Room 23, 1st Floor Main	Various Fibrous Homogeneous	15% Cellulose HA: 21	35% Gypsum 50% Non-fibrous (Other)	None Detected
21B *071600268-0045*	Drywall Assoc. W/HA20 No Joint Compound - Room 23, 1st Floor Main	Gray Fibrous Homogeneous	15% Cellulose HA: 21	35% Gypsum 50% Non-fibrous (Other)	None Detected
22A-Cove Base *071600268-0046*	4" Brown Basecoat Mastic Main Office Area - Room 2, 2nd Floor Office Area	Black Non-Fibrous Homogeneous	HA: 22	100% Non-fibrous (Other)	None Detected
22A-Mastic *071600268-0046A*	4" Brown Basecoat Mastic Main Office Area - Room 2, 2nd Floor Office Area	Yellow Non-Fibrous Homogeneous	HA: 22	100% Non-fibrous (Other)	None Detected
22B-Cove Base *071600268-0047*	4" Brown Basecoat Mastic Main Office Area - Room 1, 2nd Floor Office Area	Black Non-Fibrous Homogeneous	HA: 22	100% Non-fibrous (Other)	None Detected
22B-Mastic *071600268-0047A*	4" Brown Basecoat Mastic Main Office Area - Room 1, 2nd Floor Office Area	Brown Non-Fibrous Homogeneous	HA: 22	100% Non-fibrous (Other)	None Detected
23A *071600268-0048*	Vibration Damper 1 Black - Room 15, 1st Floor Office Area	Brown/Black Fibrous Homogeneous	60% Synthetic HA: 23	40% Non-fibrous (Other)	None Detected
23B *071600268-0049*	Vibration Damper 1 Black - Room 15, 1st Floor Office Area		HA: 23		Not Submitted
24A *071600268-0050*	Vibration Damper 2 White - Room 15, 1st Floor Office Area	Brown/Black Fibrous Homogeneous	60% Synthetic HA: 24	40% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
24B *071600268-0051*	Vibration Damper 2 White - Room 15, 1st Floor Office Area	Brown Fibrous Homogeneous	60% Synthetic HA: 24	40% Non-fibrous (Other)	None Detected
25A *071600268-0052*	Remnant Mastic On Basecoat Rm. 23 - Room 23, 1st Floor Main	Black Non-Fibrous Homogeneous	HA: 25	100% Non-fibrous (Other)	None Detected
25B *071600268-0053*	Remnant Mastic On Basecoat Rm. 23 - Room 23, 1st Floor Main	Black Non-Fibrous Homogeneous	<1% Cellulose HA: 25	100% Non-fibrous (Other)	None Detected
26A *071600268-0054*	4"x4" VAT, Mastic Under All Office Area - Room 8, 1st Floor Office Area	Black Non-Fibrous Homogeneous	HA: 26	95% Non-fibrous (Other)	5% Chrysotile
26B *071600268-0055*	4"x4" VAT, Mastic Under All Office Area - Room 13, 1st Floor Office Area		HA: 26		Stop Positive (Not Analyzed)
33A *071600268-0056*	Pipe Insulation Wrap - Room 22, 1st Floor Main	Gray Fibrous Homogeneous	10% Cellulose HA: 33	25% Non-fibrous (Other)	65% Chrysotile
33B *071600268-0057*	Pipe Insulation Wrap - Room 22, 1st Floor Main		HA: 33		Stop Positive (Not Analyzed)
33C *071600268-0058*	Pipe Insulation Wrap - Room 22, 1st Floor Main		HA: 33		Stop Positive (Not Analyzed)
PP1A *071600268-0059*	Window Glaze 1 - Room 1, 2nd Floor Office Area	Red Non-Fibrous Homogeneous	HA: PP1	100% Non-fibrous (Other)	None Detected
PP1B *071600268-0060*	Window Glaze 1 - Room 1, 2nd Floor Office Area	Red Non-Fibrous Homogeneous	HA: PP1	100% Non-fibrous (Other)	None Detected
PP1C *071600268-0061*	Window Glaze 1 - Room 1, 2nd Floor Office Area	Red Non-Fibrous Homogeneous	HA: PP1	100% Non-fibrous (Other)	None Detected
PP2A *071600268-0062*	Window Glaze 2 - 2nd Floor Main	Red Non-Fibrous Homogeneous	HA: PP2	100% Non-fibrous (Other)	None Detected
PP2B *071600268-0063*	Window Glaze 2 - 2nd Floor Main	Red Non-Fibrous Homogeneous	HA: PP2	100% Non-fibrous (Other)	None Detected
PP2C *071600268-0064*	Window Glaze 2 - 2nd Floor Main	Red Non-Fibrous Homogeneous	HA: PP2	100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
PP3A *071600268-0065*	Window Glaze 3 - 2nd Floor Main	Gray Non-Fibrous Homogeneous	HA: PP3	100% Non-fibrous (Other)	None Detected
PP3B *071600268-0066*	Window Glaze 3 - 2nd Floor Main	Gray Non-Fibrous Homogeneous	HA: PP3	100% Non-fibrous (Other)	None Detected
PP3C *071600268-0067*	Window Glaze 3 - 2nd Floor Main	Gray Non-Fibrous Homogeneous	HA: PP3	100% Non-fibrous (Other)	None Detected
PP4A *071600268-0068*	Window Glaze 4 - 1st Floor Main Room 22	Red Non-Fibrous Homogeneous	HA: PP4	100% Non-fibrous (Other)	None Detected
PP4B *071600268-0069*	Window Glaze 4 - 1st Floor Main Room 22	Gray Non-Fibrous Homogeneous	HA: PP4	100% Non-fibrous (Other)	None Detected
PP4C *071600268-0070*	Window Glaze 4 - Room 22, 1st Floor Main	Gray Non-Fibrous Homogeneous	HA: PP4	100% Non-fibrous (Other)	None Detected
PP5A *071600268-0071*	Window Glaze 5 - Room 22, 1st Floor Main	Tan Non-Fibrous Homogeneous	HA: PP5	100% Non-fibrous (Other)	None Detected
PP5B *071600268-0072*	Window Glaze 5 - Room 22, 1st Floor Main	Tan Non-Fibrous Homogeneous	HA: PP5	100% Non-fibrous (Other)	None Detected
PP5C *071600268-0073*	Window Glaze 5 - Room 22, 1st Floor Addition 2	Gray Non-Fibrous Homogeneous	HA: PP5	100% Non-fibrous (Other)	None Detected
PP6A *071600268-0074*	Window Glaze 6 - Room 24, 1st Floor Main	Tan Non-Fibrous Homogeneous	HA: PP6	100% Non-fibrous (Other)	None Detected
PP6B *071600268-0075*	Window Glaze 6 - Room 23, 1st Floor Main	Tan Non-Fibrous Homogeneous	HA: PP6	100% Non-fibrous (Other)	None Detected
PP6C *071600268-0076*	Window Glaze 6 - Room 23, 1st Floor Main	Tan Non-Fibrous Homogeneous	HA: PP6	100% Non-fibrous (Other)	None Detected
PP7A *071600268-0077*	Window Glaze 7 - 2nd Floor Main	Tan Non-Fibrous Homogeneous	HA: PP7	100% Non-fibrous (Other)	None Detected
PP7B *071600268-0078*	Window Glaze 7 - 2nd Floor Main	Tan Non-Fibrous Homogeneous	HA: PP7	100% Non-fibrous (Other)	None Detected
PP7C *071600268-0079*	Window Glaze 7 - 2nd Floor Main	Tan Non-Fibrous Homogeneous	HA: PP7	100% Non-fibrous (Other)	None Detected

Initial Report From: 01/15/2016 16:39:43

EMSL Analytical, Inc.
2205 Corporate Plaza Parkway SE, Suite 200 Smyrna
Tel/Fax: (770) 956-9150 / (770) 956-9181
http://www.EMSL.com / atlantalab@emsl.com

EMSL Order: 071600268
Customer ID: ATEC51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type

Analyst(s)

Amber Baynes (48)
Anthony Sanaie (42)

Lauren Kerber, Asbestos Lab Supervisor
or Other Approved Signatory

Initial Report From: 01/15/2016 16:39:43

OrderID: 071600268

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 071600268

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: ATC Group Services LLC	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments**
Street: 1811 W. OAK PKWY STE F	*Third Party Billing requires written authorization from third party*
City: Marietta **State/Province:** GA	**Zip/Postal Code:** 30062 **Country:** USA
Report To (Name): Darryl Watson	**Telephone #:** 770-427-9456
Email Address: darryl.watson@atcassociates.com	**Fax #:** 770 427-1807 **Purchase Order:**
Project Name/Number:	**Please Provide Results:** ☐ Fax ☑ Email
U.S. State Samples Taken:	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☒ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide*

PLM - Bulk (reporting limit)	TEM – Bulk
☒ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

☒ Check For Positive Stop – Clearly Identify Homogenous Group **Date Sampled:** Jan 8-29-2015

Samplers Name: **Samplers Signature:** [signature] For PP Jan 29 2016

Sample #	HA #	Sample Location	Material Description
01A	01	Room 2, 2nd Floor Office Area	9"x9" tan w/marbling VCT-MAST
01B	01	Room 3, 2nd Floor Office Area	9"x9" tan w/marbling, VCT Mastic
02A	02	Room 4, 2nd Floor Office Area	Stair, tread, brown, mastic
02B	02	Room 4, 2nd Floor Office Area	Stair, tread, brown, Mastic
03A	03	Room 8, 1st Floor Office Area	9"x9" black VCT, Mastic
03B	03	Room 8, 1st Floor Office Area	9"x9" black VCT, Mastic
04A	04	Room 8, 1st Floor Office Area	9"x9" gray VCT, Mastic
04B	04	Room 8, 1st Floor Office Area	9"x9" gray VCT Mastic
05A	05	Room 13, 1st Floor Office Area	9"x9" beige Marbled VCT Mast
05B	05	Room 13, 1st Floor Office Area	9"x9" beige marbled VCT Mast

Client Sample # (s): 01A – 14B / 16A – 26B / 3A,B,C / 00A - 00X **Total # of Samples:** 79

Relinquished (Client): [signature] **Date:** 1/4/16 **Time:** 1200

Received (Lab): Kim Yancy **Date:** 1-14-16 **Time:** 12:25

Comments/Special Instructions:

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*:

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
06A	06	Room 14, 1st Floor office Area	9" X 9" black
06B	06	Room 14, 1st Floor Office Area	9" X 9" black
07A	07	Room 18a, 1st Floor office Area	Gray stair tread, mastic
07B	07	Room 18a, 1st Floor office Area	Gray stair tread, MASTIC
08A	08	2nd Floor Main	Corrugated trans. panel wall | ceiling MAIN
08B	08	2nd Floor Main	corrugated trans panel wall | ceiling MAIN
09A	09	Room 22 2nd Floor main	corrugated trans panel wall | ceiling Addition
09B	09	Room 22 2nd Floor Main	corrugated trans panel wall | ceiling Addition
10A	10	Room 2 wall, 2nd Floor office Area	Drywall, joint compound 2nd FL MAIN
10B	10	Room 2 wall, 2nd Floor Office Area	Drywall, joint compound 2nd FL MAIN
10C	10	Room 2 column, 2nd Floor office Area	Drywall, joint compound 2nd FL MAIN
11A	11	Room 25 1st Floor Main	Drywall, joint compound 2nd flr
11B	11	Room 25 1st Floor Main	Drywall, joint compound, 2nd flr MA
12A	12	Outside wall Room 20, 1st Floor Addition 2	Drywall, joint compound, Addition
12B	12	Outside wall Room 20, 1st Floor Addition 2	Drywall, joint compound, Addition
13A	13	Room 8, 1st Floor Office Area	Plaster on main bldg office | 1st flr wall + ceiling
13B	13	Room 8, 1st Floor office Area	Plaster on main bldg office | 1st flr - wall + ceiling
13C	13	Room 8, 1st Floor Office Area	Plaster on main bldg office | 1st flr - wall + ceiling
13D	13	Room 18a, 1st Floor Office Area	Plaster on main bldg office | 1st flr - wall + ceiling
13E	13	Room 8, 1st Floor Office Area	Plaster on main bldg office | 1st flr - wall + ceiling
14A	14	Room 29, 1st Floor Main	Plaster, main bldg warehouse bath room
14B	14	Room 29, 1st Floor Main	Master, main bldg warehouse bath room
14C	14	Room 29, 1st Floor Main	Master, main bldg warehouse bath room

***Comments/Special Instructions:**

OrderID: 071600268

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*:

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200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company :	**EMSL-Bill to:** ☐ Same ☒ Different If Bill to is Different note instructions in Comments**
Street:	*Third Party Billing requires written authorization from third party*
City: / **State/Province:**	**Zip/Postal Code:** / **Country:**
Report To (Name):	**Telephone #:**
Email Address:	**Fax #:** / **Purchase Order:**
Project Name/Number:	**Please Provide Results:** ☐ Fax ☐ Email
U.S. State Samples Taken:	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide*

PLM - Bulk (reporting limit)	TEM – Bulk
☐ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method See Page1	

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:**

Samplers Name: **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
~~15~~		~~Void~~	~~Transite panel, smooth main bldg~~ ware house
~~15~~		~~Void~~	~~Transite panel, smooth main bldg~~ ware house
16A	16	Room 2, 2nd Floor office Area	CT - 2'x4', fissured w/ dots
16B	16	Room 2, 2nd Floor office Area	CT. 2'x4', fissured w/ dots
17A	17	Room 18a, 1st Floor office Area	1'x1' CT glued to plaster
17B	17	Room 8, 1st Floor office Area	1'x1" CT glued to plaster
18A	18	Room 8, 1st Floor office Area	Glue dobb w HA17
18B	18	Room 8, 1st Floor office Area	Glue dobb w HA17
19A	19	Room 19, 1st Floor Addition 2	1'x1' CT nailed to wooden frame
19B	19	Room 19, 1st Floor Addition 2	1'x1' CT nailed to wooden frame

Client Sample # (s): **Total # of Samples:**

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:

OrderID: 071600268

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*):

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company :	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street:	
City: / **State/Province:**	**Zip/Postal Code:** / **Country:**
Report To (Name):	**Telephone #:**
Email Address:	**Fax #:** / **Purchase Order:**
Project Name/Number:	**Please Provide Results:** ☐ Fax ☐ Email
U.S. State Samples Taken:	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

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PLM - Bulk (reporting limit)	TEM – Bulk
☐ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2 5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐ See Page 1
☐ Standard Addition Method	

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** | **Date Sampled:**

Samplers Name: | **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
20A	20	Room 23, 1st Floor Main	Glue dobb
20B	20	Room 23, 1st Floor Main	Glue dobb
21A	21	Room 23, 1st Floor Main	Drywall Assoc. w/ HA20 no joint compound
21B	21	Room 23, 1st Floor Main	Drywall Assoc w/ HA20 no joint compound
22A	22	Room 2, 2nd Floor office Area	4" brown base cut mastic main office Area
22B	22	Room 1, 2nd Floor office Area	4" brown base cut mastic main office Area
23A	23	Room 15, 1st Floor office Area	Vibration Damper 1 Black
23B	23	Room 15, 1st Floor office Area	Vibration Damper 1 Black
24A	24	Room 15, 1st Floor office Area	Vibration Damper 2 White
24B	24	Room 15, 1st Floor office Area	Vibration Damper 2 white

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*:

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
25A	25	Room 23, 1st Floor Main	Remnant mastic on bare VAT Rm 23
25B	25	Room 23, 1st Floor Main	Remnant mastic on bare VAT Rm 23
26A	26	Room 8, 1st Floor Office Area	4"x4" VAT, Mastic under all office
26B	26	Room 13, 1st Floor Office Area	4"x4" VAT, mastic under all office Area
~~27~~			~~window GLAZE - Type 1~~
~~28~~			~~Window GLAZE - Type 2~~
~~29~~			~~Window GLAZE - Type 3~~
~~30~~			~~Window GLAZE - Type 4~~
~~31~~			~~Window GLAZE - Type 5~~
~~32~~			~~Window GLAZE - Type 6~~
33A	33	Room 22, 1st Floor Main	Pipe Insulation Wrap
33B	33	Room 22, 1st Floor Main	Pipe Insulation Wrap
33C	33	Room 22, 1st Floor Main	Pipe Insulation Wrap
PP1A	PP1	Room 1, 2nd Floor Office Area	Window GLAZE 1
PP1B	PP1	Room 1, 2nd Floor Office Area	Window GLAZE 1
PP1C	PP1	Room 1, 2nd Floor Office Area	Window GLAZE 1
PP2A	PP2	2nd Floor Main	Window GLAZE 2
PP2B	PP2	2nd Floor Main	Window GLAZE 2
PP2C	PP2	2nd Floor Main	Window GLAZE 2
PP3A	PP3	2nd Floor Main	Window GLAZE 3
PP3B	PP3	2nd Floor Main	Window GLAZE 3
PP3C	PP3	2nd Floor Main	Window GLAZE 3
PP4A	PP4	1st Floor Main Room 22	Window GLAZE 4
PP4B	PP4	1st Floor Main Room 22	Window GLAZE 4

***Comments/Special Instructions:**

OrderID: 071600268

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*):

EMSL ANALYTICAL, INC
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company :	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street:	
City: / **State/Province:**	**Zip/Postal Code:** / **Country:**
Report To (Name):	**Telephone #:**
Email Address:	**Fax #:** / **Purchase Order:**
Project Name/Number:	**Please Provide Results:** ☐ Fax ☐ Email
U.S. State Samples Taken:	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☒ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

