SOLICITATION FOR:
Engineering, Architecture, and Design Services for ArtFarm
RFP # 16-10

CITY OF SOMERVILLE, MASSACHUSETTS

RELEASE DATE: 7/29/15
QUESTIONS DUE: 8/10/15 by 12PM EST
DUE DATE AND TIME: 08/26/15 by 11AM EST

Anticipated Contract Award	**8/31/2015**
Est. Contract Commencement Date	**9/15/15**
Est. Contract Completion Date	**2/29/17**

DELIVER TO:
City of Somerville
Purchasing Department
Attn: Alex Nosnik
Assistant Purchasing Director
anosnik@somervillema.gov
93 Highland Avenue
Somerville, MA 02143

NOTICE TO PROPOSERS

RFP # 16-10

All bids must be in accordance with terms and conditions set forth herein as stated.

SECTION A	Sealed proposals for: **Engineering, Architecture, and Design Services for ArtFarm**. The bids will be received at the office of the Purchasing Director, Somerville City Hall,93 Highland Avenue, Somerville, MA. 02143 no later than **08/26/15 by 11AM EST**
SECTION B.	Forms of price bid, specifications and terms of contract can be obtained at the above office on or after **7/29/15**
SECTION C.	Bid envelopes shall be clearly marked as follows: **Engineering, Architecture, and Design Services for ArtFarm Bid No: RFP # 16-10**
SECTION D.	If **awarded** vendor is a Corporation, vendor must comply with request for "Certificate of Good Standing". See attached instructions.
SECTION E.	**INSURANCE: Awarded Vendor** must comply with insurance requirements as stated in the bid package.
SECTION F.	Living Wage - See Section 5.0
SECTION G.	The requirements in Section **E or F** will be waived if the words "Non-Applicable" **(N/A)** are inserted in the space designated.
SECTION H.	The Purchasing Director reserves the right to accept or reject any or all bids, to waive any informalities, to divide the award, to amend any specifications or to accept any portion of a bid, if in her sole judgment, the best interest of the City of Somerville would be served by so doing.
SECTION I.	The City reserves the right to cancel a contract, if awarded bidder does not respond to all necessary documents and required signature forms within ten (10) working days of receipt of contract.

Signature:_____

Company: _____

By: _____ Title:_____

Date:_____ Tel. No: _____ Fax:_____

CITY OF SOMERVILLE MASSACHUSETTS

SOMERVILLE CITY HALL
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

BIDDING INSTRUCTIONS FOR
Engineering, Architecture, and Design Services for ArtFarm RFP # 16-10

Enclosed you will find a request for proposal for: Engineering, Architecture, and Design Services for ArtFarm

SECTION 1.0
GENERAL INFORMATION ON BID PROCESS

1.1 General

- When submitting proposal, please identify the solicitation title and number clearly on the submitted envelope. All responses must be sealed and delivered to:

  Purchasing Department
  City of Somerville
  93 Highland Avenue
  Somerville, MA 02143.

- Bids submitted must be an original
- **A complete bid consists of all documents listed in Sections 2.0, 4.0, 5.0 and all related appendices. Bids will be considered non-compliant and will be rejected if all required documents are not present.**
- A complete BID must also include a cover letter signed by an official authorized to bind the proposer contractually and contain a statement that the proposal is firm for ninety (90) days. **An unsigned letter or one signed by an individual not authorized to bind the Offeror will be disqualified.**
- The City of Somerville reserves the right to reject any or all proposals, waive minor informalities, and accept the proposal deemed to be in the best interest of the City.
- The successful Offeror must be an Equal Opportunity Employer.
- The signature of the Offeror's authorized official(s) must be provided on all the proposal forms.
- All information in the Offeror's response should be organized and presented in a clear / concise format. Accuracy and completeness are essential. The successful response will be incorporated into a contract as an exhibit; therefore, Offerors should not make claims

to which they are not prepared to commit themselves contractually.

- Additional copies of the solicitation may be obtained from the Purchasing Department on and after **7/29/15** between the hours of 8:30 a.m. and 4:30 p.m. Monday – Wednesday, 8:30 a.m. to 7:30 p.m. on Thursdays and 8:30 a.m. to 12:30 p.m. on Fridays.
- The Price Summary Form in Section 4 must be completed. No substitute form will be accepted. Pricing must remain firm for the entire contract period.
- Failure to answer any questions, to complete any form, or to provide the documentation required will be deemed non-responsive and result in disqualification of the bid unless the City determines that such failure constitutes a minor informality, as defined in Chapter 30B.
- Please review and return your sealed bids as sent. Also, ensure that all forms are completed and your bid response is submitted as requested. Use the attached Proposers Checklist to ensure bid documents are complete.

1.2 Submission Instructions

Please submit two sealed envelopes, all within one sealed packaged, with the following contents and marked in the following manner:

Contents of Envelope	Marked As
Envelope 1 Non-Price Technical Proposal: Shall Include (1) original and three (3) copies, and one (1) electronic copy. [Electronic copies are to be submitted on CD-ROM or thumb drives and are to be saved in Adobe Acrobat format. ("Read only" files are acceptable.)]	**To Be Marked:** Non-Price Proposal **Engineering, Architecture, and Design Services for ArtFarm RFP # 16-10**
Envelope 2 Price Proposal: Shall Include one (1) original and one (1) copy.	**To Be Marked:** Price Proposal **Engineering, Architecture, and Design Services for ArtFarm RFP # 16-10**
Please send the complete sealed package to the attention of :	**Alex Nosnik** **Assistant Purchasing Director** Purchasing Department Somerville City Hall 93 Highland Avenue Somerville, MA 02143

(Note: Massachusetts General Laws, Chapter 30B requires that price proposals must be separate from technical proposals. Therefore, *please make no reference to pricing in the non-price technical proposal.* Failure to adhere to this requirement will result in disqualification. It is the

sole responsibility of the Offeror to insure that the proposal arrives on time at the designated place. Late Proposals will not be considered, and will be returned.)

Reference: The Proposer shall list at least three relevant references. The City of Somerville reserves the right to use ourselves as a reference. References shall include the following information.

- The name, address and telephone number of each client listed above.
- A description of the work performed under each contract.
- A description of the nature of the relationship between proposer and the customer.
- The name and telephone number of the person the City may contact as a reference.
- The amount of the contract.
- The volume of the work performed.
- The dates of performance.

1.3 Questions

Questions are due: 8/10/15 by 12PM EST

Questions concerning this solicitation must be mailed or hand delivered in writing to:

Alex Nosnik
Assistant Purchasing Director
Somerville City Hall
Purchasing Department
93 Highland Avenue
Somerville, MA 02143

Or emailed to:

anosnik@somervillema.gov

Or faxed to:

617-625-1344

Answers will be sent via an addendum to all Offerors who received this solicitation through the Purchasing Department. Bidders are encouraged to contact the Purchasing Department to register as a bid document holder to automatically receive addenda as they are issued. It is the responsibility of the Offeror to also monitor the bid portal on the City's website for any updates, addendums, etc. regarding that specific solicitation. The web address is: http://www.somervillema.gov/departments/finance/purchasing/bids.

If any bidders or proposers contact anyone outside of the Purchasing Department regarding this bid/proposal, that bidder/proposer will be disqualified immediately.

1.4 Bidding Schedule

Key dates for this Request for Proposals:

RFP Issued	**7/29/15**
Deadline for Submitting Questions to RFP	**8/10/15 by 12PM EST**
Proposals Due	**08/26/15 by 11AM EST**
Anticipated Contract Award	**8/31/2015**
Est. Contract Commencement Date	**9/15/15**
Est. Contract Completion Date	**2/29/17**

Responses must be delivered by 08/26/15 by 11AM EST to:	City of Somerville Purchasing Department Attn: Alex Nosnik 93 Highland Avenue Somerville, MA 02143

SECTION 2.0
SPECIFICATIONS/SCOPE OF SERVICES

2.1 Background

The City of Somerville is seeking to procure a Consultant for a full range of landscape architectural, architectural, engineering, and design services for the Somerville ARTfarm for Social Innovation arts oriented mixed-use project. The content of the Scope of Work is arranged as follows.

The following documents are being attached to this RFP for your reference:

1) Attachment 1: Final Draft of ArtFarm Schematic from Initial Concept and Public Process
2) Attachment 2: Licensed Site Professional (LSP) report regarding environmental site condition.
3) Attachment 3: Site Survey.

2.2 Scope of Work

1.0 Summary
2.0 Project Site
3.0 Tasks
- 3.1 Site Analysis
- 3.2 Special Environmental Systems Documents
- 3.3 User Design Criteria Documents (Architectural & Engineering)
- 3.4 Tenant Coordination Related Activities
- 3.5 Design Development and Construction Documents
- 3.6 Bids and Negotiation
- 3.7 Construction Administration

4.0 Products
- 4.1 Site Analysis Design Development and Construction Documents
- 4.2 Special Environmental Systems Monitoring
- 4.3 User Design Criteria Documents
- 4.4 Tenant Coordination Related Activities Documentation
- 4.5 Bids and Negotiation
- 4.6 Construction Administration

1.0 Summary

The City of Somerville is seeking to procure a Consultant for a full range of landscape architectural, architectural, engineering, and design services for the Somerville ARTfarm for Social Innovation Project. The site is approximately 2.1 acres in size, and located at the corner of Linwood and Poplar Streets in the Brickbottom area, and is separated from the Union Square area by the elevated McGrath Highway—Route 28.

The project scope is to finalize the design of and constructions plans for the City's ARTfarm project. The selected consultant will utilize the existing baseline Schematic design (Attachment

A) to develop a comprehensive plan for the entire project. The plan will address the physical infrastructure, safety and security, the needs of the adjacent community, and the mixed-use open space goals of the ARTfarm stakeholders, while also housing a wide variety of artists, shops, users and tenants in shipping container based spaces.

Specifically, the ARTfarm plan will address the redevelopment of the site to accommodate various uses, including: Arrival at the Grand Portal; an Indoor Theater / Gallery / Café structure; Pop-up Shops; Creative Activity Main Space; Outdoor Performance venue; Artist Studios; Grow Places; Creative Youth Place; Recreational Lawn; and the walking / emergency access pathways; plus redesign of the connections between the project and the surrounding community. The plan will also design physical infrastructure including drainage, irrigation, fencing, lighting, utility connections, plantings, sidewalks, and additional landscape and environmental considerations. The plan will also provide guidance for the long term maintenance, sustainability, and green infrastructure of ARTfarm.

It is expected that the design will be creative and imaginative and focus on sustainable features while providing a safe and secure environment in which all residents and visitors will celebrate and take joy. In addition, the consultant should expect the work program to fully develop the site's potential with a plan that exceeds the needs of pure functional order, and which serves as a premier example of arts oriented multi-use open space design that provides a sense of civic grandeur and pride for all residents of the City.

The Consultant will provide full landscape architectural, architectural, and engineering services with a team that will address all the needs of the project, including, structures, drainage, lighting, utilities, engineering and landscape design and code compliance. The Consultant will assess and evaluate the evolved ARTfarm Baseline Plan and expressed Goals (Attached as Exhibit xxx) with respect to the community's needs, and will work with the Somerville Arts Council, the City's Office of Strategic Planning and Community Development (OSPCD), DPW, the City Engineers Office, City's Capital Projects Dept. and the community residents to understand the site conditions, programming needs, and the neighborhood's concerns.

Per the project description below, the Consultant further develop the schematic designs for each of the major uses; with cost estimates, and then develop final design documents that include a final cost estimate, fully detailed construction plans, and related User Design Criteria. The final design will be based on design quality, cost feasibility, and environmental sustainability, among other criteria. The final scope of work will be evolved in collaboration with city officials and the Somerville Arts Council. The project implementation may be phased to bring some components of the design to completion sooner.

The design process has seven main components with sub-tasks: Site Analysis; Design Development and Construction Documents; Special Environmental Systems Documents; User Design Criteria Documents; Tenant Coordination Related Activities; Bids and Negotiation; and Construction Administration.

- Site Analysis involves review of the subsurface investigations,; traditional grading and

orientation studies; and special systems needs such as solar orientation.
• Design Development and Construction Documents will detail the preferred Schematic Design to 100% construction drawings and construction cost estimate.
• Special Environmental Systems Documents will create design to incorporate systems to move the project toward its zero carbon and other environmental goals—and suited to applying for grants and other special support for such systems where appropriate.
• User Design Criteria Documents will provide orderly information and procedures to inform User and Tenant designers.
• Tenant Coordination Related Activities will assist in tracking User fit-up in spaces and installation of artworks in relation to the general construction process.
• Bid and Negotiation consists of working with the City to review and respond to bidders' requests for information, until the construction contract is awarded. In the final phase,
• Construction Administration, the Consultant will act in the capacity of an agent of the City, overseeing construction to ensure conformity to construction drawings, specifications, and standards. Simultaneously, Consultant will assist the process of monitoring user designs, plus occupation and fit-up of spaces in accordance with the User Design Criteria.

<u>The goal of the ARTfarm for Social Innovation design, is for the Consultant to engage in a design project that will</u>:

1) Address the artistic, health and recreational needs of the local community through the development of well designed, active spaces, as well as green and passive spaces that will provide for the physical and emotional well-being of all;

2) Analyze and provide ADA compliant designs for persons with disabilities, in conjunction with the City's ADA Coordinator.

3) Strengthen environmental accountability by exploring design options for net zero carbon operations, green products, permeable surfacing, and sustainable building practices;

4) Provide a design which minimizes City of Somerville facility maintenance needs and which provides a plan and schedule for recommended ARTfarm maintenance.

5) In the Creative Youth Area, provide a design that will meet the most current requirements for Certified Playground Safety Requirements and which will specify materials which meet the most stringent standards with regard to fall heights and safety surfaces.Include review of the User Design Criteria in the approvals process, to establish clear procedures, submission requirements, and limitations to result in minimal conflicts between General Contracting operations and fit-up by Users, Tenants and Artists, park maintenance needs and costs associated with the City, tenants, artists, etc

2.0 Project Site

The following is an excerpt from Environmental Compliance Services report of 12 February

2015, RE: November 2014 Subsurface Investigation, 10 Poplar Street, Somerville, MA

MassDEP RTN 3-32211:

"The Site is owned by the City of Somerville, Massachusetts and consists of approximately 2.1 acres of land. The Site is currently vacant and access is restricted via a locked chain-link fence that surrounds the perimeter of the Site. According to historic Sanborn Fire Insurance Company Maps, prior to 1950, several residential apartments and dwellings were located at the Site, as well as a restaurant, a school, stores and a gasoline dispensing facility (see Figure 2). The Site was also historically depicted as being utilized for drum and barrel storage and sales. A two-story building of concrete block/brick construction, with a footprint of approximately 34,464 square feet (ft2), was previously located at the Site. According to the City of Somerville assessor's field card, that building was constructed in 1950. Reportedly, a solid waste incinerator operated at the Site in the former building described herein for approximately 30 years. Subsequently, the Site, including the former incinerator building, was utilized by Waste Management as a solid waste transfer station. During Waste Management's tenure at the Site, vehicle repairs were conducted in the southern portion of the former on-site building. The former two- story Site building was demolished during the winter of 2013/2014. In addition, a lead smelting company was historically located approximately 350 ft to the southeast of the Site, on Chestnut Street (demolished in 1997).

Following completion of the activities presented [in this report], implementation of an AUL will be required. The AUL would preclude future residential use of the Site, require development of a Soil Management Plan as well as Licensed Site Professional (LSP) oversight in the event of the performance of soil excavation or relocation work at the Site, and require the use of raised beds for potential future gardening activities at the Site. Under current conditions, the AUL would not require the presence of a barrier (asphalt paving, etc.) to restrict surficial soil exposures for potential current or future Site visitors, trespassers/passersby, construction workers, utility workers or Site workers."

3.0 Tasks

3.1 Site Analysis as to Schematic Design
Target Goal: October 1, 2015

Site Analysis will include the following tasks:

- Conduct site visit(s) to review existing conditions and document existing materials, park furnishings, plant material, and any unique site features.
- Work with a certified and stamped topographical and boundary survey, noting all grades, utility locations, and site features supplied by the City.
- Review records of the City's process to date and become familiar with reports analyzing the environmental issues and limitations of the site, including ongoing monitoring requirements.

- Create a base plan for design purposes based on site survey, site visits and City records.
- Incorporate public comments into the Site Analysis, for review and comment by City staff.

Schematic Design will include the following tasks:

- Prepare a project cost estimate based for each proposed Schematic Design program element.
- **Work with City staff to develop options for the phased implementation of the ARTfarm.**

3.2 Special Environmental Systems Documents
Target Goal: January 1, 2016

Special Environmental Systems for ARTfarm will include the following tasks:

- Design energy systems that may include solar, wind, biomass, composting, etc.
- Design resource management systems such as rainwater harvesting, growing soil composting, etc.
- Provide any special documents to seek special funds, grants or incentive programs the project may be qualified for.

3.3 Environmental Engineering and Testing:
Target Goal: Ongoing, as needed

Assessment, testing, risk characterization, monitoring, design and construction administration of potential site and building hazardous materials conditions, contamination and abatement/remediation.

3.4 User Design Criteria Documents
Target Goal: Ongoing

User Design Criteria will include the following tasks:

- **Create draft Design Criteria for Architectural, and Engineering to inform tenant designers regarding capabilities, limitations and rules related to fit-up of spaces.**

3.5 Design and Construction Documents
Target Goal: submit final CD set in February 1, 2016

Design and Construction Documents will include the following tasks:

- Precede with design development of preferred Schematic Design scheme with goal to submit 100% Construction Documents for both buildings and landscapes by four months from executed contract.

- Coordinate with sub consultants as needed to develop Buildings, Utilities, Lighting, and all other project systems plans and specs, in accordance with City standards and maintenance capabilities.
- Prepare detailed unit price based Cost Estimate to use in the construction Bids and Negotiation phase.

3.6 Tenant Coordination Related Activities
Target Goal: Ongoing

Tenant Coordination Related Activities will include the following tasks:
- Design and provide documents to track activities of User and Tenants and their designers and builders during the general construction phase of work.

3.7 Bids and Negotiation
Target Goal: March, 2016

Bid and Negotiation for ARTfarm will include the following tasks:
- Assist with bid canvassing
- Attend pre-bid conference to answer questions from potential bidders relating to the proposed ARTfarm construction.
- Assist City of Somerville Purchasing Department in issuing any needed addenda and respond to the bidder's questions for clarification as needed for the building and landscape designs.
- Revise bid documents to incorporate amendments and clarifications issued during Bidding and Negotiation phase and submit to the City of Somerville.

3.8 Construction Administration
Target Goal: April 2016 – January 2017

Construction Administration will include the following tasks:
- Conduct weekly on-site observation and monitoring of construction to ensure that all materials and procedures are in accordance with drawings and specifications and that the project meets the agreed upon construction schedule.
- Schedule 2hrs/day, 4 days/week throughout construction period for site inspections and associated tasks.
- Address design coordination between the City, general contractor and design sub consultants during the construction period.

- Answer questions from general contractor and update changes to the construction drawings and specifications as needed.
- Review all submittals and change order requests with City.
- Record field notes and meeting minutes.

4.0 Products

4.1 Site Analysis as to Schematic Design Documents

Site Analysis as related to existing Schematic Design will include the following products:

- Stamped topographical site survey and boundary plan (provided by the City).
- Existing conditions plan based on site survey and environmental studies by the City.
- Schematic Design Alternatives. Schematic Design must be presented in illustrative plan. Models, perspective drawings and other representation strategies are encouraged.
- Probable Cost Estimate for each Schematic program elements.
- PowerPoint presentation or boards as necessary for all community meetings and public presentations.
- Consultant must be prepared to answer detailed questions on layout, circulation, materials, program and planting recommendations for each Schematic Design.

4.2 Design Development and Construction Documents

Design Development and Construction Documents will include the following products:

- Author 50% and 100% construction documents for City review and acceptance.
- 100% construction set must include the following plans, sections and details: Existing Conditions Plan, Site Demolition and Preparation Plan, Layout and Materials Plan, Grading Plan, Utility and Drainage Plan, Irrigation Plan, Lighting Plan, Site Specifications, Planting Plan, Plan Enlargements (as needed, to depict special areas of site improvements), Site Details (scaled as required to depict design elements and anticipated construction techniques), Site Specifications.
- Author 50% and 100% complete paper and electronic set of as built architectural documents for City review and acceptance.
- Author 50% and 100% Architectural Tenant Criteria and Engineering Tenant Criteria Documents for City review and acceptance.

4.3 Special Environmental Systems Monitoring

Special Environmental Systems Monitoring will include the following products:

- Any separate bid and/or construction documents needed for such systems.

- Applications or other requirements to apply for grants, special funds, or incentives that may be available to the project, and as agreed with City project management.

4.4 User Design Criteria Documents

User Design Criteria will include the following products:

- General description of the philosophy and goals of the ARTfarm, and identification of the elements and Special Area Criteria zones that accommodate its various users and tenants.
- Architectural Design Criteria Manual to provide information and guidance to User or Tenant designers as to capabilities, limitations and rules for fit-up of spaces.
- Engineering Design Criteria Manual to provide information and guidance to User or Tenant engineers for electrical and MEP systems in spaces.

4.5 Tenant Coordination Related Activities Documentation

Tenant Coordination will include the following products:

- Provide organized records of all submissions and other documents by Users, Tenants, and Artists during construction and fit-up phases.
- Coordinate with general contractors to accommodate User, Tenant and Artist activities on site, including safe access to spaces, storage of materials, temporary water and power, and so on.

4.6 Bids and Negotiation

Bid and Negotiation will include the following products:

- Addenda or response to bid questions as needed to provide clarification in the construction bid process.
- Revision of bid documents to incorporate amendments and clarifications issued during the Bidding and Negotiation phase.

4.7 Construction Administration

Construction Administration will include the following products:

- Update construction drawings and specifications as needed.
- Review all change orders and submittals with City and maintain current file.
- Host, write and submit all meeting minutes and field notes from all site visits. All meeting minutes to be submitted in timely fashion.
- Work with construction vendor to ensure accurate recording of all changes to the plans and provide the City with a CD set of electronic as-built plans which accurately reflect the ARTfarm final construction.

- Organize and turn over all User, Tenant and Artist fit-up and installation documents as part of the ARTfarm as-built documentation and ongoing management information.

REGULATIONS

The project design must comply with all applicable federal and state laws and City ordinances and regulations.

The Project Team's recommendations should be informed by requirements in the Americans with Disabilities Act of 1990 (42 U.S.C. § 1210 et seq), Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. §791 et seq), and the Massachusetts Architectural Access Board (M.G. L. c. 22 § 13A).

COMPARATIVE EVALUATION CRITERIA

The Comparative Evaluation Criteria set forth in this section of the RFP shall be used to evaluate responsible and responsive proposals. The Comparative Evaluation Criteria are:

All proposals will be reviewed by an evaluation committee composed of employees of the City. Final selection will be based upon and the evaluators' analysis of the information and materials required under the RFP and provided by the proposing vendors in their submissions. The City reserves the right to involve an outside consultant in the selection process. Proposals that meet the minimum quality requirements will be reviewed for responses to the comparative evaluation criteria. The evaluation committee will assign a rating of Highly Advantageous, Advantageous, Not Advantageous or Unacceptable to the comparative evaluation criteria.

The City will only award a contract to a responsive and responsible Proposer. Before awarding the contract(s), the City may request additional information from the Proposer to insure that the Proposer has the resources necessary to perform the required services. The City reserves the right to reject any and all proposals if it determines that the criteria set forth have not been met.

FACTOR 1 - Technical and Management Approach

The degree to which the Offeror effectively demonstrates knowledge, understanding, technical ability to successfully perform and manage requirements of the Scope of Work (SOW). Additionally, the appropriateness, soundness and reasonableness of the Offeror's problem resolution, logistic considerations, corporate commitment to achieve the overall project objectives. Other areas of consideration are: Record of completing projects on schedule and on budget. History of effectively communicating with city project manager regarding budget, schedules and accepting input.

Highly Advantageous: The proposer's Plan demonstrates a comprehensive understanding of the SOW and a thorough attention to detail. The Plan is both cost effective and relevant to Somerville's specific needs.

Advantageous: The proposer's Plan demonstrates a moderate understanding of the SOW and modest attention to detail. The Plan is not optimally cost effective and lacks certain aspects of relevance to Somerville's specific needs.

Not Advantageous: The proposer's Plan lacks a comprehensive understanding of the SOW and a thorough attention to detail, and is not cost effective nor relevant to Somerville.

FACTOR 2 – Key Personnel

The degree to which the Offeror's proposed key personnel resumes which ***must include either a letter of intent or a signed resume by the key personnel*** and the Consultant demonstrates the individual's ability to execute SOW requirements on the bases of strength of relevant education, training, depth and breadth of relevant experience.

Highly Advantageous: All of the personnel identified by the proposer are proven to possess a very high level of design and construction administration experience and performance. Resumes are included in the proposal for all proposed personnel. All proposed personnel are currently performing functions similar to those proposed clearly show an adequate level of relevant experience to successfully perform the scope outlined herein.

Advantageous: All of the personnel identified by the proposer are proven to possess a high level of design and construction administration experience and performance. Resumes are included in the proposal for most of the proposed personnel. Some of these proposed personnel show an adequate level of relevant experience to successfully perform the scope outlined herein.

Not Advantageous: Most but not all of the personnel identified by the proposer are proven to possess an adequate level of design and construction administration experience. Resumes are not included for any of the proposed support staff.

FACTOR 3 – Past Performance

The Offeror's proposal will be evaluated to determine the extent to which their performance demonstrates the likelihood of successful performance in providing requirements ***similar in size, scope and complexity*** *of this solicitation. The city may choose to evaluate publicly available reports, and/or data. The City may use present and/or past performance data obtained from a variety of sources not just those contracts identified by the Offeror. The information gathered for past performance may be used in the responsibility determination.*

Highly Advantageous: The proposal demonstrates the proposer's efficient and effective design and management of ten or more mixed-use projects of similar or larger size and scope in settings similar to Somerville.

Advantageous: The proposal demonstrates the proposer's efficient and effective design and management of six to ten mixed-use projects of similar size and scope in settings similar to Somerville.

Not Advantageous: The proposal demonstrates the proposer's efficient and effective design and management of less than six mixed-use projects of similar size and scope in settings similar to Somerville.

The Offeror shall provide references for **minimum of three** past references that demonstrate recent and relevant past performance of similar scope, size and complexity of services identified. Recent is defined as within the last ten years. Relevant is the work of similar complexity, magnitude, or type of work described in the SOW.

The City may consider the past performance of other companies when they are team members, affiliates, or significant subcontractors who will perform major critical aspects of the requirement when such information is relevant to the acquisition; however, the Offeror must clearly explain how these other companies will be significantly involved in the proposed contract. The Offeror shall provide a detailed summary of the work performed for each past performance submitted. Where possible the city intends to interview each reference provided to verify

project scope, dollar value and obtain additional past performance information. The Offeror shall provide telephone, fax, and email for the point of contact the technical and contractual personnel for each referenced project as well as a description of the referenced contract/purchase order.

2.4 Quality Requirements

Quality requirements, or basic business requirements, are the minimum set of standards that an entity must meet and certify to be considered responsible and responsive. **Please complete the Quality Requirements form, below, and submit it with your completed bid.** The City of Somerville will disqualify any response that does not meet the minimum quality requirements. A "No Response" to items 1-7 or a failure to respond to any of the following minimum standards will result in disqualification of your bid.

	QUALITY REQUIREMENTS	YES	NO
1.	Is the Proposer capable of providing the Architectural, Engineering, and Landscape Architectural Services, as described in the project summary?		
2.	Has the Proposer five (5) or more years of experience in providing similar services to other communities and clients?		
3.	Are you able to provide the Site Analysis as related to Schematic Designs as requested in the specifications?		
4.	Are you able to provide the Design Development and Construction Documents as requested in the specifications?		
5.	Are you able to provide the construction administration as requested in the specifications?		
6.	Have you supplied photographs and/or renderings of other mixed-use design services provided to other communities and clients?		
7.	Have you provided at least three references, including names, addresses and phone numbers, to which the proposer has provided these kinds of Architectural, Engineering, and Landscape Architectural Services to other communities?		
8.	Optional: Are you a Mass. Supplier Diversity Office MBE/WBE certified minority or woman owned business?		

In order to provide verification of affirmative responses to items 1-7 under the quality requirements listed in the Quality Requirements Form, proposers must submit written information that details the general background, experience, and qualifications of the organization. Subcontractors, if applicable, must be also included.

2.5 Period of Performance

The period of performance for this contract begins on **9/15/15** and ends on **2/29/17**.

2.6 Place of Performance
All services, delivery and other required support shall be conducted in Somerville and other locations designated by the Department POC. Meetings between the Vendor and City personnel shall be held at the City of Somerville, Massachusetts.

2.7 Vendor Conduct
The Vendor's employees shall comply with all City regulations, policies and procedures. The vendor shall ensure that their employees present professional work attire at all times. The authorized contracting body of the City may, at his/her sole discretion, direct the vendor to remove any vendor employee from city facilities for misconduct or safety reasons. Such rule does not relieve the vendor of their responsibility to provide sufficient and timely service. The City will provide the vendor with immediate written rationale notice for removal of employee through the Purchasing Department. Vendors must be knowledgeable of the conflict of interest law found on the Commonwealth's website http://www.mass.gov/ethics/laws-and-regulations-/conflict-of-interest-information/conflict-of-interest-law.html. Vendors may be required to take the Conflict of Interest exam.

2.8 Vendor Personnel
The proposer shall clearly state who will staff the project as project manager, and the staff must demonstrate the ability to carry out the requirements of this contract. The Evaluation Committee will evaluate the number of full time equivalents with demonstrated ability to carry out this project and the reasonableness and distribution of personnel expertise.

2.9 Confidentiality
The Vendor agrees that it will ensure that its employees and others performing services under this contract will not use or disclose any non-public information unless authorized by the Purchasing Department. That includes confidential reports, information, discussions, procedures, and any other data that are collected, generated or results from the performance of this SOW.

All documents, photocopies, computer data and any other information of any kind collected or received by the Vendor in connection with the contract work shall be provided to the Purchasing Department upon request at the termination of the contract (i.e., the date on which final payment is made on the contract or at such other time as may be requested by the Purchasing Director or as otherwise agreed by Purchasing Director and the Vendor).

The Contractor may not discuss the contract work in progress with any outside party, including responding to media and press inquiries, without the prior written permission of the Purchasing Department. In addition, the Vendor may not issue news releases or similar items regarding contract award, any subsequent contract modifications, or any other contract-related matter

without the prior written approval of the Purchasing Director. Requests to make such disclosure should be addressed in writing to the Purchasing Director.

2.10 Deliverables

See products section of the Scope. Vendor shall also provide for all day-to-day supervision, inspection and monitoring of all work performed to ensure compliance with the contract requirements. The contractor shall follow through to assure that all City and Contractor identified defects or omissions in the contract requirements are corrected.

SECTION 3.0
RULE FOR AWARD

The contract shall be awarded to the responsible and responsive proposer submitting the most advantageous proposal response, taking into consideration all evaluation criteria as well as price. The contract will be awarded within ninety (90) days after the bid opening. The time for award may be extended for up to 45 additional days by mutual agreement between the City and the apparent lowest responsive and responsible bidder (or, for a contract requiring payment to the City, the apparent highest responsive and responsible bidder).

SECTION 4.0
PRICING

The undersigned proposes to supply and deliver the materials and services specified below in full accordance with the Contract Documents supplied by the City of Somerville entitled: **RFP # 16-10 Engineering, Architecture, and Design Services for ArtFarm**

The Offeror proposes to furnish and deliver the services specified at the following prices that include delivery, the cost of fuel, the cost of labor and all other charges related to successful completion of trips. Prices are to remain the same for the entire contract period.