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PLM - Bulk (reporting limit)	TEM – Bulk
☐ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:**

Samplers Name: See Page 1 **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
PP4C	PP4	Room 22 1st Floor Main	Window Glaze 4
PP5A	PP5	Room 22 1st Floor Main	Window Glaze 5
PP5B	PP5	Room 22, 1st Floor ~~Addition 2~~ Main	Window Glaze 5
PP5C	~~PP6~~ PP5	Room ~~22~~ 1st Floor Addition 2	Window Glaze 5
PP6A	~~PP7~~ PP6	Room 24, 1st Floor Main	Window Glaze 6
PP6B	~~PP8~~ PP6	Room 23, 1st Floor Main	Window Glaze 6
PP6C	~~PP9~~ PP6	Room 23, 1st Floor Main	Window Glaze 6
PP7A	PP7	2nd Floor Main	Window Glaze 7
PP7B	PP7	2nd Floor Main	Window Glaze 7
PP7C	PP7	2nd Floor Main	Window Glaze 7

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:

ATTACHMENT C

LEAD LABORATORY REPORT AND CHAIN OF CUSTODY

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201600519
CustomerID:	ATEC51
CustomerPO:	
ProjectID:	

Attn: **Darryl Watson**
ATC Group Services LLC
1841 West Oak Parkway
Suite F
Marietta, GA 30062

Phone:	(770) 427-9456
Fax:	(770) 427-1907
Received:	01/15/16 10:30 AM
Collected:	1/8/2016

Project: **Life Cycle Building**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead Concentration*
Pb-1	*201600519-0001*	1/8/2016	1/16/2016	1.6 % wt
	Site: Green on Structural Steel, Main			
Pb-2	*201600519-0002*	1/8/2016	1/16/2016	0.31 % wt
	Site: Blue on Metal Utility Stations, Main			
Pb-3	*201600519-0003*	1/8/2016	1/16/2016	9.1 % wt
	Site: Blue on Wood Door and Frames, Main			
Pb-4	*201600519-0004*	1/8/2016	1/16/2016	18 % wt
	Site: Yellow on Metal Med. Stations			
Pb-5	*201600519-0005*	1/8/2016	1/16/2016	0.96 % wt
	Site: Lt.Green on Concrete and CMU<Main			
Pb-6	*201600519-0006*	1/8/2016	1/16/2016	0.57 % wt
	Site: Green on Brick, Main			
Pb-7	*201600519-0007*	1/8/2016	1/16/2016	0.54 % wt
	Site: Dk.Green on Concrete amd CMU, Main			
Pb-8	*201600519-0008*	1/8/2016	1/16/2016	0.31 % wt
	Site: Yellow on Brick, Main			
Pb-9	*201600519-0009*	1/8/2016	1/16/2016	0.012 % wt
	Site: Lt.Blue on CMU, Main			
Pb-10	*201600519-0010*	1/8/2016	1/16/2016	1.7 % wt
	Site: Yellow on Concrete Shower Area, Main			
Pb-11	*201600519-0011*	1/8/2016	1/16/2016	3.1 % wt
	Site: Silver on Structural Steel, Main			
Pb-12	*201600519-0012*	1/8/2016	1/16/2016	0.11 % wt
	Site: Tan on Glass Blocks, Office Area			
Pb-13	*201600519-0013*	1/8/2016	1/16/2016	0.061 % wt
	Site: Red on Structural Steel, Addition 2			
Pb-14	*201600519-0014*	1/8/2016	1/16/2016	0.18 % wt
	Site: Grey on Metal Door/Frames, Addition 2			
Pb-15	*201600519-0015*	1/8/2016	1/16/2016	0.41 % wt
	Site: Beige on Plaster, Office Area			

Bill Chamberlin, Laboratory Director
or other approved signatory
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 01/18/2016 13:49:13

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201600519
CustomerID:	ATEC51
CustomerPO:	
ProjectID:	

Attn: **Darryl Watson**
ATC Group Services LLC
1841 West Oak Parkway
Suite F
Marietta, GA 30062

Phone:	(770) 427-9456
Fax:	(770) 427-1907
Received:	01/15/16 10:30 AM
Collected:	1/8/2016

Project: **Life Cycle Building**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead* ***Concentration***
Pb-16	*201600519-0016*	1/8/2016	1/18/2016	0.62 % wt
	Site: Beige on Wood Pane/Doors/Frames, Office Area			
Pb-17	*201600519-0017*	1/8/2016	1/16/2016	0.098 % wt
	Site: Beige on Drywall, 2nd Floor Office Area			
Pb-18	*201600519-0018*	1/8/2016	1/18/2016	3.1 % wt
	Site: Red on Structural Steel, 2nd Floor Main			
Pb-19	*201600519-0019*	1/8/2016	1/18/2016	5.8 % wt
	Site: Brown on Structural Steel, 2nd Floor Main			
Pb-20	*201600519-0020*	1/8/2016	1/18/2016	2.4 % wt
	Site: Green on Concrete, 2nd Floor Main			

Bill Chamberlin, Laboratory Director
or other approved signatory
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 01/18/2016 13:49:13

OrderID: 201600519

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only):* 201600519

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNIMINSON, NJ 08077
PHONE: (856) 858-4800
FAX: (856) 786-5973

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company : ATC Groups Services LLC		**EMSL-Bill to:** ☒ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 1841 West Oak Parkway Suite F		*Third Party Billing requires written authorization from third party*	
City: Marietta	**State/Province: Georgia**	**Zip/Postal Code: 30062**	**Country: USA**
Report To (Name): Darryl Watson		**Fax #: 770 427 9456**	
Telephone #: 770 316 7742		**Email Address: darryl.watson@atcassociated.com**	
Project Name/Number: Life cycle Building			
Please Provide Results: ☐ Fax ☒ Email	**Purchase Order:**	**U.S. State Samples Taken: GA**	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☒ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☐ mg/cm² ☒ % by wt.	SW846-7000B/7420 or AOAC 974.02	Flame Atomic Absorption	0.01%	☒
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES	0.5 µg/filter	☐
Wipe* ☐ ASTM ☐ non ASTM *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B/7420	Flame Atomic Absorption	10 µg/wipe	☐
	SW846-6010B or C	ICP-AES	0.5 µg/wipe	☐
TCLP	SW846-1311/7420/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B/7420	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7421	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)	☐
Wastewater	SM3111B or SW846-7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)	☐
Drinking Water	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐

Other:	**Preservation Method (Water):**
Name of Sampler: Darryl Watson for Peter Stewart	**Signature of Sampler:**

	Sample #	Location	Volume/Area	Date/Time Sampled
1	Pb-1	Green on Structural Steel, main	N/A	1/08/16
2	Pb-2	Blue on Metal Utility Stations, Main	N/A	1/08/16
3	Pb-3	Blue on Wood Door and Frames, Main	N/A	1/08/16
4	Pb-4	Yellow on Metal Med.Stations	N/A	1/08/16
5	Pb-5	Lt. Greem on Concrete and CMU< Main	N/A	1/08/16
6	Pb-6	Green on Brick, Main	N/A	1/08/16

Client Sample #'s Pb-1 - Pb-20 **Total # of Samples:** 20

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** 1/15/16 **Time:** 1030 PDX

Comments:

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID *(Lab Use Only)*: 201600519

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (856) 858-4800
FAX: (856) 786-5973

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

	Sample #	Location	Volume/Area	Date/Time Sampled
7	Pb-7	Dk. Green on concrete and CMU, Main	N/A	1/08/16
8	Pb-8	Yellow on Brick, Main	N/A	1/08/16
9	Pb-9	Lt. blue on CMU, Main	N/A	1/08/16
10	Pb-10	Yellow on Concrete Shower Area, Main	N/A	1/08/16
11	Pb-11	Silver on Structural Steel, Main	N/A	1/08/16
12	Pb-12	Tan on Glass Blocks, Office Area	N/A	1/08/16
13	Pb-13	Red on Structural Steel, Addition 2	N/A	1/08/16
14	Pb-14	Grey on Metal Doors / Frames, Addition 2	N/A	1/08/16
15	Pb-15	Beige on Plaster, Office Area	N/A	1/08/16
16	Pb-16	Beige on Wood Panel/Doors/Frames, Office Area	N/A	1/08/16
17	Pb-17	Beige on Drywall, 2nd Floor Office Area	N/A	1/08/16
18	Pb-18	Red on Structrual Steel, 2nd Floor Main	N/A	1/08/16
19	Pb-19	Brown on Structrual Steel, 2nd Floor Main	N/A	1/08/16
20	Pb-20	Green on concrete, 2nd Floor Main	N/A	1/08/16

Comments/Special Instructions:

Page _____ of _____ pages

ATTACHMENT D

DUST LABORATORY REPORT AND CHAIN OF CUSTODY

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041601052
CustomerID:	ATEC51
CustomerPO:	
ProjectID:	

Attn: **Darryl Watson**
ATC Group Services LLC
1841 West Oak Parkway
Suite F
Marietta, GA 30062

Phone:	(770) 427-9456
Fax:	(770) 427-1907
Received:	01/15/16 9:15 AM
Analysis Date:	1/15/2016
Collected:	

Project: **Life Cycle Building**

Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling). Level B for 0.1% Target Analytical Sensitivity

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
Dust 1 *041601052-0001*	Floor 1st Floor Main	Brown Fibrous Homogeneous	20.00% Cellulose	80.00% Non-fibrous (other)	**None Detected**

Analyst(s)

Nancy Stalter (1)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 01/16/2016 07:26:42

OrderID: 041601052

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 041601052

EMSL ANALYTICAL, INC
2205 CORPORATE PLAZA PKWY
SUITE 200
SMYRNA, GA 30080
PHONE: (770) 956-9150
FAX: (770) 956-9181

Company : ATC Group Services, LLC	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 1841 West Oak Parkway Suite F	
City: Marietta / **State/Province: Georgia**	**Zip/Postal Code: 30062** / **Country: usa**
Report To (Name): Darryl Watson	**Telephone #: 770 316 7742**
Email Address: darrryl.watson@atcassociates.com	**Fax #: 770 427 9456** / **Purchase Order:**
Project Name/Number: Life cycle Building	**Please Provide Results:** ☐ Fax ☐ Email
U.S. State Samples Taken:	**Connecticut Samples:** ☐ Commercial ☐ Residential

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☒ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☒ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ TEM Qual. via Filtration Technique
- ☐ TEM Qual. via Drop-Mount Technique

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** | **Filter Pore Size (Air Samples):** ☐ 0.8µm ☐ 0.45µm

Samplers Name: Darryl Watson for Peter Petrowski / **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
Dust 1	Floor 1st Floor Mian	Dust	1/22/2016

16 JAN 15 AM 10:44
EMSL
CINNAMINSON, NJ

Client Sample # (s): Dust 1 - **Total # of Samples:** 1

Relinquished (Client): **Date:** 1/14/16 **Time:** 3pm

Received (Lab): FedEx **Date:** 1.15.16 **Time:** 9:51

Comments/Special Instructions:

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201600513
CustomerID:	ATEC51
CustomerPO:	
ProjectID:	

Attn: **Darryl Watson**
ATC Group Services LLC
1841 West Oak Parkway
Suite F
Marietta, GA 30062

Phone:	(770) 427-9456
Fax:	(770) 427-1907
Received:	01/15/16 10:30 AM
Collected:	

Project: **Life Cycle Building**

Test Report: Lead in Soils by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead* ***Concentration***
Dust 2	*201600513-0001*		1/16/2016	820 mg/Kg
	Site: 1st Floor Main			

Bill Chamberlin, Laboratory Director
or other approved signatory
or other approved signatory

*Analysis following Lead in Soil/Solids by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. Results reported based on dry weight. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 01/18/2016 13:31:03

OrderID: 201600513

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only):* 201600513

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNIMINSON, NJ 08077
PHONE: (856) 858-4800
FAX: (856) 786-5973

Company : ATC Group Services, LLC		EMSL-Bill to: ☐ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 1841 West Oak Parkway Suite F		*Third Party Billing requires written authorization from third party*	
City: Marietta	State/Province: Georgia	Zip/Postal Code: 30062	Country: USa
Report To (Name): Darryl Watson		Fax #: 770 427 1907	
Telephone #: 770 316 7742		Email Address: darrryl.watson@atcassociates.com	
Project Name/Number: Life Cycle Building			
Please Provide Results: ☐ Fax ☒ Email	Purchase Order:	U.S. State Samples Taken: GA	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☒ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☐ mg/cm² ☐ % by wt.	SW846-7000B/7420 or AOAC 974.02	Flame Atomic Absorption	0.01%	☐
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES	0.5 µg/filter	☐
Wipe* ☐ ASTM ☐ non ASTM *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B/7420	Flame Atomic Absorption	10 µg/wipe	☐
	SW846-6010B or C	ICP-AES	0.5 µg/wipe	☐
TCLP	SW846-1311/7420/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B/7420	Flame Atomic Absorption	40 mg/kg (ppm)	☒
	SW846-7421	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)	☐
Wastewater	SM3111B or SW846-7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)	☐
Drinking Water	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐

Other:	Preservation Method (Water):
Name of Sampler: Darryl Watson for Pete Petronski	Signature of Sampler:

Sample #	Location	Volume/Area	Date/Time Sampled
Dust 2	1st Floor Main	10ml	1/22/206

Client Sample #'s	Dust 2 -			Total # of Samples:	1
Relinquished (Client):		Date:	1/14/16	Time:	3:00p
Received (Lab):		Date:	1/15/16	Time: 1030	Fedex
Comments:					