PRICE SUMMARY FORM

TO BE ENCLOSED IN SEPARATELY SEALED ENVELOPE

Please provide Unit Price for the following and include any additional fees not listed:

2015-2017 Total Fixed Fee	
Design Services - Total Fixed Fee	
	$
2014-2017 Hourly Fee Schedule	
Principal / Project Manager	$
Associate	$
Designer	$
LSP	$
Other:	$
Other:	$
Other:	$
Other:	$

NAME OF COMPANY / INDIVIDUAL: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

TELEPHONE/FAX/EMAIL: _____

SIGNATURE OF AUTHORIZED INDIVIDUAL:_____

Please acknowledge receipt of any and all Addendums (if applicable) by signing below and including this form in your proposal package. Failure to do so may subject the proposer to disqualification.

ACKNOWLEDGEMENT OF ADDENDUMS:

Addendum #1 _____ #2 _____ #3_____ #4 _____

SECTION 5.0
FORMS

Engineering, Architecture, and Design Services for ArtFarm RFP # 16-10
PROPOSERS' CHECKLIST

Please ensure all documents listed on this checklist are included with your bid. Failure to do so may subject the proposer to disqualification.

Non-Price Proposal

____ Cover Letter

____ Bidder's Checklist

____ Notice to Proposers (found at the beginning of this document)

____ Acknowledgement of Addenda (if applicable and non-price related)

____ Quality Requirements/Minimum Selection Criteria

____ Somerville Living Wage Form

____ Certificate of Non-Collusion and Tax Compliance

_____ Certificate of Signature Authority

_____ Certificate of Good Standing (will be required of awarded Vendor; please furnish with bid if available)

_____ Insurance Specifications (bidders to review and include in bid package; furnish sample certificate with bid if possible)

_____ Reference Form (or equivalent may be attached)

Price Proposal

____ Acknowledgement of Addenda (if applicable and price related)

_____ Price Summary Page

Non-Collusion Form and Tax Compliance Certification

Instructions: Complete each part of this two-part form and sign and date where indicated below.

A. NON-COLLUSION FORM

I, the undersigned, hereby certify under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person.

As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature: _____
(Individual Submitted Bid or Proposal)
Duly Authorized

Name of Business or Entity:_____

Date: _____

B. TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. c. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support, as well as paid all contributions and payments in lieu of contributions pursuant to MGL 151A, §19A(b).

Signature: _____
(Duly Authorized Representative of Vendor)

Name of Business or Entity:_____

Social Security Number or Federal Tax ID#:_____

Date: _____

Certificate of Authority
(Corporations Only)

Instructions: Complete this form and sign and date where indicated below.

1. I hereby certify that I, the undersigned, am the duly elected Clerk/Secretary of

_____.
(Insert Full Name of Corporation)

2. I hereby certify that the following individual _____
(Insert the Name of Officer who Signed the Contract and Bonds)

is the duly elected_____ of said Corporation.
(Insert the Title of the Officer in Line 2)

3. I hereby certify that on _____
(Insert Date: Must be *on or before* Date Officer Signed Contract/Bonds)

at a duly authorized meeting of the Board of Directors of said corporation, at which a quorum was present, it was voted that

_____ _____
(Insert Name of Officer from Line 2) (Insert Title of Officer from Line 2)

of this corporation be and hereby is authorized to make, enter into, execute, and deliver contracts and bonds in the name and on behalf of said corporation, and affix its Corporate Seal thereto, and such execution of any contract of obligation in this corporation's name and on its behalf, with or without the Corporate Seal, shall be valid and binding upon this corporation; and that the above vote has not been amended or rescinded and remains in full force and effect as of the date set forth below.

4. **ATTEST**:
Signature: _____ ***AFFIX CORPORATE SEAL HERE***
(**Clerk or Secretary)**
Printed Name: _____

Printed Title:_____

Date: _____
(Date Must Be *on or after* Date Officer Signed Contract/Bonds)

Certificate of Authority
(Limited Liability Companies Only)

Instructions: Complete this form and sign and date where indicated below.

1. I, the undersigned, being a member or manager of

_____,
(Complete Name of Limited Liability Company)

a limited liability company (LLC) hereby certify as to the contents of this form for the purpose of contracting with the City of Somerville.

2. The LLC is organized under the laws of the state of: _____.

3. The LLC is managed by **(check one)** a ☐ Manager or by its ☐ Members.

4. I hereby certify that each of the following individual(s) is:
   - a member/manager of the LLC;
   - duly authorized to execute and deliver this contract, agreement, and/or other legally binding documents relating to any contract and/or agreement on behalf of the LLC;
   - duly authorized to do and perform all acts and things necessary or appropriate to carry out the terms of this contract or agreement on behalf of the LLC; and
   - that no resolution, vote, or other document or action is necessary to establish such authority.

Name	Title

5. **Signature**:_____

Printed Name: _____

Printed Title:_____

Date: _____

SOMERVILLE LIVING WAGE ORDINANCE CERTIFICATION FORM

CITY OF SOMERVILLE CODE OF ORDINANCES SECTION 2-397 et seq[*].

Instructions: This form shall be included in all Invitations for Bids and Requests for Proposals which involve the furnishing of labor, time or effort (with no end product other than reports) by vendors contracting or subcontracting with the City of Somerville, where the contract price meets or exceeds the following dollar threshold: $10,000. If the undersigned is selected, this form will be attached to the contract or subcontract and the certifications made herein shall be incorporated as part of such contract or subcontract. **Complete this form and sign and date where indicated below on page 2.**

Purpose: The purpose of this form is to ensure that such vendors pay a "Living Wage" (defined below) to all covered employees (i.e., all employees except individuals in a city, state or federally funded youth program). In the case of bids, the City will award the contract to the lowest responsive and responsible bidder paying a Living Wage. In the case of RFP's, the City will select the most advantageous proposal from a responsive and responsible offeror paying a Living Wage. In neither case, however, shall the City be under any obligation to select a bid or proposal that exceeds the funds available for the contract.

Definition of "Living Wage": For this contract or subcontract, as of **7/1/2015** "Living Wage" shall be deemed to be an hourly wage of no less than **$12.24** per hour. From time to time, the Living Wage may be upwardly adjusted and amendments, if any, to the contract or subcontract may require the payment of a higher hourly rate if a higher rate is then in effect.

CERTIFICATIONS

1. The undersigned shall pay no less than the Living Wage to all covered employees who directly expend their time on the contract or subcontract with the City of Somerville.

2. The undersigned shall post a notice, (copy enclosed), to be furnished by the contracting City Department, informing covered employees of the protections and obligations provided for in the Somerville Living Wage Ordinance, and that for assistance and information, including copies of the Ordinance, employees should contact the contracting City Department. Such notice shall be posted in each location where services are performed by covered employees, in a conspicuous place where notices to employees are customarily posted.

3. The undersigned shall maintain payrolls for all covered employees and basic records relating hereto and shall preserve them for a period of three years. The records shall contain the name and address of each employee, the number of hours worked, the gross wages, a copy of the social

[*] Copies of the Ordinance are available upon request to the Purchasing Department.

security returns, and evidence of payment thereof and such other data as may be required by the contracting City Department from time to time.

4. The undersigned shall submit payroll records to the City upon request and, if the City receives information of possible noncompliance with the provisions the Somerville Living Wage Ordinance, the undersigned shall permit City representatives to observe work being performed at the work site, to interview employees, and to examine the books and records relating to the payrolls being investigated to determine payment of wages.

5. The undersigned shall not fund wage increases required by the Somerville Living Wage Ordinance by reducing the health insurance benefits of any of its employees.

6. The undersigned agrees that the penalties and relief set forth in the Somerville Living Wage Ordinance shall be in addition to the rights and remedies set forth in the contract and/or subcontract.

CERTIFIED BY:

Signature: _____
(Duly Authorized Representative of Vendor)

Title: _____

Name of Vendor:_____

Date: _____

INSTRUCTIONS: PLEASE POST

NOTICE TO ALL EMPLOYEES
REGARDING PAYMENT OF LIVING WAGE

Under the Somerville, Massachusetts' Living Wage Ordinance (Ordinance No. 1999-1), any person or entity who has entered into a contract with the City of Somerville is required to pay its employees who are involved in providing services to the City of Somerville no less than a "Living Wage".

The Living Wage as of **7/1/2015** is **$12.24** per hour. The only employees who are not covered by the Living Wage Ordinance are individuals in a Youth Program. "Youth Program" as defined in the Ordinance, "means any city, state or federally funded program which employs youth, as defined by city, state or federal guidelines, during the summer, or as part of a school to work program, or in any other related seasonal or part-time program."

For assistance and information regarding the protections and obligations provided for in the Living Wage Ordinance and/or a copy of the Living Wage Ordinance, all employees should contact the City of Somerville's Purchasing Department directly.

Form **W-9**
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Print or type
See **Specific Instructions** on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification; check only **one** of the following seven boxes:

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____

Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.)

Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

		–							

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	**Signature of U.S. person** ▶	**Date** ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at *www.irs.gov/fw9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

INSURANCE SPECIFICATIONS
INSURANCE REQUIREMENTS FOR AWARDED VENDOR ONLY:

Prior to commencing performance of any work or supplying materials or equipment covered by these specifications, the contractor shall furnish to the Office of the Purchasing Director a Certificate of Insurance evidencing the following:

A. GENERAL LIABILITY - Comprehensive Form

Bodily Injury Liability.....….....$ One Million

Property Damage Liability.....$ One Million

B. COVERAGE FOR PAYMENT OF WORKER'S COMPENSATION BENEFIT PURSUANT TO CHAPTER 152 OF THE MASSACHUSETTS GENERAL LAWS IN THE AMOUNT AS LISTED BELOW:

WORKER'S COMPENSATION.….....$Statutory

EMPLOYERS' LIABILITY..….....…….$ Statutory

C. AUTOMOBILE LIABILITY INSURANCE AS LISTED BELOW:

BODILY INJURY LIABILITY.....$ STATUTORY

l. A contract will not be executed unless a certificate (s) of insurance evidencing above-described coverage is attached.

2. Failure to have the above-described coverage in effect during the entire period of the contract shall be deemed to be a breach of the contract.

3. All applicable insurance policies shall read:
"CITY OF SOMERVILLE" as a certificate holder and as an additional insured for general liability only along with a description of operation in the space provided on the certificate.

Certificate Should Be Made Out To:
City Of Somerville
Purchasing Department
93 Highland Avenue
Somerville, Ma. 02143

Note: If your insurance expires during the life of this contract, you shall be responsible to submit a new certificate(s) covering the period of the contract. No payment will be made on a contract with an expired insurance certificate.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY						EACH OCCURRENCE	$
	☐ COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
	☐ CLAIMS-MADE ☐ OCCUR						MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
							GENERAL AGGREGATE	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$
	☐ POLICY ☐ PRO-JECT ☐ LOC							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	☐ HIRED AUTOS ☐ NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
	☐ **UMBRELLA LIAB** ☐ OCCUR						EACH OCCURRENCE	$
	☐ **EXCESS LIAB** ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						☐ WC STATU-TORY LIMITS ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ **(Mandatory in NH)**	N / A					E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

ADD "X" HERETO CERTIFY THAT THE CITY OF SOMERVILLE IS AN ADDITIONAL INSURED

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

DESCRIPTION OF PROJECT, SOLICITATION NUMBER AND THAT THE CITY OF SOMERVILLE IS A CERTIFICATE HOLDER AND ADDITIONAL INSURED

CERTIFICATE HOLDER

CERTIFICATES SHOULD BE MADE OUT TO:

CITY OF SOMERVILLE
PURCHASING DEPARTMENT
93 HIGHLAND AVE
SOMERVILLE, MA 02143

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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CERTIFICATE OF GOOD STANDING

TO: Vendor

FROM: Purchasing Department

RE: **CERTIFICATE OF GOOD STANDING**

The **Awarded Vendor** must comply with our request for a **CURRENT "Certificate of Good Standing".**

If you require information on how to obtain the "Certificate of Good Standing" or Certificate of Registration (Foreign Corporations) from the Commonwealth of Massachusetts, please call the Secretary of State's Office at (617) 727-2850 (Press #1) located at One (1) Ashburton Place, 17th Floor, Boston, MA 02133 or you may access their web site at: http://corp.sec.state.ma.us/CorpWeb/Certificates/CertificateOrderForm.aspx

If your company is incorporated outside of Massachusetts and therefore is a "foreign corporation", but is registered to do business in Massachusetts, please comply with our request for the Certificate of Registration from the Commonwealth of Massachusetts. If your company is a foreign corporation, but is not registered to do business in Massachusetts, please provide the Certificate of Good Standing from your state of incorporation.

Please note that without the above certificate (s), the City of Somerville cannot execute your contract.

IMPORTANT NOTICE

Requests for Certificates of Good Standing by mail may take a substantial amount of time. A certificate may be obtained immediately in person at the Secretary's Office at the address above. Also, at this time, the Secretary of State's Office may not have your current annual report recorded. If this is the case, and you are therefore unable to obtain the Certificate of Good Standing, please forward a copy of your annual report filing fee check with your signed contracts. Please forward your original Certificate of Good Standing to the Purchasing Department upon receipt.

Thank You,

Purchasing Director

SECTION 6.0
INSTRUCTIONS TO OFFEROR

6.1 General Information & Submission Instructions

6.1.1 Bid Delivery

Responses must be delivered by 08/26/15 by 11AM EST to:	City of Somerville Purchasing Department Attn: Alex Nosnik93 Highland Avenue Somerville, MA 02143

One (1) proposal package (including two sealed envelopes) should be submitted. Responses must be sealed and marked with the solicitation tile and number. All bids must include a forms listed in the Proposers Checklist

6.1.2 Evaluation Methodology

All responses will be reviewed by an evaluation committee composed of employees of the City. However, the City reserves the right to involve an outside consultant in the selection process. Final selection will be based upon the evaluators' analysis of the information and materials provided by the proposing vendors in their technical submissions compared to both the Quality Requirements & Comparative Evaluation Criteria of the solicitation. Responses that meet the minimum Quality Requirements will then be reviewed for responses to the Comparative Evaluation Criteria. The evaluation committee will assign a rating of Highly Advantageous, Advantageous, Not Advantageous or Unacceptable to the Comparative Evaluation Criteria.

The City will award the contract to the most responsive and responsible Offeror who demonstrates best value to the city, technical and price considered. Before awarding the contract(s), the City may request additional information from the Offeror to insure that the Offeror has the necessary resources to perform the required services. The City reserves the right to reject any and all proposals if it determines that the criteria set forth have not been met.

6.2 Non-Price (Technical) Proposal Format

Responses must be submitted in accordance with the requirements set forth in this solicitation. These requirements were developed to standardize the preparation of responses while helping to assure consistency in format and content. This process will reduce the time required to prepare a response and will simplify the review process by City staff. Results of the proposal review process will be utilized to establish a preliminary ranking of the proposers. The City may interview the top ranked candidates as part of the evaluation process. All information in the technical proposal should be organized and presented as directed below. Your Non-Price Proposal response should contain all forms outlined in the Proposers Checklist in the order that

they appear.

Responses shall be prepared on standard 8.5 x 11 inch paper (charts may be landscaped but must be on 8.5 x 11 inch paper) and shall be in a legible font size (12). All pages of each response shall be appropriately numbered, and identified with the solicitation number. For ease of reference, consecutive page numbering with tabs is required.

Elaborate format and binding are neither necessary nor desirable. All binders will be capable of lying flat when opened. The cover and spine of each binder will clearly identify the Offeror's name, solicitation number, formal solicitation title and copy number, (e.g. copy 2 of 3). The original for each volume will be clearly identified on the cover and the spine. All binders will allow for easy removal and replacement of pages.

6.2.1 Cover Letter

Include a cover letter will summarize, in a brief and concise manner that the Offeror understands of the requested services. Please include the official name of the firm submitting the proposal, mailing address, e-mail address, telephone number, fax number and contact name. The letter must be signed by an official authorized to bind the proposer contractually and contain a statement that the proposal is firm for ninety (90) days. An unsigned letter or one signed by an individual not authorized to bind the Offeror will be disqualified.

6.2.2 Qualifications & Experience

The proposer shall include qualifications and experience of the firm (or sole proprietor). The proposer shall identify the year the firm was established, the total number of employees currently employed, and the number of employees focused on this engagement. This section should also generally describe work which is similar in scope and complexity which the Offeror has undertaken in the past. A discussion of the challenges faced, and solutions developed are highly recommended. The proposer may include any additional literature and product brochures.

6.2.3 Quality Requirements Form

The Quality Requirements Form, or set of basic business standards, must be addressed by each offeror and presented within the technical proposal documentation.

6.3 Price Proposal Format

6.3.1 Cover Letter

Include a cover letter to summarize, in a brief and concise manner, that the Offeror understands that their offer will bid the firm to the price submitted with their response. Please include the official name of the firm submitting the proposal, mailing address, e-mail address, telephone number, fax number and contact name. The letter must be signed by an official authorized to bind the proposer contractually and contain a statement that the pricing is firm for ninety (90) days. An unsigned letter or one signed by an individual not authorized to bind the Offeror will be

disqualified.

6.3.2 Price Summary Page

See Section 4.0.

6.3.3 Bid Prices to Remain Firm
All bid prices submitted in response to this solicitation must remain firm for 90 days following the bid opening.

6.3.4 Price Submission
All prices must contain the unit rate as requested on the bid price form in this solicitation. All prices are to include delivery, the cost of fuel, the cost of labor and all other charges related to the products or services listed. Prices are to remain fixed for the contract period of performance.

6.3.5 Estimated Quantities
The City of Somerville has provided estimated quantities for services over the course of the contract period. These estimates are estimates only and not guaranteed.

6.4 Bid Signature
A response must be signed as follows: 1) if the Offeror is an individual, by her/him personally; 2) if the Offeror is a partnership, by the name of the partnership, followed by the signature of each general partner; and 3) if the Offeror is a corporation, by the authorized officer, whose signature must be attested to by the clerk/secretary of the corporation, and with the corporate seal affixed.

6.5 Time for Bid Acceptance
The contract will be awarded within 60 days after the bid opening. The time for award may be extended for up to 45 additional days by mutual agreement between the City of Somerville and the apparent lowest responsive and responsible bidder (or, for a contract requiring payment, the apparent highest responsive and responsible bidder.)

The Offeror's submission will remain in effect for a period of 90 days from the response deadline or until it is formally withdrawn, a contract is executed or this solicitation is canceled, whichever occurs first.

6.6 Hours of Operation
The awarded Vendor shall schedule his working hours to coincide with the working hours of the City. The normal working hours are 8:30 a.m. and 4:30 p.m. Monday – Wednesday, 8:30 a.m. to 7:30 p.m. on Thursdays and 8:30 a.m. to 12:30 p.m. on Fridays.

6.6.1 Holidays are as follows:

New Year's Day	Memorial Day	Columbus Day
Martin Luther King Day	Bunker Hill Day	Veterans' Day
Presidents' Day	Independence Day	Thanksgiving Day
Patriots' Day	Labor Day	Thanksgiving Friday
Christmas Eve (half day)	Christmas Day	

Please visit http://www.somervillema.gov/ for the City's most recent calendar.
*Under State Law, all holidays falling on Sunday must be observed on Monday.

If the awarded Vendor for their convenience desires to perform work during other than normal working hours or on other than normal work days, or if the Vendor is required to perform work at such times, the Vendor shall reimburse the City for any additional expense occasioned the City, thereby, such as, but not limited to, overtime pay for City employees, utilities service, etc.

UNLESS otherwise specified in these provisions, services will be performed during normal work hours. When required services occur on holidays, work will be performed on either the previous or following work day, unless specified otherwise.

6.6.2 Inclement Weather Days

In the event of inclement weather, the Vendor is responsible for listening to the public media to determine if the City has been closed because of the weather. The Vendor is encouraged to coordinate work schedules with the City POC to accommodate support requirements, other personnel availability, meeting schedules and vacation schedules.

6.6.3 Unforeseen Office Closure

If, at the time of the scheduled bid opening, Purchasing Department is closed due to uncontrolled events such as fire, snow, ice, wind, or building evacuation, the bid opening will be postponed until 2:00 p.m. on the next normal business day. Bids will be accepted until that date and time.

6.7 Changes & Addenda

If any changes are made to this solicitation, an addendum will be issued. Addenda will be emailed or faxed to all bidders on record as having picked up the solicitation. The City will also post addendums on its website (http://www.somervillema.gov/departments/finance/purchasing/bids). No changes may be made to the solicitation documents by the Offerors without written authorization and/or an addendum from the Purchasing Department.

6.8 Modification or Withdrawal of Bids, Mistakes, and Minor Informalities

An Offeror may correct, modify, or withdraw a bid by written notice received by the City of Somerville prior to the time and date set for the bid opening. Bid modifications must be submitted in a sealed envelope clearly labeled "Modification No.__" to the address listed in part

one of this section. Each modification must be numbered in sequence, and must reference the original solicitation.

After the bid opening, an Offeror may not change any provision of the bid in a manner prejudicial to the interests of the City or fair competition. Minor informalities will be waived or the bidder will be allowed to correct them. If a mistake and the intended bid are clearly evident on the face of the bid document, the mistake will be corrected to reflect the intended correct bid, and the bidder will be notified in writing; the bidder may not withdraw the bid. A bidder may withdraw a bid if a mistake is clearly evident on the face of the bid document, but the intended correct bid is not similarly evident.

6.9 Right to Cancel/Reject Bids
The City of Somerville may cancel this solicitation, or reject in whole or in part any and all bids, if the City determines that cancellation or rejection serves the best interests of the City.

6.10 Unbalanced Bids
The City reserves the right to reject unbalanced, front-loaded and conditional bids.

6.11 Brand Name "or Equal"
Any references to any brand name or proprietary product in the specifications shall require the acceptance of an equal or better brand. The City has the right to make the final determination as to whether an alternate brand is equal to the brand specified.

6.12 Warranty
The Offeror warrants that (1) the Supplies sold are merchantable, (2) that they are fit for the purpose for which they are being purchased, (3) that they are absent any latent defects and (4) that they are in conformity with any sample which may have been presented to the City. The bidder guarantees that upon inspection, any defective or inferior Supplies shall be replaced without additional cost to the City. The Vendor will assume any additional cost accrued by the City due to the defective or inferior Supplies. The bidder guarantees all Supplies for a period of one (1) year, or as otherwise specified herein.

6.13 Invoicing
The Vendor will mail an invoice to the ordering Department after completion of the service and be authorized by a work order. All invoice submissions must include a Vendor Work Order which was signed by the Department Head, or his/her designee authorizing the work to be performed on a City Building. Any Invoices that are presented for payment, that do not have a signed work order backup, by a City designee, will not be paid by the City.

6.14 Electronic Funds Transfer (EFT)
For Electronic Funds Transfer payment, the following information shall be submitted with

invoices to the office / individuals address listed in Section III:

- Contract/Order number.
- Contractor's name & address as stated in the contract/order number.
- The signature (manual or electronic, as appropriate) title, and telephone number of the Vendor's representative authorized to provide sensitive information.
- Name of financial institution.
- Financial institution nine (9) digit routing transit number.
- Vendor's account number.
- Type of account, i.e., checking or saving.

6.15 Cancellation

The City reserves the right to cancel this contract at any time on any grounds, including the vendor's failure to comply with the Scope of Work (SOW) provided herein.

6.16 Questions About the Solicitation

Questions are due: 8/10/15 by 12PM EST

Questions concerning this solicitation must be mailed or hand delivered in writing to:

Alex Nosnik
Assistant Purchasing Director
Somerville City Hall
Purchasing Department
93 Highland Avenue
Somerville, MA 02143

Or emailed to:

anosnik@somervillema.gov

Or faxed to:

617-625-1344

Written responses will be mailed or faxed to all bidders on record as having picked up the RFP.

If any bidders or proposers contact anyone outside of the Purchasing Department regarding this bid/proposal, that bidder/proposer will be disqualified immediately.

SECTION 7.0
GENERAL TERMS & CONDITIONS

7.1 Taxes
Purchases incurred by the City are exempt from Federal Excise Taxes, Massachusetts Sales Tax, and solicitation prices must exclude any such taxes. Tax Exemption Certificates will be furnished upon request. City of Somerville's Massachusetts Tax Exempt Number is M046 001 414.

7.2 Freight on Board (FOB)
All prices are to be firm F.O.B. delivered destination (Somerville, MA), to the address specified on the "Notice to Proposers" or any other department location doing business for the City of Somerville in need of such services.

7.3 Unit Price
In case of error in extension of prices quoted herein, the unit price will govern.

7.4 Price Reduction
It is understood and agreed that should any price reductions occur between the opening of this RFP and completion of this delivery. The benefits of all such reductions will be extended.

7.5 Guarantees
The proposer to whom a contract is awarded, guarantees to the City of Somerville all supplies, equipment, related services/maintenance, and labor for a period of at least one (1) year. Upon inspection, any defective or inferior equipment, supplies/materials shall be replaced without additional cost to the City. The contractor will assume any additional cost accrued by the City.

7.6 Indemnification
The vendor agrees to take all necessary precautions to prevent injury to any persons or damage to property during the term of this agreement and shall indemnify and save the City of Somerville harmless against all loss and expense resulting in any way, from any negligent or willful act or omission on the part of the Vendor, it's agents, employees, or sub-contractors or resulting directly or indirectly from Vendor's performance under this Agreement.

7.7 Insurance
Vendor's liability insurance shall be purchased and maintained by the Vendor to protect him from claims under Worker's Compensation Acts and other employee benefits acts, claims from damages because of bodily injury, including death, and from claims for damages, other than to the work itself, to property which may arise out of or result from the Vendor's operation under this agreement, whether such operation by himself or anyone employed by them. This insurance shall be written for not less than any limits of law, whichever is the greater and shall include

contractual liability applicable to Vendor's obligations. The Vendor shall deposit with the City of Somerville standard certificates of insurance thereof for any insurance about to expire at least ten (10) days before such expiration. All such insurance policies shall contain an endorsement or provision requiring thirty (30) days written notice to the City of Somerville prior to cancellations or material change in coverage, scope, or amount of any such policy or policies. Compliance by Vendor with the insurance requirement, however, shall not relieve Vendor from liability under the indemnity provisions. Vendor shall require subcontractors to provide and maintain the required insurance at subcontractors' expense. Subcontractors shall list the City of Somerville and Contractor as additional insured where applicable.

7.8 Independent Contractor
Vendor is not an agent or employee of the City of Somerville and is not authorized to act on behalf of the City of Somerville.

7.9 Complete Agreement
This agreement supersedes all prior agreements and understandings between the parties and may not be changed unless mutually agreed upon in writing by both parties.

7.10 Assignment
Vendor shall not assign the Agreement, or any interest therein, without prior written consent of the City of Somerville.

7.11 Subcontractors
Vendor shall not engage any other company, sub-contractor or individual to perform any obligation hereunder, without the prior written consent of the City of Somerville.

7.12 Governing Law
The Bidding procedures shall be in accordance with M.G.L. c. 30B, as most recently amended and all other applicable laws. The contractor shall comply with all Federal, State and Local laws regulations and ordinances governing this type of work.

7.13 Enforceability
In the event any provision of this Agreement is found to be legally unenforceable, such unenforceability shall not prevent enforcement of any other provision of the Agreement.

7.14 Conflict of Interest
The Proposer certifies that no official or employee of the City of Somerville has a financial interest in this proposal or in the contract which the proposer offers to execute or in the expected profits to arise there from, unless there has been compliance with provisions of Massachusetts General Laws Chapter 43, sec. 27 (Interest in Public Contract by Public Employees), and Massachusetts General Laws, Chapter 268A, sec. 20 (Conflict of Interest), and that this proposal

is made in good faith without fraud or collusion or connection with any other person submitting a proposal.

7.15 Termination

7.15.1 For Cause

The City of Somerville shall have the right to terminate this agreement if (i) Vendor neglects or fails to perform or observe any of these obligations hereunder and a cure is not affected by Vendor within fifteen (15) days next following its receipt of a termination notice issued by the City of Somerville, or (ii) if a judgment or decree is entered against Vendor approving a petition for any arrangement, liquidations, dissolution or similar relief relating to bankruptcy or insolvency and such judgment or decree remains unvacated for thirty (30) days; or (iii) immediately if Vendor shall file a voluntary petition in bankruptcy or any petition or answer seeking any arrangement, liquidation or dissolution relating to bankruptcy, insolvency or other relief or debtors shall seek or consent or acquiesce an appointment of any trustee, receiver of liquidation of any of Vendor's property; or (iv) funds are not appropriated or otherwise made available to support continuation of performance in any fiscal year succeeding the first year of this Agreement. The City of Somerville shall pay all reasonable and supportable costs incurred prior to termination, which payment shall not exceed the value of service provided.

7.15.2 Termination for Convenience

The City may terminate this Contract without cause, at any time, effective upon the date of termination specified by written notice to the Contractor, in which case, the Contractor shall be compensated for: (1) sums due under this Contract incurred up to the date of termination for all Work performed and accepted by the City up to the termination date, calculated on a percentage completion basis covering the period of time between the last approved application for payment and the date of termination using the progress schedule and schedule of values. The Contractor shall use its best efforts to mitigate any expenses and shall in no event incur any new obligations after the date of termination.

7.15.3 Payment by the City

Payment by the City as provided in this section shall be deemed to fully compensate the Contractor for all expenses and those of any consultants, subcontractors and suppliers, directly or indirectly attributable to the termination. Lost profits shall not be payable. Any such termination shall not give rise to any cause of action for damages against the City.

7.15.4 Contractor's Duties Upon Termination For Convenience

Upon termination of this Contract without cause, the Contractor shall: (1) immediately stop the Work; (2) stop placing orders and Subcontracts in connection with this Contract; (3) cancel all

existing orders and Subcontracts; (4) surrender the site to City in a safe condition; and (5) promptly transfer to City all materials, supplies, work in process, appliances, facilities, equipment and machinery of this Contract, and all work product, plans, drawings, specifications and other information and documents used in connection with Services performed under this Contract. Failure by the Contractor to comply with said duties shall relieve the City of its obligation to compensate the Contractor, as provided for under this section.

7.16 Discrimination
It is understood and agreed that it shall be a material breach of any contract resulting from this RFP for the contractor to engage in any practice which shall violate any provision of Massachusetts General Laws, Chapter 151B, relative to discrimination in hiring, discharge, compensation, or terms, conditions or privileges of employment because of race, color, religion, creed, national origin, sex, or ancestry.

7.17 Withdrawal or Modification of Bid Response
To withdraw, cancel or modify a response at any time prior to the solicitation opening date, an Offeror must submit such request in writing to the Purchasing Director. Correction or modifications must be sealed when submitted and must indicate on the outside of the envelope whether the correction or modification pertains to the price proposal or the non-price proposal.

7.18 Samples
All qualified proposers may be requested to submit samples.

7.19 Financial and Operational Information
By submitting a proposal, the proposer authorized the City of Somerville to contact any and all parties referenced by the proposer regarding financial and operational information.

7.20 Payment
The City of Somerville shall make no payment for a supply or service rendered prior to the execution of the contract.

7.21 Extension of Contract
The City reserves the right to extend the time of any contract resulting from the bid as needed and/or to increase the value by 25% at the sole discretion of the Purchasing Director.

a. The Offeror's submission will remain in effect for a period of 90 days from the response deadline or until it is formally withdrawn, a contract is executed or this solicitation is canceled, whichever occurs first.
b. The City will have the option to cancel the contract provided that written notice is given 90 days prior to the effective termination date.

The Procurement Officer shall cancel the contract if funds are not appropriated or otherwise made available to support continuation of performance in any fiscal year succeeding the first year.

7.22 Sales Tax Exemption

Materials, equipment, and supplies for this project are exempt from sales tax in accordance with M.G.L. Chapter 64H, Section 6 (d). The City will furnish the successful bidder with its sales tax exemption number.

APPENDIX A
SAMPLE CONTRACT

AGREEMENT FOR DESIGNER SERVICES
BETWEEN
THE CITY OF SOMERVILLE
AND
THE DESIGN PROFESSIONAL

This Agreement made on the _____ is between the City of Somerville ("the **City**"), City Hall, 93 Highland Avenue, Somerville, MA 02143 and _____("the **Design Professional**") located at _____

for the services described herein and in the attached APPENDIX A, Request for Proposals ("RFP"). The Design Professional's principal design discipline is *(insert architecture, landscape architecture, or engineering)* _____.

The **City** and the **Design Professional** agree to the following:

ARTICLE 1

DEFINITIONS

1.1. In General.

1.1.1. Well-known meanings. When words or phrases which have a well-known technical or construction industry or trade meaning are used herein, such words or phrases shall be interpreted in accordance with that meaning, unless otherwise stated.

1.1.2. Capitalization. The words and terms defined in this Article are capitalized in this Agreement. Other capitalized words may refer to a specific document found in the Contract Documents or may be defined in the General Terms and Conditions of the Contract.

1.1.3. Persons. Whenever the word person or persons is used, it includes, unless otherwise stated, entity or entities, respectively, including, but not limited to, corporations, partnerships, and joint venturers.

1.1.4. Singular and Plural. The following terms have the meanings indicated which are applicable to both the singular and the plural thereof.

1.2. Definitions.

1.2.1. ***Agreement*** **-** The Agreement is this written document between the **City** and the **Design Professional** which is titled: Agreement for Designer Services between the City of Somerville and the **Design Professional**, which is the executed portion of the Contract, and which forms a part of the Contract. The Agreement also includes all documents required to be attached thereto, including, but not limited to, certificates of insurance and all modifications of the Agreement.

1.2.2. ***Change Order*** **-** A Change Order is a document which is signed by the Contractor and the **City** which is directed to the Contractor and which authorizes the Contractor to make an addition to, a deletion from, or a revision in the Work, or an adjustment in the sum or in the time of the Contract issued on or after the date of the Contract**.**

1.2.3. ***Construction Cost*** **-** The Construction Cost is the total cost or estimated cost to the **City** of all elements of the Project designed or specified by the **Design Professional**. The Construction Cost shall include the cost of labor at current prevailing wage rates established by the Commonwealth and furnished by the **City** (or, if applicable, current Davis Bacon wage rates established by the federal government and furnished by the **City**), materials and equipment designed, specified, selected, or specially provided for by the **Design Professional**, plus a reasonable allowance for overhead and profit. In addition, a reasonable allowance for contingencies shall be included for market conditions at the time of bidding and for changes in the Work during construction. Construction Cost does not include the compensation of the **Design Professional** and the **Design Professional's** consultants, the costs of the land, rights-of-way, financing, or other costs which are the responsibility of the **City** as provided herein.

1.2.4. ***Construction Documents*** **-** The Construction Documents consist of Plans and Specifications setting forth in detail the requirements for the construction of the Project.

1.2.5. ***Contract Documents*** - The Contract Documents consist of the Agreement between the City and the Contractor; the notice of award of the Contract; the Notice to Proceed; the entire Project Manual; Change Orders; Work Change Directives; the Contractor's Bid and all accompanying documents; and the **Design Professional's** written interpretations and clarifications issued on or after the issuance of the Notice to Proceed.

1.2.6. ***Contract*** **-** The Contract consists of all the Contract Documents.

1.2.7. ***Contractor*** **-** The Contractor is the person who is awarded the construction contract for the Project pursuant to M.G.L. c. 149, §§44A-H, inclusive, or M.G.L. c. 30, §39M, and is identified in the Agreement as such. The term "Contractor" is intended to include the Contractor as well as its authorized representative(s).

1.2.8. ***General Terms And Conditions Of The Contract*** - General Terms and Conditions of the Contract refers to the General Terms and Conditions of the Contract between the City and the Contractor.

1.2.9. ***Product Data*** **-** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

1.2.10. ***Project*** **-** The Project is the total construction of which the Work to be provided under the Contract Documents may be the whole or a part of the Project as indicated elsewhere in the Contract Documents and may include construction by the **City** or by separate contractors. The Project is the Work described in the invitation to bid and Specifications, and illustrated by the Plans.

1.2.11. ***Proposed Change Order*** **-** A Proposed Change Order is a Change Order that has not been approved by the **City**.

1.2.12. ***Reimbursable Expenses*** **-** Reimbursable Expenses are in addition to compensation for Basic and Additional Services and include expenses incurred by the **Design Professional** in the interest of the Project, as identified by the following: long distance calls and faxes; fees paid for securing approval of authorities having jurisdiction over the Project; reasonable expense of reproduction necessary for the rendition of services hereunder, which expense shall not include the expense of producing the sets of documents referred to in the Schematic Design Phase, the Design Development Phase, and the Construction Document Phase herein, as these expenses are covered in the **Design Professional's** compensation for Basic Services; expense of postage and such other expenses incurred in connection with the Project when specifically authorized in advance in writing by the **City**. Payment for photocopying letter or legal size documents shall not exceed 10¢ per page. Payment for all other documents shall be at cost. Sales tax is not a reimbursable expense. The **City's** tax exempt number is E04-600-1414.

1.2.13. ***Samples*** **-** Samples are physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

1.2.14. ***Shop Drawings*** **-** Shop Drawings are all drawings, diagrams, illustrations, schedules, and other information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the Work.

1.2.15. ***Statement of Probable Construction Costs*** **-** The Statement of Probable Construction Costs is a preliminary, detailed estimate of Construction Cost based on current area, volume, or other unit costs. Such estimate shall indicate the cost of each category of work involved in constructing the Project (including, but not limited to, filed sub-trades) and shall establish the period of time for each category from the commencement to the completion of the construction of the Project. The detailed estimate shall include quantities of all materials and unit prices of labor and material, as well as a cost estimate containing individual line items for each item of work.

1.2.16. ***Substantial Completion*** **-** Substantial Completion means that the Work has been completed and opened to public use, except for minor incomplete or unsatisfactory items that do not materially impair the usefulness of the Work. The **Design Professional** shall decide what constitutes "minor," "incomplete," "unsatisfactory," and "materially" and the **Design Professional's** decision shall be final.

1.2.17. ***Work Change Directive*** **-** A Work Change Directive is a written directive to the Contractor issued on or after the date of the contract between the **City** and the Contractor and signed by the **City** and recommended by the **Design Professional** ordering an addition to, a deletion from, or a revision in the Work.

1.2.18. ***Work*** **-** The Work means the construction and services required by the Construction Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill its obligations. The Work may constitute the whole or a part of the Project.

ARTICLE 2

THE DESIGN PROFESSIONAL'S RESPONSIBILITIES

2.1. **STANDARD OF PERFORMANCE.** The Design Professional shall perform the services under this Agreement with the skill, care, and diligence in accordance with the high level of professional standards prevailing in the greater Boston area for the type of construction required herein. All of the **Design Professional's** services under this Agreement shall be performed as expeditiously as is consistent with such standards. The **Design Professional** shall be responsible in accordance with those standards for the adequacy, safety, and overall integrity of the Project's design, including, but not limited to, the Design architectural or landscape architectural (or both if applicable), structural, mechanical, and electrical design of the Project.

2.2. **SCHEDULE OF PERFORMANCE.** The approved schedule for the performance of the **Design Professional's** services is attached hereto as APPENDIX B. Time is of the essence and time periods established by the attached APPENDIX B shall not be exceeded by the **Design Professional** except for delays due to causes outside the **Design Professional's** control (which term shall not include staffing problems, insufficient financial resources, consultant's default, or negligent errors or omissions on the part of either the **Design Professional** or any of its consultants).

2.3. **TIMELINESS OF INTERPRETATIONS, CLARIFICATIONS, AND DECISIONS.** With regard to all phases of this Agreement**,** the **Design Professional** shall render interpretations, clarifications, and decisions in a timely manner pertaining to documents submitted by the **City** or the Contractor in order to avoid unreasonable delay in the orderly and sequential progress of the **Design Professional's** services.

2.4. **RELATIONSHIP WITH THE CITY.** For the purposes of this Agreement, the **Design Professional** shall be a representative of the **City** and shall advise and consult with the **City** until the termination of the Contractor's warranty and correction period.

ARTICLE 3

SCOPE OF THE DESIGN PROFESSIONAL'S BASIC SERVICES

3.1. **IN GENERAL.**

3.1.1. The **Design Professional's** Basic Services shall consist of:

3.1.1.1. those services identified below within the different phases;

3.1.1.2. any other professional services which are reasonably necessary as determined by the **City** for the design and administration of construction of the Project, including, without limitation, the following:

3.1.1.2.1. for public building projects, all surveys (unless provided by the **City**), geotechnical services, testing services, and related information and reports reasonably required by the Project, geotechnical and civil engineers; landscape architect; independent cost estimator; fire protection, life safety, lighting, interior design, asbestos removal, and movable equipment consultants; and normal structural, mechanical, electrical, and any other engineering services necessary to produce a complete and accurate set of Construction Documents (the cost for any and all professional services is not subject to profit adjustments);

3.1.1.2.2 for park/playground projects, all surveys (unless provided by the **City**), lighting consultants, independent cost estimators (if specified in the RFP)
and normal structural, mechanical, electrical, and any other engineering services necessary to produce a complete and accurate set of Construction Documents (the cost for any and all professional services is not subject to profit adjustments);

3.1.1.2.3 for roadway, bridge, and other public works projects other than park/playground projects, all surveys (unless provided by the **City**), geotechnical services, testing services, and related information and reports reasonably required by the Project, geotechnical and civil engineers; independent cost estimators; fire protection, life safety, and lighting consultants; and normal structural, mechanical, electrical, and any other engineering services necessary to produce a complete and accurate set of Construction Documents (the cost for any and all professional services is not subject to profit adjustments).

3.1.1.3. attending and providing testimony at any formal or informal hearings related to the Project, including, but not limited to, bid protest hearings and Board of Aldermen meetings, if deemed necessary by the **City**. If the **Design Professional** is called as a witness in a court of competent jurisdiction in a matter in which the **Design Professional** is a named party, the **Design Professional** will not be additionally compensated. If the **Design Professional** is called by the **City** as a witness in a matter in a court of competent jurisdiction in which the **Design Professional** is not a named party,

the **Design Professional** will be compensated according to APPENDIX C attached hereto;

3.1.1.4. preparing for and appearing on the **City's** behalf at all administrative or regulatory hearings, presentations, or conferences with respect to any zoning, building code, urban renewal, or other matters in connection with the Project, including, without limitation, any hearings, presentations, or conferences with any City, State, or Federal agencies or officials and any neighborhood groups. The **Design Professional's** obligations under this paragraph shall include preparing plans and other materials reasonably required in connection with any such hearings, presentations, and conferences;

3.1.1.5. assisting the **City** in connection with the **City's** responsibility for filing documents required for the approval of governmental authorities having jurisdiction over the Project. The **Design Professional** shall prepare the Plans and Specifications required in order to obtain approval of, and in accordance with, all requirements of all governmental agencies having jurisdiction over the Project. Any Plans and Specifications furnished by the **Design Professional** which are discovered to be defective during any Phase will be promptly corrected by the **Design Professional** at no cost to the **City**, and the **Design Professional** will promptly reimburse the **City** for all damages, if any, resulting from the use of such defective Plans and Specifications. The **City's** approval, acceptance, use of or payment for all or any part of the **Design Professional's** services shall in no way alter the **Design Professional's** obligations or the **City's** rights hereunder; and

3.1.1.6. all design and redesign services required within or between the Design Development Phase and the Construction Documents Phase to keep the Construction Cost of the Project within the fixed limit of Construction Cost.

3.1.2. As part of the Basic Services, the **Design Professional** shall assist the General Contractor in preparing record drawings in accordance with the following:

3.1.2.1. Record Keeping.
As the Construction Phase progresses, the **Design Professional** shall work with the Contractor to maintain four separate sets of in-progress record drawings (blueline or blackline) at the Site, one set each for architectural, mechanical, electrical, plumbing, and structural disciplines**.** All deviations from the Construction Documents and the exact locations of the Work as installed and constructed shall be neatly and accurately indicated. Work completed to date shall be colored and highlighted.

3.1.2.2. Permanent Record Drawing Preparation.
The **Design Professional** shall assist the General Contractor in transferring the information contained on the in-progress record drawings to CAD compatible discs of the original contract drawings. All work shall be performed by experienced and knowledgeable draftspersons using the same standards and quality of drafting as used on the original drawings.

3.1.2.3. Review of Record Drawings at Substantial Completion.
Upon Substantial Completion of the Work or portions thereof, the **Design Professional** of record shall review and approve the above permanent record drawings.

3.1.2.4. Submission to the **City.**

The following shall be submitted to the **City** no later than the date of Substantial Completion:

3.1.2.4.1 A complete set of original Construction Documents on disk in AutoCad format.

3.1.2.4.2 Permanent record drawings as described above on mylar with the seal of the **Design Professional** of record.

3.1.2.4.3 One set of blueline prints of the above.

3.1.2.4.4 Four sets of in-progress record drawings.

3.2. SCHEMATIC DESIGN PHASE.

3.2.1. Commencement. The Schematic Design Phase begins upon the full execution of this Agreement.

3.2.2. Written Program. The **Design Professional** in consultation with the **City** and any other persons designated by the **City** shall develop a written program for the Project to ascertain the **City's** needs and to establish the requirements of the Project.

3.2.3. Preliminary Evaluation. The **Design Professional** shall provide a preliminary evaluation of the **City's** program, schedule, and construction budget requirements, each in terms of the other.

3.2.4. Alternative Approaches. The **Design Professional** shall review with the **City** alternative approaches to the design and construction of the Project.

3.2.5. Schematic Design Documents. The **Design Professional** shall prepare, for approval by the **City**, Schematic Design Documents consisting of drawings and other documents illustrating the scale and relationship of Project components. Based upon the program approved by the **City**, as well as schedule and construction budget requirements, the Schematic Design Documents shall comply with all applicable laws, statutes, ordinances, codes, orders, rules, and regulations.

3.2.6. Independent Cost Estimators. As part of the Basic Services and when requested by the **City**, the **Design Professional** shall retain the services of an independent cost estimator whose responsibilities shall include without limitation all cost estimates described in this Agreement, estimates of the cost of Proposed Change Orders and assistance in establishing a Change Order budget, and review and confirmation of the Contractor's cost estimates.

3.2.7. Statement of Probable Construction Costs. The **Design Professional** shall submit to the **City** a Statement of Probable Construction Costs.

3.2.8. Life-Cycle Cost Estimates. If this Agreement includes Design Professional services necessary for the preliminary design of a new building or for the modification or replacement of an energy system in an existing building, life-cycle cost estimates for the Project shall be obtained at an initial stage and as a Basic Service. (*Reference:* M.G.L. c. 149, §44M).

3.2.8 SUSTAINABLE DESIGN CRITERIA. INSERT REQUIREMENTS AS TO SUSTAINABLE DESIGN.

3.3. DESIGN DEVELOPMENT PHASE.

3.3.1. Commencement. The Design Development Phase begins upon the **City's** written approval of the **Design Professional's** Schematic Design Documents.

3.3.2. Preparation of Design Development Documents. Based on the approved Schematic Design Documents and any adjustments authorized by the **City** in the program**,** schedule, or construction budget, the **Design Professional** shall prepare, for approval by the **City**, Design Development Documents consisting of drawings and other documents to fix and describe the size and character of the Project as to appropriate architectural, landcape architectural, structural, mechanical, and electrical systems; materials; and such other elements as may be appropriate. The Design Development Documents shall be complete and unambiguous and shall comply with all applicable laws, statutes, ordinances, codes, orders, rules, and regulations.

3.3.3. Adjustment to Statement of Probable Construction Cost. The **Design Professional** shall advise the **City** in writing of any adjustments to the Statement of Probable Construction Cost prior to the commencement of the Construction Document Phase. The approved adjustment of the Statement of Probable Construction Cost or the Statement of Probable Construction Cost, if there is no adjustment, shall constitute a fixed limit of Construction Cost as that term is used herein. Such fixed limit, once established, shall be adjusted only by written agreement of the **City** and the **Design Professional**, or as otherwise provided herein.

3.4. CONSTRUCTION DOCUMENT PHASE.

3.4.1. Commencement. The **Design Professional's** responsibility to provide Basic Services for the Construction Document Phase under this Agreement commences with the **City's** acceptance and approval of the Design Development Documents and ends on the date the Bidding and Award Phase commences.

3.4.2. Preparation of Plans and Specifications. Based on the approved Design Development Documents and any further adjustments in the scope or quality of the Project or in the construction budget authorized by the **City**, the **Design Professional** shall prepare, for approval by the **City**, Plans and Specifications setting forth in detail the requirements for the construction of the Project.

3.4.3. Preparation of Additional Bidding Information. The **Design Professional** shall assist the **City** in preparing the bidding documents when requested by the City.

3.4.4. City-Generated Forms and Documents. The **City** shall provide the **Design Professional** with copies of all **City**-generated forms and documents intended to be included in the Project Manual. The **Design Professional** will include these forms and documents in its Project Manual. It is the responsibility of the **Design Professional** to ensure that all such documents are included in the final Project Manual. Any costs incurred as a result of the failure of the **Design Professional** to include any such documents will be borne by the **Design Professional** and not charged to the **City**, where such failure is the fault of the **Design Professional**. The **Design Professional** may propose changes to these **City**-generated forms and documents; however, implementation of such changes are subject to the unilateral approval of the **City**. No changes may be made to such documents without the prior written consent of the **City**. The **Design Professional** shall prepare and submit to the **City** for approval the entire Project Manual. The **Design Professional** shall, to the best of his/her ability, immediately inform the City if any documents are missing or deficient.

3.4.5. Addenda. All addenda shall be issued by the Contracting Department; however, at the Contracting Department's sole discretion, the **Design Professional** may be called upon to prepare a draft of any such addenda. Any corrections to the Construction Documents which require an addendum will be made by the **Design Professional** at no charge to the **City**.

3.4.6. Printing of Project Manual. The **Design Professional** must provide the **City** with a final draft of the Project Manual and obtain approval from the **City** prior to printing. The **Design Professional** will be responsible for the printing of the Project Manuals unless the **City** instructs the Design Professional otherwise. The cost of producing such Project Manuals will be passed onto the **City** at cost. Any changes required to be made to the Construction Documents as a result of errors by the **Design Professional** or persons within its control will be promptly corrected at no cost to the **City**. The **Design Professional** shall make its best efforts to print Project Manuals on paper containing a minimum of twenty percent (20%) post consumer content.

3.4.7. Packaging the Project Manual.. The **Design Professional** will require the printer of the Project Manual to wrap each set of Plans in a brown wrapper, or, if the Plans are small in number, fold each set of Plans and insert one set into each Project Manual.

3.4.8. Delivery of Project Manual. The **Design Professional** will use its best efforts to ensure that the Contracting Department receives the number of Project Manuals requested by the Contracting Department no later than 3:00 p.m. on the day prior to the first day of advertisement of the Invitation to Bid.

3.4.9. Adjustment to Statement of Probable Construction Cost. The **Design Professional** shall advise the **City** in writing of any adjustments to Statement of Probable Construction Cost indicated by changes in requirements or general market conditions.

3.5. BIDDING AND AWARD PHASE.

3.5.1. Commencement. The Bidding and Award Phase commences on the date the Invitation to Bid is first advertised pursuant to M.G.L. c. 149, §44J, or M.G.L. c. 30, §39M, and ends on the date the Construction Phase begins.

3.5.2. Additional Bidders. The **Design Professional** shall assist the **City** in obtaining bids if, in the opinion of the Contracting Department, an insufficient number of persons requested the Project Manual. The **Design Professional** will notify "eligible" and "responsible" persons (as those terms are defined in the M.G.L. c. 149, §44A and referred to in M.G.L. c. 30, §39M) of the Invitation to Bid.

3.5.3. When Lowest Bid Exceeds Total Construction Cost. If the lowest bona fide bid by a Contractor exceeds the total construction cost of the Project as set forth in the approved Statement of Probable Construction Costs by more than ten percent (10%), then upon the request of the **City**, the **Design Professional** will revise the Plans and Specifications in consultation with the **City** to reduce or modify the quality or quantity, or both, of the Work so that the total construction cost of the Project will not exceed the total construction cost set forth in the Statement of Probable Construction Costs by more than ten percent (10%). All revisions pursuant to this paragraph shall be at the **Design Professional's** sole cost and expense (which cost and expense include, but are not limited to the **Design Professional's** time, the cost of reprinting the Project Manual, and the cost of re-advertisement of the Project).

3.5.4. Pre-Bid Conferences. The **Design Professional** shall attend all pre-bid conferences.

3.5.5. Investigation of Bidders. The **Design Professional** shall investigate, at minimum, the lowest Bidder. The investigation shall include, but is not limited to, reviewing the files maintained by the Division of Capital Asset Management, or any other governmental agency

charged with maintaining such documents related to such Bidder, telephoning or writing owners of the Bidder's prior projects, telephoning or writing Design Professionals from such prior projects, visiting the sites of such other projects and checking all other appropriate references. The **Design Professional** shall provide the **City** with a detailed letter of approval or disapproval of such Bidder. The letter must include relevant language from the appropriate state laws regarding the eligibility and responsibility of Bidders (i.e., M.G.L. c.149, §44A(1), M.G.L. c. 30, §39M(c), or, if appropriate, M.G.L. c. 29, §29F). If the **Design Professional** disapproves of the lowest Bidder, then the **Design Professional** must investigate the next lowest Bidder in the same manner described above, and continue to investigate each successive low Bidder until a Bidder is approved. For every Bidder investigated, the **Design Professional** must provide the **City** with a detailed letter as described above.

3.5.6. Preparation of Contract. To the extent required, the **Design Professional** shall assist the Contracting Department in the preparation of the construction contract.

3.6. CONSTRUCTION PHASE-- ADMINISTRATION OF THE CONSTRUCTION CONTRACT.

3.6.1. Commencement. The Construction Phase commences with the full execution of the contract for construction and terminates on the date of expiration of all of the guarantees and warranties provided by the Contractor to the **City**.

3.6.2. Change in Design Professional's Duties, Etc. Construction Phase duties, responsibilities, and limitations of authority of the **Design Professional** shall not be extended without written agreement of the **City** and the **Design Professional.** Any restrictions or modifications to the **Design Professional's** duties and responsibilities can be imposed by the **City** without the consent of the **Design Professional**.

3.6.3. Pre-construction Conferences. The **Design Professional** shall attend all pre-construction conferences.

3.6.4. Site Visits. The **Design Professional** shall visit the Site at intervals appropriate to the stage of construction, but no less than once a week, or as otherwise agreed by the **City** and the **Design Professional**, to become familiar with the progress and quality of the Work and to determine with care if the Work is proceeding in accordance with the requirements of the Contract Documents. The **Design Professional** shall cause its engineering and other consultants to make similar Site visits, at such times as may be required for observation of portions of the Work designed and/or specified by them. The **Design Professional** shall not be required to make continuous on-site inspections to check the quality or quantity of the Work. The **Design Professional** shall promptly submit to the **City** a detailed written report subsequent to each on-site visit, which shall include any observation of material deviations by the Contractor or subcontractors from the requirements of the Contract Documents.

3.6.5. Job Meetings. There shall be no less than one job meeting per week. The **Design Professional** shall attend all job meetings. The number of meetings per week will depend on the complexity of the Project at a particular stage, the problems encountered on the Project, or the **City's** request that additional meetings be held. The **Design Professional** shall also be required to be present when governmental authorities having jurisdiction over the Project visit the Site to inspect the Work**.** The **Design Professional** will exercise good care and diligence in discovering and promptly reporting to the **City**, as well as to the Contractor, any defects or deficiencies in the Work.

3.6.6. Construction Means, Methods, Etc. The **Design Professional** shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work. However, the **Design Professional** shall promptly report to the **City** any perceived irregularities.

3.6.7. Contractor's Schedule. Except as otherwise provided in this Agreement, the **Design Professional** shall not be responsible for the Contractor's schedules or failure to carry out the Work in accordance with the Contract Documents, except to the extent that such failure is caused by the **Design Professional**. Except as otherwise provided in this Agreement, the **Design Professional** shall not have control over or charge of acts or omissions of the Contractor, its Subcontractors, or their agents or employees, or of any other persons performing portions of the Work. However, nothing in this paragraph shall relieve the **Design Professional** of its obligations to the **City** elsewhere in this Agreement. The **Design Professional** shall review all schedules presented by the Contractor and advise the **City** as to the appropriateness of same.

3.6.8. Communications. The **City** and the Contractor may communicate through the **Design Professional**. Communications by and with the **Design Professional's** consultants shall be through the **Design Professional**, unless the **City** deems it necessary or expedient to speak directly to the consultants.

3.6.9. Applications and Certifications for Payment. Based on the **Design Professional's** observations of the Work and evaluations of the Contractor's applications for payment, the **Design Professional** shall review and certify the appropriate amounts due the Contractor within five (5) business days after receipt of the Contractor's application for payment, and such certifications shall be in the form requested by the **City**. The **Design Professional's** certification for payment shall constitute a representation to the **City** based on the **Design Professional's** observations at the site and on the data comprising the Contractor's application for payment that the Work has progressed to the point indicated and the quality of Work is in accordance with the Contract Documents. The foregoing representations are subject to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the **Design Professional**. The **Design Professional** is required to review and validate the certified payrolls. The **Design Professional** is required to reconcile the applications for payment with the certified payrolls. The issuance of a certificate for payment shall further constitute a representation that the Contractor is entitled to payment in the amount certified. Timely payment of Contractor is required by M.G.L. c. 30, §39K; therefore, the **Design Professional** shall establish office procedures assuring either immediate mail or messenger delivery of the approved applications for payment to the **City.** Notwithstanding the foregoing, the Mayor's Office of Strategic Planning and Community Development (SPCD) shall be responsible for monitoring and certifying construction payrolls for compliance with prevailing wage requirements (a) if the Contract is a federally funded contract subject to federal Davis Bacon and Related Acts; and/or (b) if SPCD is the Contracting Department.

3.6.10. Rejection of Work. The **Design Professional** shall have the responsibility, obligation, and authority to reject Work which (1) does not conform to the Contract Documents; or (2) the **Design Professional** believes to be defective; or (3) the **Design Professional** believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. The **Design Professional** shall promptly notify the **City** of such rejection. Whenever the **Design Professional** considers it necessary or advisable for implementation of the intent of the Contract Documents, the **Design Professional** will have the responsibility, obligation, and authority to require additional inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed, or completed; provided, however, the **Design Professional** must obtain the **City's** prior written approval of any such special inspection or testing. However, neither this authority of the **Design Professional** nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the **Design Professional** to the Contractor, Subcontractors, Suppliers, other persons performing portions of the Work.

3.6.11. **Submittals.** The **Design Professional** shall review and approve or take other appropriate action upon the Contractor's submittals such as Proposed Change Orders, Shop Drawings, Product Data, and Samples, for the purpose of: (a) determining compliance with applicable laws, statutes, ordinances, codes, orders, rules, and regulations; and (b) determining whether the Work, when completed, will be in compliance with the requirements of the Contract Documents. The **Design Professional's** action shall be taken with such reasonable promptness as to cause no delay in the Work taking into account the time periods set forth in the latest schedule prepared by the Contractor and approved by the **Design Professional** and, in any event, such action shall be taken within fourteen (14) days after submittal to the **Design Professional**. The **Design Professional** shall indemnify the **City** for any monies paid by the **City** to the Contractor as a result of the **Design Professional's** delay in taking appropriate action, as described above, where such delay is not caused in any part by the **City**. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities or for substantiating instructions for installation or performance of equipment or systems designated by the Contractor, all of which remain the responsibility of the Contractor to the extent required by the Contract Documents. The **Design Professional's** review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the **Design Professional**, of construction means, methods, techniques, sequences, or procedures. The **Design Professional's** approval of a specific item shall not indicate approval of an assembly of which the item is a component. When professional certification of performance characteristics of materials, systems, or equipment is required by the Contract Documents, the **Design Professional** shall be entitled to rely upon such certification to establish that the materials, systems, or equipment will meet the performance criteria required by the Contract Documents.

3.6.12. **Change Orders and Work Change Directives.** The **Design Professional** shall prepare Change Orders and Work Change Directives, with supporting documentation and data if deemed necessary by the **Design Professional** for the approval and execution in accordance with the Contract Documents, and may authorize minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time (which is the time in which the Work reaches final completion) and which are not inconsistent with the intent of the Contract Documents.

3.6.13. **Interpretations, Clarifications, and Decisions of the Design Professional.**

3.6.13.1. The **Design Professional** will interpret, clarify, and decide matters concerning performance under and requirements of the Contract Documents on written request of either the **City** or the Contractor. The **Design Professional's** response to such requests will be made with reasonable promptness and within the time set forth herein. Any such written interpretations, clarifications, or decisions shall be binding on the **City** and the Contractor. Interpretations, clarifications, and decisions of the **Design Professional** shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in the form of drawings. The **Design Professional** may, as the **Design Professional** judges desirable, issue additional drawings or instructions indicating in greater detail the construction or design of the various parts of the Work; such drawings or instructions may be effected by a Field Order or other notice to the Contractor, provided such drawings or instructions are reasonably consistent with the previously existing Contract Documents. The **Design Professional** shall not be liable for results of interpretations, clarifications, and decisions so rendered in good faith and in the absence of negligence by the **Design Professional**.

3.6.13.2. Time Limit for Rendering Decisions. The **Design Professional** shall render written interpretations, clarifications, and decisions within a reasonable time, but in no event more than seven (7) days after receipt of same.

3.6.14. **Aesthetic Effect.** The **Design Professional's** decisions on matters relating to aesthetic effect must be consistent with the **City's**. The **Design Professional** shall advise the **City** in matters relating to aesthetic effect; however, the **City's** decision in these matters shall be final.

3.6.15. **Claims.**

3.6.15.1. Initial Referral. All Claims, the bases of which arise prior to final payment or the earlier termination of the Contract, shall be referred initially to the **Design Professional** for action as provided herein.

3.6.15.2. Time Period and Action. The **Design Professional** shall review Claims and shall do one of the following within seven (7) days of receipt of the Claim:

3.6.15.2.1. defer any action with respect to all or any part of a Claim for the purpose of requesting and receiving additional information from either party;

3.6.15.2.2. decline to render a decision for any reason which it deems appropriate (including, but not limited to, the fact that the Claim involves allegations of fault on the part of the **Design Professional**); or

3.6.15.2.3. render a decision on all or a part of the Claim.

If the **Design Professional** requests additional information, the **Design Professional** shall take action with respect to the Claim no later than seven (7) days after receipt of the additional information. The **Design Professional** shall notify the parties in writing of its disposition of such Claim. If the **Design Professional** decides that the Work relating to such Claim should proceed regardless of its disposition of such Claim, the **Design Professional** shall issue to the Contractor a written order to proceed.

3.6.15.3. Decisions.

3.6.15.3.1. Decisions by the City or the Design Professional. (*Reference:* M.G.L. c. 30, §39P). In every case in which this Contract requires the **City**, any official, or its **Design Professional** to make a decision on interpretation of the Specifications, approval of equipment, material or any other approval, or progress of the Work, the decision shall be made promptly and, in any event, no later than seven (7) days after the written submission for decision; but if such decision requires extended investigation and study, the **City**, the official, or the **Design Professional** shall, within seven (7) days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the seven-day period and the date by which the decision will be made.

3.6.15.4. Resolved Claims. If a Claim is resolved, the **Design Professional** shall obtain or prepare the appropriate documentation and provide the **City** and the Contractor with a copy of same.

3.6.16. Determination of Substantial and Final Completion. On behalf of the **City**, the **Design Professional** shall conduct inspections, determine the dates of Substantial Completion and final completion, and shall issue a certificate of Substantial Completion, with the prior written consent of the **City**. Such inspections shall include a reasonable number of Site visits by the **Design Professional** and the **Design Professional's** engineering consultants. The **Design Professional** shall provide to the **City** a written report of all findings with recommendations for appropriate action. The **Design Professional** will receive and review (and approve or disapprove, as the case may be) written guarantees, operating manuals, spare parts lists, value charts, and

related documents required by the Contract Documents to be assembled by the Contractor. When the **Design Professional** is satisfied that all such documents are complete as required by the Contract Documents, the **Design Professional** shall issue a final certificate of payment.