ATTACHMENT E

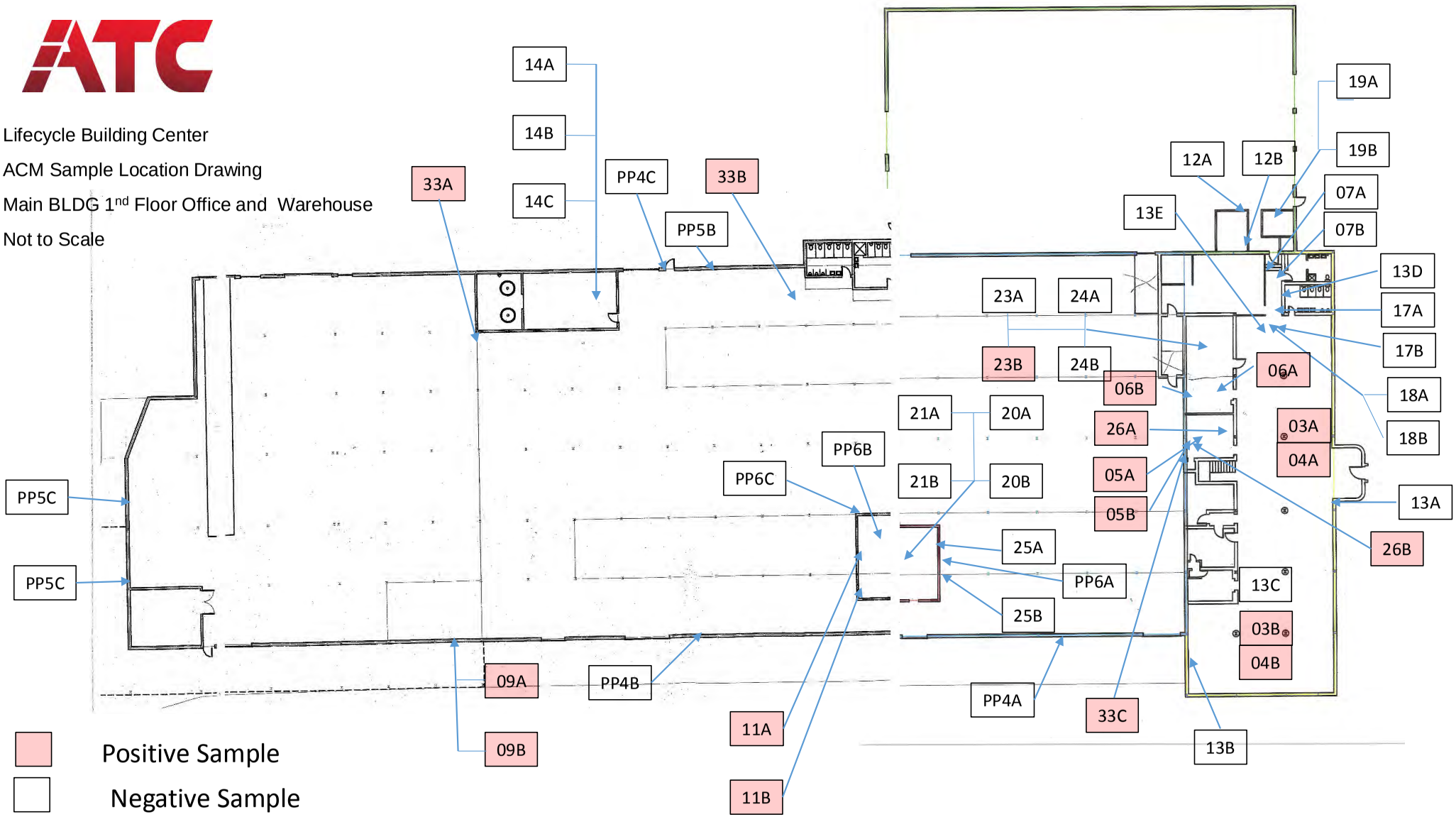
ASBESTOS SAMPLE LOCATION DRAWINGS AND ASBESTOS MATERIAL LOCATION DRAWINGS

Lifecycle Building Center

ACM Sample Location Drawing

Main BLDG 1nd Floor Office and Warehouse

Not to Scale

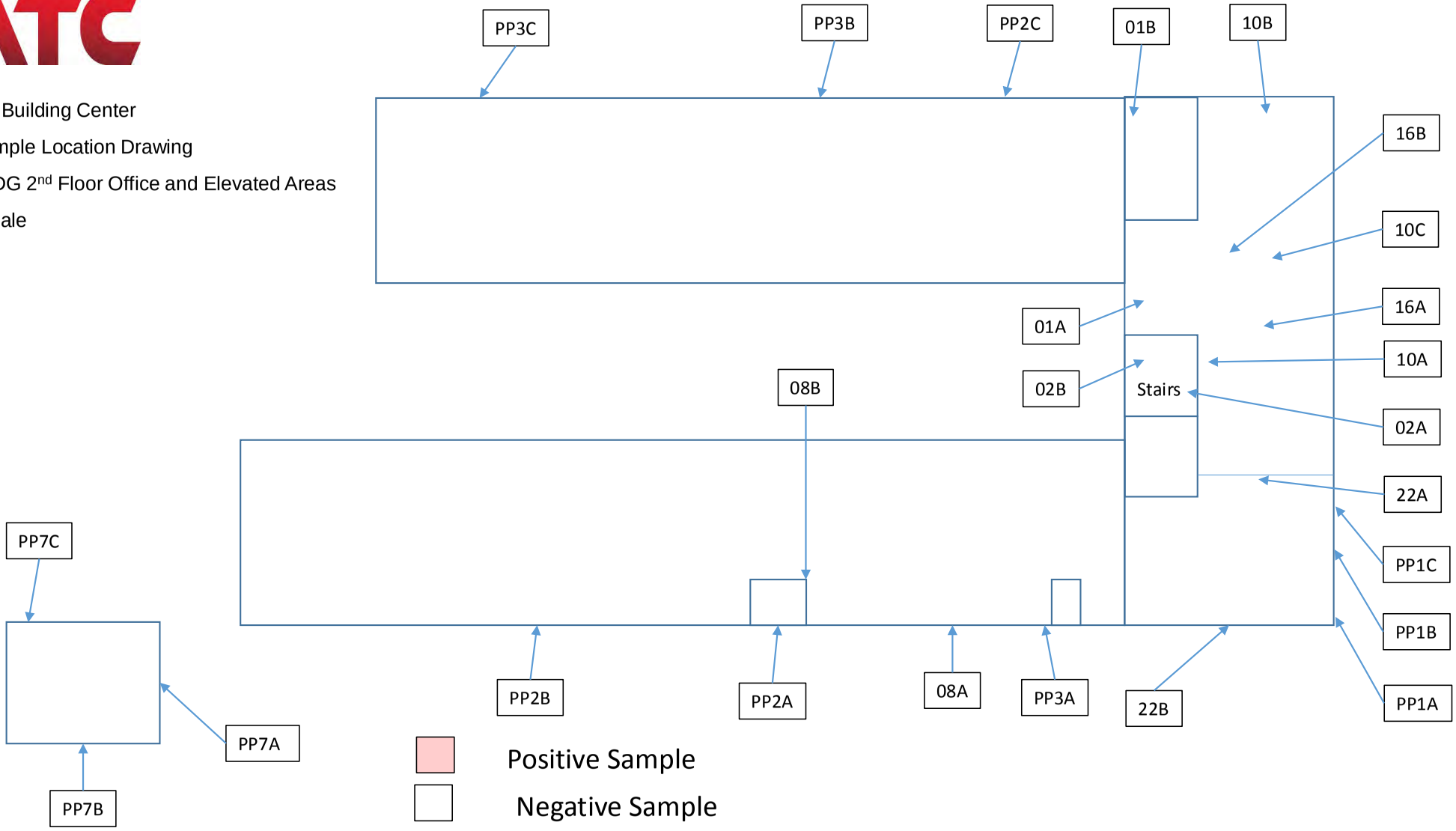


Lifecycle Building Center

ACM Sample Location Drawing

Main BLDG 2nd Floor Office and Elevated Areas

Not to Scale

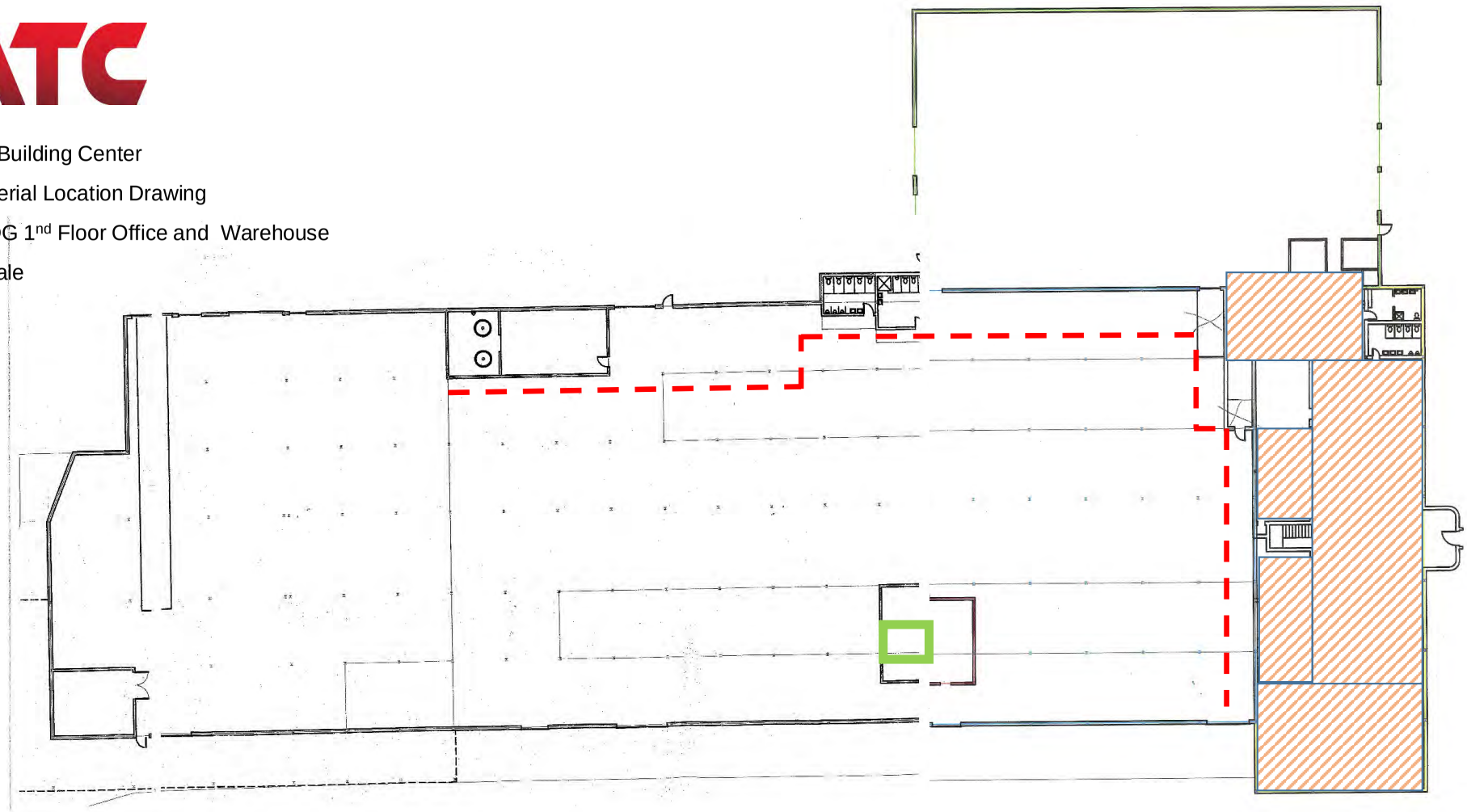


Lifecycle Building Center

ACM Material Location Drawing

Main BLDG 1nd Floor Office and Warehouse

Not to Scale



Various ACM Flooring(s) ACM Pipe Insulation ACM Gypsum Wall Board/Joint Compound

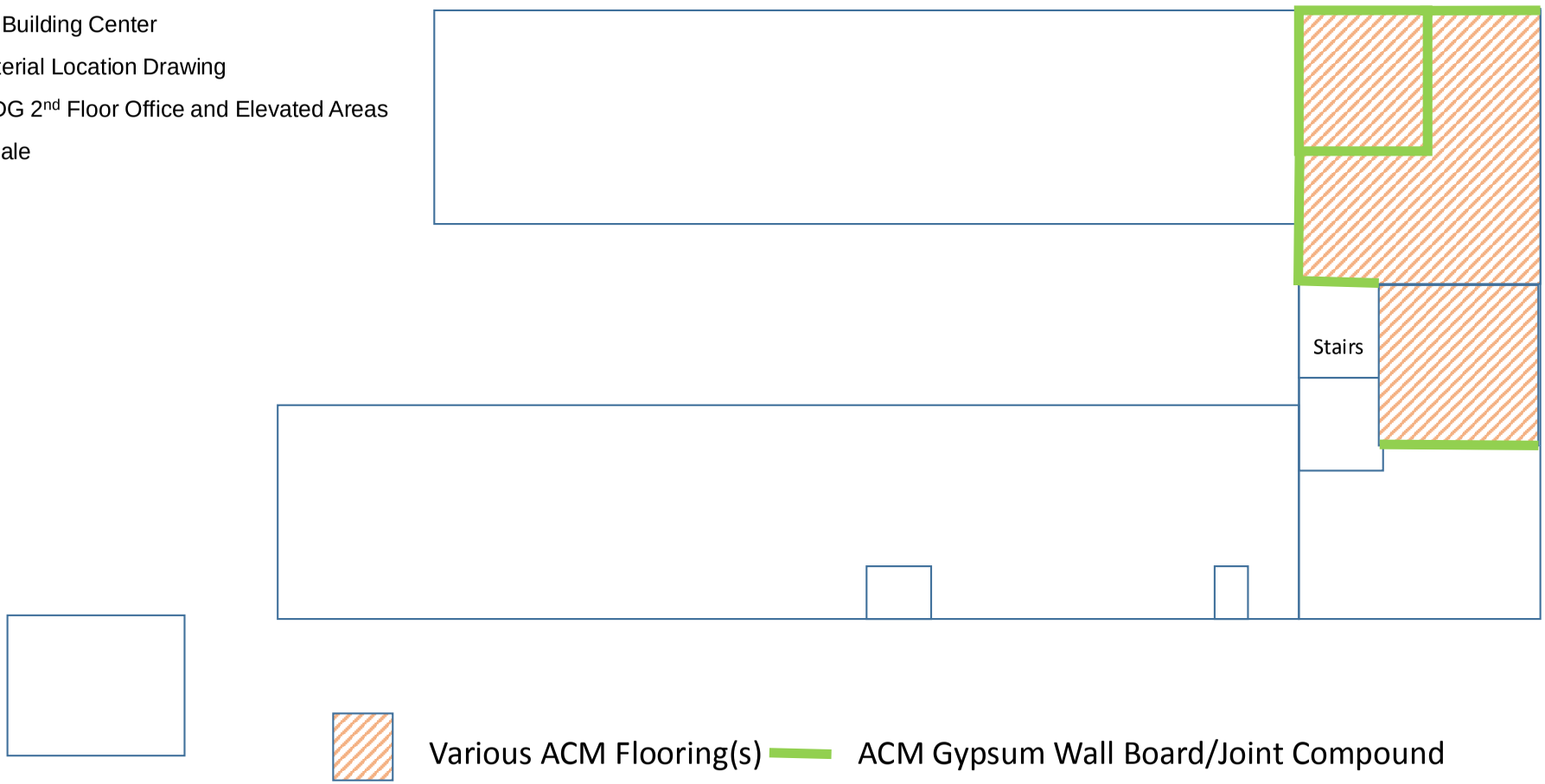
ACM Corrugated Panels on roof and exterior walls not shown

Lifecycle Building Center

ACM Material Location Drawing

Main BLDG 2nd Floor Office and Elevated Areas

Not to Scale



ACM Corrugated Panels on roof and exterior walls not shown

March 25, 2016

Shannon Goodman
Executive Director
Lifecycle Building Center
1116 Murphy Ave SW
Atlanta, GA 30310

Cardno

2000 1st Drive
Suite 220
Marietta, GA 30062

Phone +1 678 433 1199
Fax +1 770 973 7447

www.cardno.com

RE: **Wooden Floor Blocks Sampling**
The Lifecycle Building Center Project
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

Dear Ms. Goodman:

Cardno is pleased to present the findings and recommendations of the sampling of wooden floor blocks for the Lifecycle Building Center (LBC) located at 1116 Murphy Avenue, SW, East Point, Georiga. Cardno through its subcontractor ATC Group Services. LLC performed the sampling of wooden floor block in December 2015. The scope of services were performed in accordance with past discussions with Mr. Jimmy Mitchell, board member of the Lifecycle Building Center and yourself.

This scope of services evaluated the potential for employee and visitor exposure to potential environmental concerns that may exist at the site. The environmental concerns identified as asbestos containing materials (ACM), floor dust, and lead based paint where addressed in a separate report and presented to LBC on February 11, 2016. This report and conclusions only address the wooden floor block sampling event.

For a summary of the conclusions and recommendations regarding the wooden floor block sampling, please see below. The full report is attached for your review at your convenience.

Summary of Results and Standard Comparison:

The following laboratory results and regulatory standard comparisons were performed in an effort to evaluate the potential of environmental impact due to the presence of the wooden floor blocks:

- The laboratory analytical results were reviewed and compared to the 40 Code of Federal Register (CFR), Chapter 1, 268.48, Universal Treatment Standards (UTS) for wastewater in order to perform a preliminary hazardous waste evaluation in the event wooden block disposal is desired in the future. The UTS wastewater standards were compared with the laboratory results for TCLP- VOCs, TCLP-SVOCs and TCLP-RCRA metals;

- Environmental Protection Agency (EPA) Method 1311, Section 1.2, which covers the procedures for TCLP analysis, allows for the conversion of the TCLP results in milligram per liter (mg/L) to milligrams per kilogram (mg/Kg) using a ratio of 20:1 (mg/Kg to mg/L). This conversion will allow for a laboratory results comparison with the UTS non-wastewater standards in order to perform a preliminary hazardous waste evaluation in the event wooden block disposal is desired in the future.

- TCLP results were compared, as converted to mg/Kg, with the EPA Regional Screening Levels (RSLs), November 2015 for both residential and industrial soil in order to perform a human health risk evaluation of the wooden blocks. It should be noted that the RSL table concentrations do not address the potential of ecological risk.

Wooden Floor Block Sampling Conclusion:

The results of this assessment indicate the presence of two (2) SVOC compounds, 2-methylphenol and 3&4 methylphenol, and one (1) RCRA metal, lead, at concentrations that potentially indicate that disposal of the wooden floor blocks would require a hazardous material waste designation. The compounds, 2-methylphenol (also known as o-cresol) and 3&4-methylphenol (also known as p-cresol), are typically associated with wood treatment using creosote products.

Furthermore, it should be noted that one (1) PCB compound, PCB-1254, was detected at a concentration that is potentially harmful to human health in a residential setting if found in soil. However, presently this facility is used solely for commercial practice of warehousing deconstructed building materials. It is the understanding of Cardno that no forseeable residential use is planned in the near term or likely in the future. Should residential development of the Property occur, further testing may be necessary to determine proper handling and disposal options.

We appreciate the opportunity to provide you with our services. Should you have any questions regarding the results and recommendations, or wish to arrange convenient time to meet, please feel free to contact me at 850.556.1369.

Sincerely,

Roger Register
Branch Manager / South Area Brownfields Practice Leader
Cardno
Direct Line +1 678.433.1199
Email: roger.register@cardno.com

Attachment:
(A) *Limited Phase II Environmental Site Assessment Addendum*, ATC Group Services, LLC, dated 3/25/2016

ATTACHMENT A

Limited Phase II Environmental Site Assessment Addendum
ATC Group Services, LLC, dated 3/25/2016

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

1841 West Oak Parkway, Ste. F
Marietta, GA 30062
Telephone 770-427-9456
Fax 770-427-1907

March 25, 2016

Mr. Roger Register
Branch Manager
Cardno Inc.
2000 First Drive, Suite 220
Marietta, GA 30062

RE: **Limited Phase II Environmental Site Assessment Addendum**
The Lifecycle Building Project
1116 Murphy Avenue
Atlanta, Fulton County, Georgia

Dear Mr. Register:

ATC Group Services (ATC), formerly Cardno ATC, is pleased to provide this letter of findings for a recent limited environmental sampling and analyses event at a large industrial building located at 1116 Murphy Avenue in Atlanta, Fulton County, Georgia ("the Property"). According to Fulton County Tax records, the Property is currently owned by Eleven Sixteen Murphy LLC and is currently identified under the USEPA Brownfield Grant Cooperative Agreement # BF 00-D12413-0 for the City of Atlanta.

BACKGROUND

Cardno ATC performed a Phase I Environmental Site Assessment (ESA) of the property in May 2015 in conformance with the scope and limitations of ASTM Standard Practice E 1527-13 and All Appropriate Inquiry (AAI) (as that term is defined by the U.S. EPA in 40 C.F.R. Part 312). This assessment revealed the following evidence of *recognized environmental conditions* (RECs) in connection with the Property:

- On-site historical lead and/or iron foundry;
- On-site historical paint booth;
- On-site historical use and storage of large quantities solvents and petroleum products;
- Former diesel repair activities on-site and hydraulic lifts/subsurface equipment;
- Record of observation of sludge/residue in floor pits in the warehouse area during a previous environmental evaluation; and
- Identified lead impact to on-site soil above regulatory standards from either on-site activities or east-northeast adjacent off-site facilities.