3.6.17. Inspection Prior to End of Guarantee Period. Notwithstanding any other provision in this Agreement, at least thirty (30) days prior to the expiration of the Contractor's guarantee period, the **Design Professional** shall assist the **City** in inspecting the Project at the **City's** request and provide to the **City** a written report of all findings with recommendations for appropriate action. Such inspections shall include a reasonable number of Site visits by the **Design Professional** and the **Design Professional's** engineering consultants.

3.6.18. Certificate of Occupancy. The **Design Professional** shall be responsible for satisfying any and all requirements with respect to services of an Design Professional necessary to obtain a permanent certificate of occupancy under the Commonwealth of Massachusetts State Building Code.

3.6.19. Limitation on the Design Professional's Responsibilities.

3.6.19.1. Neither the **Design Professional's** authority to act under the provisions of the Contract Documents nor any decision made by the **Design Professional** in good faith to exercise or not to exercise such authority shall give rise to any duty or responsibility of the **Design Professional** to the Contractor, any Subcontractor, any Supplier, any surety for any of them, or any other person. The **Design Professional** will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Article 5 of the General Terms and Conditions. The **Design Professional** will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The **Design Professional** will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, Suppliers, or of any other persons performing portions of the Work.

ARTICLE 4

DESIGN PROFESSIONAL'S ADDITIONAL SERVICES

4.1. **IN GENERAL.** The services described hereunder shall be paid for by the **City** in addition to the compensation for Basic Services. Prior to performing any service which the **Design Professional** claims to be an Additional Service, the **Design Professional** shall notify the **City** in writing that the service is an Additional Service, and shall provide with such notice an estimate of the additional compensation which will be payable to the **Design Professional** for performing such service. Such service shall not be performed, nor shall such estimate be exceeded, without the **City's** prior written approval. Failure to so notify the **City** and obtain the **City's** written approval shall constitute a waiver of the **Design Professional's** claim for additional compensation on account of such services. These services shall be provided only if authorized or confirmed in writing by the **City**. Notwithstanding anything to the contrary in this Agreement, the **City** shall not be responsible to pay and the **Design Professional** shall not be entitled to receive compensation for any additional service if such service was required due to the fault of the **Design Professional** or the **Design Professional's** failure to perform in accordance with the terms of this Agreement. Neither the **Design Professional** nor its consultants shall be compensated for any services involved in preparing changes that are required for additional Work that should have been anticipated by the **Design Professional** in the preparation of the Construction Documents, as reasonably determined by the **City**.

4.2. **LIST OF ADDITIONAL SERVICES**. The following list of Additional Services is intended to be illustrative and not considered all inclusive.

4.2.1. Making major revisions in Plans, Specifications, or other documents when such major revisions are:

4.2.1.1. inconsistent with approvals or instructions previously given by the **City**, including revisions made necessary by adjustments in the **City's** program or project budget;

4.2.1.2. required by the enactment or revision of codes, laws, or regulations subsequent to the preparation of such documents; or

4.2.1.3. due to changes required as a result of the **City's** failure to render decisions in a timely manner and where such failure is in no way caused by the **Design Professional**.

4.2.2. Providing services required because of major changes in the Project instigated by the **City**.

4.2.3. Undertaking material design work requested by the **City** in connection with Change Orders, Construction Change Directives, and the Contractor's value engineering proposals, provided that evaluation and judgments of the proposed changes and value engineering substitutions shall be provided as a Basic Service.

4.2.4. Providing consultation concerning replacement of Work damaged by fire or other cause during construction, and furnishing services required in connection with the replacement of such Work; provided, however, that such services are not required as a result of the negligence of the **Design Professional**.

4.2.5. Providing any other services not otherwise included in this Agreement.

ARTICLE 5

OTHER CONDITIONS OR SERVICES

5.1. **OTHER SERVICES.** Any other services which are part of Basic Services are set forth in APPENDIX D.

5.2. **HAZARDOUS MATERIALS.** Unless otherwise provided in this Agreement, the **Design Professional** and the **Design Professional's** consultants shall have no responsibility for the discovery, presence, handling, removal, or disposal of, or exposure of persons to hazardous materials in any form at the Project Site, including, but not limited to, asbestos, asbestos products, polychlorinated biphenyl, or other toxic substances, provided, however, the **Design Professional** shall report to the **City** the presence and location of any hazardous material observed by the **Design Professional** (or any material suspected to exist) or that an design professional of similar skill and expertise should have observed.

ARTICLE 6

THE CITY'S RESPONSIBILITIES

6.1. REQUIREMENTS FOR THE PROJECT. The **City** shall consult with the **Design Professional** regarding requirements for the Project, including the **City's** contemplated objectives, schedule, constraints, and criteria, including space requirements and relationships, flexibility, expandability, special equipment, systems, and site requirements.

6.2. BUDGET. The **City** shall consult with the **Design Professional** in order to establish and update an overall budget for the Project, including the Construction Cost, the **City's** other costs and reasonable contingencies related to all of these costs.

6.3. AUTHORIZED REPRESENTATIVE The **City** shall designate a representative authorized to act on the **City's** behalf with respect to the Project. The **City** or such authorized representative shall render decisions in a timely manner pertaining to documents submitted by the **Design Professional** in order to avoid unreasonable delay in the orderly and sequential progress of the **Design Professional's** services.

6.4. CONSULTANTS. The **City** shall furnish the services of consultants not listed in the advertisement for the Request for Proposals when the **City** deems such services to be necessary.

6.5. FURNISHING INFORMATION OR SERVICES. Notwithstanding anything to the contrary written herein, the **City** shall only furnish information or services described in herein to the extent that any such information or service is reasonably required by the **Design Professional** to perform its services under this Agreement. The **Design Professional** shall review and confirm the sufficiency of any test and information furnished to the **Design Professional** by or on behalf of the **City** pursuant to this section.

6.6. NOTICE OF FAULT OR DEFECT. The **City** shall give prompt written notice to the **Design Professional**, if the **City** becomes aware of any fault or defect in the Project or nonconformance with the Contract Documents.

ARTICLE 7

USE OF THE DESIGN PROFESSIONAL'S PLANS, SPECIFICATIONS, AND OTHER DOCUMENTS

7.1. IN GENERAL. The Plans, Specifications, and other documents prepared by the **Design Professional** for this Project are instruments of the **Design Professional's** service for use solely with respect to this Project and, unless otherwise provided, the **Design Professional** shall be deemed the author of these documents and shall retain all common law, statutory, and other reserved rights, including the copyright (Note: if this contract is federally funded, see Appendix L Federal Requirements regarding royalties and copyrights). The **City** shall be permitted to retain copies, including reproducible copies, of the **Design Professional's** Plans, Specifications, and other documents for information and reference in connection with the **City's** use and occupancy of the Project. The **Design Professional's** Plans, Specifications, or other documents shall not be used by the **City** or others on other projects, except by agreement in writing. However, it is expressly understood and agreed that the **City** shall have the right to utilize the Plans, Specifications, and other documents in the event the **City** expands the Project, corrects any deficiencies, or makes any renovations or repairs to the Project. In the event of termination or purported termination of this Agreement by either party, the **City** may use the Plans, Specifications, and other documents in connection with the Project, notwithstanding any dispute between the **City** and the **Design Professional** as to the reason for validity of the termination, provided only that the **Design Professional** has been paid for its work through the date of the termination, unless the matter of such payment is subject to litigation or other dispute resolution procedure provided for herein.

7.2. OFFICIAL REGULATORY REQUIREMENTS. Submission or distribution of the Plans, Specifications, and other documents to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the **Design Professional's** reserved rights herein.

ARTICLE 8

BASIS OF COMPENSATION

8.1. IN GENERAL. For Basic Services, compensation shall be as provided in APPENDIX E.

8.2. STIPULATED SUM. Where the compensation is based on a stipulated sum, progress payments for Basic Services in each phase shall be as stated in APPENDIX F.

8.3. MATERIAL CHANGE IN SCOPE OR SERVICES. In the event of a material change in the scope or services of the Project or the **Design Professional's** services, the **Design Professional** shall continue to perform in accordance with the terms of this Agreement during the course of any renegotiation of the **Design Professional's** compensation hereunder. Equitable adjustments shall be made to the total dollar amount of this Agreement in the event of changes in scope or services herein. (*Reference:* M.G.L. c. 7, §38G for designer contracts subject to the Designer Selection Statute, but this section applies also to contracts not subject to M.G.L. c. 7, §38G).

8.4. ADDITIONAL SERVICES OF THE DESIGN PROFESSIONAL. For Additional Services of the **Design Professional**, compensation shall be as stated in APPENDIX C.

8.5. ADDITIONAL SERVICES OF THE CONSULTANTS. For additional services of consultants, compensation shall be the actual cost billed to the **Design Professional** for such services stated in APPENDIX G.

8.6. REIMBURSABLE EXPENSES. For Reimbursable Expenses, compensation shall be the actual cost billed to the **Design Professional**, not including any tax. The City will provide its tax-exempt number upon request..

ARTICLE 9

PAYMENT TO THE DESIGN PROFESSIONAL

9.1. PAYMENT TO DESIGN PROFESSIONAL. The **City** shall make payments directly to the **Design Professional** within forty-five (45) days after the **City** receives and approves the **Design Professional's** detailed certified monthly statement. The detailed monthly statement must include, at minimum, itemized hours and work performed by the **Design Professional** (including, but not limited to, all employees of the **Design Professional** and its agents), and an itemized list of Reimbursable Expenses. Records of the **Design Professional's** expenses and hours pertaining to this Project shall be kept in accordance with generally accepted accounting principles, which principles shall be consistently applied. Said records shall be available to the **City** or its authorized representative upon reasonable notice for inspection and copying during regular business hours for six (6) years after the date of the final certificate of payment.

9.2. NO ADVANCE PAYMENTS. No payments will be made in advance of services rendered.

9.3. DEDUCTIONS. Deductions may be made from the **Design Professional's** compensation, if the **Design Professional** has not properly performed the services required in accordance with the terms of this Agreement.

ARTICLE 10

INSURANCE REQUIREMENTS

10.1. **LIABILITY INSURANCE.** The **Design Professional** at its own expense must obtain and maintain a professional liability insurance policy covering negligent errors, omissions, and acts of the **Design Professional** or of any person for whose performance the **Design Professional** is legally liable arising out of the performance of such contracts for design services. The **City** may require a consultant employed by the **Design Professional** subject to this subparagraph to obtain and maintain a similar liability insurance policy. If the **Design Professional** is required by the **City** to obtain all or a portion of such insurance coverage, it shall at its own expense furnish a certificate or certificates of insurance coverage to the **City** prior to the award of the contract. Certificates of insurance are attached hereto as APPENDIX H. Any amendments these insurance requirements are set forth in APPENDIX H.

10.2. **INSURANCE RATING.** Any insurance carrier utilized to fulfill the insurance requirements of this Contract shall have a minimum A.M. Best rating of A-X**.**

10.3. **MINIMUM COVERAGES.** The **Design Professional** and its structural, mechanical, and electrical engineering consultants shall each maintain the following minimum insurance coverages:

10.3.1. Workers' Compensation insurance- co-called "statutory coverage" in compliance with Massachusetts law;

10.3.2. Employer's liability policy covering bodily injury by accident ($100,000 each occurrence) and bodily injury by disease ($100,000 each employee, $500,000 policy limit);

10.3.3. Comprehensive automobile liability insurance including hired, non-owned, and leased vehicles, if any, in the amount of $1,000,000 covering personal injury, bodily injury, and property damage;

10.3.4. Valuable Papers insurance in the amount of $100,000 covering damage to plans, drawings, computations, filed notes, or other similar data relating to the Work covered by this Agreement;

10.3.5. Commercial general liability insurance with a primary limit of not less than $1,000,000 combined single limit and naming the **City** as an additional insured; and

10.3.6. Professional Liability insurance in an amount not less than $1,000,000 or ten per cent (10%) of the Project's estimated cost of construction, or such larger amounts as the **City** may require, for the applicable period of limitations, including contractual liability coverage with all coverage retroactive to the earlier date of this Agreement or the commencement of the **Design Professional's** services in relation to the Project.

10.4. **INSURANCE TERMS**. All insurance shall be provided by companies qualified and licensed to do business in the Commonwealth of Massachusetts and acceptable to the City, and shall be maintained for a period of six (6) years following the last performance of services under this Agreement. Certificates evidencing such insurance shall be furnished to the **City** upon the execution of this Agreement by the **Design Professional** and upon each renewal period thereafter. The policies shall provide that the policies shall not be cancelled, renewed, or amended without thirty (30) days' prior notice to the **City**. All requests by the **Design Professional** for approval of engineers or other consultants shall be accompanied by certificates setting forth the types and amounts of insurance carried by them. The **Design Professional** shall require each such engineer or other consultant approved by the **City** to maintain the insurance shown in such certificate in accordance with the provisions of this paragraph.

ARTICLE 11

STATUTORY RECORD-KEEPING AND RECORD-FILING REQUIREMENTS

(M.G.L. C. 30, §39R)

___(If this contract is federally funded, see also Federal Requirements attached hereto as Appendix L.)

11.1. The **Design Professional** shall make and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the **Design Professional**.

11.2. Until the expiration of six (6) years after final payment, the office of inspector general, and the deputy commissioner of capital planning and operations shall have the right to examine any books, documents, papers or records of the **Design Professional** or of its subcontractors that directly pertain to and involve transactions relating to, the **Design Professional** or its subcontractors.

If this contract is subject to the Massachusetts Designer Selection Statute, M.G.L., c. 7, §38A-1/2 et seq., and if the Contract Amount exceeds $100,000, the provisions of M.G.L. c. 30, §39R contained in sections 11.3 –11.7 below shall be applicable.

11.3. The **Design Professional** shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the **City**, including in its description the date of the change and reasons therefore, and shall accompany said description with a letter from the **Design Professional's** independent certified public accountant approving or otherwise commenting on the changes.

11.4. The **Design Professional** has filed a statement of management ("management," as used in these paragraphs is defined in M.G.L. c. 30, §39R(a)(7) as "the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor" which is the **Design Professional** herein) on internal accounting controls as set forth in M.G.L. c. 30, §39R(c) prior to the execution of this Agreement.

11.5. The **Design Professional** must file with the **City** a statement of management as to whether the system of internal accounting controls of the **Design Professional** and its subsidiaries reasonably assures that:

11.5.1. transactions are executed in accordance with management's general and specific authorization;

11.5.2. transactions are recorded as necessary: to permit preparation of financial statements in conformity with generally accepted accounting principles, and to maintain accountability for assets;

11.5.3. access to assets is permitted only in accordance with management's general or specific authorization; and

11.5.4. the record accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

11.6. The **Design Professional** has filed with DCAM prior to the execution of this Agreement and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in M.G.L. c. 30, §39R(d). The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the **City** upon request.

11.7. The **Design Professional** shall file with the **City** a statement prepared and signed by an independent certified public accountant, stating that s/he has examined the statement of management on internal accounting controls, and expressing an opinion as to:

11.7.1. whether the representations of management in response to this paragraph and the previous paragraph are consistent with the result of management's evaluation of the system of internal accounting controls; and

11.7.2. whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the **Design Professional's** financial statements.

NOTE: RECORDS AND STATEMENTS REQUIRED TO BE MADE, KEPT OR FILED UNDER THE PROVISIONS OF M.G.L. c. 30, §39R ARE **NOT PUBLIC RECORDS** AS DEFINED IN M.G.L. c.4, §7 AND SHALL NOT BE OPEN TO PUBLIC INSPECTION, EXCEPT AS PROVIDED HEREIN.

(*Reference:* M.G.L. c. 30, §39R)

ARTICLE 12

TERMINATION, SUSPENSION, OR ABANDONMENT

12.1. Except for reasons of nonpayment, this Agreement may be terminated by either party upon not less than seven (7) days' written notice should the other party fail to perform in accordance with the terms of this Agreement through no fault of the party initiating the termination and may be terminated without cause by the **City** upon at least seven (7) days' written notice to the **Design Professional**. In the event this Agreement is terminated by the **City** pursuant to this paragraph, the **Design Professional** shall be entitled to receive compensation for Basic and Additional Services properly performed and for all substantiated Reimbursable Expenses incurred to the date of the notice of termination, but in no event shall compensation exceed the amount specified hereafter if the Project does not proceed and in no event shall any payment be due earlier than such payment would otherwise be due hereunder. Moreover, the **City** shall be entitled to retain from the monies alleged to be due to the **Design Professional** an amount that reasonably reflects the cost and expense incurred or to be incurred by the **City** associated with the termination, if the termination is with cause.

12.2. The **City** reserves the right to stop or suspend the work upon seven (7) days' written notice to the **Design Professional**, with no resulting fee adjustment to the **Design Professional**, unless such suspension extends for more than twelve (12) months, in which case the **Design Professional's** compensation shall be equitably adjusted when the project is resumed to provide for expenses incurred in the interruption and resumption of the **Design Professional's** services. The **Design Professional** shall have no cause for termination of this Agreement based on suspension of the Project unless such suspension extends for more than twelve (12) months.

12.3. Persistent failure by the **City** to make payments to the **Design Professional** in accordance with this Agreement or persistent failure of the **City** to pay the **Design Professional** within forty-five (45) days of receipt of a statement for services properly performed shall be considered nonperformance and cause for termination. "Persistent" herein shall mean at least three occasions.

12.4. If the **City** fails to make payment when due for services and expenses properly performed, the **Design Professional** may, upon thirty (30) days' written notice to the **City**, suspend performance of services under this Agreement. Unless the **Design Professional** receives within thirty (30) days of the date of the notice payment in full for such services that have been properly performed, the suspension shall take effect without further notice. In the event of a suspension of services, the **Design Professional** shall have no liability to the **City** for delay or damage caused by the **City** because of such suspension of services.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1. GOVERNING LAW. This Agreement shall be governed by the laws of the Commonwealth of Massachusetts and, if federally funded, applicable provisions of the Federal Requirements attached hereto as Appendix L.

13.2. VENUE. Venue for any court action or proceeding shall be Middlesex County in the Commonwealth of Massachusetts only. The **Contractor**, all Subcontractors, and Suppliers waive any and all jurisdictional and venue defenses.

13.3. PARTNERS, SUCCESSORS, ASSIGNS, ETC. The **City** and the **Design Professional**, respectively, bind themselves, their partners, successors, assigns, and legal representatives to the other party to this Agreement and to the partners, successors, assigns, and legal representative of such other party with respect to all covenants of this Agreement.

13.4. PROHIBITION AGAINST ASSIGNMENT. The **Design Professional** shall not assign, in whole or in part, its rights and obligations under the Contract Documents without prior written consent of the **City**. An assignment without the prior written consent of the **City** shall not relieve the **Design Professional** of its obligations thereunder.

13.5. ENTIRE AGREEMENT. This Agreement represents the entire and integrated agreement between the **City** and the **Design Professional** and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement can be amended only by a written instrument signed by both the **City** and the **Design Professional**.

13.6. THIRD-PARTY BENEFICIARIES. Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the **City** or the **Design Professional**.

13.7. NOTICES AND DEMANDS. Notices and demands required by or permitted to be given hereunder shall be hand-delivered or given by registered mail, certified mail, express mail with a tracking receipt, or FedEx and shall be addressed to the parties at the addresses set forth in APPENDIX I. Such notices and demands may be sent by facsimile transmission if such transmission is followed by hand delivery, or registered, certified, or express mail, or FedEx on the same day or the following business day. Notice and demands shall be deemed to have been given when delivered, or when mailed, or when transmitted by facsimile, if followed by hand delivery or registered or certified mail as provided herein.

13.8. WAIVER OF RIGHTS. The **City's** review, approval, acceptance, or payment for services under this Agreement shall not operate as a waiver of any rights under this Agreement and the **Design Professional** shall be and shall remain liable to the **City** for all damages incurred by the **City** as the result of the **Design Professional's** failure to perform in conformance with the terms and conditions of this Agreement. The rights and remedies of the **City** provided for under this Agreement are in addition to any other rights or remedies provided or allowed by law.

13.9. PERSONAL LIABILITY. No member, officer, director, trustee, representative, consultant, volunteer participant, or employee of the **City** shall be personally liable to the **Design Professional** under

any term or provision of this Agreement for the **City's** payment obligation or otherwise, or because of any breach hereof.

13.10. INDEMNIFICATION. The **Design Professional** shall indemnify and defend the **City** from and against all claims, costs, and liability arising out of the **Design Professional's** Services hereunder, to the extent that such claims, costs, and liability are the result of the negligent acts, errors, or omissions of the **Design Professional**, or breaches by the **Design Professional** of its obligations hereunder or (with respect to the **Design Professional's** duty to defend) are claimed to be the result thereof.

13.11. DESIGN PROFESSIONAL'S PRINCIPALS AND SENIOR PERSONNEL. The **City** is relying on the continued participation in the Project of the principals and senior personnel whose names and time commitments and, where applicable, Massachusetts professional registration numbers are listed in the attached APPENDIX J. The **Design Professional** shall not remove any such individual from the Project or reduce his or her time commitment to the Project without the **City's** written consent unless such individual dies, becomes disabled, or terminates his or her employment. The replacement of any individual listed in APPENDIX J shall be subject to the **City's** written approval.

13.12 USE OF PROJECT-RELATED DOCUMENTS. The **Design Professional** may, upon prior written consent of the **City**, include representations of the design of the Project, including photographs of the exterior and interior, among the **Design Professional's** promotional and professional materials. The **Design Professional's** materials shall not include the **City's** confidential or proprietary information if the **City** has previously advised the **Design Professional** in writing of the specific information considered by the **City** to be confidential or proprietary. The **City** shall provide professional credit for the **Design Professional** on the construction sign and in the promotional materials for the Project. The **City** considers all information concerning the Project to be confidential and proprietary unless otherwise expressly indicated in writing to the **Design Professional**.

ARTICLE 14

CERTIFICATIONS

14.1. The undersigned **Design Professional** certifies under the penalties of perjury that:

14.1.1. the **Design Professional** has not given, offered or agreed to give any gift, contribution or offer of employment as an inducement for, or in connection with, the award of a contract for design services;

14.1.2. no consultant to, or subcontractor for the **Design Professional** has given, offered or agreed to give any gift, contribution, or offer of employment to the **Design Professional**, or to any other person, corporation, or entity as an inducement for or in connection with the award to the consultant or subcontractor of a contract by the **Design Professional**;

14.1.3. no person, corporation, or other entity, other than a bona fide, full-time employee of the **Design Professional** has been retained or hired to solicit for or in any way assist the **Design Professional** in obtaining the contract for design services upon an agreement or understanding that such person, corporation, or other entity be paid a fee or other consideration contingent upon the award of the contract to the designer;

14.1.4. if and as required by M.G.L. c. 30, §39R, the **Design Professional** has internal accounting controls the **Design Professional** shall:

14.1.4.1. file regular statements of management concerning internal auditing controls; and

14.1.4.2. file an annual audited financial statement; and submit a statement from an independent certified public accountant that s/he has examined management's internal auditing controls and expresses an opinion as to their consistency with management's statements and whether such statements are reasonable with respect to transactions and assets that are substantial in relation to the **Design Professional's** financial statements, as provided by M.G.L. c. 7, §38H(e) and

14.1.4.3. the Design Professional has filed a statement of management on internal accounting controls as set forth in M.G.L. c. 30, §39R(c) prior to the execution of this Agreement;

14.1.4.4the Design Professional has filed with DCAM prior to the execution of this Agreement an audited financial statement for the most recent completed fiscal year as set forth in M.G.L. c. 30, §39R(d); and

14.1.5. the **Design Professional** has complied with all the laws of the Commonwealth pertaining to taxes, reporting of employees and contractors, and withholding and remitting child support (M.G.L. c. 62C, §49A).

14.1.6. the **Design Professional** will, for a seven-year period after the final payment, maintain accurate books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the **Design Professional**;

APPENDICES:

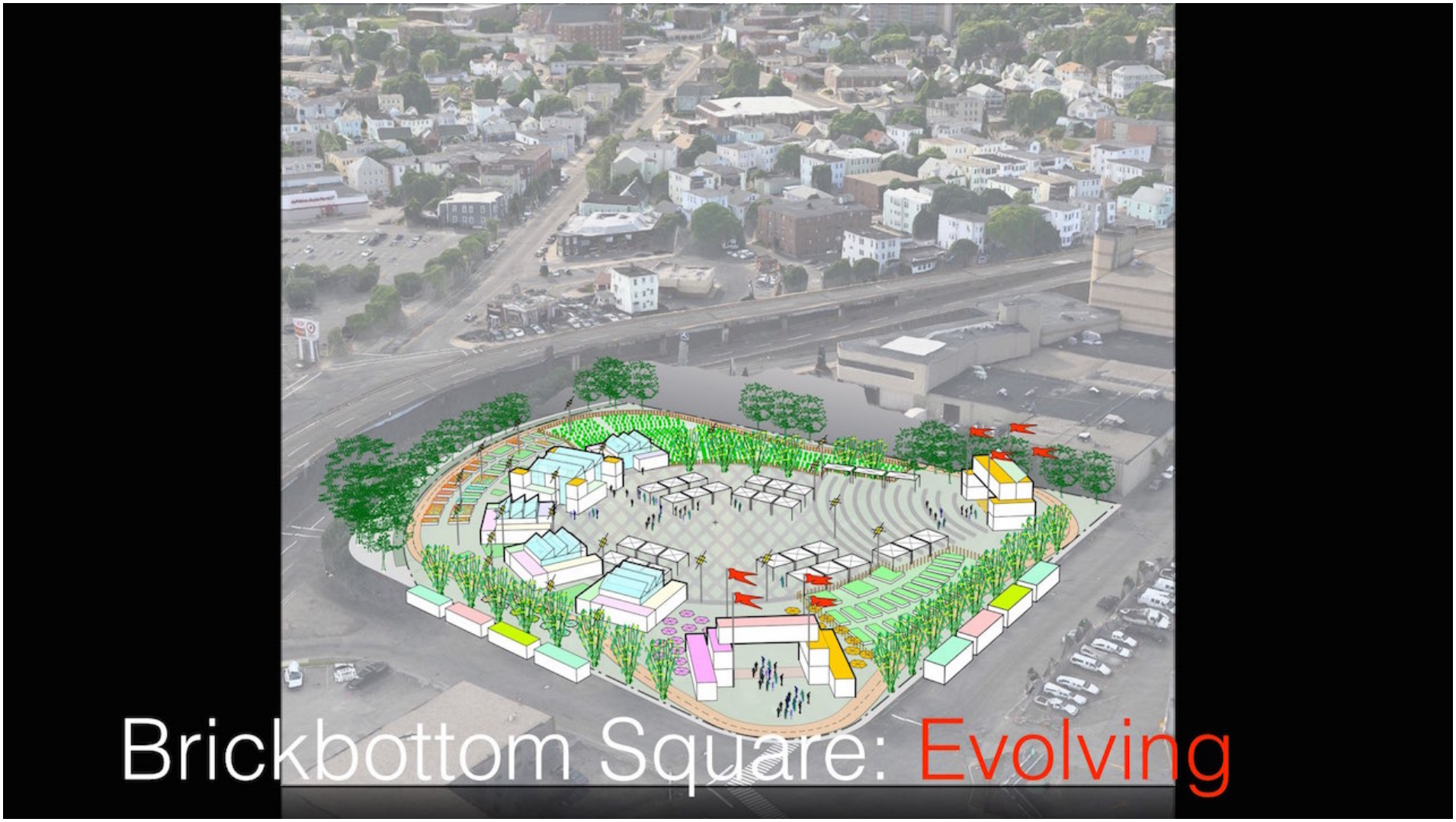
APPENDIX A The RFP
APPENDIX B Schedule of Performance of the Architect
APPENDIX C Compensation for Additional Services
APPENDIX D Additional Basic Services
APPENDIX E Compensation for Basic Services
APPENDIX F Compensation Based Upon a Stipulated Sum
APPENDIX G Compensation for Additional Services of Consultants
APPENDIX H Certificates of Insurance and Additional Insurance Requirements
APPENDIX I Notices
APPENDIX J Mass. Professional Registration Numbers
APPENDIX K Truth-In-Negotiations Certificate
APPENDIX L Federal Requirements
APPENDIX M Statement of Management

SIGNATURE PAGE FOLLOWS:

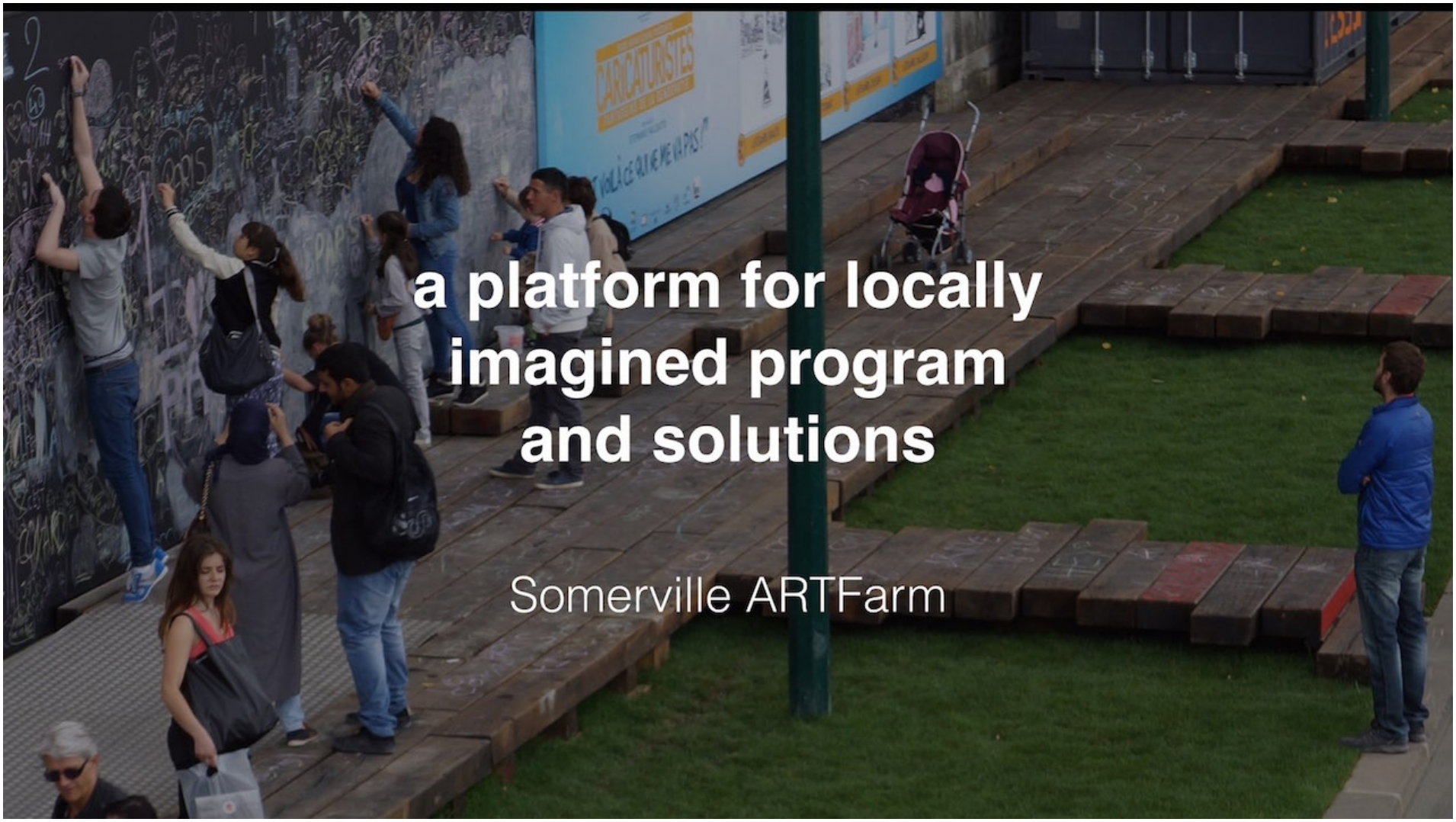
Attachment 1

Final Draft of ArtFarm Schematic from Initial Concept and Public Process

ARTFarm: in the beginning…


Brickbottom Square: Evolving

a model for
activating spaces
Somerville ARTFarm


CARICATURISTES
a platform for locally
imagined program
and solutions
Somerville ARTFarm

public engagement

Somerville ARTFarm

ARTFARM

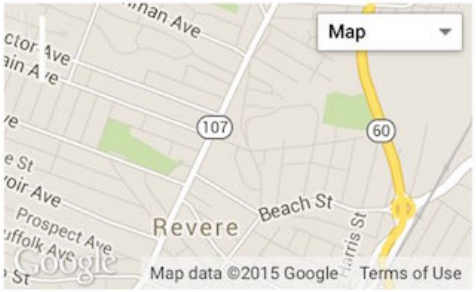
OVERVIEW PROCESS EXPERIENCE CALENDAR

WHAT IS ARTfarm?