As a result of the identified RECs, Cardno ATC completed a Limited Phase II ESA at the Property dated September 4, 2015. Ten (10) soil borings were advanced on the Property in a

general grid pattern. The laboratory results indicated detectable concentrations of metals and volatile organic compounds (VOCs) in the soil samples collected from several of the boring locations. Additionally, 2-inch diameter (PVC) monitoring wells were installed within nine (9) of the ten (10) soil borings for collection and laboratory analysis of groundwater. The laboratory results indicated detectable concentrations of metals and VOCs in the groundwater samples collected from several of the monitoring well locations.

ATC has also completed an Asbestos and Lead Based Paint survey for the subject Property concurrently with this assessment, which has been reported under separate cover.

This report summarizes the performance of additional Phase II assessment activities that evaluate the potential for environmental impact and concerns that may exist due to the presence of the wooden floor blocks within the building.

SCOPE OF WORK

Sample Collection and Laboratory Analyses

Four (4) wooden floor blocks (WB-01 through WB-04) were collected from within the existing building. WB-01 was collected outside of and adjacent to the office area, WB-02 was collected from within the office area, WB-03 was collected from the main work area, and WB-04 was collected from within a storage area. The blocks appeared to be creosote treated pine based primarily on the odor of the blocks. The sample locations are located on the Sample Location Plan as presented in Appendix I. The blocks were transported to ATC and were split and separated to obtain 100 gram samples for laboratory analysis. The samples were obtained from the exposed side of the blocks. All sample equipment was appropriately decontaminated prior to and between sample collection using USEPA Region 4 Field Branches Quality System and Technical Procedures Guidance.

The collected samples were placed in laboratory supplied containers on wet ice and submitted to FTS Analytical Services under standard chain of custody procedures. All samples were analyzed by toxicity characteristic leaching procedure (TCLP) methods – VOCs via EPA Method 1311/8260B, TCLP-Semi-volatile organic compounds (SVOCs) via EPA Method 1311/8270D and TCLP-Resource Conservation and Recovery Act (RCRA) Eight (8) Metals via EPA Method 1311/6010C/7470A. The blocks were also analyzed for polychlorinated biphenyls (PCBs) via EPA Method 8082A as there is not TCLP analysis for PCBs.

Summary of Results and Standard Comparison

The following laboratory result and regulatory standard comparisons were performed in an effort to evaluate the potential of environmental impact due to the presence of the wooden floor blocks:

- ATC reviewed the laboratory analytical results and compared them to the 40 Code of Federal Register (CFR), Chapter 1, 268.48, Universal Treatment Standards (UTS) for wastewater in order to perform a preliminary hazardous waste evaluation in the event wooden block disposal is desired in the future. The UTS wastewater standards were compared with the laboratory results for TCLP- VOCs, TCLP-SVOCs and TCLP-RCRA metals;

- Environmental Protection Agency (EPA) Method 1311, Section 1.2, which covers the procedures for TCLP analysis, allows for the conversion of the TCLP results in milligram per liter (mg/L) to milligrams per kilogram (mg/Kg) using a ratio of 20:1 (mg/Kg to mg/L). This conversion will allow for a laboratory results comparison with the UTS non-wastewater standards in order to perform a preliminary hazardous waste evaluation in the event wooden block disposal is desired in the future.

- ATC also compared the TCLP results, as converted to mg/Kg, with the EPA Regional Screening Levels (RSLs), November 2015 for both residential and industrial soil in order to perform a human health risk evaluation of the wooden blocks. It should be noted that the RSL table concentrations do not address the potential of ecological risk.

The detected concentrations of each constituent are shown in Tables 1 and 2 as presented in Appendix II. A summary of the laboratory analytical results (report attached) and the result comparisons is as follows:

- One (1) TCLP-VOC, 2-butanone (MEK), was detected at a concentration that exceeds its laboratory method detection limit (MDL) at WB-03 (0.019 mg/L) and WB-04 (0.026 mg/L). No other TCLP-VOC constituents were detected in any of the samples analyzed. The TCLP-VOC results for 2-butanone (MEK) and the results converted to mg/Kg do not exceed the comparison standards of UTS wastewater, UTS non-wastewater and the RSLs for residential and industrial soil;

- Two (2) TCLP-SVOC constituents, 2-methylphenol and 3&4-methylphenol, were detected in WB-01 (0.506 mg/L, 1.48 mg/L) and WB-03 (0.178 mg/L, 0.538 mg/L) at concentrations that exceed their respective laboratory MDL. The compound 3&4 Methylphenol was also detected in WB-02 (0.0166 mg/L) and WB-04 (0.118 mg/L). No other TCLP-SVOC constituents were detected. The TCLP-SVOC concentrations of 2-methylphenol at WB-01 and WB-03 exceed the UTS wastewater standard of 0.11 mg/L. The TCLP-SVOC concentration of 3&4 methylphenol at WB-01 exceeds the UTS wastewater standard of 0.77 mg/L. The converted TCLP-SVOC results into mg/Kg at WB-01 exceed the UTS non-wastewater standard of 5.6 mg/Kg for both 2-methylphenol and 3&4 methylphenol. The 3&4 methylphenol UTS non-wastewater standard of 5.6 mg/Kg is also exceeded at WB-03. The converted TCLP-SVOC concentrations into mg/Kg for 2-methylphenol and 3&4 methylphenol do not exceed their respective RSLs for residential and industrial soil;

- One (1) TCLP-RCRA metal, lead, was detected in WB-03 (1.26 mg/L) and WB-04 (0.353 mg/L) at concentrations that exceed their respective laboratory MDL. No other TCLP-RCRA metals were detected. The concentration of lead at WB-03 exceeds the UTS non-wastewater of standard of 0.75 mg/L (as TCLP). The converted TCLP concentration for lead to mg/Kg does not exceed its respective RSL standards for residential and industrial soil; and

- One (1) PCB aroclor, PCB-1254, was detected in WB-03 (0.106 mg/Kg) and WB-04 (0.584 mg/Kg) at concentrations that exceed its respective laboratory MDL. No other PCB constituents were detected. The concentrations of PCB-1254 do not exceed the UTS non-wastewater standard for total PCBs of 10 mg/Kg. The concentration at WB-04 does however exceed its RSL for residential soil of 0.24 mg/Kg.

Conclusion

The results of this assessment indicate the presence of two (2) SVOC compounds, 2-methylphenol and 3&4 methylphenol, and one (1) RCRA metal, lead, at concentrations that potentially indicate that disposal of the wooden blocks would require a hazardous material waste designation. The compounds, 2-methylphenol (also known as o-cresol) and 3&4-methylphenol (also known as p-cresol), are typically associated with wood treatment using creosote products.

It should also be noted that one (1) PCB compound, PCB-1254, was detected at a concentration that is potentially harmful to human health in a residential setting if found in soil. However, this facility appears to be commercial in nature and is considered likely to be so in the future. Should residential development of the Property occur, further testing may be necessary.

We appreciate the opportunity to provide these services to you. Should you have any questions or need additional information, please either of us at the telephone numbers provided below.

Sincerely,

Kelby Williams, EIT
Environmental Engineer

Robert L. Mangum Jr., PG, GA No. 1180
Senior Project Manager

Attachments:
Appendix 1 - Figure
Appendix II - Tables
Appendix III - Laboratory Analytical Report

APPENDIX I

Figure

Cardno
Shaping the Future

"This is not a map of survey."

60 0 60

City of Atlanta – Lifecycle Building
1116 Murphy Avenue SW
Atlanta, Georgia
Parcel ID No. 14 011900070135
EPA Cooperative Agreement #00-D12413-0

Figure 1
SAMPLE LOCATION PLAN

APPENDIX II

Tables

TABLE 1
Analytical Data for TCLP - VOCs, SVOCs and RCRA Metals in Wood Blocks
Lifecycle Building Center
1116 Murphy Ave SW
Atlanta, Fulton County, Georgia

TCLP Results - Volatile Organic Compounds (EPA SW-846 1311/8260B), Semivolatile Organic Compounds (EPA SW-846 1311/8270D)
Resource Recovery and Conservation Act Metals (EPA SW-846 1311/6010C) and Mercury (SW-846 1311/7470D)

	Sample I.D.	WB-01	WB-02	WB-03	WB-04	Universal Treatment Standards for Disposal[1]	WB-01 [2]	WB-02 [2]	WB-03 [2]	WB-04 [2]	Universal Treatment Standards for Disposal[1]	EPA Regional Screening Level-Residential[3]	EPA Regional Screening Level-Industrial[3]
	Sample Matrix	Liquid	Liquid	Liquid	Liquid	Wastewater	Solid	Solid	Solid	Solid	Non-Wastewater	Soil	Soil
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg (TCLP mg/L [4])	mg/Kg	mg/Kg
	Sample Date	1/8/16	1/8/16	1/8/16	1/8/16		1/8/16	1/8/16	1/8/16	1/8/16			
VOCs	1,1-Dichloroethene	< 0.0098	< 0.0098	< 0.0098	< 0.0098	0.025	0.20	0.20	0.20	0.20	6.0	230	1,000
	1,2-Dichloroethane	< 0.0082	< 0.0082	< 0.0082	< 0.0082	0.21	0.16	0.16	0.16	0.16	6.0	0.46	2.0
	2-Butanone (MEK)	< 0.013	< 0.013	**0.019**	**0.026**	0.28	0.26	0.26	0.38	0.52	36	27,000	190,000
	Benzene	< 0.0067	< 0.0067	< 0.0067	< 0.0067	0.14	0.13	0.13	0.13	0.13	10	1.2	5.1
	Carbon tetrachloride	< 0.0089	< 0.0089	< 0.0089	< 0.0089	0.057	0.18	0.18	0.18	0.18	6.0	0.65	2.9
	Chlorobenzene	< 0.0059	< 0.0059	< 0.0059	< 0.0059	0.057	0.12	0.12	0.12	0.12	6.0	280	1,300
	Chloroform	< 0.014	< 0.014	< 0.014	< 0.014	0.046	0.28	0.28	0.28	0.28	6.0	0.32	1.4
	Tetrachloroethene	< 0.018	< 0.018	< 0.018	< 0.018	0.056	0.36	0.36	0.36	0.36	6.0	24	100
	Trichloroethene	< 0.0072	< 0.0072	< 0.0072	< 0.0072	0.054	0.14	0.14	0.14	0.14	6.0	0.94	6.0
	Vinyl chloride	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.270	0.03	0.03	0.03	0.03	6.0	0.059	1.7
SVOCs	1,4-Dichlorobenzene	< 0.0123	< 0.0123	< 0.0123	< 0.0123	0.090	0.246	0.246	0.246	0.246	6.0	2.6	11
	2,4,5-Trichlorophenol	< 0.0056	< 0.0056	< 0.0056	< 0.0056	0.18	0.11	0.11	0.11	0.11	7.4	6,300	82,000
	2,4,6-Trichlorphenol	< 0.0147	< 0.0147	< 0.0147	< 0.0147	0.035	0.29	0.29	0.29	0.29	7.4	49	210
	2,4-Dinitrotoluene	< 0.0151	< 0.0151	< 0.0151	< 0.0151	0.32	0.30	0.30	0.30	0.30	140	1.7	7.4
	2-methylphenol (o-cresol)	**0.506**	< 0.0130	**0.178**	< 0.0130	0.11	**10.12**	0.26	**3.56**	0.26	5.6	3,200	41,000
	3&4-Methylphenol (p-cresol*)	**1.48**	**0.0166**	**0.538**	**0.118**	0.77	**29.60**	**0.33**	**10.76**	**2.36**	5.6	6,300	82,000
	Hexachlorobenzene	< 0.0146	< 0.0146	< 0.0146	< 0.0146	0.055	0.29	0.29	0.29	0.29	10	0.21	0.96
	Hexachlorobutadiene	< 0.0112	< 0.0112	< 0.0112	< 0.0112	0.055	0.22	0.22	0.22	0.22	5.6	1.2	5.3
	Hexachloroethane	< 0.0113	< 0.0113	< 0.0113	< 0.0113	0.055	0.23	0.23	0.23	0.23	30	1.8	8.0
	Nitrobenzene	< 0.0128	< 0.0128	< 0.0128	< 0.0128	0.068	0.26	0.26	0.26	0.26	14	5.1	22
	Pentachlorophenol	< 0.0135	< 0.0135	< 0.0135	< 0.0135	0.089	0.27	0.27	0.27	0.27	7.4	1.0	4.0
	Pyridine	< 0.0110	< 0.0110	< 0.0110	< 0.0110	0.014	0.22	0.22	0.22	0.22	16	78	1,200
RCRA METALs	Arsenic	< 0.25	< 0.25	< 0.25	< 0.25	(note [4])	5.00	5.00	5.00	5.00	5.0 (TCLP mg/L)	0.68	3.0
	Barium	< 0.25	< 0.25	< 0.25	< 0.25	(note [4])	5.00	5.00	5.00	5.00	21 (TCLP mg/L)	15,000	220,000
	Cadmium	< 0.25	< 0.25	< 0.25	< 0.25	(note [4])	5.00	5.00	5.00	5.00	0.11 (TCLP mg/L)	71	980
	Chromium	< 0.25	< 0.25	< 0.25	< 0.25	(note [4])	5.00	5.00	5.00	5.00	0.60 (TCLP mg/L)	0.3	6.3
	Lead	< 0.25	< 0.25	**1.26**	**0.353**	(note [4])	5.00	5.00	**25.20**	**7.06**	0.75 (TCLP mg/L)	400	800
	Selenium	< 0.25	< 0.25	< 0.25	< 0.25	(note [4])	5.00	5.00	5.00	5.00	5.7 (TCLP mg/L)	390	5,800
	Silver	< 0.25	< 0.25	< 0.25	< 0.25	(note [4])	5.00	5.00	5.00	5.00	0.14 (TCLP mg/L)	390	5,800
	Mercury	< 0.01	< 0.01	< 0.01	< 0.01	(note [4])	0.20	0.20	0.20	0.20	0.025 (TCLP mg/L)	11	46

NOTES:

Analyses performed by FTS Analytical Services (Xenco)

[1] 40 CFR Chapter 1 §268.48 Universal Treatment Standards, Wastewater Standards (mg/L) and Nonwastewater Standards (mg/Kg)

[2] Toxicity Characteristic Leaching Procedure (TCLP) EPA Method 1311, Section 1.2, use 20:1 ratio estimation to convert TCLP result from mg/L to mg/Kg

[3] EPA Regional Screening Level (RSL) Summary Table - November 2015, preliminary risk-based action levels

[4] 40 CFR Chapter 1 §268.48 Universal Treatment Standards, Nonwastewater Standards presented as mg/L for RCRA Metals

NA - Not Applicable. No standard exists for this compound

--- Data Not Available

* p-cresol is synomyn for 4-methylphenol

62	Indicates detection of compound greater than laboratory detection limits
62	Indicates detection of compound equal to or greater than hazardous treatment standard
62	Indicates detection of compound equal to or greater than EPA regional screening level

TABLE 2
Analytical Data for PCBs in Wood Blocks
Lifecycle Building Center
1116 Murphy Ave SW
Atlanta, Fulton County, Georgia

Polychlorinated Biphenyls (EPA SW-846 8082A)

Sample I.D.	WB-01	WB-02	WB-03	WB-04	Univesal Treatment Standards for Disposal[1]	EPA Regional Screening Level-Residential [2]	EPA Regional Screening Level-Industrial [2]
Sample Matrix	**Solid**	**Solid**	**Solid**	**Solid**	**Nonwastewater**	**Soil**	**Soil**
Units	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
Sample Date	1/8/16	1/8/16	1/8/16	1/8/16			
PCB-1016	< 0.0243	< 0.0247	< 0.0249	< 0.0244	NA	4.1	27
PCB-1221	< 0.0226	< 0.0229	< 0.0231	< 0.0226	NA	0.20	0.83
PCB-1232	< 0.0220	< 0.0223	< 0.0224	< 0.0220	NA	0.17	0.72
PCB-1242	< 0.0241	< 0.0244	< 0.0246	< 0.0241	NA	0.23	0.95
PCB-1248	< 0.0230	< 0.0233	< 0.0235	< 0.0230	NA	0.23	0.95
PCB-1254	< 0.0248	< 0.0251	**0.106**	**0.584**	NA	0.24	0.97
PCB-1260	< 0.0276	< 0.0280	< 0.0282	< 0.0276	NA	0.24	0.99
TOTAL	ND	ND	0.106	0.584	10		

NOTES:

Analyses performed by FTS Analytical Services (Xenco)

[1] 40 CFR Chapter 1 §268.48 Universal Treatment Standards, Wastewater Standards (mg/L) and Nonwastewater Standards (mg/Kg)

[2] EPA Regional Screning Level (RSL) Summary Table - November 2015, preliminary risk-based action levels

ND - Not detected

--- Data Not Available

62 Indicates detection of compound greater than laboratory detection limits

62 Indicates detection of compound equal to or greater than hazardous treatment standard

62 Indicates detection of compound equal to or greater than EPA regional screening level

APPENDIX III

Laboratory Analytical Report

Analytical Report 522531

for

ATC Group Services - Marietta GA

Project Manager: Robert Mangum

Lifecycle

26-FEB-16

Collected By: Client

6017 Financial Dr., Norcross, GA 30071
Ph:(770) 449-8800 Fax:(770) 449-5477

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534-15-1)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

Table of Contents

26-FEB-16

Project Manager: **Robert Mangum**
ATC Group Services - Marietta GA
1841 West Oak Parkway, Suite F
Marietta, GA 30062

Reference: XENCO Report No(s): **522531**
Lifecycle
Project Address: GA

Robert Mangum:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 522531. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 522531 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

J. Derek Rounsley
Project Manager

Sample Cross Reference 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WB-01	S	01-08-16 09:15		522531-001
WB-02	S	01-08-16 09:25		522531-002
WB-03	S	01-08-16 09:30		522531-003
WB-04	S	01-08-16 10:35		522531-004

Sample receipt non conformances and comments:

This revised report replaces the original report submitted on 01/15/2016. TCLP VOC units were incorrectly reported as ug/L and were changed to mg/L. The reporting version was originally a level II and was changed top a level three to report values over the MDL. No other changes were made to this report.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-985356 TCLP RCRA Metals by SW-846 1311/6010C
Lab Sample ID 522531-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Arsenic, Selenium recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 522531-001, -002, -003, -004. The Laboratory Control Sample for Arsenic, Selenium is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-985446 TCLP SVOCs by SW-846 1311/8270D
Surrogate 2-Fluorophenol recovered above QC limits Data confirmed by re-analysis. Samples affected are: 703222-1-BLK.