Converting a former 2.2 acre waste transfer site, Somerville ARTFarm for Social Innovation is a self-sustaining creative commons designed to foster community betterment. ARTFarm is a platform for locally imagined programs and solutions that harness green technology, micro and culinary entrepreneurship, art/performance, urban agriculture and community building activities to address local challenges and enrich the experience of living in Somerville.

WHERE IS ARTfarm?

10 Poplar Street, Somerville, MA 02143



GET INVOLVED

ARTfarm is in the early stages of development. If you are a business, organization, or community member and have feedback you want to share you can go to our Question and Comment section or you can email gjenkins at somervillema dot gov .

Comment Section

keeping people updated

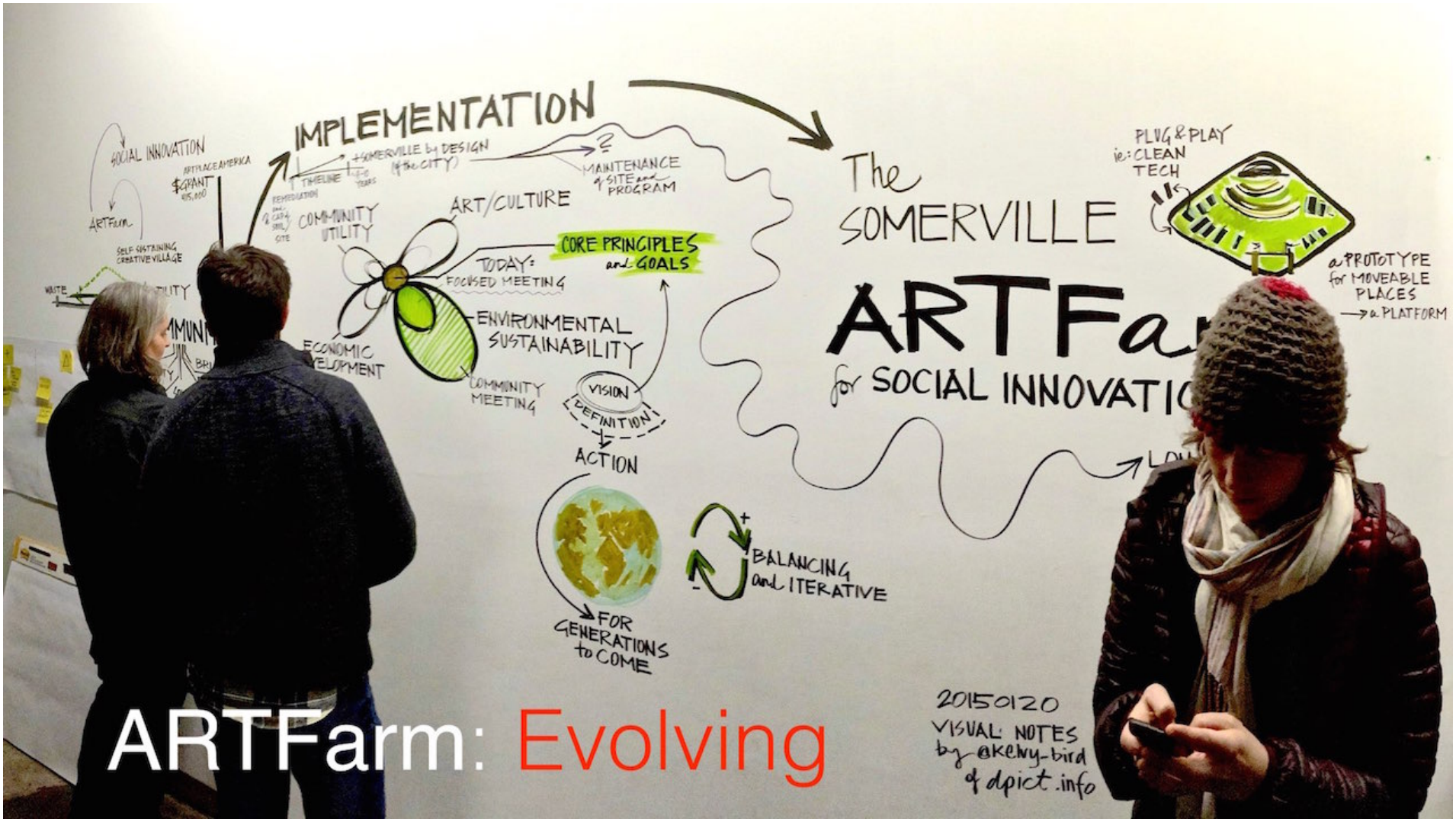
Establishing
GUIDING PRINCIPLES

- versatility, flexibility and adaptability
- universality
- community focus
- model of sustainability

COMMUNITY UTILITY - For our third community meeting held on Tuesday, March 24, a great group of folks met to review our core principals concerning Community Utility. Here are the notes and more of Kelvy's great scribing work. Click here for the ARTFarm Community Utility notes meeting notes

ARTS and CULTURE Our second working group meeting on core principals was held on a nice cold evening, February 16th, at Earthos's office. This meeting brought together individuals across Somerville involved with arts and culture. Sharon Lacey, a local artist, also shared examples of engaging organizations and individuals from London to start a conversation about how ARTfarm could be positioned [...]

ENVIRONMENT and SUSTAINABILITY Hello. On January 16th we held our first working group meeting to examine our core principals. This meeting was held with individuals and representative from organizations engaged with environmental and sustainability concerns within Somerville. A great first meeting. Below are the notes and visual scribing by Kelvy Bird. Click here for the ARTFarm Environmental Focus Group meeting notes.



ARTFarm: Evolving

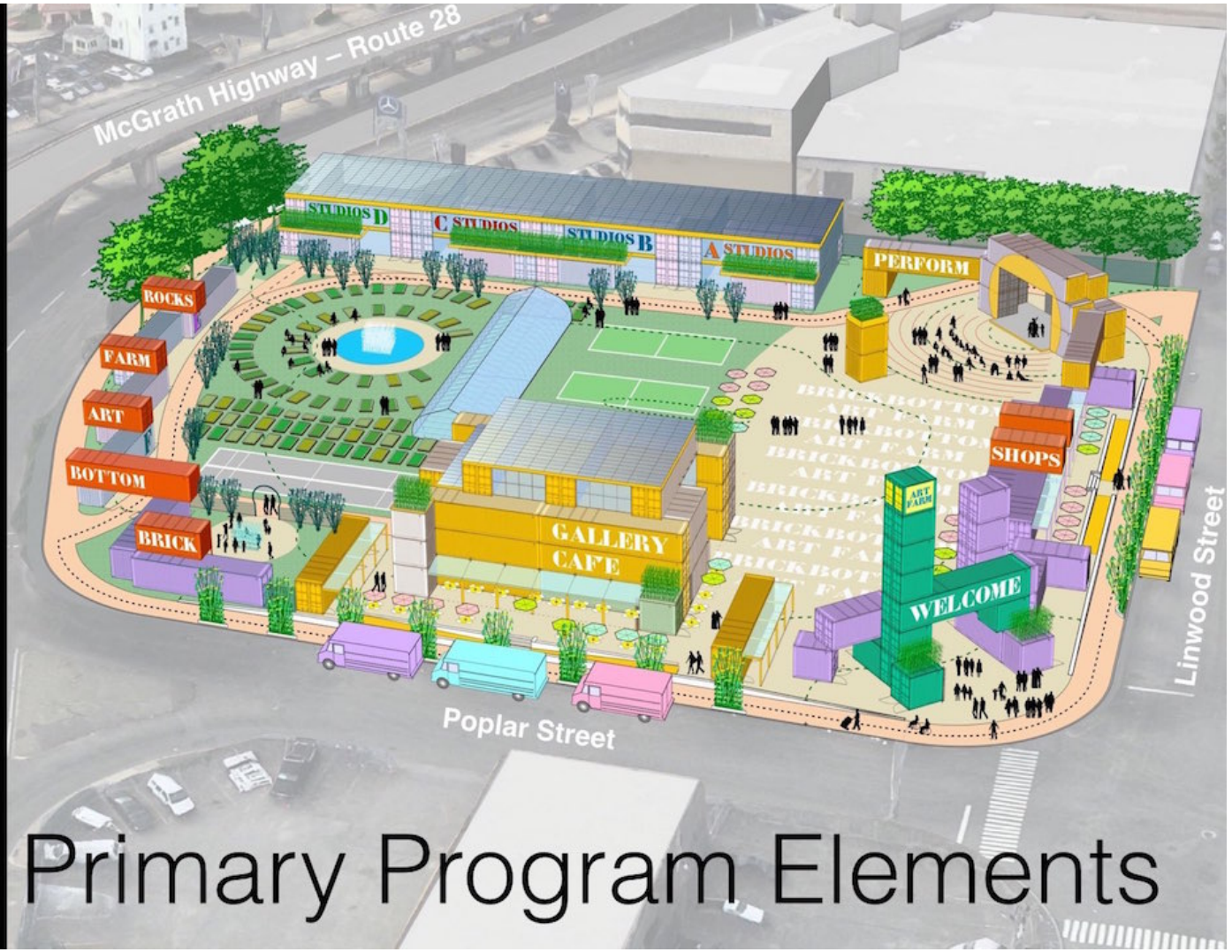
Linwood St
Poplar St
McGrath Highway
POPLAR STREET
LINWOOD STREET
LIVE / WORK UNITS
WORKSHOP / STUDIO SPACE
POLYTUNNEL CAFE / GROW SPACE
WORKSHOP SPACE
EVENT SPACE
STREET FRONT KIOSKS
WORKSHOP / STUDIO SPACE
STUDIO / RETAIL / CAFE SPACE
NEW PUBLIC SQUARE
The SOMERVILLE
ARTFarm
for SOCIAL INNOVATION
PLUG & PLAY in CLEAN TECH
a PROTOTYPE for MOVEABLE PLACES
→ a PLATFORM
LONGEVITY
ARTFARM

ARTFarm: Today's Baseline

ARTFarm: Today's Baseline

- 65,500 Square Feet
  OPEN SPACE USES
- 32,000 Square Feet
  VARIED ARTS SPACES
- 50–55 Art STUDIOS
- Year Round
  THEATER, CAFE &
  GALLERY BUILDING
- Creative
  YOUTH FACILITIES
- 8 Pop-up SHOPS
- GREEN HOUSE and
  GROW SPACES

1. GRAND PORTAL
2. Gallery/Cafe/ INDOOR THEATER
3. Pop-up SHOPS
4. Creative Activity PLACE
5. Outdoor PERFORMANCE
6. Artist STUDIOS
7. Grow PLACES
8. Creative YOUTH PLACE
9. Recreational LAWN



ARTFarm: Primary Program Elements

1. GRAND PORTAL
(1,900 sf)

- Interior & Surface ART DISPLAY
- FLOWER MARKET
- Administration/ TICKETING
- Historical Display: The BRICKBOTTOM STORY

ARTFarm: 1

Temporary art museum, New York
nyc-architecture.com

ARTFarm:

buenosairesstreetart.com

SHOPS
ART FARM
WELCOME
1

buenosairesstreetart.com

2. THEATER / GALLERY / CAFE (8,300 sf)

ARTFarm CAFE

a. GALLERY Spaces

b. Multi-purpose Space

c. SOLAR Roof Systems

d. Stair Modules

e. Year Round Use

f. Food Truck Spaces
OUTDOOR SEATING

ARTFarm: 2

pop up restaurant, London homedit.com

http://www.inzombie.com/#!/zoom/c1ofn/image1p06

Platoon cultural center, Berlin archdaily.com

ARTFarm: 2

3. Pop-up SHOPS (1,600 sf)

a. Interior & Surface ART DISPLAY

b. Frontage for 8 SHOPS

c. SEATING Areas

d. Stair/Ramp Access

e. FOOD TRUCK Spaces

ARTFarm: 3

HUMMINGBIRD
COFFEE
Pop up market, Christchurch New Zealand
WWW.NEWS.CN
lostateminor.com
Pop up market.
ARTFarm:
SHOPS
3
ezcontainers.com

4. Creative Activity PLACE (19,500 sf)

a. 10,300 sf Multi-purpose Year Round

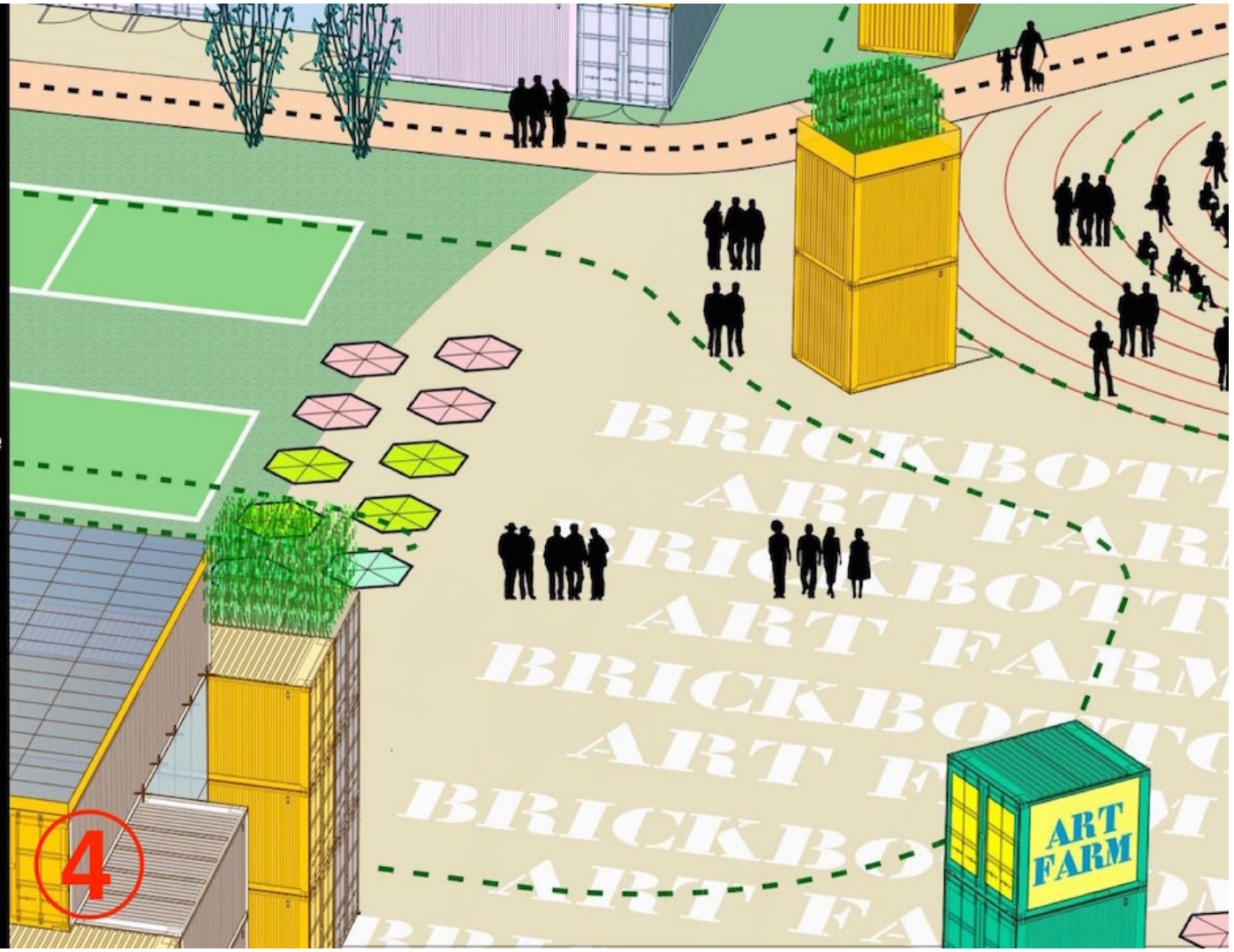
b. FLEXIBLE Open Space

c. SEATING Areas

d. Plus 9,200 sf Recreational LAWN

e. Access/Perimeter ⅕ MILE TRAIL

ARTFarm: 4



ARTFarm:
4
ART FARM

5. Outdoor PERFORMANCE (12,600 sf)

a. 5% audience rake to 600 sf STAGE

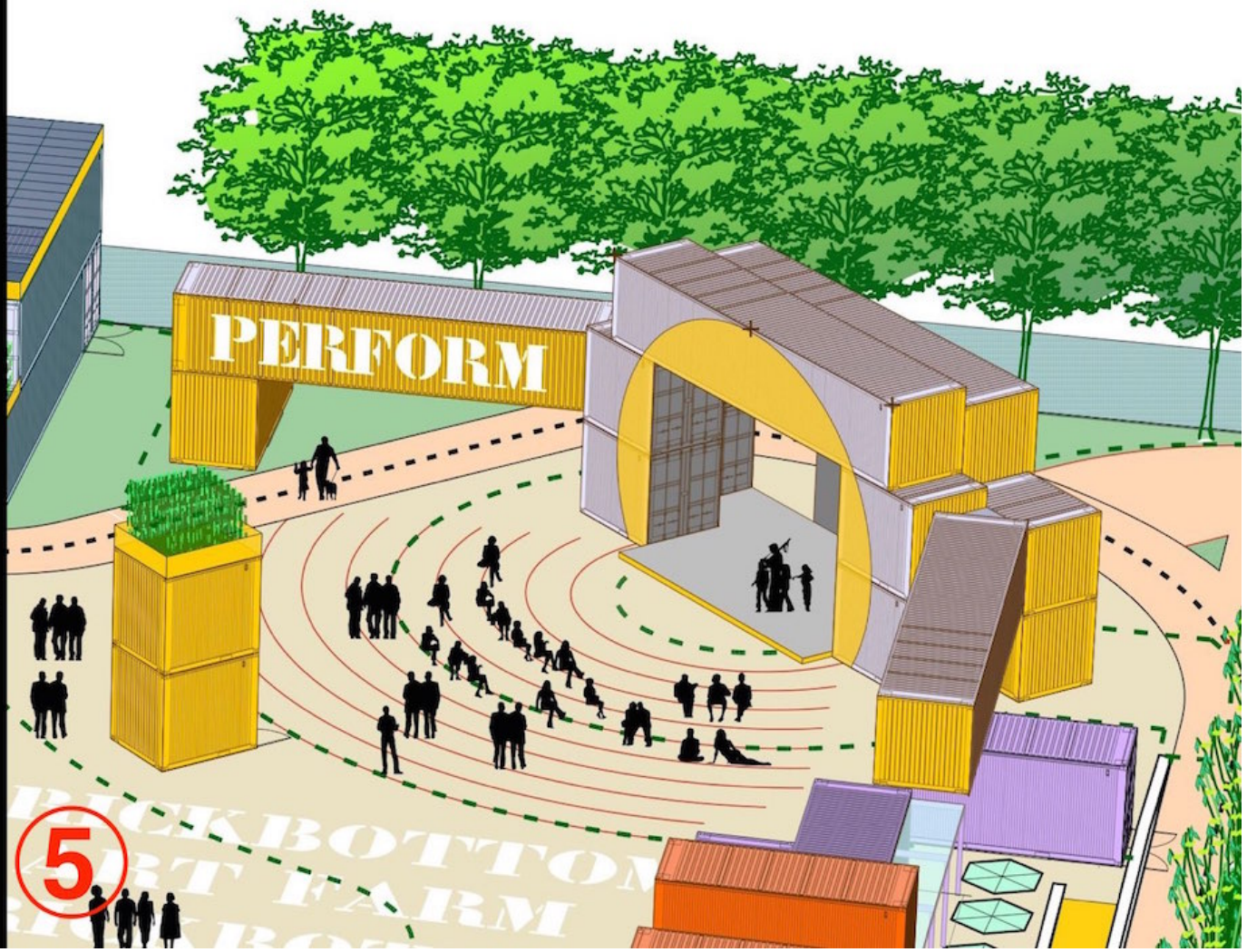
b. 3–400 PEOPLE sitting 1,000 + standing

c. Support and Prep SPACES

d. Easy Load-in ACCESS

e. DRAMA, MOVIES, MUSIC, SPEECH, ETC

ARTFarm: 5



Los Vegas Container Park
PERFORM
5
ARTFarm:

6. Artist STUDIOS (12,900 sf)

a. 50–55 STUDIOS on 2 Levels

b. 9–11 Studios per SHARED COURT

c. Secure YEAR ROUND USE

d. Numerous DISPLAY OPTIONS

e. SOLAR Roof Systems

ARTFarm: 6

Studio 140 SF
Studio 140 SF
Studio 140 SF
Studio 140 SF
COVERED COURT 1024 SF
Studio 140 SF
Studio 140 SF
Studio 140 SF
STUDIOS B
A STUDIOS
ARTFarm:
6
dellacooks.com

7. Grow / OPEN SPACE (13,600 sf)

a. 11,000 sf GROW SPACE PARK

b. POLLINATOR PLANTS & Test VEGETABLES 100 raised beds

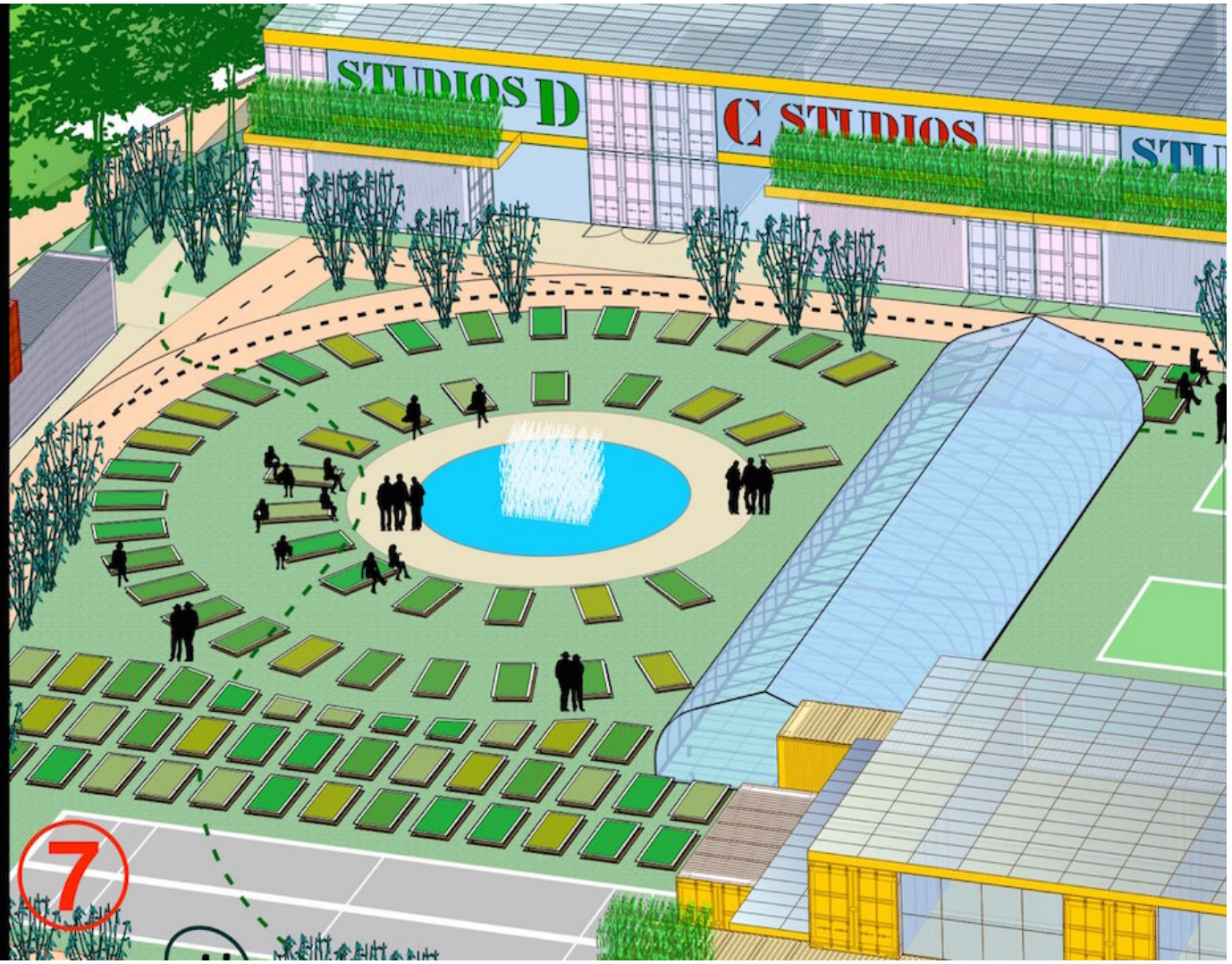
c. 2,600 sf Teaching GREEN HOUSE

d. WATER ELEMENT

e. Upper BEE HOUSE

f. Composting Demo SYTEMS

ARTFarm:



Sarah Howard
STUDIOS D
C STUDIOS
ARTFarm:
7

8. Creative YOUTH SPACE (3,100 sf + general access)

a. Secure Year Round FACILITIES

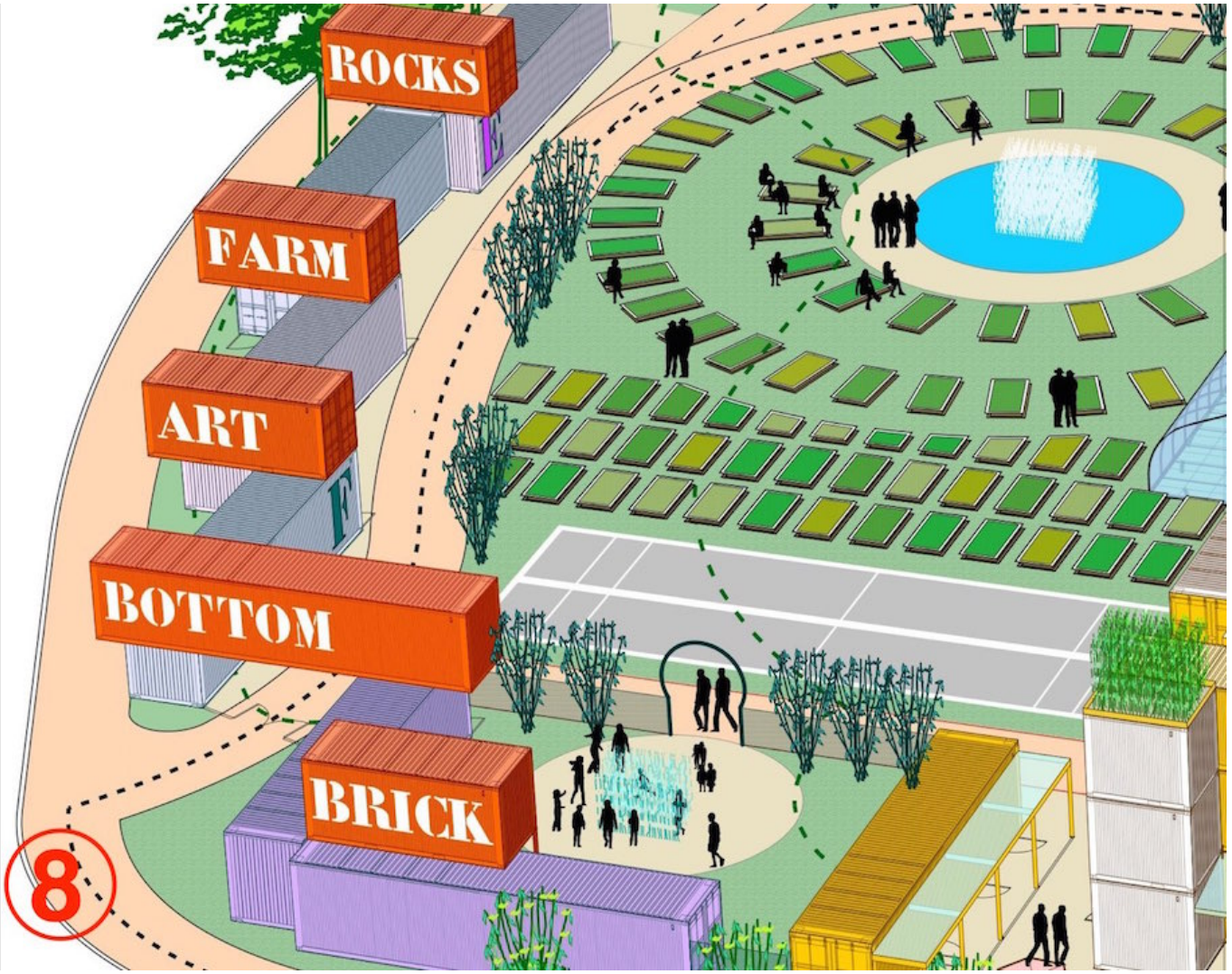
b. Play YARD

c. Splash FOUNTAIN

d. Arts TRAINING

e. Access to PARK & RECREATION

ARTFarm:



Ross Miller
biophiliccities
dnainfo.com
terrafluxus.com
streets.mn
thehighline.org
FARM
ART
BOTTOM
BRICK
8
ARTFarm:

9. Recreational LAWN & TRACK (part of main activity space)

a. 9,200 sf GRASS

b. Passive LOUNGING

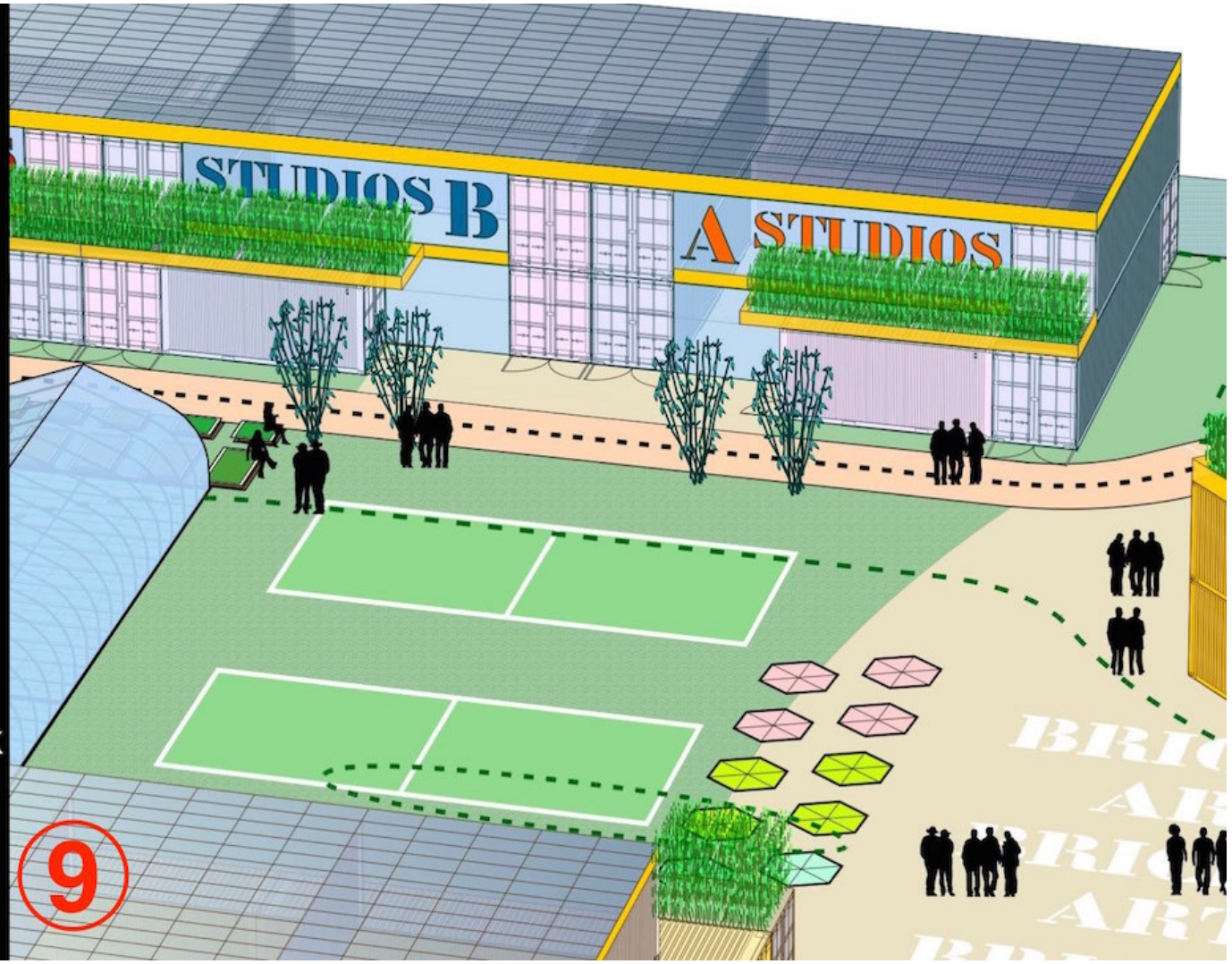
c. Frisbee TOSS

d. Badminton COMPETITION

e. EXHIBITIONS

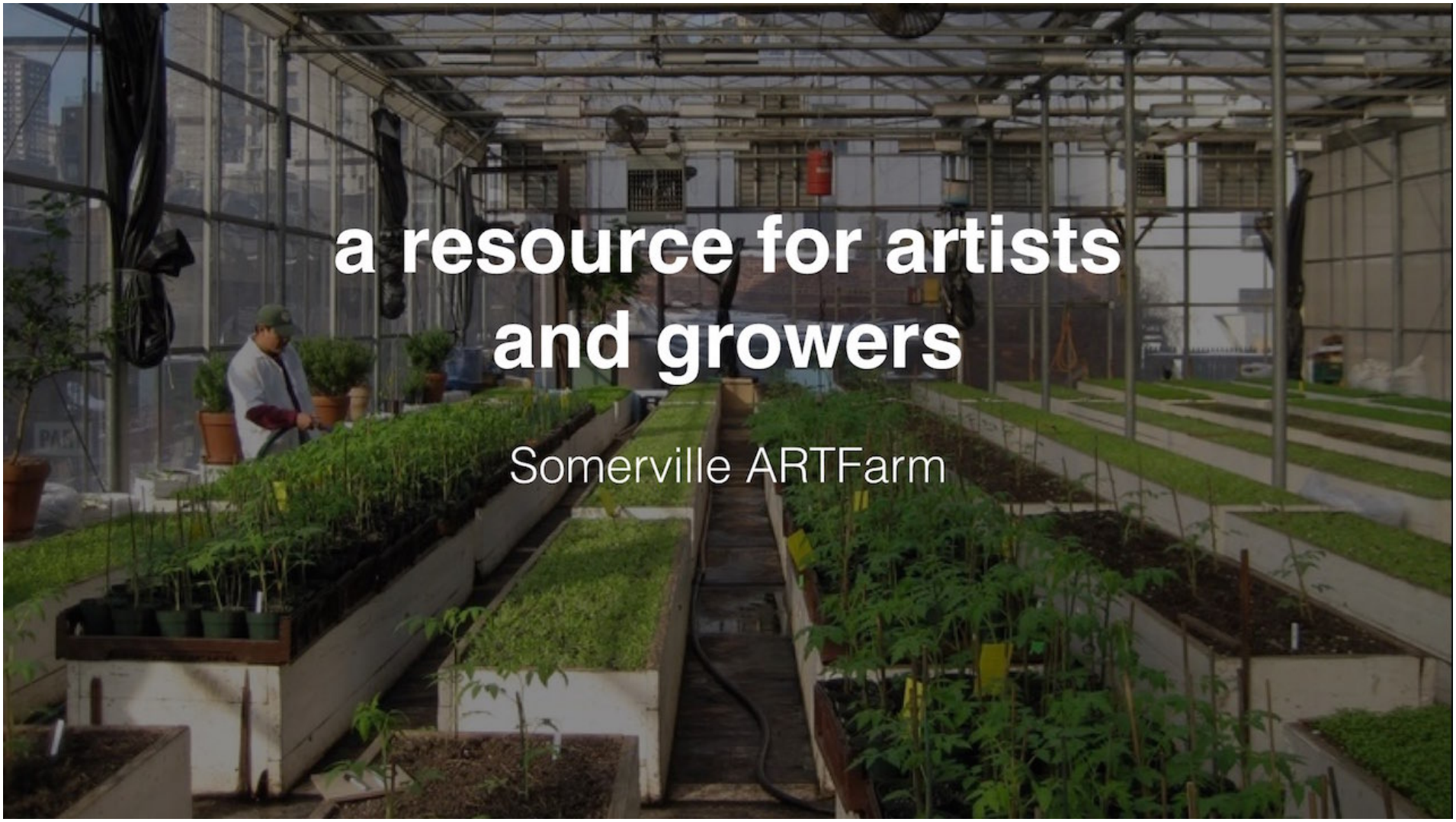
f. ⅕ mile Walking TRACK

ARTFarm: 9



MakersFaire.com
STUDIOS B
A STUDIOS
9
6
ARTFarm:

ARTFarm: Outcomes

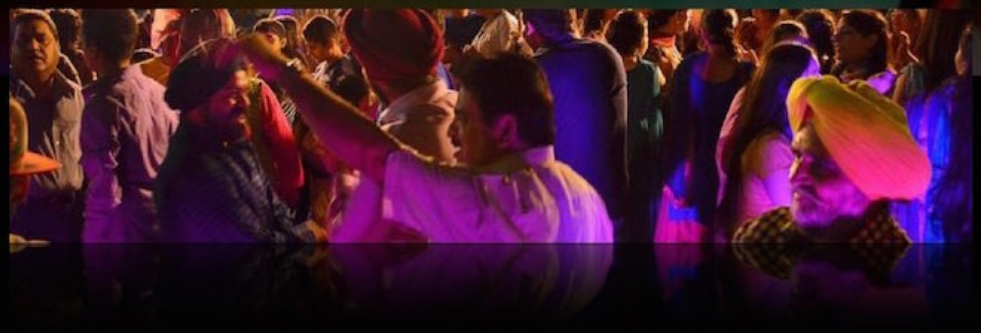

a resource for artists
and growers
Somerville ARTFarm

a resource for artists
and performers
Somerville ARTFarm

Artisan's ASYLUM
GREENTOWNLABS
BAA
SOMERVILLE FIRST SOURCE JOBS INITIATIVE
SOMERVILLE
Think local. Shop local.
LOCAL FIRST
a local economic catalyst
Somerville ARTFarm

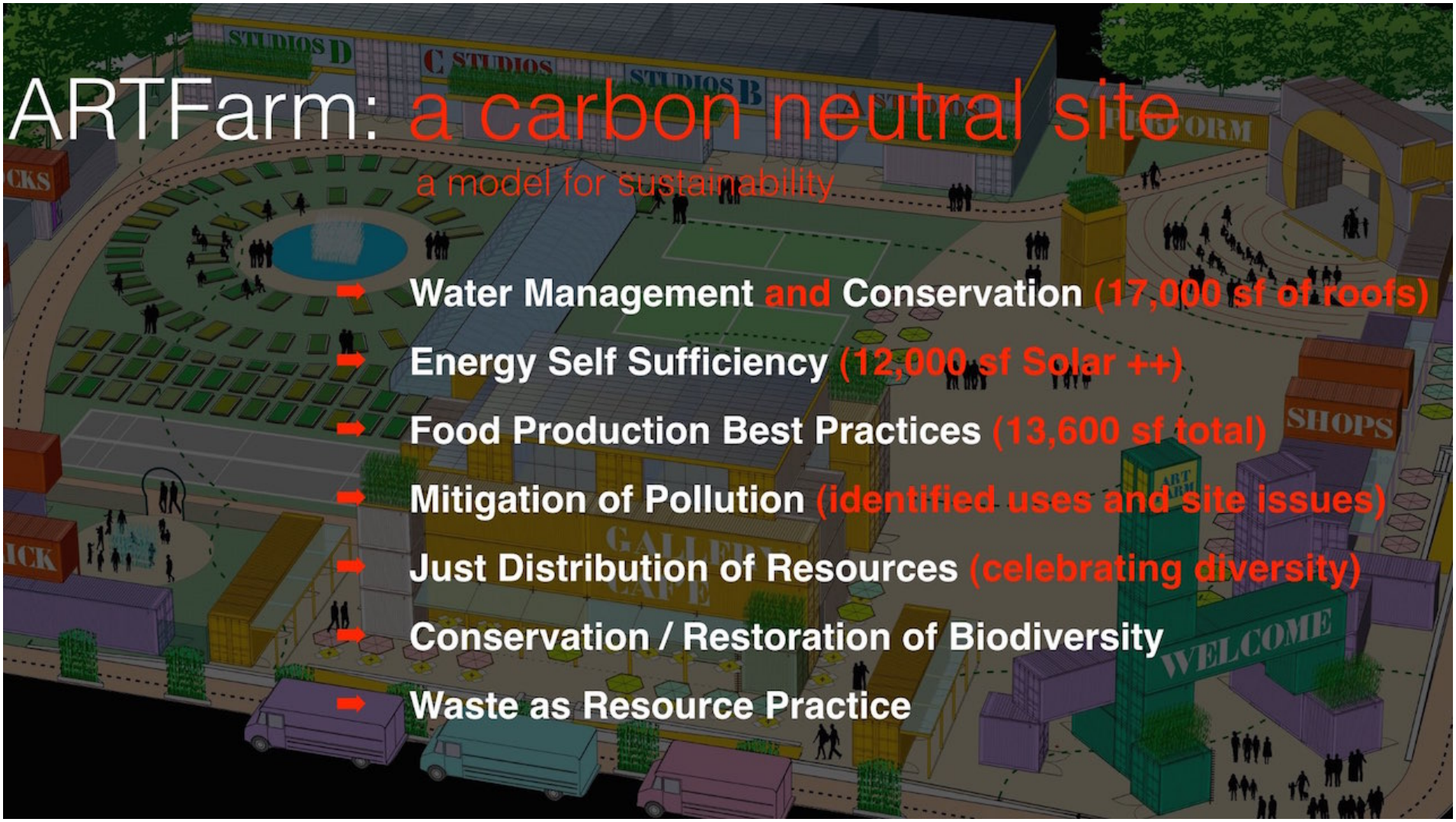
celebration of diversity

Somerville ARTFarm



place for families
Somerville ARTFarm

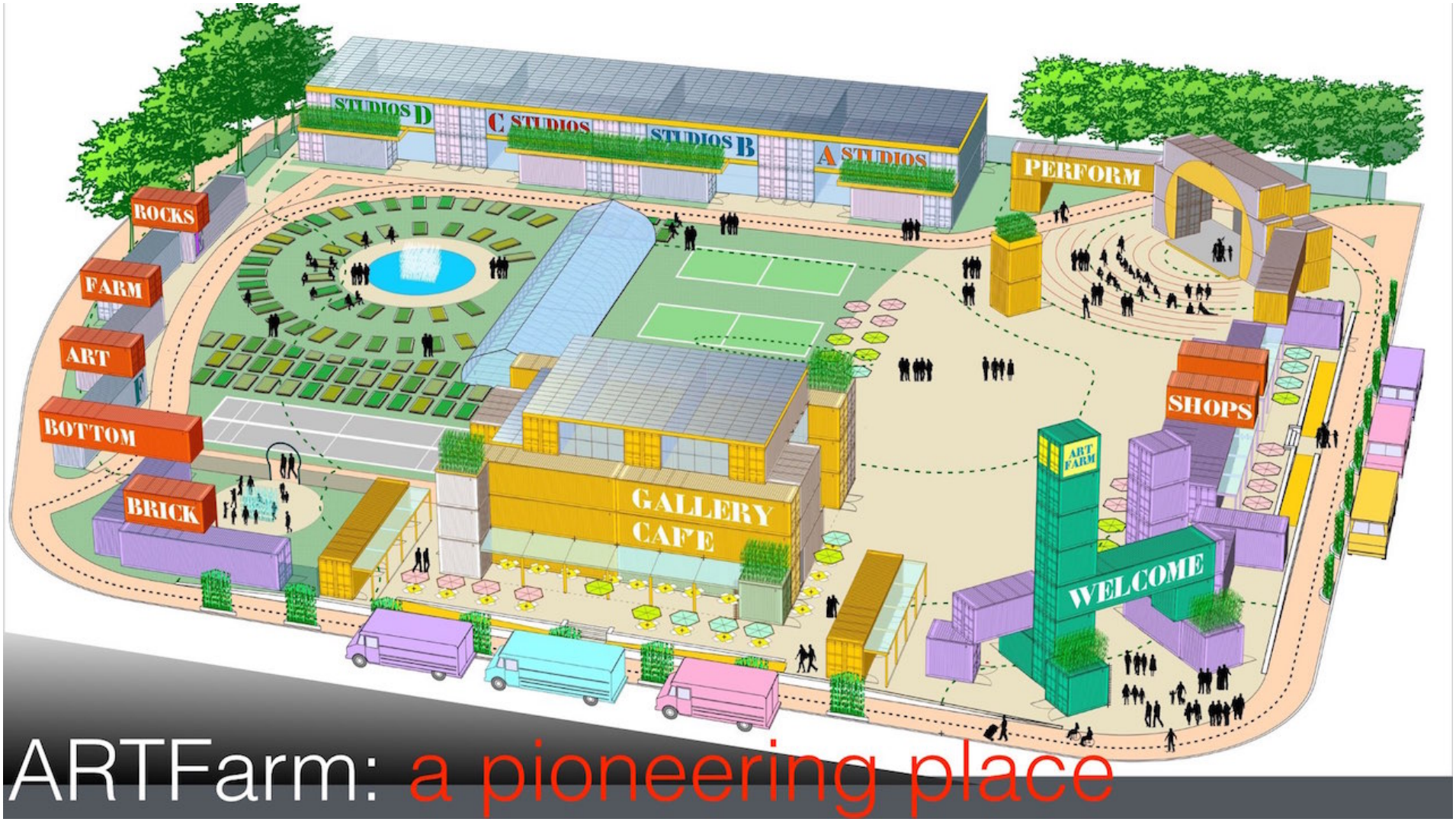
mixed use open space
Somerville ARTFarm



ARTFarm: a carbon neutral site

a model for sustainability

- Water Management and Conservation (17,000 sf of roofs)
- Energy Self Sufficiency (12,000 sf Solar ++)
- Food Production Best Practices (13,600 sf total)
- Mitigation of Pollution (identified uses and site issues)
- Just Distribution of Resources (celebrating diversity)
- Conservation / Restoration of Biodiversity
- Waste as Resource Practice



ARTFarm: a pioneering place

Attachment 2

Licensed Site Professional (LSP) report regarding environmental site condition

ENVIRONMENTAL COMPLIANCE SERVICES, INC.
10 State Street, Woburn, MA 01801 tel 781.246.8897 fax 781.246.8950 www.ecsconsult.com

February 12, 2015
ECS Project No. 05-221790

Mr. Vithal Deshpande
Environmental Coordinator
City of Somerville
50 Evergreen Avenue
Somerville, Massachusetts 02145

RE: November 2014 Subsurface Investigation Results
10 Poplar Street
Somerville, Massachusetts
MassDEP RTN 3-32211

Dear Mr. Deshpande:

As requested, Environmental Compliance Services Inc. (ECS) has prepared this letter report detailing the results of subsurface investigation activities that were completed in November 2014 at the property located at 10 Poplar Street in Somerville, Massachusetts (here-in-after referred to as the "Site"). The work was performed as detailed in ECS' July 2014 Scope of Services. This letter also provides conclusions regarding Site conditions based on the laboratory analytical results for the May 2014 subsurface investigation activities and provides recommendations for Site closure in accordance with the Massachusetts Contingency Plan MCP), 310 CMR 40.0000. A Site Locus Map is provided as Figure 1 and a Site Plan is provided as Figure 2.

1.0 SITE DESCRIPTION

The Site is owned by the City of Somerville, Massachusetts and consists of approximately 2.1 acres of land. The Site is currently vacant and access is restricted via a locked chain-link fence that surrounds the perimeter of the Site. According to historic Sanborn Fire Insurance Company Maps, prior to 1950, several residential apartments and dwellings were located at the Site, as well as a restaurant, a school, stores and a gasoline dispensing facility (see Figure 2). The Site was also historically depicted as being utilized for drum and barrel storage and sales. A two-story building of concrete block/brick construction, with a footprint of approximately 34,464 square feet (ft^2), was previously located at the Site. According to the City of Somerville assessor's field card, that building was constructed in 1950. Reportedly, a solid waste incinerator operated at the Site in the former building described herein for approximately 30 years. Subsequently, the Site, including the former incinerator building, was utilized by Waste Management as a solid waste transfer station. During Waste Management's tenure at the Site, vehicle repairs were conducted in the southern portion of the former on-site building. The former two-story Site building was demolished during the winter of 2013/2014. In addition, a lead smelting company was historically located approximately 350 ft to the southeast of the Site, on Chestnut Street (demolished in 1997).

Currently, the Site is vacant of buildings, but the western portion of the Site is temporarily being used as a staging area for construction materials including sand, gravel and asphalt. The land surface at the Site is improved primarily with asphalt pavement in the southern and eastern portions of the property, the concrete slab on which the former two-story Site building was built in the central and northwestern portions of the Site, and a round concrete slab which may have been a footing for a former smokestack (located to the east of the former Site building, abutting Linwood Street). Small landscaped areas are

located along the southwestern and southeastern perimeters of the Site as well as in the northern corner of the Site. The remaining portions of the Site not described herein are unpaved.

The northwestern portion of the Site was historically operated as a gasoline dispensing facility and, as such, the potential presence of Underground storage tanks (USTs) was also evaluated by ECS. Historical records from the Somerville Fire Department (SFD) indicate that one 1,500-gallon gasoline UST and one 500-gallon waste oil UST were removed from the Site in 1957. In addition, one 3,000-gallon gasoline UST was documented as having been removed from the Site in 1970. A 1,000-gallon fuel oil UST was removed from the Site in 1985 and lastly, one 500-gallon waste oil UST was removed from the Site in 2005. ECS did not obtain any information related to the specific locations of these former USTs at the Site. According to Lieutenant MacLaughlin of the SFD Fire Prevention Office, there are records of a wastewater UST being installed at the Site, however, there are no records detailing the removal of the wastewater UST being removed from the Site. Lieutenant MacLaughlin indicated that the location of the wastewater UST, if it were present, would be adjacent to the southwestern side of the former on-site building. Lieutenant MacLaughlin also indicated that the vehicle repairs that were conducted at the Site when it operated as a solid waste transfer facility occurred in the southern portion of the former on-site building.

Since a nearby property located to the southeast of the Site was formerly operated as a lead smelting facility, the potential presence of heavy metals was a concern. Historical Site operations, including trash incineration and vehicle repairs, may also have resulted in the presence of heavy metals at the Site. Similarly, due to the incineration operations conducted at the Site historically, ECS recommended evaluating Site conditions for the potential presence of polycyclic aromatic hydrocarbons (PAHs). PAHs and metals may also have been deposited at the Site historically since early Site usage consisted of residential dwellings where coal and wood ash containing PAHs and metals would have been generated during combustion processes associated with home heating. Other historical Site operations, including the prior uses of the Site as a barrel storage facility and a gasoline dispensing facility, as well as the performance of vehicle repairs, present an uncertainty with respect to what, if any, waste materials were stored at the Site and whether there were potentially any releases of oils and/or gasoline or other hazardous materials at the Site. Based on this historical information, ECS initially recommended the performance of a subsurface investigation program and the collection and laboratory analysis of soil and/or groundwater samples for volatile organic compounds (VOCs), PAHs, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), polychlorinated biphenyls (PCBs) and/or Massachusetts Contingency Plan (MCP) 14 metals.

An online search of state reportable releases database via the Massachusetts Department of Environmental Protection's (MassDEP) "Searchable Sites" database indicated that the Site was the location of two historical releases: a release of approximately 25 to 30 gallons of hydraulic oil to the pavement in January 1996 and a release associated with a small plastic container and an unknown chemical that resulted in the formation of a dense mist around the container in September 2001. Both of these releases were remediated such that background levels were achieved at the Site. There were no documented release of oil and/or hazardous materials (OHM) located on properties immediately adjacent to the Site.

2.0 PREVIOUS INVESTIGATIONS

2.1 GROUND PENETRATING RADAR AND ELECTROMAGNETIC INDUCTION SURVEY – APRIL 2014

In April 2014 ECS oversaw Radar Solutions International, Inc. (RSI) of Waltham, Massachusetts perform a geophysical investigation at the Site consisting of a GPR and EMI survey. This was done in order to evaluate select areas of the Site for the potential presence of USTs or other underground utilities. There were two main areas of investigation at the Site that were the focus of the GPR and EMI survey. Area 1

was a 140 ft by 100 ft area located in the western portion of the Site adjacent to a large reinforced concrete pad that remains at the Site, in the vicinity of soil boring B-10. Area 2 was a smaller, 30 ft by 50 ft area, adjacent to another reinforced concrete pad located at the Site, in the vicinity of soil boring/monitoring well B-9/ECS-9. The locations of Area 1 and Area 2 are depicted on the Site Plan, included as Figure 2. The results of the GPR and EMI survey indicated the following:

- The EMI contour in Area 1 depicts a large metal target in the northwest corner of the grid that could be indicative of a UST. However, the EMI anomaly is not coincident with any observed GPR targets. As a result, RSI determined that the EMI anomaly may have been more likely to have been caused by a buried reinforced concrete pad rather than a UST; and,
- The EMI data for Area 2 indicated that buried metal may be present along the eastern edge of that grid. However, there was no associated GPR target observed. As such, RSI determined that this anomaly could also be caused by a buried concrete pad or possibly the close proximity of the above-ground reinforced concrete pad, which may have been more heavily reinforced in some areas than others.

2.2 Soil Boring Advancement/ Monitoring Well Installation – May 2014

In May 2014, ECS oversaw the advancement of 10 soil borings at the Site (designated B-1 through B-10), five of which were completed as groundwater monitoring wells (designated ECS-2, ECS-3, ECS-4, ECS-8 and ECS-9). All of the soil borings were advanced to depths ranging up to 15 ft below ground surface (bgs). Soil samples were collected continuously from the ground surface to the terminus of each soil boring. As indicated in the soil boring logs, soils observed during the soil boring advancement activities consisted primarily of poorly sorted, fine to coarse sands interspersed with some gravel. These materials were underlain, at observed depths ranging from 8 to 15 ft bgs, by a clay layer. Evidence of urban fill material including pieces of brick, glass and wood, as well as ash were also encountered in soil samples collected from several soil boring locations. Based on their locations as well as visual observations and field screening results, the following soil samples were also submitted to Accutest Laboratories of Marlborough, Massachusetts (Accutest) for laboratory analysis of the following parameters:

Boring ID	Depth Interval (feet)	Laboratory Analyses
B-1	0-1	Metals, PCBs
	3-5	Metals, PCBs, EPH, VPH, VOCs
B-2	0-1	Metals, PCBs
	3-5	SVOCs
	7-8	Metals, SVOCs
B-3	2-3	Metals, PCBs
	5-6	Metals
B-4	0-2	Metals, SVOCs, PCBs
	6-7	Metals
B-5	5-10	Metals, PCBs
B-6	2-3	Metals, PCBs
	14-15	Metals, EPH, VPH, VOCs
B-7	2-3	Metals, SVOCs, PCBs
B-8	0-2	Metals, SVOCs, PCBs
	2-3	Metals
B-9	0-1	Metals, SVOCs, PCBs
	7-8	Metals, PCBs, EPH, VPH, VOCs
B-10	0-1	Metals, SVOCs, PCBs
	6.5-7.5	Metals, SVOCs, PCBs

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Notes:
PCBs = Polychlorinated Biphenyls by USEPA Method 8082
SVOCs = Semi-volatile organic compounds by USEPA Method 8270 (PAHs)
EPH = Extractable Petroleum Hydrocarbons with target PAHs by MassDEP Methods
VOCs = Volatile Organic Compounds by USEPA Method 8260
VPH = Volatile Petroleum Hydrocarbons with target VOCs by MassDEP Methods

The laboratory analytical results for the soil samples collected from soil borings B-1 through B-10 indicated that VOCs were not detected in any of the three soil samples analyzed for those parameters at concentrations greater than their respective laboratory method detection limits (MDLs). VPH carbon fraction ranges and/or naphthalene were detected in all three soil samples submitted for VPH analysis; however, none of the concentrations exceeded their respective, applicable MCP RCS-1 Reportable Concentrations. EPH carbon fraction ranges and/or PAHs/SVOCs were detected in soil samples collected from soil borings B-1, B-2, B-4, B-9 and B-10. The concentrations of select PAHs/SVOCs in the soil samples collected from soil borings B-1 at 3 to 5 ft bgs, B-2 at 3 to 5 ft bgs and 7 to 8 ft bgs, B-4 at 0 to 2 ft bgs and B-9 at 7 to 8 ft bgs exceeded their respective, applicable MCP RCS-1 Reportable Concentrations.

PCBs were detected in soil samples collected from soil borings B-1 through B-3, at depth intervals ranging from 0 to 8 ft bgs, at concentrations greater than their respective laboratory MDLs. The concentration of PCBs detected in the soil sample collected from soil boring B-10 at 6.5 to 7.5 ft bgs exceeded the MCP RCS-1 Reportable Concentration for that parameter.

The MCP 14 metals analyses indicated that arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, vanadium and/or zinc were detected at concentrations greater than their respective laboratory MDLs in all of the soil samples analyzed for those parameters. The concentrations of lead detected in the soil samples collected from soil borings B-1 at 3 to 5 ft bgs, B-2 at 7 to 8 ft bgs, B-3 at 2 to 3 ft bgs and 5 to 6 ft bgs, B-4 at 0 to 2 ft bgs and 6 to 7 ft bgs, B-6 at 2 to 3 ft bgs and 14 to 15 ft bgs, B-9 at 0 to 1 ft bgs and 7 to 8 ft bgs and B-10 at 6.5 to 7.5 ft bgs all exceeded the MCP RCS-1 Reportable Concentration for that parameter.

The laboratory analytical results for the soil samples collected from soil borings B-1 through B-10 in May 2014 are summarized in Tables 1 through 5.

2.3 Groundwater Sample Collection and Differential Survey – May 2014

On May 8, 2014, ECS personnel returned to the Site in order to collect groundwater samples from four of the newly installed groundwater monitoring wells (ECS-2, ECS-3, ECS-8 and ECS-9) at the Site. At that time, the depth to groundwater ranged from 6.1 ft bgs in monitoring well ECS-4 to 10.58 ft bgs in monitoring well ECS-9. All of the samples were submitted to Spectrum Analytical, Inc. (Spectrum) of Agawam, Massachusetts for laboratory analysis for MCP 14 metals, EPH, VPH and VOCs. Additionally, the groundwater samples collected from groundwater monitoring wells ECS-2, ECS-8 and ECS-9 were also submitted for laboratory analysis for PCBs.

In addition to the collection of groundwater samples from the newly installed monitoring wells, on May 8, 2014 ECS personnel also completed a differential elevation survey of the groundwater monitoring well casings. The monitoring well casing elevations, in conjunction with the depths to groundwater observed at the Site on May 8, 2014, were utilized to determine the groundwater flow direction beneath the Site. Based on this data, groundwater flow is inferred to be generally toward the west; however, some variability in groundwater elevation was observed which may be due to the presence of underground structures such as concrete walls, footings etc. that may be affecting groundwater flow at the Site.

The VOC laboratory analytical results for the groundwater samples collected from monitoring wells ECS-2, ECS-3, ECS-8 and ECS-9 indicated that trace concentrations of Freon 113 and acetone were detected

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in the groundwater sample collected from monitoring well ECS-3. VOCs were not detected in any of the other groundwater samples at concentrations greater than their respective laboratory MDLs. Additionally, VPH, EPH and PCBs were not detected in any of the groundwater samples at concentrations greater than their respective laboratory MDLs. The MCP 14 metals analyses for the groundwater samples indicated that low concentrations of dissolved barium, nickel and/or zinc were detected in all four groundwater samples analyzed; however, none of the concentrations of these parameters exceeded their respective, applicable MCP RCGW-2 Reportable Concentrations.

The laboratory analytical results for the groundwater samples collected from monitoring wells ECS-2, ECS-3, ECS-8 and ECS-9 in May 2014 are summarized in Tables 6 through 9.

2.4 MassDEP Notification – RTN 3-32211

Based on the presence of lead, PCBs and select SVOCs/PAHs in Site soils at concentrations greater than their respective MCP RCS-1 Reportable Concentrations, a MCP 120-day reporting condition existed for the Site, in accordance with 310 CMR 40.0315(2). On behalf of the City of Somerville, ECS submitted a Release Notification Form (RNF) to the MassDEP for the release condition on June 2, 2014. The MassDEP subsequently issued Release Tracking Number (RTN) 3-32211 to the release condition.

3.0 SUBSURFACE INVESTIGATION – NOVEMBER 2014

Based on the results of the subsurface investigation activities conducted at the Site in April and May 2014, ECS personnel returned to the Site in November 2014 to oversee additional subsurface investigation activities at the Site in order to estimate the extent of OHM.

3.1 Soil Boring Advancement/ Monitoring Well Installation – November 2014

On November 24 and 25, 2014, ECS oversaw Drilex advance 10 additional soil borings at the Site, designated PB-1 through PB-10 and install 1 overburden aquifer groundwater monitoring well, designated ECS-1. All of the soil borings were advanced to depths ranging up to 20 ft bgs using a Geoprobe® direct push probing system. Soil boring/monitoring well construction logs are included in Attachment I.

Soil borings PB-1 through PB-10 were advanced in various locations throughout the entire Site. The locations of the soil borings and groundwater monitoring well were chosen based on known and/or suspected locations at the Site that may have been proximal to higher risk historical operations as well as based on the laboratory analytical results for soil samples collected during the May 2014 investigation and the need to further delineate the horizontal and vertical extents of lead and PAH impacts to soil at the Site. Prior to advancement of the soil borings with the Geoprobe® rig, all of the soil borings were pre-cleared to a depth of approximately 6 ft bgs utilizing a vactor truck.

ECS field personnel were present at the Site during the pre-clearing and soil boring advancement activities in order to direct the activities and to collect and log soil samples for lithological description and field screening. During the pre-clearing activities, soil samples were collected at various depth intervals with a hand auger. During the soil boring advancement activities, soil samples were collected continuously into acetate liners via direct push methodology. The field screening activities included testing soil samples in the field with a portable photoionization detector (PID) for the presence of VOCs.