1,4-Dichlorobenzene recovered below QC limits in the laboratory control sample. Samples in the analytical batch are: 522531-001, -002, -003, -004.

1,4-Dichlorobenzene, 2-methylphenol, 3&4-Methylphenol, Hexachlorobutadiene, Hexachloroethane RPD was outside laboratory control limits.
Samples in the analytical batch are: 522531-001, -002, -003, -004

Hits Summary 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id : **WB-01**
Lab Sample Id : 522531-001
Matrix : Solid
Date Collected : 01.08.16 09.15
Date Received : 01.08.16 16.05
% Moisture :

Analytical Method : TCLP SVOCs by SW-846 1311/8270D
Seq Number 985446
Prep Method: SW3510C
Date Prep: 01.12.16 09.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
2-methylphenol	95-48-7	0.506	mg/L	01.12.16 19.21	F	1
3&4-Methylphenol	15831-10-4	1.48	mg/L	01.12.16 19.21	F	1

Sample Id : **WB-02**
Lab Sample Id : 522531-002
Matrix : Solid
Date Collected : 01.08.16 09.25
Date Received : 01.08.16 16.05
% Moisture :

Analytical Method : TCLP SVOCs by SW-846 1311/8270D
Seq Number 985446
Prep Method: SW3510C
Date Prep: 01.12.16 09.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
3&4-Methylphenol	15831-10-4	0.0166	mg/L	01.12.16 19.49	JF	1

Sample Id : **WB-03**
Lab Sample Id : 522531-003
Matrix : Solid
Date Collected : 01.08.16 09.30
Date Received : 01.08.16 16.05
% Moisture : 10.23
Basis : Dry Weight

Analytical Method : PCBs by SW-846 8082A
Seq Number 985534
Prep Method: SW3550
Date Prep: 01.13.16 09.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
PCB-1254	11097-69-1	0.106	mg/kg	01.13.16 22.53	J	1

Hits Summary 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id : **WB-03**
Lab Sample Id : 522531-003
Matrix : Solid
Date Collected : 01.08.16 09.30
Date Received : 01.08.16 16.05
% Moisture :

Analytical Method : TCLP RCRA Metals by SW-846 1311/6010C
Seq Number 985356
Prep Method: SW3010A
Date Prep: 01.12.16 06.49

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Lead	7439-92-1	1.26	mg/L	01.12.16 14.56		1

Analytical Method : TCLP SVOCs by SW-846 1311/8270D
Seq Number 985446
Prep Method: SW3510C
Date Prep: 01.12.16 09.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
2-methylphenol	95-48-7	0.178	mg/L	01.12.16 20.18	F	1
3&4-Methylphenol	15831-10-4	0.538	mg/L	01.12.16 20.18	F	1

Analytical Method : TCLP VOCs by SW-846 1311/8260B
Seq Number 985409
Prep Method: SW5030B
Date Prep: 01.12.16 09.39

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
2-Butanone (MEK)	78-93-3	0.019	mg/L	01.12.16 14.15	J	10

Sample Id : **WB-04**
Lab Sample Id : 522531-004
Matrix : Solid
Date Collected : 01.08.16 10.35
Date Received : 01.08.16 16.05
% Moisture : 8.48
Basis : Dry Weight

Analytical Method : PCBs by SW-846 8082A
Seq Number 985534
Prep Method: SW3550
Date Prep: 01.13.16 09.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
PCB-1254	11097-69-1	0.584	mg/kg	01.13.16 23.19		1

Hits Summary 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id : **WB-04**
Lab Sample Id : 522531-004

Matrix : Solid
Date Collected : 01.08.16 10.35
Date Received : 01.08.16 16.05

% Moisture :

Analytical Method : TCLP RCRA Metals by SW-846 1311/6010C
Seq Number 985356

Prep Method: SW3010A
Date Prep: 01.12.16 06.49

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Lead	7439-92-1	0.353	mg/L	01.12.16 14.58	J	1

Analytical Method : TCLP SVOCs by SW-846 1311/8270D
Seq Number 985446

Prep Method: SW3510C
Date Prep: 01.12.16 09.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
3&4-Methylphenol	15831-10-4	0.118	mg/L	01.12.16 20.46	F	1

Analytical Method : TCLP VOCs by SW-846 1311/8260B
Seq Number 985547

Prep Method: SW5030B
Date Prep: 01.13.16 09.10

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
2-Butanone (MEK)	78-93-3	0.026	mg/L	01.13.16 13.57	J	10

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-01**
Lab Sample Id: 522531-001

Matrix: Solid
Date Collected: 01.08.16 09.15

Date Received: 01.08.16 16.05

Analytical Method: PCBs by SW-846 8082A
Tech: ARM
Analyst: VIC
Seq Number: 985534

Date Prep: 01.13.16 09.00

Prep Method: SW3550
% Moisture: 8.46
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
PCB-1016	12674-11-2	<0.0243	0.218	0.0243	mg/kg	01.13.16 22.00	U	1
PCB-1221	11104-28-2	<0.0226	0.218	0.0226	mg/kg	01.13.16 22.00	U	1
PCB-1232	11141-16-5	<0.0220	0.218	0.0220	mg/kg	01.13.16 22.00	U	1
PCB-1242	53469-21-9	<0.0241	0.218	0.0241	mg/kg	01.13.16 22.00	U	1
PCB-1248	12672-29-6	<0.0230	0.218	0.0230	mg/kg	01.13.16 22.00	U	1
PCB-1254	11097-69-1	<0.0248	0.218	0.0248	mg/kg	01.13.16 22.00	U	1
PCB-1260	11096-82-5	<0.0276	0.218	0.0276	mg/kg	01.13.16 22.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Decachlorobiphenyl	2051-24-3	38	%	19-203	01.13.16 22.00	
Tetrachloro-m-xylene	877-09-8	77	%	19-191	01.13.16 22.00	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-01** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-001 Date Collected: 01.08.16 09.15

Analytical Method: TCLP Mercury by SW-846 1311/7470A Prep Method: SW7470P

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 07.26

Seq Number: 985347

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Mercury	7439-97-6	<0.0100	0.0200	0.0100	mg/L	01.12.16 12.08	U	1

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C Prep Method: SW3010A

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 06.49

Seq Number: 985356

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	<0.250	0.500	0.250	mg/L	01.12.16 14.35	UX	1
Barium	7440-39-3	<0.250	0.500	0.250	mg/L	01.12.16 14.35	U	1
Cadmium	7440-43-9	<0.250	0.500	0.250	mg/L	01.12.16 14.35	U	1
Chromium	7440-47-3	<0.250	0.500	0.250	mg/L	01.12.16 14.35	U	1
Lead	7439-92-1	<0.250	0.500	0.250	mg/L	01.12.16 14.35	U	1
Selenium	7782-49-2	<0.250	0.500	0.250	mg/L	01.12.16 14.35	UX	1
Silver	7440-22-4	<0.250	0.500	0.250	mg/L	01.12.16 14.35	U	1

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-01** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-001 Date Collected: 01.08.16 09.15

Analytical Method: TCLP SVOCs by SW-846 1311/8270D Prep Method: SW3510C

Tech: VBR % Moisture:

Analyst: VIC Date Prep: 01.12.16 09.00

Seq Number: 985446

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,4-Dichlorobenzene	106-46-7	<0.0123	0.100	0.0123	mg/L	01.12.16 19.21	ULF	1
2,4,5-Trichlorophenol	95-95-4	<0.00560	0.100	0.00560	mg/L	01.12.16 19.21	U	1
2,4,6-Trichlorophenol	88-06-2	<0.0147	0.100	0.0147	mg/L	01.12.16 19.21	U	1
2,4-Dinitrotoluene	121-14-2	<0.0151	0.100	0.0151	mg/L	01.12.16 19.21	U	1
2-methylphenol	95-48-7	**0.506**	0.100	0.0130	mg/L	01.12.16 19.21	F	1
3&4-Methylphenol	15831-10-4	**1.48**	0.100	0.0163	mg/L	01.12.16 19.21	F	1
Hexachlorobenzene	118-74-1	<0.0146	0.100	0.0146	mg/L	01.12.16 19.21	U	1
Hexachlorobutadiene	87-68-3	<0.0112	0.100	0.0112	mg/L	01.12.16 19.21	UF	1
Hexachloroethane	67-72-1	<0.0113	0.100	0.0113	mg/L	01.12.16 19.21	UF	1
Nitrobenzene	98-95-3	<0.0128	0.100	0.0128	mg/L	01.12.16 19.21	U	1
Pentachlorophenol	87-86-5	<0.0135	0.100	0.0135	mg/L	01.12.16 19.21	U	1
Pyridine	110-86-1	<0.0110	0.100	0.0110	mg/L	01.12.16 19.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
2-Fluorophenol	367-12-4	76	%	33-92	01.12.16 19.21	
Nitrobenzene-d5	4165-60-0	77	%	37-94	01.12.16 19.21	
2-Fluorobiphenyl	321-60-8	80	%	33-92	01.12.16 19.21	
2,4,6-Tribromophenol	118-79-6	97	%	32-129	01.12.16 19.21	
Terphenyl-D14	1718-51-0	82	%	25-116	01.12.16 19.21	
Phenol-d5	4165-62-2	74	%	35-100	01.12.16 19.21	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-01** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-001 Date Collected: 01.08.16 09.15

Analytical Method: TCLP VOCs by SW-846 1311/8260B Prep Method: SW5030B

Tech: MWE % Moisture:

Analyst: ZHO Date Prep: 01.12.16 09.39

Seq Number: 985409

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1-Dichloroethene	75-35-4	<0.0098	0.050	0.0098	mg/L	01.12.16 13.47	U	10
1,2-Dichloroethane	107-06-2	<0.0082	0.050	0.0082	mg/L	01.12.16 13.47	U	10
2-Butanone (MEK)	78-93-3	<0.013	0.50	0.013	mg/L	01.12.16 13.47	U	10
Benzene	71-43-2	<0.0067	0.050	0.0067	mg/L	01.12.16 13.47	U	10
Carbon tetrachloride	56-23-5	<0.0089	0.050	0.0089	mg/L	01.12.16 13.47	U	10
Chlorobenzene	108-90-7	<0.0059	0.050	0.0059	mg/L	01.12.16 13.47	U	10
Chloroform	67-66-3	<0.014	0.050	0.014	mg/L	01.12.16 13.47	U	10
Tetrachloroethene	127-18-4	<0.018	0.050	0.018	mg/L	01.12.16 13.47	U	10
Trichloroethene	79-01-6	<0.0072	0.050	0.0072	mg/L	01.12.16 13.47	U	10
Vinyl chloride	75-01-4	<0.0015	0.020	0.0015	mg/L	01.12.16 13.47	U	10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,2-Dichloroethane-D4	17060-07-0	124	%	53-159	01.12.16 13.47	
4-Bromofluorobenzene	460-00-4	102	%	30-186	01.12.16 13.47	
Toluene-D8	2037-26-5	106	%	70-130	01.12.16 13.47	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-02**
Lab Sample Id: 522531-002

Matrix: Solid
Date Collected: 01.08.16 09.25

Date Received: 01.08.16 16.05

Analytical Method: PCBs by SW-846 8082A
Tech: ARM
Analyst: VIC
Seq Number: 985534

Date Prep: 01.13.16 09.00

Prep Method: SW3550
% Moisture: 10.22
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
PCB-1016	12674-11-2	<0.0247	0.221	0.0247	mg/kg	01.13.16 22.27	U	1
PCB-1221	11104-28-2	<0.0229	0.221	0.0229	mg/kg	01.13.16 22.27	U	1
PCB-1232	11141-16-5	<0.0223	0.221	0.0223	mg/kg	01.13.16 22.27	U	1
PCB-1242	53469-21-9	<0.0244	0.221	0.0244	mg/kg	01.13.16 22.27	U	1
PCB-1248	12672-29-6	<0.0233	0.221	0.0233	mg/kg	01.13.16 22.27	U	1
PCB-1254	11097-69-1	<0.0251	0.221	0.0251	mg/kg	01.13.16 22.27	U	1
PCB-1260	11096-82-5	<0.0280	0.221	0.0280	mg/kg	01.13.16 22.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Decachlorobiphenyl	2051-24-3	55	%	19-203	01.13.16 22.27	
Tetrachloro-m-xylene	877-09-8	69	%	19-191	01.13.16 22.27	

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-02** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-002 Date Collected: 01.08.16 09.25

Analytical Method: TCLP Mercury by SW-846 1311/7470A Prep Method: SW7470P

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 07.26

Seq Number: 985347

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Mercury	7439-97-6	<0.0100	0.0200	0.0100	mg/L	01.12.16 12.11	U	1

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C Prep Method: SW3010A

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 06.49

Seq Number: 985356

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	<0.250	0.500	0.250	mg/L	01.12.16 14.48	U	1
Barium	7440-39-3	<0.250	0.500	0.250	mg/L	01.12.16 14.48	U	1
Cadmium	7440-43-9	<0.250	0.500	0.250	mg/L	01.12.16 14.48	U	1
Chromium	7440-47-3	<0.250	0.500	0.250	mg/L	01.12.16 14.48	U	1
Lead	7439-92-1	<0.250	0.500	0.250	mg/L	01.12.16 14.48	U	1
Selenium	7782-49-2	<0.250	0.500	0.250	mg/L	01.12.16 14.48	U	1
Silver	7440-22-4	<0.250	0.500	0.250	mg/L	01.12.16 14.48	U	1

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-02** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-002 Date Collected: 01.08.16 09.25

Analytical Method: TCLP SVOCs by SW-846 1311/8270D Prep Method: SW3510C

Tech: VBR % Moisture:

Analyst: VIC Date Prep: 01.12.16 09.00

Seq Number: 985446

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,4-Dichlorobenzene	106-46-7	<0.0123	0.100	0.0123	mg/L	01.12.16 19.49	ULF	1
2,4,5-Trichlorophenol	95-95-4	<0.00560	0.100	0.00560	mg/L	01.12.16 19.49	U	1
2,4,6-Trichlorophenol	88-06-2	<0.0147	0.100	0.0147	mg/L	01.12.16 19.49	U	1
2,4-Dinitrotoluene	121-14-2	<0.0151	0.100	0.0151	mg/L	01.12.16 19.49	U	1
2-methylphenol	95-48-7	<0.0130	0.100	0.0130	mg/L	01.12.16 19.49	UF	1
3&4-Methylphenol	15831-10-4	**0.0166**	0.100	0.0163	mg/L	01.12.16 19.49	JF	1
Hexachlorobenzene	118-74-1	<0.0146	0.100	0.0146	mg/L	01.12.16 19.49	U	1
Hexachlorobutadiene	87-68-3	<0.0112	0.100	0.0112	mg/L	01.12.16 19.49	UF	1
Hexachloroethane	67-72-1	<0.0113	0.100	0.0113	mg/L	01.12.16 19.49	UF	1
Nitrobenzene	98-95-3	<0.0128	0.100	0.0128	mg/L	01.12.16 19.49	U	1
Pentachlorophenol	87-86-5	<0.0135	0.100	0.0135	mg/L	01.12.16 19.49	U	1
Pyridine	110-86-1	<0.0110	0.100	0.0110	mg/L	01.12.16 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
2-Fluorophenol	367-12-4	79	%	33-92	01.12.16 19.49	
Nitrobenzene-d5	4165-60-0	74	%	37-94	01.12.16 19.49	
2-Fluorobiphenyl	321-60-8	72	%	33-92	01.12.16 19.49	
2,4,6-Tribromophenol	118-79-6	86	%	32-129	01.12.16 19.49	
Terphenyl-D14	1718-51-0	100	%	25-116	01.12.16 19.49	
Phenol-d5	4165-62-2	72	%	35-100	01.12.16 19.49	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-02** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-002 Date Collected: 01.08.16 09.25

Analytical Method: TCLP VOCs by SW-846 1311/8260B Prep Method: SW5030B

Tech: MWE % Moisture:

Analyst: ZHO Date Prep: 01.12.16 09.39

Seq Number: 985409

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1-Dichloroethene	75-35-4	<0.0098	0.050	0.0098	mg/L	01.12.16 13.20	U	10
1,2-Dichloroethane	107-06-2	<0.0082	0.050	0.0082	mg/L	01.12.16 13.20	U	10
2-Butanone (MEK)	78-93-3	<0.013	0.50	0.013	mg/L	01.12.16 13.20	U	10
Benzene	71-43-2	<0.0067	0.050	0.0067	mg/L	01.12.16 13.20	U	10
Carbon tetrachloride	56-23-5	<0.0089	0.050	0.0089	mg/L	01.12.16 13.20	U	10
Chlorobenzene	108-90-7	<0.0059	0.050	0.0059	mg/L	01.12.16 13.20	U	10
Chloroform	67-66-3	<0.014	0.050	0.014	mg/L	01.12.16 13.20	U	10
Tetrachloroethene	127-18-4	<0.018	0.050	0.018	mg/L	01.12.16 13.20	U	10
Trichloroethene	79-01-6	<0.0072	0.050	0.0072	mg/L	01.12.16 13.20	U	10
Vinyl chloride	75-01-4	<0.0015	0.020	0.0015	mg/L	01.12.16 13.20	U	10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,2-Dichloroethane-D4	17060-07-0	122	%	53-159	01.12.16 13.20	
4-Bromofluorobenzene	460-00-4	106	%	30-186	01.12.16 13.20	
Toluene-D8	2037-26-5	106	%	70-130	01.12.16 13.20	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-03** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-003 Date Collected: 01.08.16 09.30

Analytical Method: PCBs by SW-846 8082A Prep Method: SW3550

Tech: ARM % Moisture: 10.23

Analyst: VIC Date Prep: 01.13.16 09.00 Basis: Dry Weight

Seq Number: 985534

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
PCB-1016	12674-11-2	<0.0249	0.222	0.0249	mg/kg	01.13.16 22.53	U	1
PCB-1221	11104-28-2	<0.0231	0.222	0.0231	mg/kg	01.13.16 22.53	U	1
PCB-1232	11141-16-5	<0.0224	0.222	0.0224	mg/kg	01.13.16 22.53	U	1
PCB-1242	53469-21-9	<0.0246	0.222	0.0246	mg/kg	01.13.16 22.53	U	1
PCB-1248	12672-29-6	<0.0235	0.222	0.0235	mg/kg	01.13.16 22.53	U	1
PCB-1254	11097-69-1	**0.106**	0.222	0.0253	mg/kg	01.13.16 22.53	J	1
PCB-1260	11096-82-5	<0.0282	0.222	0.0282	mg/kg	01.13.16 22.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Decachlorobiphenyl	2051-24-3	67	%	19-203	01.13.16 22.53	
Tetrachloro-m-xylene	877-09-8	73	%	19-191	01.13.16 22.53	

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-03** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-003 Date Collected: 01.08.16 09.30

Analytical Method: TCLP Mercury by SW-846 1311/7470A Prep Method: SW7470P

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 07.26

Seq Number: 985347

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Mercury	7439-97-6	<0.0100	0.0200	0.0100	mg/L	01.12.16 12.14	U	1

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C Prep Method: SW3010A

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 06.49

Seq Number: 985356

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	<0.250	0.500	0.250	mg/L	01.12.16 14.56	U	1
Barium	7440-39-3	<0.250	0.500	0.250	mg/L	01.12.16 14.56	U	1
Cadmium	7440-43-9	<0.250	0.500	0.250	mg/L	01.12.16 14.56	U	1
Chromium	7440-47-3	<0.250	0.500	0.250	mg/L	01.12.16 14.56	U	1
Lead	7439-92-1	**1.26**	0.500	0.250	mg/L	01.12.16 14.56		1
Selenium	7782-49-2	<0.250	0.500	0.250	mg/L	01.12.16 14.56	U	1
Silver	7440-22-4	<0.250	0.500	0.250	mg/L	01.12.16 14.56	U	1

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-03** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-003 Date Collected: 01.08.16 09.30

Analytical Method: TCLP SVOCs by SW-846 1311/8270D Prep Method: SW3510C

Tech: VBR % Moisture:

Analyst: VIC Date Prep: 01.12.16 09.00

Seq Number: 985446

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,4-Dichlorobenzene	106-46-7	<0.0123	0.100	0.0123	mg/L	01.12.16 20.18	ULF	1
2,4,5-Trichlorophenol	95-95-4	<0.00560	0.100	0.00560	mg/L	01.12.16 20.18	U	1
2,4,6-Trichlorophenol	88-06-2	<0.0147	0.100	0.0147	mg/L	01.12.16 20.18	U	1
2,4-Dinitrotoluene	121-14-2	<0.0151	0.100	0.0151	mg/L	01.12.16 20.18	U	1
2-methylphenol	95-48-7	**0.178**	0.100	0.0130	mg/L	01.12.16 20.18	F	1
3&4-Methylphenol	15831-10-4	**0.538**	0.100	0.0163	mg/L	01.12.16 20.18	F	1
Hexachlorobenzene	118-74-1	<0.0146	0.100	0.0146	mg/L	01.12.16 20.18	U	1
Hexachlorobutadiene	87-68-3	<0.0112	0.100	0.0112	mg/L	01.12.16 20.18	UF	1
Hexachloroethane	67-72-1	<0.0113	0.100	0.0113	mg/L	01.12.16 20.18	UF	1
Nitrobenzene	98-95-3	<0.0128	0.100	0.0128	mg/L	01.12.16 20.18	U	1
Pentachlorophenol	87-86-5	<0.0135	0.100	0.0135	mg/L	01.12.16 20.18	U	1
Pyridine	110-86-1	<0.0110	0.100	0.0110	mg/L	01.12.16 20.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
2-Fluorophenol	367-12-4	69	%	33-92	01.12.16 20.18	
Nitrobenzene-d5	4165-60-0	66	%	37-94	01.12.16 20.18	
2-Fluorobiphenyl	321-60-8	63	%	33-92	01.12.16 20.18	
2,4,6-Tribromophenol	118-79-6	90	%	32-129	01.12.16 20.18	
Terphenyl-D14	1718-51-0	58	%	25-116	01.12.16 20.18	
Phenol-d5	4165-62-2	70	%	35-100	01.12.16 20.18	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-03** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-003 Date Collected: 01.08.16 09.30

Analytical Method: TCLP VOCs by SW-846 1311/8260B Prep Method: SW5030B

Tech: MWE % Moisture:

Analyst: ZHO Date Prep: 01.12.16 09.39

Seq Number: 985409

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1-Dichloroethene	75-35-4	<0.0098	0.050	0.0098	mg/L	01.12.16 14.15	U	10
1,2-Dichloroethane	107-06-2	<0.0082	0.050	0.0082	mg/L	01.12.16 14.15	U	10
2-Butanone (MEK)	78-93-3	**0.019**	0.50	0.013	mg/L	01.12.16 14.15	J	10
Benzene	71-43-2	<0.0067	0.050	0.0067	mg/L	01.12.16 14.15	U	10
Carbon tetrachloride	56-23-5	<0.0089	0.050	0.0089	mg/L	01.12.16 14.15	U	10
Chlorobenzene	108-90-7	<0.0059	0.050	0.0059	mg/L	01.12.16 14.15	U	10
Chloroform	67-66-3	<0.014	0.050	0.014	mg/L	01.12.16 14.15	U	10
Tetrachloroethene	127-18-4	<0.018	0.050	0.018	mg/L	01.12.16 14.15	U	10
Trichloroethene	79-01-6	<0.0072	0.050	0.0072	mg/L	01.12.16 14.15	U	10
Vinyl chloride	75-01-4	<0.0015	0.020	0.0015	mg/L	01.12.16 14.15	U	10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,2-Dichloroethane-D4	17060-07-0	124	%	53-159	01.12.16 14.15	
4-Bromofluorobenzene	460-00-4	104	%	30-186	01.12.16 14.15	
Toluene-D8	2037-26-5	104	%	70-130	01.12.16 14.15	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-04** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-004 Date Collected: 01.08.16 10.35

Analytical Method: PCBs by SW-846 8082A Prep Method: SW3550

Tech: ARM % Moisture: 8.48

Analyst: VIC Date Prep: 01.13.16 09.00 Basis: Dry Weight

Seq Number: 985534

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
PCB-1016	12674-11-2	<0.0244	0.218	0.0244	mg/kg	01.13.16 23.19	U	1
PCB-1221	11104-28-2	<0.0226	0.218	0.0226	mg/kg	01.13.16 23.19	U	1
PCB-1232	11141-16-5	<0.0220	0.218	0.0220	mg/kg	01.13.16 23.19	U	1
PCB-1242	53469-21-9	<0.0241	0.218	0.0241	mg/kg	01.13.16 23.19	U	1
PCB-1248	12672-29-6	<0.0230	0.218	0.0230	mg/kg	01.13.16 23.19	U	1
PCB-1254	11097-69-1	**0.584**	0.218	0.0248	mg/kg	01.13.16 23.19		1
PCB-1260	11096-82-5	<0.0276	0.218	0.0276	mg/kg	01.13.16 23.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Decachlorobiphenyl	2051-24-3	63	%	19-203	01.13.16 23.19	
Tetrachloro-m-xylene	877-09-8	94	%	19-191	01.13.16 23.19	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-04** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-004 Date Collected: 01.08.16 10.35

Analytical Method: TCLP Mercury by SW-846 1311/7470A Prep Method: SW7470P

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 07.26

Seq Number: 985347

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Mercury	7439-97-6	<0.0100	0.0200	0.0100	mg/L	01.12.16 12.17	U	1

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C Prep Method: SW3010A

Tech: ABA % Moisture:

Analyst: 4150 Date Prep: 01.12.16 06.49

Seq Number: 985356

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	<0.250	0.500	0.250	mg/L	01.12.16 14.58	U	1
Barium	7440-39-3	<0.250	0.500	0.250	mg/L	01.12.16 14.58	U	1
Cadmium	7440-43-9	<0.250	0.500	0.250	mg/L	01.12.16 14.58	U	1
Chromium	7440-47-3	<0.250	0.500	0.250	mg/L	01.12.16 14.58	U	1
Lead	7439-92-1	**0.353**	0.500	0.250	mg/L	01.12.16 14.58	J	1
Selenium	7782-49-2	<0.250	0.500	0.250	mg/L	01.12.16 14.58	U	1
Silver	7440-22-4	<0.250	0.500	0.250	mg/L	01.12.16 14.58	U	1

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-04** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-004 Date Collected: 01.08.16 10.35

Analytical Method: TCLP SVOCs by SW-846 1311/8270D Prep Method: SW3510C

Tech: VBR % Moisture:

Analyst: VIC Date Prep: 01.12.16 09.00

Seq Number: 985446

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,4-Dichlorobenzene	106-46-7	<0.0123	0.100	0.0123	mg/L	01.12.16 20.46	ULF	1
2,4,5-Trichlorophenol	95-95-4	<0.00560	0.100	0.00560	mg/L	01.12.16 20.46	U	1
2,4,6-Trichlorophenol	88-06-2	<0.0147	0.100	0.0147	mg/L	01.12.16 20.46	U	1
2,4-Dinitrotoluene	121-14-2	<0.0151	0.100	0.0151	mg/L	01.12.16 20.46	U	1
2-methylphenol	95-48-7	<0.0130	0.100	0.0130	mg/L	01.12.16 20.46	UF	1
3&4-Methylphenol	15831-10-4	**0.118**	0.100	0.0163	mg/L	01.12.16 20.46	F	1
Hexachlorobenzene	118-74-1	<0.0146	0.100	0.0146	mg/L	01.12.16 20.46	U	1
Hexachlorobutadiene	87-68-3	<0.0112	0.100	0.0112	mg/L	01.12.16 20.46	UF	1
Hexachloroethane	67-72-1	<0.0113	0.100	0.0113	mg/L	01.12.16 20.46	UF	1
Nitrobenzene	98-95-3	<0.0128	0.100	0.0128	mg/L	01.12.16 20.46	U	1
Pentachlorophenol	87-86-5	<0.0135	0.100	0.0135	mg/L	01.12.16 20.46	U	1
Pyridine	110-86-1	<0.0110	0.100	0.0110	mg/L	01.12.16 20.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
2-Fluorophenol	367-12-4	68	%	33-92	01.12.16 20.46	
Nitrobenzene-d5	4165-60-0	63	%	37-94	01.12.16 20.46	
2-Fluorobiphenyl	321-60-8	65	%	33-92	01.12.16 20.46	
2,4,6-Tribromophenol	118-79-6	86	%	32-129	01.12.16 20.46	
Terphenyl-D14	1718-51-0	84	%	25-116	01.12.16 20.46	
Phenol-d5	4165-62-2	70	%	35-100	01.12.16 20.46	

Certificate of Analytical Results 522531

ATC Group Services - Marietta GA, Marietta, GA

Lifecycle

Sample Id: **WB-04** Matrix: Solid Date Received:01.08.16 16.05

Lab Sample Id: 522531-004 Date Collected: 01.08.16 10.35

Analytical Method: TCLP VOCs by SW-846 1311/8260B Prep Method: SW5030B

Tech: MWE % Moisture:

Analyst: ZHO Date Prep: 01.13.16 09.10

Seq Number: 985547

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1-Dichloroethene	75-35-4	<0.0098	0.050	0.0098	mg/L	01.13.16 13.57	U	10
1,2-Dichloroethane	107-06-2	<0.0082	0.050	0.0082	mg/L	01.13.16 13.57	U	10
2-Butanone (MEK)	78-93-3	**0.026**	0.50	0.013	mg/L	01.13.16 13.57	J	10
Benzene	71-43-2	<0.0067	0.050	0.0067	mg/L	01.13.16 13.57	U	10
Carbon tetrachloride	56-23-5	<0.0089	0.050	0.0089	mg/L	01.13.16 13.57	U	10
Chlorobenzene	108-90-7	<0.0059	0.050	0.0059	mg/L	01.13.16 13.57	U	10
Chloroform	67-66-3	<0.014	0.050	0.014	mg/L	01.13.16 13.57	U	10
Tetrachloroethene	127-18-4	<0.018	0.050	0.018	mg/L	01.13.16 13.57	U	10
Trichloroethene	79-01-6	<0.0072	0.050	0.0072	mg/L	01.13.16 13.57	U	10
Vinyl chloride	75-01-4	<0.0015	0.020	0.0015	mg/L	01.13.16 13.57	U	10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,2-Dichloroethane-D4	17060-07-0	104	%	53-159	01.13.16 13.57	
4-Bromofluorobenzene	460-00-4	104	%	30-186	01.13.16 13.57	
Toluene-D8	2037-26-5	104	%	70-130	01.13.16 13.57	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

ATC Group Services - Marietta GA

Lifecycle

Analytical Method: **Percent Moisture by SM2540G**
Seq Number: 985296 Matrix: Soil
Parent Sample Id: 522373-016 MD Sample Id: 522373-016 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	14.6	14.7	1	20	%	01.11.16 13:00	

Analytical Method: **Percent Moisture by SM2540G**
Seq Number: 985296 Matrix: Soil
Parent Sample Id: 522530-009 MD Sample Id: 522530-009 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	11.9	11.8	1	20	%	01.11.16 13:00	

Analytical Method: **Percent Moisture by SM2540G**
Seq Number: 985296 Matrix: Soil
Parent Sample Id: 522530-024 MD Sample Id: 522530-024 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	15.0	15.0	0	20	%	01.11.16 13:00	

Analytical Method: **Percent Moisture by SM2540G**
Seq Number: 985296 Matrix: Soil
Parent Sample Id: 522530-039 MD Sample Id: 522530-039 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	18.4	18.6	1	20	%	01.11.16 13:00	

Analytical Method: **Percent Moisture by SM2540G**
Seq Number: 985296 Matrix: Soil
Parent Sample Id: 522576-008 MD Sample Id: 522576-008 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	9.05	9.30	3	20	%	01.11.16 13:00	

Analytical Method: **TCLP Mercury by SW-846 1311/7470A** Prep Method: SW7470P
Seq Number: 985347 Matrix: Water Date Prep: 01.12.16
MB Sample Id: 703242-1-BLK LCS Sample Id: 703242-1-BKS LCSD Sample Id: 703242-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Mercury	<0.0100	0.0250	0.0250	100	0.0251	100	85-115	0	20	mg/L	01.12.16 11:44	

ATC Group Services - Marietta GA

Lifecycle

Analytical Method: TCLP Mercury by SW-846 1311/7470A — Prep Method: SW7470P
Seq Number: 985347 — Matrix: Liquid — Date Prep: 01.12.16
Parent Sample Id: 522482-001 — MD Sample Id: 522482-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Mercury	<0.0100	<0.0100	0	20	mg/L	01.12.16 11:53	U

Analytical Method: TCLP Mercury by SW-846 1311/7470A — Prep Method: SW7470P
Seq Number: 985347 — Matrix: Liquid — Date Prep: 01.12.16
Parent Sample Id: 522482-001 — MS Sample Id: 522482-001 S — MSD Sample Id: 522482-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Mercury	<0.0100	0.0250	0.0261	104	0.0261	104	85-115	0	20	mg/L	01.12.16 11:56	