Soil samples were collected continuously from the ground surface to the terminus of each soil boring location. As indicated in the soil boring logs, soils observed during the soil boring advancement activities consisted primarily of poorly sorted, fine to coarse sands interspersed with some gravel. These materials were underlain, at observed depths ranging from 8 to 15 ft bgs, by a clay layer. Evidence of urban fill material including pieces of brick and glass, as well as coal ash were also encountered in soil samples collected at several soil borings. PID field screening results for the soil samples collected during the soil

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boring advancement activities ranged from non-detect at the instrument's detection limit of 0.1 parts per million (ppm) to 1.6 ppm (soil boring PB-6, 7 to 9 ft bgs). Based on the locations as well as visual observations and PID field screening results, the following soil samples were also submitted to Accutest Laboratories of Marlborough, Massachusetts (Accutest) for laboratory analysis of the following parameters:

Boring ID	Depth Interval (feet)	Laboratory Analyses
PB-1	0-2	PCBs, Lead
	1-3	SVOCs
	5-7	Lead
	6-8	SVOCs
	10-11	VPH, EPH
PB-2	0-2	PCBs, Lead
	1-3	SVOCs
	5-7	Lead
	6-8	VPH, EPH, PCBs
PB-3	0-2	PCBs, Lead
	1-3	SVOCs
	5-7	SVOCs
	8-10	Lead
PB-4	0-2	PCBs, Lead
	1-3	SVOCs
	5-7	Lead
	6-8	SVOCs, PCBs
PB-5	0-2	PCBs, Lead
	1-3	SVOCs
	6-8	PCBs, Lead
PB-6	0-2	PCBs, Lead
	1-3	SVOCs
	13-15	PCBs
	18-20	Lead
PB -7	0-2	PCBs, Lead
	1-3	SVOCs
	6-7.5	SVOCs
PB-8	0-2	PCBs, Lead
	1-3	SVOCs
	6-8	SVOCs
	8-10	VPH, EPH, Lead
PB-9	0-2	PCBs, Lead
	1-3	SVOCs
	6-8	Lead
	8-10	PCBs
	13-15	SVOCs
PB-10	0-2	PCBs, Lead
	1-3	SVOCs
	6	VPH, EPH
	6-8	SVOCs, Lead
	8-10	PCBs

Notes:
PCBs = Polychlorinated Biphenyls by USEPA Method 8082
SVOCs = Semi-volatile organic compounds by USEPA Method 8270 (PAHs)

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EPH = Extractable Petroleum Hydrocarbons with target PAHs by MassDEP Methods
VPH = Volatile Petroleum Hydrocarbons with target VOCs by MassDEP Methods

During the soil boring advancement activities, groundwater was observed at a depth of approximately 5 to 7 ft bgs. One 2-inch diameter polyvinyl chloride (PVC) groundwater monitoring well, constructed with 10 ft of slotted well screen, was installed in soil boring PB-1. The borehole annulus surrounding the monitoring well was backfilled from the terminus of the boring to a depth approximately one foot above the well screen with filter sand pack. Above the sand pack, a one-foot thick bentonite seal was placed in the annulus, followed by native soil to ground level. The monitoring well was completed at the ground surface with a water tight road box, set in concrete and flush with grade.

3.1.1 Soil Sample Laboratory Analytical Results

The laboratory analytical results for the soil samples collected from soil borings PB-1 through PB-10 indicated that VPH constituents were not detected in any of the four soil samples analyzed for those parameters at concentration greater than their respective laboratory MDLs. Additionally, EPH constituents were also not detected in two of the four soil samples analyzed for those parameters at concentration greater than their respective laboratory MDLs. In the remaining two soil samples, EPH carbon fraction ranges and PAHs were detected at concentrations greater than their respective laboratory MDLs but lower than their respective, applicable MCP Method 1 S-1, S-2 and S-3 Soil Standards.

PCBs were not detected in the soil samples submitted for laboratory analysis for those parameters in the soil samples collected from soil borings PB-5 or PB-10. PCBs were detected in select soil samples collected from soil borings PB-1 through PB-4 and PB-6 through PB-9 at concentrations greater than their respective laboratory MDLs but lower than their respective, applicable MCP Method 1 S-1, S-2 and S-3 Soil Standards.

SVOCs were not detected in the soil samples collected from soil borings PB-4 (6 to 8 ft bgs), PB-8 (6 to 8 ft bgs), PB-9 (13 to 15 ft bgs) or PB-10 (6 to 8 ft bgs). SVOCs were detected in all of the remaining soil samples submitted for laboratory analysis for those parameters at concentrations greater than their respective laboratory MDLs. The only soil sample that exhibited SVOC concentrations greater than their respective, applicable MCP Method 1 S-1 and/or S-3 Soil Standards was the soil sample collected from soil boring PB-9 at 1 to 3 ft bgs.

Lead was detected at concentrations greater than the laboratory MDL in all of the soil samples submitted for laboratory analysis for that parameter. The concentrations of lead detected in the soil samples collected from soil borings PB-1 (5 to 7 ft bgs), PB-3 (0 to 2 ft bgs), PB-4 (5 to 7 ft bgs), PB-5 (0 to 2 ft bgs), PB-6 (0 to 2 ft bgs), PB-7 (0 to 2 ft bgs) and PB-10 (0 to 2 ft bgs) were greater than the MCP Method 1 S-1 Soil Standard for that parameter.

The laboratory analytical results for the soil samples collected in November 2014 indicated that elevated concentrations of SVOC/PAHs and lead are present throughout the Site and that these impacts extend to the boundaries of the property. The laboratory analytical results for the soil samples collected from soil borings PB-1 through PB-10 in November 2014 are summarized in Tables 1 through 5 and the laboratory analytical certificates are provided as Attachment II.

3.2 IMMINENT HAZARD EVALUATION

ECS evaluated the Site conditions and soil laboratory analytical data to ensure that there are no releases at the Site which shall be deemed to or could pose an IH condition per 310 CMR 40.0324 of the MCP. ECS

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has determined that the release condition at the Site does not pose an IH to human health, safety, public welfare and/or the environment based on the following:

- The release has not likely resulted in the presence of OHM vapors within buildings, structures, or underground utility conduits at a concentration equal to or greater than 10% of the Lower Explosive Limit;
- The released materials are not considered reactive or explosive hazardous materials, as described in 310 CMR 40.0347 of the MCP, which threaten human health or safety;
- The release was not a release to a roadway that endangers public safety;
- The nature of the release is not such that it poses a significant risk to human health when present for even a short period of time, as specified in 310 CMR 40.0950[1];
- The release will not produce immediate or acute adverse impacts to freshwater or saltwater fish populations;
- The release does produce readily apparent effects to human health, including respiratory distress or dermal irritation;
- The release to the environment has not resulted in the measurement of concentrations of Hazardous material, equal to or greater than any of the following concentrations at the ground surface or within a depth of twelve inches bgs, at a location within 500 ft of a residential dwelling, school, playground, recreation area or park:

Hazardous Material	CAS Number	Concentration
Arsenic	7440382	40 mg/Kg
Cadmium	7440439	60 mg/Kg
Chromium (VI) (or Total Chromium in the absence of CrVI data)	18540299	200 mg/Kg
Cyanide	57125	100 mg/Kg
Mercury (total)	7439976	300 mg/Kg
Methyl Mercury	22967926	10 mg/Kg
PCBs	1336363	10 mg/Kg

- Long-term risk levels associated with current exposures are not greater than ten times the Cumulative Receptor Risk Limits in 310 CMR 40.0993(6)[2].

4.0 CONCLUSIONS

The laboratory analytical data for soil samples collected from soil borings advanced at the Site in May and November 2014 indicate that concentrations of PCBs were detected in various soil boring locations at depths ranging from the ground surface to approximately 10 ft bgs. However, only one PCB concentration exceeded the applicable MCP Method 1 S-1 Soil Standard for that parameter (B-10, 6.5 to 7.5 ft bgs). These data indicate that, although present, the site-wide concentrations of PCBs detected in soil may not pose a significant risk of harm to human health.

[1]This was determined by completing a MassDEP Short form for Human Health Risk Assessment under the MCP for the Trespasser Soil Imminent Hazard scenario (v0414). The exposure point concentrations (EPCs) that were utilized in the assessment were set equal to the maximum concentrations of all contaminants detected in soil samples collected from the 0 to 3 ft bgs depth interval.
[2]This was determined by completing a MassDEP Shortform for Human Health Risk Assessment under the MCP for the Trespasser Soil (chronic and cancer risk) scenario (v0414). The exposure point concentrations (EPCs) that were utilized in the assessment were set equal to the maximum concentrations of all contaminants detected in soil samples collected from the 0 to 3 ft bgs depth interval.

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The VOC laboratory analytical data was obtained from soil borings B-1, B-6 and B-9. These data indicate that, with the exception of a low concentration of naphthalene detected in soil boring B-9, VOCs were not detected at concentrations greater than their respective laboratory MDLs in the soil samples collected from these soil borings. Based on these laboratory analytical results, additional characterization of VOCs is not warranted at the Site.

VPH analyses of soil samples collected from the Site indicate that low concentrations (below applicable MCP Method 1 Soil Standards) of C_9-C_{12} aliphatic hydrocarbons, C_9-C_{10} aromatic hydrocarbons and/or naphthalene were detected in 3 out of 7 soil samples analyzed for VPH. Additionally, EPH laboratory analytical results indicate that EPH carbon fraction ranges were detected in 5 out of the 7 soil samples analyzed for those parameters; however, all of the concentrations were lower than the most conservative MCP Method 1 S-1 Soil Standards. Although several PAHs were detected at concentrations exceeding their respective, applicable MCP Method 1 S-1 Soil Standards in the soil sample collected from soil boring B-9 at 7 to 8 ft bgs, the EPH carbon fraction range concentrations in that soil sample were below their respective MCP Method 1 S-1 Soil Standards. Based on VPH carbon fraction range and target analyte data it is the opinion of ECS that additional characterization of these parameters in soil is not warranted. Based on available data, the presence of VPH carbon fraction ranges and target analytes, EPH carbon fraction ranges and VOCs in soil may not pose a significant risk of harm to human health at the Site.

Laboratory analytical data for SVOCs indicated that the concentrations of select SVOCs/PAHs detected in soil samples collected from soil borings B-1, B-2, B-4, B-9 and PB-9, at depths ranging from the ground surface to 8 ft bgs, exceeded their respective, applicable MCP Method 1 S-1 Soil Standards. Additionally, select SVOCs/PAHs were detected in soil samples collected from soil borings B-10, PB-1 through PB-7 and PB-10, at concentrations greater than their respective laboratory MDLs but lower than their respective MCP Method 1 S-1 Soil Standards. The laboratory analytical data for the SVOC analyses indicate that the these contaminants are present in soil at varying concentrations, at depths ranging from the ground surface to 8 ft bgs, throughout the Site. Based on the presence of elevated concentrations of SVOCs/PAHs in the vicinity of soil boring PB-9, located along the northern property boundary of the Site, additional characterization of the soil in this area is warranted in order to determine the horizontal extents of these impacts.

A preliminary evaluation of the concentrations of SVOCs/PAHs in soil at the Site indicates that the presence of these contaminants does not pose a significant risk of harm to human health for human receptors that may be present under current Site conditions. However, an evaluation of the potential risks of harm to human health associated with these contaminants for potential future residents indicates that a condition of No Significant Risk would not exist in the future should the Site be developed as a residential property. As such, remedial efforts to reduce the concentrations of these contaminants or the implementation of institutional controls (deed restriction, activity and use limitation, etc.) would be required in order to achieve a condition of No Significant Risk of harm to human health for potential future residential receptors.

The laboratory analytical results for soil samples collected in May and November 2014 indicate that lead was detected in every soil sample analyzed for metals or lead at a concentration greater than the laboratory MDL (37 total soil samples). The depths at which lead was detected in soil ranged from the ground surface to approximately 20 ft bgs, and the concentrations of lead detected in 17 of the 37 soil samples analyzed for that parameter exceeded the MCP Method 1 S-1 soil standard for that parameter. During the advancement of soil borings at the Site in November 2014, ECS attempted to collect soil samples from depths greater than 10 ft bgs from soil boring PB-7 in order to delineate the vertical extent of lead impacts to soil in that area of the Site. Auger refusal was encountered in soil boring PB-7 at a depth of 7.5 ft bgs. ECS personnel directed the drillers to advance a soil boring several feet away from that location,

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Mr. Vithal Deshpande
City of Somerville
February 12, 2015
Page 13

however, auger refusal was again encountered at a depth of 7.5 ft bgs. As such, ECS was not able to collect soil samples from a depth sufficient enough to characterize the vertical extent of lead impacts in that area.

As is the case with SVOCs/PAHs in soil at the Site, an evaluation of the concentrations of lead detected at the Site also indicates that the presence of these contaminants does not pose a significant risk of harm to human health for human receptors that may be present under current Site conditions. However, an evaluation of the potential risks of harm to human health associated with potential future residents indicates that a Condition of No Significant Risk would not exist in the future should the Site be developed as a residential property. As such, remedial efforts to reduce the concentrations of these contaminants or the implementation of institutional controls (deed restriction, activity and use limitation, etc.) would be required in order to achieve a condition of No Significant Risk of harm to human health for potential future residential receptors.

Based on the presence of elevated concentrations of lead in soil samples collected from soil borings PB-1, PB-4, PB-5, PB-7 and PB-10, which are located along the perimeter of the Site, additional characterization of the lead impacts to soil in these areas is warranted in order to complete the characterization of the extents of these impacts to soil prior to Site closure.

In accordance with MassDEP guidance, background concentrations of oil and/or hazardous material (OHM) are those levels that would exist in the absence of the Disposal Site and which satisfy one or more of the following criteria:

- are ubiquitous and consistently present in the environment at, and in the vicinity of, the Disposal Site Area, and are attributable to geologic or ecological conditions, or through atmospheric deposition of industrial process or engine emissions;
- are attributable to coal, ash, or wood ash associated with fill material; and,
- are the result of releases to groundwater from a public water supply system or constitute petroleum residues incidental to the normal operation of motor vehicles.

Background concentrations of certain metals and SVOCs/PAHs in soil have been established by the Office of Research and Standards, MassDEP (MassDEP/ORS, 1995. *Guidance for Disposal Site Risk Characterization, In Support of the Massachusetts Contingency Plan,* BWSC/ORS #141-95). Anthropogenic background concentrations of certain metals and PAHs in soil and sediment have been published (MassDEP/ORS, 2002. *Anthropogenic Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil.*). Chemicals present at concentrations less than or equal to background concentrations present no significant risk of harm to human health by definition, and may therefore be excluded from consideration as Disposal Site Contaminants of Concern (COCs).

The Site and surrounding area have an extensive history of development and commercial/industrial operations, and this information in conjunction with the observations made during the soil boring advancement activities (the presence of fill material containing wood, glass, bricks, ash, etc.), suggest that the presence of SVOCs/PAHs and metals may be attributable to a background condition related to urban fill material. This is further evidenced by their presence in soil samples collected from the perimeter of the Site (PB-1, PB-2, PB-4, PB-5, PB-7 and PB-10), which indicates that the presence of these contaminants extend off-site in all directions and are ubiquitous to the Disposal Site vicinity as a background condition. However, select metals, including lead, as well as all of the SVOCs/PAHs detected in soil samples collected from the Site have exceeded the MassDEP published background concentration for these contaminants in soil containing coal ash or wood ash in at least one soil sample analyzed. Although the concentrations of select metals and SVOCs/PAHs are above background as defined by the MassDEP, the concentrations may be consistent with local background conditions based on historic Site and area uses. However, historical Site operations, including trash incineration and vehicle repairs, may have resulted in the presence of these contaminants at the Site and, as such, consideration of these COCs as background

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surficial lead and SVOC/PAH concentrations in shallow soil to levels that do not pose a Significant Risk of Harm to human health. If this alternative is chosen, implementation of an AUL would still be required; however, the AUL would restrict exposures to soil at depths greater than 3 ft bgs for future residential receptors rather than preclude future residential use of the Site.

In summary, it is the opinion of ECS that the following activities should be performed at the Site:

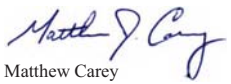
1. Development of Site-specific background conditions via the use of existing off-site laboratory analytical data; alternatively, advance off-site soil borings to characterize the nature of off-site impacts as a result of historical area operations and activities to determine site specific background conditions;
2. Further delineate the presence of elevated levels of PAHs in the vicinity of PB-9;
3. Define the vertical extent of lead impacts in the area of B-9 and PB-7;
4. Collect groundwater samples from newly installed groundwater monitoring well ECS-1 to ensure that there are no dissolved-phase groundwater impacts in that area of the Site;

5a. Complete the excavation, disposal and replacement of the top 3 ft of soil throughout the Site, followed by the implementation of an AUL restricting potential future exposures to impacted soil located at depths greater than 3 ft bgs; or,

5b. Implementation of a non-residential AUL at the Site following the completion of items 1 through 3 above.

The next regulatory deadline for the Site is the MCP Phase I/Tier Classification deadline, which is June 2, 2015. Should you have any questions regarding the information presented in this letter, please do not hesitate to contact either of the undersigned.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.



Matthew Carey
Senior Project Manager

Steven Low
Branch Manager

FIGURES:

Figure 1	Site Locus
Figure 2	Site Plan
Figure 3	Groundwater Contour Plan

TABLES:

Table 1	Concentrations of Volatile Organic Compounds (VOCs) Detected in Soil
Table 2	Concentrations of Extractable Petroleum Hydrocarbons (EPH) and Semi-Volatile Organic Compounds (SVOCs) Detected in Soil
Table 3	Concentrations of Volatile Petroleum Hydrocarbons (VPH) Detected in Soil
Table 4	Concentrations of Polychlorinated Biphenyls (PCBs) Detected in Soil
Table 5	Concentrations of Metals Detected in Soil
Table 6	Concentrations of Volatile Organic Compounds (VOCs) Detected in Groundwater
Table 7	Concentrations of Volatile Petroleum Hydrocarbons (VPH) Detected in Groundwater
Table 8	Concentrations of Extractable Petroleum Hydrocarbons (EPH) Detected in Groundwater
Table 9	Concentrations of Dissolved Metals and Polychlorinated Biphenyls (PCBs) Detected in Groundwater

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contaminants may not be feasible. It is the opinion of ECS that, in order to complete an evaluation of local background conditions in the area of the Site, it will be necessary to obtain laboratory analytical data from off-site locations.

ECS has not collected groundwater samples from newly installed monitoring well ECS-1 at this time, however, a comparison of the soil analytical results from soil borings B-2, B-3, B-8 and B-9 advanced in May 2014 with the analytical results for soil samples collected from soil boring PB-1 in November 2014, in conjunction with a review of the groundwater sample laboratory analytical results for groundwater samples collected from monitoring wells ECS-2, ECS-3, ECS-8 and ECS-9 in May 2014 indicates that it is likely that any groundwater impacts in the vicinity of monitoring well ECS-1 would be nominal.

5.0 RECOMMENDATIONS

Although historical Site operations may have contributed to the presence of PAHs and metals in soil at the Site, their presence in locations surrounding the Site perimeter, in conjunction with historical activities conducted in the immediate vicinity of the Site, indicates that these COCs are likely present throughout the area and not solely associated with Site operations. Development of Site-specific background concentrations, therefore, would aid in further characterization of the nature and extent of impacts surrounding the Site.
In order to further evaluate background conditions in the vicinity of the Site, ECS recommends evaluation of existing data for nearby sites and/or the potential advancement of off-site soil borings. A review of publicly available information on Disposal Sites in the area may be beneficial in establishing area-wide background conditions for SVOC/PAH and lead. The completion of a Site specific background study may also eliminate the need for horizontal delineation of soil impacts, as these data would likely indicate that the presence of SVOCs/PAHs in soil is ubiquitous to the Site and surrounding area and not related to historical release(s) of OHM at the Site. Should ECS not be able to obtain existing laboratory analytical data for off-site locations, this data will need to be obtained via the advancement of off-site soil borings/collection of off-site soil samples for laboratory analysis for lead and/or SVOCs/PAHs. It is important to note that if off-site data does not suggest that the impacts observed on-site are related to background conditions associated with historical Site and area uses, then the advancement of soil borings in various locations surrounding the Site will be necessary in order to delineate the horizontal extents of contamination associated with the Site.

In addition to recommending the performance of a Site-specific background study, ECS also recommends further delineation of the SVOC/PAH impacts observed in the soil sample collected from soil boring PB-9 at a depth range of 1 to 3 ft bgs. In order to further delineate the PAH impacts, ECS recommends the advancement additional soil borings in this area of the Site (including off-site to the north of the location of PB-9).

Due to the auger refusal encountered during the advancement of soil boring PB-7 and the inability to collect additional soil samples for vertical delineation of lead impacts in that area of the Site, ECS recommends the advancement of an additional soil boring in the vicinity of B-9 and PB-7 in order to collect soil samples from depths greater than 10 ft bgs for vertical delineation of lead impacts in that area of the Site.

Following completion of the activities presented above, implementation of an AUL will be required. The AUL would preclude future residential use of the Site, require development of a Soil Management Plan as well as Licensed Site Professional (LSP) oversight in the event of the performance of soil excavation or relocation work at the Site, and require the use of raised beds for potential future gardening activities at the Site. Under current conditions, the AUL would not require the presence of a barrier (asphalt paving, etc.) to restrict surficial soil exposures for potential current or future Site visitors, trespassers/passersby, construction workers, utility workers or Site workers.

As an alternative to the implementation of a non-residential use AUL at the Site, excavation, disposal and replacement of the top 3 ft of soil throughout the entirety of the Site could be performed in order to reduce

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ATTACHMENTS:

Attachment I Soil Boring Logs
Attachment II Soil Sample Laboratory Analytical Results

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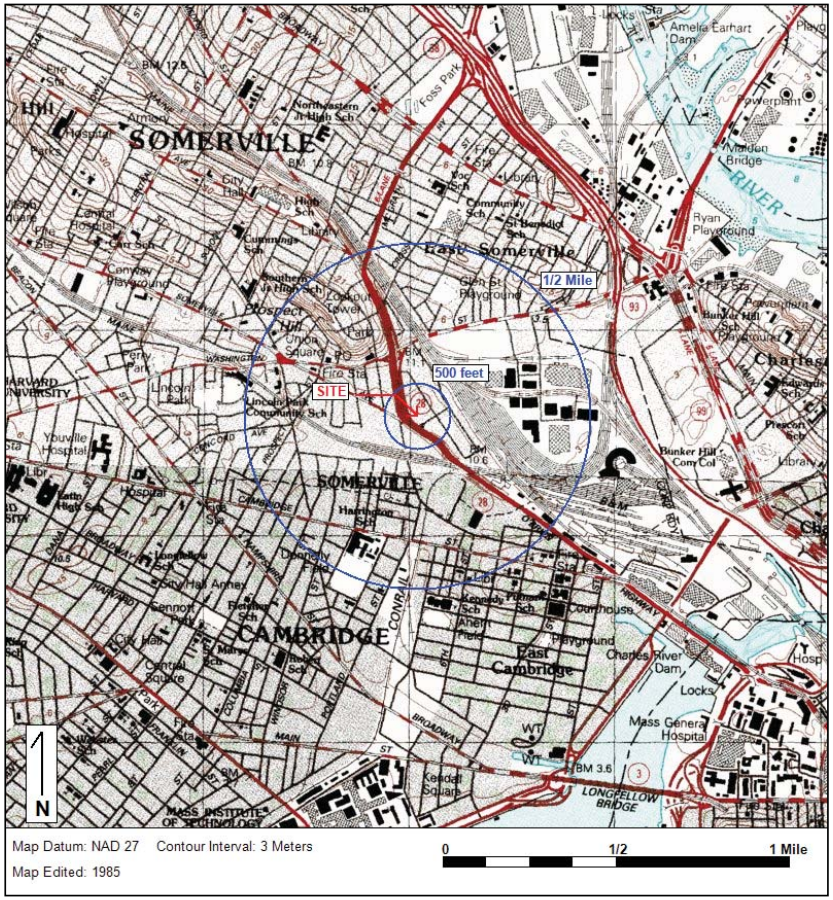
FIGURES

Environmental Compliance Services, Inc.
10 State Street
Woburn, MA 01801
Phone 781-246-8897 Fax 781-246-8950
www.ecsconsult.com

Vacant Property 10 Poplar Street, Somerville, MA 02145
10 Poplar Street
Somerville, MA 02145

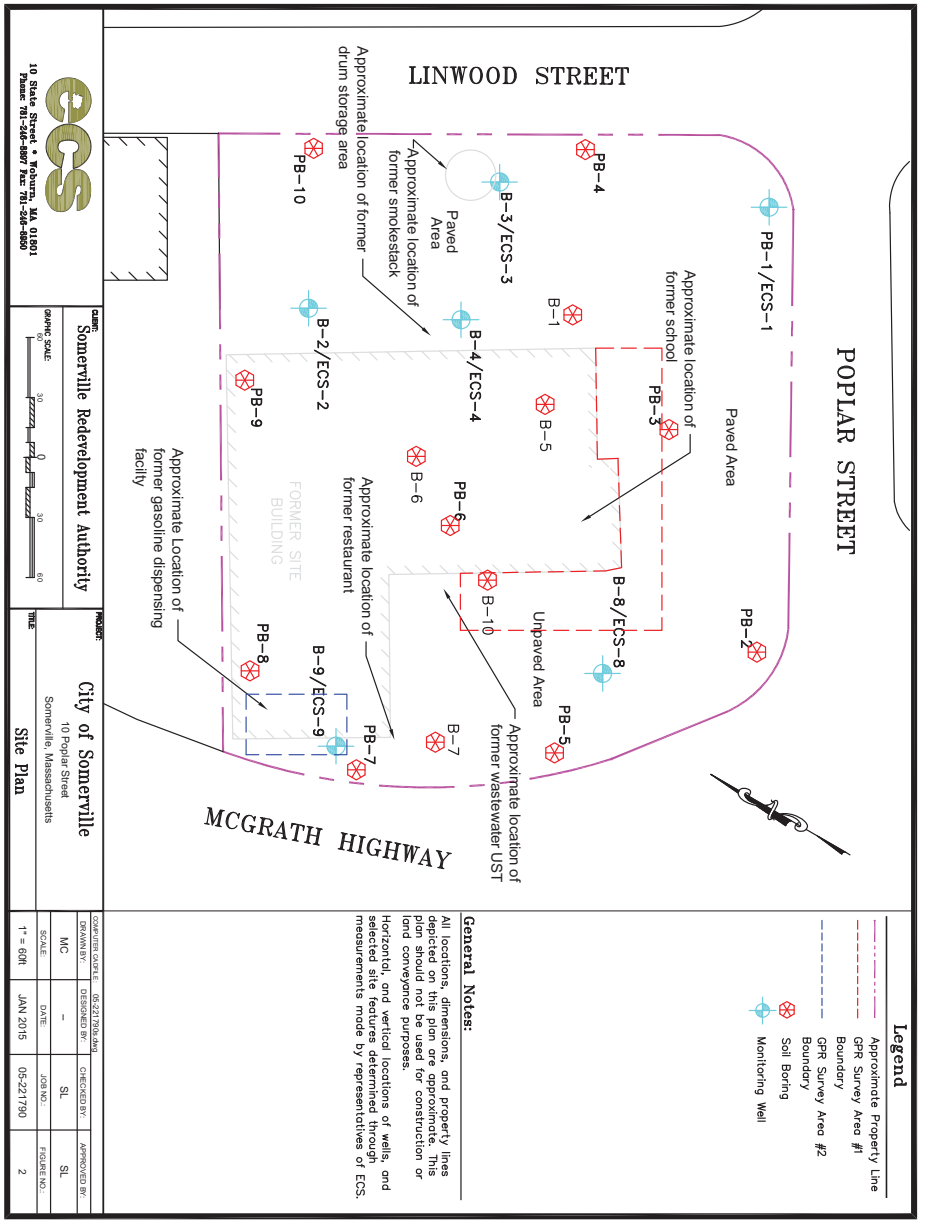
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Boston North, MA

Lat/Lon: 42 22' 39" NORTH, 71 5' 17" WEST - UTM Coordinates: 19 328087 EAST / 4693813 NORTH

Generated By: Carol Farrington



TABLES

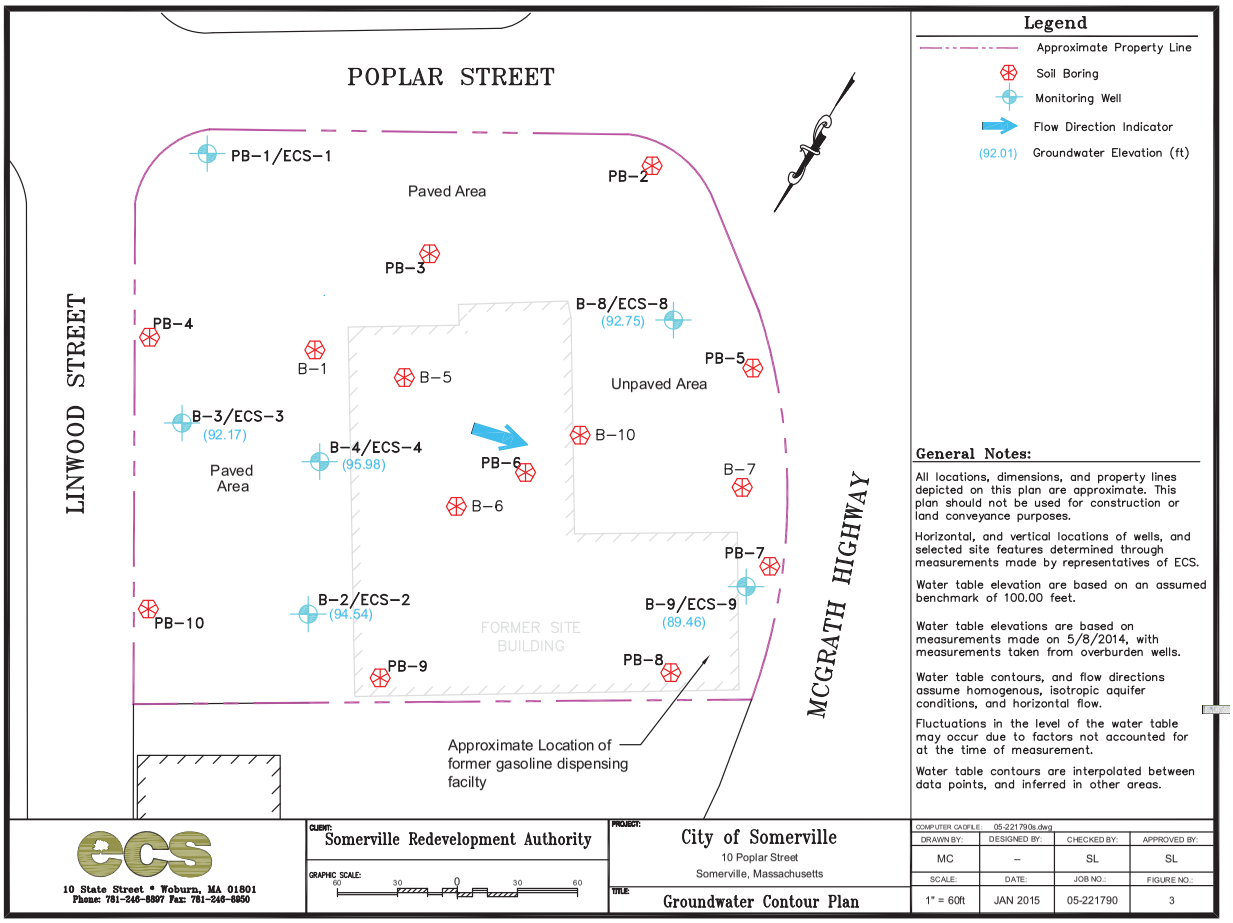

POPLAR STREET
LINWOOD STREET
MCGRATH HIGHWAY
PB-1/ECS-1
PB-2
PB-3
PB-4
B-8/ECS-8
(92.75)
B-1
B-5
PB-5
Unpaved Area
B-3/ECS-3
(92.17)
B-4/ECS-4
(95.98)
B-10
PB-6
B-7
Paved Area
B-6
PB-7
B-2/ECS-2
(94.54)
B-9/ECS-9
(89.46)
PB-10
FORMER SITE BUILDING
PB-9
PB-8
Approximate Location of former gasoline dispensing facilty
Legend
Approximate Property Line
Soil Boring
Monitoring Well
Flow Direction Indicator
(92.01) Groundwater Elevation (ft)
General Notes:
All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.
Horizontal, and vertical locations of wells, and selected site features determined through measurements made by representatives of ECS.
Water table elevation are based on an assumed benchmark of 100.00 feet.
Water table elevations are based on measurements made on 5/8/2014, with measurements taken from overburden wells.
Water table contours, and flow directions assume homogenous, isotropic aquifer conditions, and horizontal flow.
Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.
Water table contours are interpolated between data points, and inferred in other areas.
ecs
10 State Street • Woburn, MA 01801
Phone: 781-246-5807 Fax: 781-246-5850
CLIENT: Somerville Redevelopment Authority
GRAPHIC SCALE: 60 30 0 30 60
PROJECT: City of Somerville
10 Poplar Street
Somerville, Massachusetts
TITLE: Groundwater Contour Plan
COMPUTER CADFILE: 05-221790s.dwg
DRAWN BY: MC
DESIGNED BY: –
CHECKED BY: SL
APPROVED BY: SL
SCALE: 1" = 60ft
DATE: JAN 2015
JOB NO.: 05-221790
FIGURE NO.: 3