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C — Prep Method: SW3010A
Seq Number: 985356 — Matrix: Water — Date Prep: 01.12.16
MB Sample Id: 703239-1-BLK — LCS Sample Id: 703239-1-BKS — LCSD Sample Id: 703239-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	<0.250	2.00	2.40	120	2.35	118	80-120	2	20	mg/L	01.12.16 14:31	
Barium	<0.250	2.00	2.01	101	1.97	99	80-120	2	20	mg/L	01.12.16 14:31	
Cadmium	<0.250	2.00	2.22	111	2.17	109	80-120	2	20	mg/L	01.12.16 14:31	
Chromium	<0.250	2.00	2.18	109	2.13	107	80-120	2	20	mg/L	01.12.16 14:31	
Lead	<0.250	2.00	2.13	107	2.09	105	80-120	2	20	mg/L	01.12.16 14:31	
Selenium	<0.250	2.00	2.34	117	2.37	119	80-120	1	20	mg/L	01.12.16 14:31	
Silver	<0.250	2.00	2.16	108	2.12	106	80-120	2	20	mg/L	01.12.16 14:31	

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C — Prep Method: SW3010A
Seq Number: 985356 — Matrix: Solid — Date Prep: 01.12.16
Parent Sample Id: 522531-001 — MD Sample Id: 522531-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	<0.250	<0.250	0	20	mg/L	01.12.16 14:37	U
Barium	<0.250	<0.250	0	20	mg/L	01.12.16 14:37	U
Cadmium	<0.250	<0.250	0	20	mg/L	01.12.16 14:37	U
Chromium	<0.250	<0.250	0	20	mg/L	01.12.16 14:37	U
Lead	<0.250	<0.250	0	20	mg/L	01.12.16 14:37	U
Selenium	<0.250	<0.250	0	20	mg/L	01.12.16 14:37	U
Silver	<0.250	<0.250	0	20	mg/L	01.12.16 14:37	U

ATC Group Services - Marietta GA

Lifecycle

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C — Prep Method: SW3010A
Seq Number: 985356 — Matrix: Solid — Date Prep: 01.12.16
Parent Sample Id: 522531-001 — MS Sample Id: 522531-001 S — MSD Sample Id: 522531-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	<0.250	2.00	2.43	122	2.45	123	80-120	1	20	mg/L	01.12.16 14:39	X
Barium	<0.250	2.00	2.08	104	2.09	105	80-120	0	20	mg/L	01.12.16 14:39	
Cadmium	<0.250	2.00	2.23	112	2.24	112	80-120	0	20	mg/L	01.12.16 14:39	
Chromium	<0.250	2.00	2.22	111	2.23	112	80-120	0	20	mg/L	01.12.16 14:39	
Lead	<0.250	2.00	2.23	112	2.23	112	80-120	0	20	mg/L	01.12.16 14:39	
Selenium	<0.250	2.00	2.43	122	2.45	123	80-120	1	20	mg/L	01.12.16 14:39	X
Silver	<0.250	2.00	2.17	109	2.18	109	80-120	0	20	mg/L	01.12.16 14:39	

Analytical Method: PCBs by SW-846 8082A — Prep Method: SW3550
Seq Number: 985534 — Matrix: Solid — Date Prep: 01.13.16
MB Sample Id: 703339-1-BLK — LCS Sample Id: 703339-1-BKS — LCSD Sample Id: 703339-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
PCB-1016	<0.00373	0.167	0.183	110	0.180	108	17-171	2	30	mg/kg	01.13.16 20:15	
PCB-1260	<0.00422	0.167	0.179	107	0.181	108	33-193	1	30	mg/kg	01.13.16 20:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	96		92		91		19-203	%	01.13.16 20:15
Tetrachloro-m-xylene	111		113		113		19-191	%	01.13.16 20:15

Analytical Method: PCBs by SW-846 8082A — Prep Method: SW3550
Seq Number: 985534 — Matrix: Solid — Date Prep: 01.13.16
Parent Sample Id: 522531-001 — MS Sample Id: 522531-001 S — MSD Sample Id: 522531-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
PCB-1016	<0.0243	1.09	0.575	53	0.498	46	17-171	14	30	mg/kg	01.13.16 21:08	
PCB-1260	<0.0275	1.09	0.438	40	0.392	36	33-193	11	30	mg/kg	01.13.16 21:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	47		43		19-203	%	01.13.16 21:08
Tetrachloro-m-xylene	41		34		19-191	%	01.13.16 21:08

ATC Group Services - Marietta GA

Lifecycle

Analytical Method: TCLP SVOCs by SW-846 1311/8270D — Prep Method: SW3510C

Seq Number: 985446 — Matrix: Water — Date Prep: 01.11.16

MB Sample Id: 703222-1-BLK — LCS Sample Id: 703222-1-BKS — LCSD Sample Id: 703222-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,4-Dichlorobenzene	<0.00123	0.0500	0.0206	41	0.0318	64	44-91	43	30	mg/L	01.12.16 17:01	LF
2,4,5-Trichlorophenol	<0.000560	0.0500	0.0382	76	0.0381	76	44-104	0	30	mg/L	01.12.16 17:01	
2,4,6-Trichlorophenol	<0.00147	0.0500	0.0354	71	0.0472	94	48-99	29	30	mg/L	01.12.16 17:01	
2,4-Dinitrotoluene	<0.00151	0.0500	0.0371	74	0.0368	74	59-120	1	30	mg/L	01.12.16 17:01	
2-methylphenol	<0.00130	0.0500	0.0269	54	0.0443	89	43-101	49	30	mg/L	01.12.16 17:01	F
3&4-Methylphenol	<0.00163	0.0500	0.0280	56	0.0388	78	32-115	32	30	mg/L	01.12.16 17:01	F
Hexachlorobenzene	<0.00146	0.0500	0.0390	78	0.0363	73	48-117	7	30	mg/L	01.12.16 17:01	
Hexachlorobutadiene	<0.00112	0.0500	0.0239	48	0.0348	70	28-106	37	30	mg/L	01.12.16 17:01	F
Hexachloroethane	<0.00113	0.0500	0.0238	48	0.0369	74	34-106	43	30	mg/L	01.12.16 17:01	F
Nitrobenzene	<0.00128	0.0500	0.0259	52	0.0334	67	40-110	25	30	mg/L	01.12.16 17:01	
Pentachlorophenol	<0.00135	0.0500	0.0362	72	0.0344	69	31-107	5	30	mg/L	01.12.16 17:01	
Pyridine	<0.00110	0.0500	0.0270	54	0.0255	51	3-120	6	30	mg/L	01.12.16 17:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
2-Fluorophenol	106	**	63		94		30-100	%	01.12.16 17:01
Nitrobenzene-d5	89		52		75		46-111	%	01.12.16 17:01
2-Fluorobiphenyl	91		68		72		44-117	%	01.12.16 17:01
2,4,6-Tribromophenol	88		83		78		48-117	%	01.12.16 17:01
Terphenyl-D14	47		75		68		46-126	%	01.12.16 17:01
Phenol-d5	98		59		87		35-100	%	01.12.16 17:01

Analytical Method: TCLP VOCs by SW-846 1311/8260B — Prep Method: SW5030B

Seq Number: 985409 — Matrix: Water — Date Prep: 01.12.16

MB Sample Id: 703306-1-BLK — LCS Sample Id: 703306-1-BKS — LCSD Sample Id: 703306-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1-Dichloroethene	<0.00098	0.050	0.060	120	0.054	108	70-130	11	20	mg/L	01.12.16 11:09	
1,2-Dichloroethane	<0.00082	0.050	0.057	114	0.050	100	70-130	13	20	mg/L	01.12.16 11:09	
2-Butanone (MEK)	<0.0013	0.10	0.10	100	0.093	93	30-150	7	20	mg/L	01.12.16 11:09	
Benzene	<0.00067	0.050	0.054	108	0.049	98	80-120	10	20	mg/L	01.12.16 11:09	
Carbon tetrachloride	<0.00089	0.050	0.055	110	0.049	98	65-140	12	20	mg/L	01.12.16 11:09	
Chlorobenzene	<0.00059	0.050	0.055	110	0.050	100	80-120	10	20	mg/L	01.12.16 11:09	
Chloroform	<0.0014	0.050	0.056	112	0.052	104	65-135	7	20	mg/L	01.12.16 11:09	
Tetrachloroethene	<0.0018	0.050	0.051	102	0.045	90	45-150	13	20	mg/L	01.12.16 11:09	
Trichloroethene	<0.00072	0.050	0.056	112	0.050	100	70-125	11	20	mg/L	01.12.16 11:09	
Vinyl chloride	<0.00015	0.050	0.051	102	0.054	108	50-145	6	20	mg/L	01.12.16 11:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,2-Dichloroethane-D4	120		112		112		53-159	%	01.12.16 11:09
4-Bromofluorobenzene	108		100		102		30-186	%	01.12.16 11:09
Toluene-D8	104		98		102		70-130	%	01.12.16 11:09

ATC Group Services - Marietta GA

Lifecycle

Analytical Method: **TCLP VOCs by SW-846 1311/8260B** Prep Method: SW5030B

Seq Number: 985547 Matrix: Water Date Prep: 01.13.16

MB Sample Id: 703406-1-BLK LCS Sample Id: 703406-1-BKS LCSD Sample Id: 703406-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1-Dichloroethene	<0.00098	0.050	0.054	108	0.055	110	70-130	2	20	mg/L	01.13.16 10:09	
1,2-Dichloroethane	<0.00082	0.050	0.050	100	0.050	100	70-130	0	20	mg/L	01.13.16 10:09	
2-Butanone (MEK)	<0.0013	0.10	0.091	91	0.094	94	30-150	3	20	mg/L	01.13.16 10:09	
Benzene	<0.00067	0.050	0.052	104	0.052	104	80-120	0	20	mg/L	01.13.16 10:09	
Carbon tetrachloride	<0.00089	0.050	0.049	98	0.048	96	65-140	2	20	mg/L	01.13.16 10:09	
Chlorobenzene	<0.00059	0.050	0.052	104	0.052	104	80-120	0	20	mg/L	01.13.16 10:09	
Chloroform	<0.0014	0.050	0.053	106	0.052	104	65-135	2	20	mg/L	01.13.16 10:09	
Tetrachloroethene	<0.0018	0.050	0.050	100	0.048	96	45-150	4	20	mg/L	01.13.16 10:09	
Trichloroethene	<0.00072	0.050	0.053	106	0.052	104	70-125	2	20	mg/L	01.13.16 10:09	
Vinyl chloride	<0.00015	0.050	0.048	96	0.050	100	50-145	4	20	mg/L	01.13.16 10:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,2-Dichloroethane-D4	100		96		98		53-159	%	01.13.16 10:09
4-Bromofluorobenzene	106		104		102		30-186	%	01.13.16 10:09
Toluene-D8	104		102		102		70-130	%	01.13.16 10:09

Analytical Method: **TCLP VOCs by SW-846 1311/8260B** Prep Method: SW5030B

Seq Number: 985409 Matrix: Solid Date Prep: 01.12.16

Parent Sample Id: 522531-002 MS Sample Id: 522531-002 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,1-Dichloroethene	<0.0098	0.50	0.54	108	52-141	mg/L	01.12.16 20:26	
1,2-Dichloroethane	<0.0082	0.50	0.51	102	71-143	mg/L	01.12.16 20:26	
2-Butanone (MEK)	<0.013	1.0	1.1	110	43-155	mg/L	01.12.16 20:26	
Benzene	<0.0067	0.50	0.54	108	78-117	mg/L	01.12.16 20:26	
Carbon tetrachloride	<0.0089	0.50	0.46	92	63-152	mg/L	01.12.16 20:26	
Chlorobenzene	<0.0059	0.50	0.53	106	75-117	mg/L	01.12.16 20:26	
Chloroform	<0.014	0.50	0.53	106	67-136	mg/L	01.12.16 20:26	
Tetrachloroethene	<0.018	0.50	0.47	94	57-132	mg/L	01.12.16 20:26	
Trichloroethene	<0.0072	0.50	0.52	104	77-120	mg/L	01.12.16 20:26	
Vinyl chloride	<0.0015	0.50	0.48	96	43-148	mg/L	01.12.16 20:26	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,2-Dichloroethane-D4	96		53-159	%	01.12.16 20:26
4-Bromofluorobenzene	102		30-186	%	01.12.16 20:26
Toluene-D8	102		70-130	%	01.12.16 20:26

QC Summary 522531

ATC Group Services - Marietta GA

Lifecycle

Analytical Method: **TCLP VOCs by SW-846 1311/8260B** Prep Method: SW5030B

Seq Number: 985547 Matrix: Solid Date Prep: 01.13.16

Parent Sample Id: 522531-004 MS Sample Id: 522531-004 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,1-Dichloroethene	<0.0098	0.50	0.56	112	52-141	mg/L	01.13.16 16:14	
1,2-Dichloroethane	<0.0082	0.50	0.50	100	71-143	mg/L	01.13.16 16:14	
2-Butanone (MEK)	0.026	1.0	1.1	107	43-155	mg/L	01.13.16 16:14	
Benzene	<0.0067	0.50	0.54	108	78-117	mg/L	01.13.16 16:14	
Carbon tetrachloride	<0.0089	0.50	0.47	94	63-152	mg/L	01.13.16 16:14	
Chlorobenzene	<0.0059	0.50	0.52	104	75-117	mg/L	01.13.16 16:14	
Chloroform	<0.014	0.50	0.53	106	67-136	mg/L	01.13.16 16:14	
Tetrachloroethene	<0.018	0.50	0.47	94	57-132	mg/L	01.13.16 16:14	
Trichloroethene	<0.0072	0.50	0.52	104	77-120	mg/L	01.13.16 16:14	
Vinyl chloride	<0.0015	0.50	0.49	98	43-148	mg/L	01.13.16 16:14	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,2-Dichloroethane-D4	98		53-159	%	01.13.16 16:14
4-Bromofluorobenzene	102		30-186	%	01.13.16 16:14
Toluene-D8	100		70-130	%	01.13.16 16:14

CUSTODY SEAL
DATE 1-8-16
SIGNATURE

FTS ANALYTICAL SERVICES

CHAIN OF CUSTODY

COC# ATL302277
Page 1 of 1

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

Company Name: ATC
Address: 1841 West OAK Pkwy, Suite F
Results Sent to: Robert.Mangum@cardno.com
Email address:
Contact Phone #: 678-581-7571 Cell#:
Project Name (Site): Life Cycle
Project Number (ID):
Regulatory Program:
Sampler(s): (signature) Robert Mangum
Sampler(s): (printed) Robert Mangum

Receiver's Initials/Temp: HN / 5.5
Custody Seal(s): ___ Y N Lab Work Order # 522531
P.O.# (if required):
Field Comments / Lab Precautions:

Analysis Requested

Sample ID #	Sample Depth (Ft)	Collection Date / Time	Matrix (See below)	Composite	Grab	No. of Containers	Container Type: GC	GC	GC	GC	Chemical Preservation Code: TCLP SVOC 1311/8270C	TCLP VOC 1311/8260	TCLP RCRA SW-846 1311/6010C	PCB SW-846 8082
WB-01	Floor	1/8/16 - 0915	SD		✓	2	X	X	X	X				
WB-02	Floor	1/8/16 - 0925	SD		✓	2	X	X	X	X				
WB-03	Floor	1/8/16 - 0930	SD		✓	2	X	X	X	X				
WB-04	Floor	1/8/16 - 1035	SD		✓	2	X	X	X	X				

Relinquished By: Date / Time 1-8-16 1605
2) Received By: Date / Time 1/8/16 16:05
Delivered by: (Circle One) Fed Ex / UPS / Courier / Lab Pickup / Hand / Other

Relinquished By: Date / Time
4) Received By: Date / Time

Relinquished By: Date / Time
6) Received By: Date / Time

Turnaround Time (business days)
TAT Starts when samples are rec'd by 2PM
___10 Days ; ___5-7 Days; ___3 Days
___2 Days ; ___1 Day; ___Same Day

Matrix Guide: (W=Water) (DW = Drinking Water) (GW = Groundwater) (SW = Surface Water) (L = Liquid) (O = Oil) (S = Soil) (SD = Solid) (SL = Sludge) (A = Air) (C = Air Cartridge)
Chemical Preservation Codes: 1 = HCL / 2 = HNO / 3 = H2SO / 4 = NaOH + NaAsO / 5 = NaOH + ZnAc / 6 = NaS2O3 / 7 = NaHSO4 0.1M CH3OH / 8 = ZnAc

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: ATC Group Services - Marietta GA

Date/ Time Received: 01/08/2016 04:05:00 PM

Work Order #: 522531

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : #61

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#6 *Custody Seals Signed and dated?	**No**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**No**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JDR PH Device/Lot#:

Checklist completed by: /Derek Rounsley Date: 01/08/2016
J. Derek Rounsley

Checklist reviewed by: /Derek Rounsley Date: 01/08/2016
J. Derek Rounsley

Attachment 7
Example Quarterly Report Template

This is the suggested format the CAR can use to provide your EPA Project Officer with your quarterly report. Include property names and other details in the appropriate task description of accomplishments. Be descriptive with your reporting.

CAR Name:
Cooperative Agreement Number:
Date Quarterly Report Submitted:
Quarterly Report Number:

Task 1: Project Management and Reporting

Subtask / Activity	Deliverable/ Outputs / Milestone	Target Date[1]	Lead Party
A. Assemble internal team, including technical, financial, managerial. Establish project schedule.	Team established, agreement written. Schedule developed.	Qtr. 1	PM, team
B. Prepare bid documents for procuring contractor support.	Bid package complete.	Qtr. 1	City Engineer
C. Select contractor.	Contractor selected	Qtr. 2	PM
D. Kick-off meeting held.	Kick-off meeting complete	Qtr. 2	Team
E. Grant Project Reporting			
a. Quarterly Progress Reports to EPA & State	Quarterly Progress Reports (10 days after end of qtr.)		PM
b. Final Grant Reporting	Final Report (90 days after grant)		PM, team
F. Attend New Grantee Workshop			PM
G. Attend Local, State and National Brownfields Conferences			

Cost Estimates for Task 1:

Actual Accomplishments and Progress Reporting for *(fill in the blank)* Reporting Period: *Use this area to provide a description of the progress made during the reporting period for this task. Be detailed and descriptive.*

Task 2: Community Involvement/Engagement

Subtask / Activity	Deliverable/ Outputs / Milestone	Target Date	Lead Party
A. Setup Information Repository for Public Information	Files made publicly available.	Qtr. 1	PM, team
B. Community Engagement Plan Developed	Assessment complete, part of Plan.	Qtr. 1	Team
C. Media, Electronic & Social Networking Systems Updated	Plan complete.	Qtr. 1	Contractor
D. Meetings to describe project/schedule and/or updates	Radio, TV, flyers newspaper, etc.	Every Qtr.	Team
Kick-off meeting Update after final Phase II ESA Draft and Final ABCA Mobilization	Meetings conducted.	Qtrs.: 2, 4, 8, 10	PM, Team

Cost Estimates for Task 2: (include cost estimates here)

Actual Accomplishments and Progress Reporting for *(fill in the blank)* period: *Use this area to provide a description of the progress made during the reporting period for this task. Be detailed and descriptive.*

Task 3A: Additional Site Characterization

Subtask / Activity	Deliverable/ Outputs / Milestone	Target Date	Lead Party
A. Final Phase II ESA Generic QAPP Site Specific QAPPs			

Cost Estimates for Task 3: (include cost estimates here)

Actual Accomplishments and Progress Reporting for *(fill in the blank)* period: *Use this area to provide a description of the progress made during the reporting period for this task. Be detailed and descriptive.*

Task 3B: Cleanup Planning

Subtask / Activity	Deliverable/ Outputs / Milestone	Target Date	Lead Party
A. Finalize ABCA			

Cost Estimates for Task 4: (include cost estimates here)

Actual Accomplishments and Progress Reporting for *(fill in the blank)* period: *Use this area to provide a description of the progress made during the reporting period for this task. Be detailed and descriptive.*

Task 3C: Cleanup Implementation

Subtask / Activity	Deliverable/ Outputs / Milestone	Target Date	Lead Party
A. Mobilization B. Conduct Cleanup C. Prepare final Cleanup Report			

Cost Estimates for Task 4: (include cost estimates here)

Actual Accomplishments and Progress Reporting for *(fill in the blank)* period: *Use this area to provide a description of the progress made during the reporting period for this task. Be detailed and descriptive.*

Quarterly Expenditure Reporting

Attachment 8
Preparing Your Brownfields Community Plan: Involving Your Community

This is the suggested format the CAR can use to provide your EPA Project Officer with your quarterly report. Include property names and other details in the appropriate task description of accomplishments. Be descriptive with your reporting.

Preparing Your Brownfields Community Plan: Involving Your Community

Introduction

The Environmental Protection Agency (EPA) Region 4 Brownfields program has prepared this information to assist Brownfield Grantees and/or their consultants in developing a Community Involvement Plan (CIP). This is not intended to be a template. EPA requires applicants to describe their plans for involving community members and community-based organizations in the site cleanup and reuse decisions. Involving the community and soliciting feedback regarding Brownfields activities and redevelopment plans are essential to a community Brownfields program's success.

This overview does not constitute a rulemaking by EPA.

General Overview

"*EPA is committed to community involvement;*

all citizens play key roles in the success of Brownfields Grants."

-Mike Norman, EPA Region 4 Brownfields Section Chief

The (CIP) will describe the Grantee's strategies to inform and motivate local communities for meaningful involvement throughout the project. The CIP should be an evolving document and is most effective when it is updated or revised as your project conditions change.

A CIP is an effective tool for managing community involvement activities, which involves communicating with citizens, community organizations, and other key stakeholders affected by the project. The CIP will define the roles of the grant recipient, State and Federal representatives, and/ or consultants. The CIP will also help the public understand ways in which they can participate in the decision-making process.

The level of public involvement will vary from project to project. At a minimum, your plan should demonstrate a commitment to and strategy for two-way communication with people living or

working near the Brownfields site(s) and/or project area. The CIP should discuss what outreach activities will be implemented, and may include a timeline indicating when community outreach activities will occur. Activities may include public meetings, Brownfields 101 workshops, and site visits. The CIP may also discuss the establishment of community groups (e.g. Citizen Steering Committee, Citizens Advisory Board or a similarly-titled group) which can represent a larger community's position and provide input on project decisions from an overall community prospective. Ideally, the Grantee should seek input from all potentially impacted parties and stakeholders.

The CIP should be one of the first deliverables under a Brownfields grant, as it defines the project area, and details the early steps that will be taken to provide general Brownfields education and site-specific information to the community. EPA Region 4 expects that most Grantees have already taken steps to involve or communicate with their constituents, as this is a key ranking criteria of the grant guidelines. Interested members of the community may have little-to-no knowledge of the full project, but they may have valuable information on the background and history of the community. A critical first step in establishing a meaningful dialogue is providing the community with project background information (such as general Brownfields project goals, and what project-specific decisions have already been made) to help individuals identify issues that are relevant and important to them. Community representatives need this background information in order to be fully involved in the decision-making process. If your program is large, it may be appropriate to set up subgroups to focus on individual topics.

The ultimate goal is to keep citizens informed and involved so that they remain aware of potential concerns, questions, and solutions. Communication is a two-way process: grant recipients need to provide information to the community, and the community needs to provide information and feedback in return. This informational is intended to help facilitate and open those lines of communication.

Note: *Developers and investors are attracted to areas with strong community pride, support and interest, and appreciate predictability. Knowing the Grantees' and community's concerns and expectations early in the plan process helps eliminate surprises that could derail a project.*

Building Your Plan's Foundation

EPA Region 4 encourages Grantees to increase their community awareness prior to writing a Community Involvement Plan by conducting a community assessment. Most Grantees have performed a community assessment before writing their Brownfields Grant Application and/or before the award of their Brownfields Grant. Before getting started writing the CIP, you should know the answers to the following:

Who is the Community?

What are the Demographics?

Are there language barriers?

Who are the community leaders?

Are there key community or neighborhood organizations?

Have you defined the project area, geographic boundaries, and history?

What are the community's needs and concerns?

Are there other concerns such as healthcare, crime, access to healthy food or other concerns?

How will you find out what the community's needs and concerns are?

What level of understanding does the community have about Brownfields?

If the community does not understand Brownfields will you conduct a Brownfields 101?

Is the community concerned about any particular sites or properties?

How does and will the community get information? word of mouth? radio, newspapers, television, church, web sites, social media, etc.

Are Public Meetings an effective way to communicate with the affected community? What are the potential locations for the public meetings and availability?

What capabilities does the grantee have to deliver information? What methods are effective in your community?

What outcomes does the community want to see? Or does the community need to develop a vision? What does the community NOT want to see happen?

How will the community be involved in the site inventory, prioritization and/or the site selection?

Building Your Plan

Regarding the format, the cover page should identify the CIP as an EPA document with the Brownfields Grant number. Although the CIP is project specific, it should not be about the project. Rather, the CIP should be about how you will involve the community in the project process. It should also be issue specific in that it should identify the community's issues, needs and concerns.

After identifying community concerns, the CIP should identify specific activities, outreach products, or programs that you will use to address the concerns. In general, at a minimum, the content of the CIP should include:

Overview of the CIP

Project Description

Community Involvement Plan Objectives

Community Involvement Activities and Timing (including your communication strategy)

Site(s) selection process, description, and documentation

Contact List

Location of the Information Repository

Location for Public Meetings

Media Contacts

Glossary of Terms

List of Acronyms

Established Title of Community Group(s), and

Map(s)/Figure(s) of site(s)

Community Involvement Plan

SECTION 1

Overview of the Community Involvement Plan

Describe how the Community Involvement Plan (CIP) will identify issues of concern and interest to the community potentially affected by the project. How will the Grantee use the information in this CIP to help identify and address current matters of concern, and to review past community involvement efforts as the project progresses. Explain how the CIP will also provide guidance to the Grantee and help to ensure that community needs are addressed throughout the Brownfields project process.

What is the CIP intended to do? Will the CIP encourage community interest and participation throughout the Brownfields project at the site(s)? How will the Grantee initiate and support two•way communication between Grantee and the community? Would an educational session be beneficial to help ensure that community members understand the Brownfields process, and the opportunities it offers them to participate in the decision•making process regarding the site cleanup?

Note: *If the grantee has already identified issues or concerns (either from institutional knowledge, community interviews, or conversations with other interested parties and regulatory authorities), then discuss them here. Whether or not issues have been identified, discuss your plan for soliciting community input (more detail will be included in Section 2). Also include information about the target community. This should be defined in the Brownfields grant application (proposal). You may wish to include the demographics table from your proposal, if it provides useful information for developing the CIP.*

SECTION 2

Project Description and Definition of Project Area

Include a discussion of the grant type, project area (e.g., a specific site, a neighborhood, city-wide, county-wide, etc.), time frame (typically three years), and envisioned outcomes, if applicable**.**

Community Involvement Plan Objectives

Include in this section what your objectives are for the CIP throughout the investigation and/or cleanup project. You will need to keep community members informed and involved in the assessment and/or cleanup process.

TIP: *The CIP is intended to provide general Brownfields program information to interested community members, as well as help them identify the participation opportunities and options available to them throughout the project. Objectives may include: providing timely, project specific information to community members so that they are able to participate in, or closely follow, project related activities to the maximum extent they desire and the process allows; providing opportunities for community input that are tailored to the needs and concerns of the community; helping ensure that community members are well informed, so that they are knowledgeable about site activities and the Brownfields process; enhancing communications between Grantee and the media to help ensure reporters are provided timely information about site related activities and events and are aware of site related pertinent topics.*

SECTION 3

Community Involvement Activities

Tip: *Actual methods and procedures will be based on the level of community interest, identified community issues and concerns, and the complexity and duration of the project's investigation and/ or cleanup. The level of participation sought by communities or individual community members varies.*

This is an overview of your "action plan" for the CIP. Describe or list the planned outreach and community involvement activities. Describe or list how you will gather community information (e.g., interviews, visioning sessions, listening sessions, hold meetings, partner with specific organizations/leaders, etc.)

Tip: *The community stakeholders may have important information to provide in reuse and/or revitalization for your Brownfields project. By performing your outlined activities, the Grantee can help ensure that community members know about the Brownfields process and the actions taking place concerning the project, and that they are aware of the opportunities for the community to participate in project related decisions. By providing accurate information about the project investigation, the Grantee will enable interested parties to make recommendations regarding the project that are appropriate for their community.*

Note: *The following methods are commonly used as community outreach tools. You may wish to use some or all for your project, or you may have other methods that are not listed below. Include a rationale for why you are using these methods.*

Assign a Point of Contact

Provide name and contact information for project point of contact. Include address, telephone number, and email information. Describe the point of contact's role. Is the point of contact providing a direct link between the Grantee and the community? How will the point of contact prepare and distribute project related information, including public meetings, data and documents to residents, local officials, local media and interested parties? Will the point of contact provide language translation at the meetings and for any written material? Will the point of contact be responsible for revising or updating the CIP?

Prepare and distribute information to residents and interested parties.

Some Grantees have used fact sheets (also referred to as community updates or newsletters) which are useful when communicating with large groups of people about topics of common interest. For example, fact sheets are helpful for explaining specific events and issues, discussing and dispelling rumors, explaining relevant scientific or technological data, or informing interested parties about progress or problems related to the site(s) or the schedule of work.

Develop and maintain a mailing (and contact) list.

Mailing (and contact) lists are developed and maintained to facilitate distribution of materials, such as fact sheets and meeting notices, to interested and potentially affected community members. The lists also provides a quick reference to key community members, such as local officials and community group leaders. Residents, local businesses, elected officials, and the media are routinely included on mailing and contact lists. Community surveys and local tax maps

form the basis of most mailing lists, but the lists are revised to include those who request to be added (or deleted) and those who provide their names and addresses on meeting and event sign in sheets. The Grantee should make every effort to protect the privacy of community residents, which includes denying requests to share personal information, such as names, addresses and individual residential sampling results, with non-government persons. The mailing list will be periodically updated and revised, if necessary, throughout the course of the Brownfields project

Make project related information, including data and documents, available to community members locally.

The grant Terms and Conditions require establishment of an information repository. The Grantee should make project related information available to local residents at easily accessible locations, such as a local library or municipal building. The available information may be in any one of several forms, including paper copies, online (via the Internet), or CD-ROM, electronic copies depending on the capabilities and preferences of the local host facility. The information made available will include project related documents. Specify the name of the local library or municipal building, include how it was established as the local information repository host, and how it will maintain a project file for public review.

Keep local officials well informed about project activities and developments.

By keeping local officials abreast of the work schedule and project related developments, the Grantee can promote a collaborative relationship to help ensure that officials are able to respond knowledgeably to citizens' inquiries. When local officials are well informed, they can enhance the flow of accurate information between the Grantee and concerned community members.

Keep local media well informed about project activities.

By distributing timely and accurate information to the local media, the Grantee can minimize misinformation and speculation about site related activities. News releases, written materials, and direct phone calls are all appropriate ways to provide information to media representatives. The media should always be notified of public meetings and similar events, and may be offered opportunities to participate in news briefings or conduct interviews with the Grantee. Upon request, or when circumstances warrant, special information sessions or news conferences can be useful to ensure that complex situations

are understood and can be accurately conveyed to the public. Every effort will be made to address media inquiries quickly.

Conduct Public Meetings and/or Public Availability sessions

When conducted, Public Meetings should be held at a convenient location during evening hours so that most interested parties will be able to attend. Public Availability Sessions are less structured than meetings. Generally, there are no formal presentations. Instead, community members are invited to come at their convenience within the set time frames, and talk one on one with the Grantee and others associated with the site cleanup activities. Public Availability Sessions may include afternoon and evening hours so that interested parties can attend at their convenience.

Place Public Information sometimes known as Public Notices in local publications

Public Notices regarding required and elective activities can be selectively placed the newspapers. To ensure the widest possible exposure, Public Notices about Brownfields activities are often run as retail display ads, rather than in the classified or legal notice sections. Public Notices announce important project related developments, Public Meetings and Availability Sessions, the release of project related documents, or any other information of importance to the community at large.

Provide support for Community Groups

Community Groups are community-led groups that are intended to represent and include all interested members of the community, including other interested representatives. By meeting regularly to discuss the site related activities and the community's issues and concerns, this often helps to keep the community informed and involved in the process. These groups can also provide valuable information to local governments concerning the future use of properties and the communities' collective long term goals. Although these groups are not funded in the Brownfields Grant, the Grantee can assist interested community members in forming groups and provide support services to the groups, such as assistance with production and mailing of newsletters they may develop.

Language Translation

Describe any language translations that will be provided at meetings and for printed information (if necessary).

Revise Community Involvement Plan as Needed

It is important that the CIP is periodically updated to reflect changing concerns of the community as Brownfields related activities progress. The CIP contact list should be revised whenever elections result in a change in elected officials, or when personnel changes affect non-elected official contacts.

Community Involvement Activities to Date

TIP: *Example below: Include in a table format the community involvement meetings and other activities*

Date	Event	Representatives

SECTION 4

Site or Sites Selection Inventory Process

Describe how the community was involved or will be involved in the site or sites inventory process. Describe site or sites history and actions to date.

Site or Sites Description

Describe the site location or sites locations with intersections, if applicable. Also describe the site and adjoining properties. A map of the site(s) and surrounding area showing streets, homes, businesses, and geographic features may also be provided on a separate page or fold -out.

Site or Sites Documentation

Provide location of project documents by establishing an Administrative Record (all project records must be made available to the public at a repository local to the project, during normal working hours, throughout the duration of the project). Also include a list of the documents that will be made available for public review (e.g., Phase I and Phase II reports, decision documents, public notices, summary of responses to public comments, and other supporting documents.)

APPENDIX A

List of Contacts

A.1 Federal Elected Officials

Include United States Senators and

Include United States House of Representatives for the Congressional district(s) in which the project is located

A.2 State Elected Officials

Include Governor

Include State Senators and

State House of Representative member(s) for the District(s) which the project is located

A.3 Local Officials

List here

A.4 EPA Region 4 Officials

List here

Other relevant federal agency officials if applicable

A.5 State Environmental Agency Officials

Include here

A.6 Media

List Newspapers Name(s) here

List Television Stations here

List Radio Stations here

List other media here such as social media (Twitter or Facebook, etc.)

Appendix B

Information Repositories and Potential Meeting Location

B.1 Library or other location(s)

List Here

B.2 Potential Public Meeting Location

List Here

Appendix C

C.1 Glossary of Terms

List Here

Appendix D

D.1 List of Acronyms

List Here

Appendix E

E.1 Community Group Name

List Here

Appendix F

F.1 Maps of site(s)

Include Here

Attachment 9
SF-424 (Application for Federal Assistance)

Attachment 10
SF-424A (Budget Information)

Attachment 11
SF-424B (Assurances)

Attachment 12
EPA Form 5700-54 (Key Contacts)

Attachment 13
EPA Form 6600-06 (Certification Regarding Lobbying)

Attachment 14
EPA Form 4700-4 (Pre-Award Compliance)