Table 1
Concentrations of Volatile Organic Compounds (VOCs) Detected in Soil
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	B-1	B-6	B-9	MCP Reportable Concentrations/Soil Standards[1] (µg/Kg[2])				
Sample Date	5/1/2014	5/2/2014	5/2/2014					
Sample Depth (feet)	3-5	14-15	7-8	RCS-1	S-1/GW-2	S-1/GW-3	S-3/GW-2	S-3/GW-3
Volatile Organic Compounds	Results/Method Detection Limits (µg/Kg)							
Acetone	ND/450	ND/660	ND/580	6,000	50,000	400,000	50,000	400,000
Benzene	ND/23	ND/33	ND/29	2,000	40,000	40,000	400,000	1,000,000
Bromobenzene	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
Bromochloromethane	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
Bromodichloromethane	ND/91	ND/130	ND/120	100	100	30,000	100	500,000
Bromoform	ND/91	ND/130	ND/120	100	1,000	300,000	1,000	800,000
Bromomethane	ND/91	ND/130	ND/120	500	500	30,000	500	30,000
2-Butanone (MEK)	ND/450	ND/660	ND/580	4,000	50,000	400,000	50,000	400,000
n-Butylbenzene	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
sec-Butylbenzene	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
tert-Butylbenzene	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
Carbon disulfide	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
Carbon tetrachloride	ND/91	ND/130	ND/120	5,000	5,000	30,000	5,000	1,000,000
Chlorobenzene	ND/91	ND/130	ND/120	1,000	3,000	100,000	3,000	100,000
Chloroethane	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
Chloroform	ND/91	ND/130	ND/120	200	200	500,000	200	1,000,000
Chloromethane	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
o-Chlorotoluene	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
p-Chlorotoluene	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
Di-Isopropyl ether	ND/91	ND/130	ND/120	100,000	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane	ND/230	ND/330	ND/290	10,000	NS	NS	NS	NS
Dibromochloromethane	ND/91	ND/130	ND/120	5	30	20,000	30	500,000
1,2-Dibromoethane	ND/91	ND/130	ND/120	100	100	1,000	100	40,000
1,2-Dichlorobenzene	ND/91	ND/130	ND/120	9,000	100,000	300,000	100,000	300,000
1,3-Dichlorobenzene	ND/91	ND/130	ND/120	3,000	100,000	100,000	200,000	500,000
1,4-Dichlorobenzene	ND/91	ND/130	ND/120	700	1,000	80,000	1,000	2,000,000
Dichlorodifluoromethane	ND/91	ND/130	ND/120	1,000,000	NS	NS	NS	NS
1,1-Dichloroethane	ND/91	ND/130	ND/120	400	9,000	500,000	9,000	1,000,000
1,2-Dichloroethane	ND/91	ND/130	ND/120	100	100	20,000	100	300,000
1,1-Dichloroethene	ND/91	ND/130	ND/120	3,000	9,000	500,000	40,000	3,000,000
cis-1,2-Dichloroethene	ND/91	ND/130	ND/120	100	100	100,000	100	500,000
trans-1,2-Dichloroethene	ND/91	ND/130	ND/120	1,000	1,000	500,000	1,000	3,000,000
1,2-Dichloropropane	ND/91	ND/130	ND/120	100	100	30,000	100	1,000,000
1,3-Dichloropropane	ND/230	ND/330	ND/290	500,000	NS	NS	NS	NS
2,2-Dichloropropane	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
1,1-Dichloropropene	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	ND/91	ND/130	ND/120	10	NS	20,000	NS	NS
trans-1,3-Dichloropropene	ND/91	ND/130	ND/120	10	NS	20,000	NS	NS
1,4-Dioxane	ND/1100	ND/1,600	ND/1,500	200	6,000	20,000	6,000	500,000
Ethyl Ether	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
Ethylbenzene	ND/91	ND/130	ND/120	40,000	500,000	500,000	1,000,000	3,000,000
Hexachlorobutadiene	ND/230	ND/330	ND/290	30,000	30,000	30,000	100,000	100,000
2-Hexanone	ND/450	ND/660	ND/580	100,000	NS	NS	NS	NS
Isopropylbenzene	ND/230	ND/330	ND/290	1,000,000	NS	NS	NS	NS
p-Isopropyltoluene	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
Methyl Tert Butyl Ether	ND/91	ND/130	ND/120	100	100,000	100,000	100,000	500,000
4-Methyl-2-pentanone (MIBK)	ND/230	ND/330	ND/290	400	50,000	400,000	50,000	400,000
Methylene bromide	ND/230	ND/330	ND/290	500,000	NS	NS	NS	NS
Methylene chloride	ND/91	ND/130	ND/120	100	4,000	400,000	4,000	700,000
Naphthalene	ND/230	ND/330	2,160	4,000	20,000	500,000	20,000	3,000,000
n-Propylbenzene	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
Styrene	ND/230	ND/330	ND/290	3,000	4,000	70,000	4,000	1,000,000
tert-Amyl Methyl Ether	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
tert-Butyl Ethyl Ether	ND/91	ND/130	ND/120	NS	NS	NS	NS	NS
1,1,1,2-Tetrachloroethane	ND/230	ND/330	ND/290	100	100	80,000	100	500,000
1,1,2,2-Tetrachloroethane	ND/91	ND/130	ND/120	5	20	10,000	20	400,000
Tetrachloroethene	ND/91	ND/130	ND/120	1,000	10,000	30,000	10,000	1,000,000
Tetrahydrofuran	ND/450	ND/660	ND/580	500,000	NS	NS	NS	NS
Toluene	ND/230	ND/330	ND/290	30,000	500,000	500,000	2,000,000	3,000,000
1,2,3-Trichlorobenzene	ND/230	ND/330	ND/290	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	ND/230	ND/330	ND/290	2,000	6,000	700,000	6,000	5,000,000
1,1,1-Trichloroethane	ND/91	ND/130	ND/120	30,000	500,000	500,000	600,000	3,000,000
1,1,2-Trichloroethane	ND/91	ND/130	ND/120	100	2,000	40,000	2,000	500,000
Trichloroethene	ND/91	ND/130	ND/120	300	300	30,000	300	60,000
Trichlorofluoromethane	ND/91	ND/130	ND/120	1,000,000	NS	NS	NS	NS
1,2,3-Trichloropropane	ND/230	ND/330	ND/290	100,000	NS	NS	NS	NS
1,2,4-Trimethylbenzene	ND/230	ND/330	ND/290	1,000,000	NS	NS	NS	NS
1,3,5-Trimethylbenzene	ND/230	ND/330	ND/290	10,000	NS	NS	NS	NS
Vinyl chloride	ND/91	ND/130	ND/120	700	700	1,000	700	60,000
m,p-Xylene	ND/91	ND/130	ND/120	100,000	100,000	500,000	100,000	3,000,000
o-Xylene	ND/91	ND/130	ND/120	100,000	100,000	500,000	100,000	3,000,000
Xylene (total)	ND/91	ND/130	ND/120	100,000	100,000	500,000	100,000	3,000,000

Notes:
ND(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NS = No Standard.
[1]MCP Method 1 Soil Standards from Table 2, 310 CMR 40.0975 (6)(a)&(c), April, 2014.
[2]µg/Kg = micrograms per kilogram = parts per billion (ppb).
Bold indicates concentration exceeds MCP RCS-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP S-1 and/or S-3 Soil Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 2
Concentrations of Extractable Petroleum Hydrocarbons (EPH) and Semi-Volatile Organic Compounds (SVOCs) Detected in Soil
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	B-1	B-2	B-4	B-6	B-7	B-8	B-9	B-10	PB-1	PB-2		PB-3	
Sample Date	5/1/14	5/1/14	5/1/2014	5/2/2014	5/1/2014	5/2/2014	5/1/2014	5/2/2014	5/1/14	11/25/2014	11/26/2014	11/25/2014	11/25/2014
Depth below grade (feet)	0-1	3-5	5-8	6-2	2-3	0-2	0-1	7-8	6.5-7.5	1-2	10-11	1-2	6-7
EPH Fractions													
C9-C18 Aliphatics	123,000	NA	NA	259,00	NA	NA	NA	ND/53,000	NA	NA	NA	ND/10,000	NA
C19-C36 Aliphatics	268,000	NA	NA	2,470,000	NA	NA	NA	189,000	NA	NA	NA	18,400	NA
C11-C22 Aromatics	220,000	NA	NA	857,000	NA	NA	NA	109,000	NA	NA	NA	ND/10,000	NA
Semi-Volatile Organic Compounds													
Acenaphthene	NA	ND/490	2,000	ND/1,400	ND/560	ND/5,500	ND/560	ND/2,600	ND/120	ND/3560	ND/120	ND/530	ND/460
Acenaphthylene	NA	ND/490	1,060	3,100	ND/560	ND/5,500	ND/560	ND/2,600	ND/120	ND/3560	ND/120	ND/530	ND/460
Anthracene	NA	650	2,700	2,200	ND/560	ND/5,500	ND/560	2,200	ND/120	ND/3560	ND/120	ND/530	ND/460
Benzo(a)anthracene	NA	2,900	14,000	22,000	ND/560	ND/5,500	ND/560	7,210	ND/120	ND/3560	ND/120	ND/530	252
Benzo(a)pyrene	NA	2,170	12,700	17,900	ND/560	ND/5,500	1,830	11,600	ND/120	ND/3560	219	ND/530	565
Benzo(b)fluoranthene	NA	1,910	14,200	18,800	3,850	ND/5,500	ND/560	2,230	5,910	ND/120	ND/3560	170	ND/530
Benzo(g,h,i)perylene	NA	1,420	5,970	8,030	1,900	ND/5,500	ND/560	1,020	6,100	ND/120	ND/3560	127	ND/530
Benzo(k)fluoranthene	NA	1,160	5,810	7,900	1,720	ND/5,500	ND/560	1,470	11,200	ND/120	ND/3560	213	ND/530
Chrysene	NA	2,180	11,400	20,100	1,120	ND/5,500	ND/560	1,470	11,200	ND/120	ND/3560	213	ND/530
Dibenzo(a,h)anthracene	NA	ND/490	1,410	2,720	ND/560	ND/5,500	ND/560	ND/2,600	ND/120	ND/3560	ND/120	ND/530	ND/460
Fluoranthene	NA	3,620	31,000	41,700	1,980	ND/5,500	ND/560	4,010	30,900	121	ND/3560	465	ND/110
Indeno(1,2,3-cd)pyrene	NA	ND/490	3,360	2,430	ND/560	ND/5,500	ND/560	ND/2,600	4,470	ND/120	ND/3560	ND/120	ND/530
1-Methylnaphthalene	NA	1,200	6,700	6,130	1,010	ND/5,500	ND/560	ND/2,600	4,470	ND/120	ND/3560	ND/120	ND/530
2-Methylnaphthalene	NA	ND/490	807	ND/1,400	ND/560	ND/5,500	ND/560	ND/2,600	ND/120	ND/3560	ND/120	ND/530	ND/530
Naphthalene	NA	ND/490	2,060	ND/560	ND/560	ND/5,500	ND/560	ND/2,600	ND/120	ND/3560	ND/120	ND/530	ND/460
Phenanthrene	NA	2,640	24,800	33,400	984	ND/5,500	ND/560	3,130	35,300	ND/120	ND/3560	297	ND/110
Pyrene	NA	3,060	27,700	37,300	2,140	ND/5,500	ND/560	3,560	23,200	ND/120	ND/3560	417	ND/110

Notes:
ND(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NA = Not Analyzed.
1MCP Method 1 Soil Standards from Table 2, 310 CMR 40.0975 (6)(a)&(c), April, 2014.
2µg/Kg = micrograms per kilogram = parts per billion (ppb).
Bold indicates concentration exceeds MCP RCS-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP S-1 and/or S-3 Soil Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 2
Concentrations of Extractable Petroleum Hydrocarbons (EPH) and Semi-Volatile Organic Compounds (SVOCs) Detected in Soil
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	PB-4		PB-5	PB-6	PB-7		PB-8			PB-9		PB-10			Urban Fill Background Concentrations (µg/Kg)	MCP Reportable Concentrations/Soil Standards[1] (µg/kg[2])				
Sampling Date	11/24/2014	11/24/2014	11/25/2014	11/25/2014	11/25/2014	11/25/2014	11/25/2014	11/25/2014	11/25/2014	11/24/2014	11/24/2014	11/24/2014	11/24/2014	11/25/2014						
Depth below grade (feet)	1-3	6-8	1-3	1-3	1-3	6-7.5	1-3	6-8	8-10	1-3	13-15	1-3	6	6-8		RCS-1	S-1/GW-2	S-1/GW-3	S-3/GW-2	S-3/GW-3
Hydrocarbons	Results/Method Detection Limits (µg/kg)																			
C9-C18 Aliphatics	NA	NA	NA	NA	NA	NA	NA	NA	ND/9,300	NA	NA	NA	ND/11,000	NA	NS	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000
C19-C36 Aliphatics	NA	NA	NA	NA	NA	NA	NA	NA	16,800	NA	NA	NA	ND/11,000	NA	NS	3,000,000	3,000,000	3,000,000	5,000,000	5,000,000
C11-C22 Aromatics	NA	NA	NA	NA	NA	NA	NA	NA	ND/19,000	NA	NA	NA	ND/22,000	NA	NS	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000
Semi-Volatile Organic Compounds	Results/Method Detection Limits (µg/kg)																			
Acenaphthene	ND/540	ND/110	ND/110	ND/110	862	ND/580	ND/120	ND/1,100	ND/470	**10,500**	ND/120	ND/110	ND/550	ND/120	2,000	4,000	1,000,000	1,000,000	5,000,000	5,000,000
Acenaphthylene	ND/540	ND/110	126	ND/110	675	ND/580	ND/120	ND/1,100	ND/470	**3,710**	ND/120	ND/110	ND/550	ND/120	1,000	1,000	600,000	10,000	600,000	10,000
Anthracene	ND/540	ND/110	128	241	2,670	ND/580	ND/120	ND/1,100	ND/470	**27,700**	ND/120	ND/110	ND/550	ND/120	4,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000
Benz(a)anthracene	1,440	ND/110	526	539	6,590	1,290	ND/120	ND/1,100	ND/470	***69,700***	ND/120	146	ND/550	ND/120	9,000	7,000	7,000	7,000	300,000	300,000
Benzo(a)pyrene	1,370	ND/110	663	483	5,400	1,280	ND/120	ND/1,100	ND/470	***65,200***	ND/120	141	ND/550	ND/120	7,000	2,000	2,000	2,000	30,000	30,000
Benzo(b)fluoranthene	1,200	ND/110	509	440	4,440	1,210	ND/120	ND/1,100	ND/470	***77,160***	ND/120	115	ND/550	ND/120	8,000	7,000	7,000	7,000	300,000	300,000
Benzo(g,h,i)perylene	930	ND/110	385	287	2,610	732	ND/120	ND/1,100	ND/470	**32,200**	ND/120	ND/110	ND/550	ND/120	3,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000
Benzo(k)fluoranthene	1,090	ND/110	485	431	4,430	1,020	ND/120	ND/1,100	ND/470	**31,400**	ND/120	112	ND/550	ND/120	4,000	70,000	70,000	70,000	3,000,000	3,000,000
Chrysene	1,450	ND/110	524	556	5,720	1,350	ND/120	ND/1,100	ND/470	***74,100***	ND/120	137	ND/550	ND/120	7,000	70,000	70,000	70,000	3,000,000	3,000,000
Dibenzo(a,h)anthracene	ND/540	ND/110	117	ND/110	957	ND/580	ND/120	ND/1,100	ND/470	***12,240***	ND/120	ND/110	ND/550	ND/120	1,000	700	700	700	30,000	30,000
Fluoranthene	2,720	ND/110	936	1,270	13,400	2,310	171	ND/1,100	ND/470	**143,000**	ND/120	242	ND/550	ND/120	10,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000
Fluorene	ND/540	ND/110	ND/110	142	872	ND/580	ND/120	ND/1,100	ND/470	**13,400**	ND/120	ND/110	ND/550	ND/120	2,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000
Indeno(1,2,3-cd)pyrene	949	ND/110	455	317	3,310	824	ND/120	ND/1,100	ND/470	***40,440***	ND/120	ND/110	ND/550	ND/120	3,000	7,000	7,000	7,000	300,000	300,000
2-Methylnaphthalene	ND/540	ND/110	ND/110	144	ND/570	ND/580	ND/120	ND/1,100	ND/470	**3,270**	ND/120	ND/110	ND/550	ND/120	1,000	700	80,000	300,000	80,000	500,000
Naphthalene	ND/540	ND/110	ND/110	176	ND/570	ND/580	ND/120	ND/1,100	ND/470	**6,170**	ND/120	ND/110	ND/550	ND/120	1,000	4,000	20,000	500,000	20,000	3,000,000
Phenanthrene	1,630	ND/110	382	995	9,660	1,400	125	ND/1,100	ND/470	**120,000**	ND/120	155	ND/550	ND/120	20,000	10,000	500,000	500,000	3,000,000	3,000,000
Pyrene	2,590	ND/110	952	1,140	11,900	2,180	175	ND/1,100	ND/470	**110,000**	ND/120	246	ND/550	ND/120	20,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NA = Not Analyzed.
1MCP Method 1 Soil Standards from Table 2, 310 CMR 40.0975 (6)(a)&(c), April, 2014.
2µg/Kg = micrograms per kilogram = parts per billion (ppb).
Bold indicates concentration exceeds MCP RCS-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP S-1 and/or S-3 Soil Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 3
Concentrations of Volatile Petroleum Hydrocarbons (VPH) Detected in Soil
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	Sampling Date	Depth below grade (feet)	C5- C8 Aliphatics (µg/Kg[1])	C9- C12 Aliphatics (µg/Kg)	C9- C10 Aromatics (µg/Kg)	Benzene (µg/Kg)	Ethylbenzene (µg/Kg)	Methyl Tert Butyl Ether (µg/Kg)	Naphthalene (µg/Kg)	Toluene (µg/Kg)	m,p-Xylene (µg/Kg)	o-Xylene (µg/Kg)
B-1	5/1/2014	3-5	ND/6,100	20,200	27,000	ND/300	ND/300	ND/61	411	ND/300	ND/300	ND/300
B-6	5/2/2014	14-15	ND/6,500	25,000	32,300	ND/330	ND/330	ND/65	545	ND/330	ND/330	ND/330
B-9	5/2/2014	7-8	ND/7,100	ND/7,100	ND/7,100	ND/350	ND/350	ND/71	2,150	ND/350	ND/350	ND/350
PB-1	11/25/2014	10-11	ND/7,000	ND/7,000	ND/7,000	ND/350	ND/350	ND/70	ND/350	ND/350	ND/350	ND/350
PB-2	11/25/2014	6-8	ND/5,900	ND/5,900	ND/5,900	ND/300	ND/300	ND/59	ND/300	ND/300	ND/300	ND/300
PB-8	11/25/2014	8-10	ND/5,500	ND/5,500	ND/5,500	ND/280	ND/280	ND/55	ND/280	ND/280	ND/280	ND/280
PB-10	11/24/2014	6	ND/7,200	ND/7,200	ND/7,200	ND/360	ND/360	ND/72	ND/360	ND/360	ND/360	ND/360
MCP RCS-1 Reportable Concentration			100,000	1,000,000	100,000	2,000	40,000	100	4,000	30,000	100,000	100,000
MCP Method 1 S-1/GW-2 Soil Standard[2]			100,000	1,000,000	100,000	40,000	500,000	100,000	20,000	500,000	100,000	100,000
MCP Method 1 S-1/GW-3 Soil Standard			100,000	1,000,000	100,000	40,000	500,000	100,000	500,000	500,000	500,000	500,000
MCP Method 1 S-3/GW-2 Soil Standard			500,000	5,000,000	500,000	400,000	1,000,000	100,000	20,000	2,000,000	100,000	100,000
MCP Method 1 S-3/GW-3 Soil Standard			500,000	5,000,000	500,000	1,000,000	3,000,000	500,000	3,000,000	3,000,000	3,000,000	3,000,000

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NA = Not Analyzed.
[1]µg/Kg = micrograms per kilogram = parts per billion (ppb).
[2]MCP Method 1 Soil Standards from Table 2, 310 CMR 40.0975 (6)(a)&(c), April, 2014.
Bold indicates concentration exceeds MCP RCS-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP S-1 and/or S-3 Soil Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 4
Concentrations of Polychlorinated Biphenyls (PCBs) Detected in Soil
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	Sampling Date	Depth below grade (feet)	Aroclor 1016 (µg/Kg[1])	Aroclor 1221 (µg/Kg)	Aroclor 1232 (µg/Kg)	Aroclor 1242 (µg/Kg)	Aroclor 1248 (µg/Kg)	Aroclor 1254 (µg/Kg)	Aroclor 1260 (µg/Kg)	Aroclor 1262 (µg/Kg)	Aroclor 1268 (µg/Kg)
B-1	5/1/2014	0-1	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35
	5/1/2014	3-5	ND/37	ND/37	ND/37	ND/37	ND/37	430	97.8 [a]	ND/37	ND/37
B-2	5/1/2014	0-1	ND/35	ND/35	ND/35	ND/35	ND/35	53.4	ND/35	ND/35	ND/35
	5/1/2014	7-8	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-3	5/2/2014	2-3	ND/36	ND/36	ND/36	ND/36	ND/36	156 [a]	183	ND/36	ND/36
	5/2/2014	5-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-4	5/1/2014	0-2	ND/38	ND/38	ND/38	ND/38	ND/38	ND/38	ND/38	ND/38	ND/38
	5/1/2014	6-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-5	5/2/2014	5-10	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35
B-6	5/2/2014	2-3	ND/36	ND/36	ND/36	ND/36	ND/36	98.4	50.2 [a]	ND/36	ND/36
	5/2/2014	14-15	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-7	5/2/2014	2-3	ND/39	ND/39	ND/39	459	ND/39	ND/39	ND/39	ND/39	ND/39
B-8	5/2/2014	0-2	ND/39	ND/39	ND/39	480	ND/39	ND/39	ND/39	ND/39	ND/39
	5/2/2014	2-3	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-9	5/2/2014	0-1	ND/38	ND/38	ND/38	ND/38	ND/38	47.2	ND/38	ND/38	ND/38
	5/2/2014	7-8	ND/37	ND/37	ND/37	ND/37	ND/37	73.9	ND/37	ND/37	ND/37
B-10	5/2/2014	0-1	ND/38	ND/38	ND/38	292	ND/38	ND/38	ND/38	ND/38	ND/38
	5/2/2014	6.5-7.5	ND/38	ND/38	ND/38	**1,620a**	ND/38	ND/38	ND/38	ND/38	ND/38
PB-1	11/24/2014	0-2	ND/41	ND/41	ND/41	ND/41	ND/41	720	ND/41	ND/41	ND/41
PB-2	11/25/2014	0-2	ND/36	ND/36	ND/36	ND/36	ND/36	79.2	53.4	ND/36	ND/36
	11/25/2014	6-8	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36
PB-3	11/25/2014	0-2	ND/38	ND/38	ND/38	ND/38	ND/38	646	143	ND/38	ND/38
PB-4	11/24/2014	0-2	ND/36	ND/36	ND/36	ND/36	ND/36	145	144	ND/36	ND/36
	11/25/2014	6-8	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36
PB-5	11/25/2014	0-2	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35	ND/35
	11/25/2014	6-8	ND/54	ND/54	ND/54	ND/54	ND/54	ND/54	ND/54	ND/54	ND/54
PB-6	11/25/2014	0-2	ND/37	ND/37	ND/37	ND/37	ND/37	59.2	ND/37	ND/37	ND/37
	11/25/2014	13-15	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40
PB-7	11/25/2014	0-2	ND/38	ND/38	ND/38	63.8	ND/38	71.5	ND/38	ND/38	ND/38
PB-8	11/25/2014	0-2	ND/42	ND/42	ND/42	770	ND/42	ND/42	ND/42	ND/42	ND/42
PB-9	11/24/2014	0-2	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36
	11/25/2014	8-10	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	ND/36	73.3
PB-10	11/24/2014	0-2	ND/37	ND/37	ND/37	ND/37	ND/37	ND/37	ND/37	ND/37	ND/37
	11/25/2014	8-10	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40	ND/40
MCP RCS-1 Reportable Concentration			1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
MCP Method 1 S-1/GW-2 Soil Standard[2]			1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
MCP Method 1 S-1/GW-3 Soil Standard			1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
MCP Method 1 S-3/GW-2 Soil Standard			4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
MCP Method 1 S-3/GW-3 Soil Standard			4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NA = Not Analyzed.
[1] µg/Kg = micrograms per kilogram = parts per billion (ppb).
[2] MCP Method 1 Soil Standards from Table 2, 310 CMR 40.0975 (6)(a)&(c), April, 2014.
[a] Estimated value due to the presence of other Aroclor patterns.
Bold indicates concentration exceeds MCP RCS-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP S-1 and/or S-3 Soil Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 5
Concentrations of Metals Detected in Soil
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	Sampling Date	Depth below grade (feet)	Antimony (mg/Kg[1])	Arsenic (mg/Kg)	Barium (mg/Kg)	Beryllium (mg/Kg)	Cadmium (mg/Kg)	Chromium (mg/Kg)	Lead (mg/Kg)	Mercury (mg/Kg)	Nickel (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Thallium (mg/Kg)	Vanadium (mg/Kg)	Zinc (mg/Kg)
B-1	5/1/2014	0-1	ND/0.87	3.6	29.1	ND/0.35	0.56	12.8	23.1	ND/0.032	14.9	ND/0.87	ND/0.43	ND/0.87	62.6	160
	5/1/2014	3-5	ND/0.93	9.1	104	0.42	1.2	22.9	***316***	0.47	17.6	ND/0.93	ND/0.47	ND/0.93	31.7	222
B-2	5/1/2014	0-1	ND/0.84	4.5	62.4	0.39	ND/0.33	13	78.4	0.19	10.2	ND/0.84	ND/0.42	ND/0.84	17.7	77.2
	5/1/2014	7-8	ND/2.1	11.1	198	ND/0.84	ND/0.84	39.6	***595***	3.8	18.5	4.3	ND/1.0	ND/2.1	11.1	390
B-3	5/2/2014	2-3	ND/0.88	6.2	63.6	0.41	0.72	18.1	***266***	0.2	16.1	ND/0.88	ND/0.44	ND/0.88	30.1	197
	5/2/2014	5-6	ND/0.98	16.2	131	0.75	0.45	37.3	***211***	0.21	27.1	ND/0.98	ND/0.49	ND/0.98	49.5	154
B-4	5/1/2014	0-2	ND/0.93	6.1	150	ND/0.37	5.8	20.2	***555***	0.21	19.3	ND/0.93	0.85	ND/0.93	27.5	317
	5/1/2014	6-7	ND/0.94	7.5	109	0.46	0.37	20.5	***368***	0.44	14.5	ND/0.94	ND/0.47	ND/0.94	26.3	180
B-5	5/2/2014	5-10	ND/0.88	6.2	49.2	ND/0.35	ND/0.35	11.9	56.1	0.76	10.4	ND/0.88	ND/0.44	ND/0.88	19.3	68.3
B-6	5/2/2014	2-3	ND/0.88	6.6	50.4	0.37	3.4	25.4	***610***	0.22	25.8	ND/0.88	0.5	ND/0.88	63.4	215
	5/2/2014	14-15	ND/0.92	2.3	201	ND/0.37	0.53	7.8	***345***	0.064	10.6	ND/0.92	ND/0.46	ND/0.92	39.3	251
B-7	5/2/2014	2-3	ND/0.96	5.8	223	0.45	ND/0.38	17.7	84.3	0.56	12.8	ND/0.96	ND/0.48	ND/0.96	21.2	145
B-8	5/2/2014	0-2	ND/0.95	5.9	133	0.38	0.46	25.2	103	0.12	14.5	ND/0.95	ND/0.47	ND/0.95	16.4	122
	5/2/2014	2-3	ND/0.84	2	67.4	0.36	ND/0.33	4.9	31.8	0.052	6.8	ND/0.84	ND/0.42	ND/0.84	23.1	58.3
B-9	5/2/2014	0-1	ND/0.92	12.4	182	0.46	1.4	21.1	***762***	1.6	17.8	1.1	ND/0.46	ND/0.92	26.8	430
	5/2/2014	7-8	ND/0.93	9.9	145	ND/0.37	1.2	16.7	***690***	1.4	13.5	ND/0.93	ND/0.47	ND/0.93	22.5	370
B-10	5/2/2014	0-1	ND/0.94	5.9	171	0.39	0.42	35.8	84.7	0.12	12.7	ND/0.94	ND/0.47	ND/0.94	22	120
	5/2/2014	6.5-7.5	ND/0.92	3.9	70.2	ND/0.37	ND/0.37	17	751	0.07	11.4	ND/0.92	ND/0.46	ND/0.92	53	204
PB-1	11/24/2014	0-2	NM	NM	NM	NM	NM	NM	188	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	5-7	NM	NM	NM	NM	NM	NM	***297***	NM	NM	NM	NM	NM	NM	NM
PB-2	11/25/2014	0-2	NM	NM	NM	NM	NM	NM	195	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	5-7	NM	NM	NM	NM	NM	NM	68.6	NM	NM	NM	NM	NM	NM	NM
PB-3	11/25/2014	0-2	NM	NM	NM	NM	NM	NM	***497***	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	8-10	NM	NM	NM	NM	NM	NM	33.4	NM	NM	NM	NM	NM	NM	NM
PB-4	11/24/2014	0-2	NM	NM	NM	NM	NM	NM	189	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	5-7	NM	NM	NM	NM	NM	NM	***377***	NM	NM	NM	NM	NM	NM	NM
PB-5	11/25/2014	0-2	NM	NM	NM	NM	NM	NM	***204***	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	6-8	NM	NM	NM	NM	NM	NM	15.7	NM	NM	NM	NM	NM	NM	NM
PB-6	11/25/2014	0-2	NM	NM	NM	NM	NM	NM	***527***	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	18-20	NM	NM	NM	NM	NM	NM	15.3	NM	NM	NM	NM	NM	NM	NM
PB-7	11/25/2014	0-2	NM	NM	NM	NM	NM	NM	***298***	NM	NM	NM	NM	NM	NM	NM
PB-8	11/25/2014	0-2	NM	NM	NM	NM	NM	NM	188	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	8-10	NM	NM	NM	NM	NM	NM	4	NM	NM	NM	NM	NM	NM	NM
PB-9	11/24/2014	0-2	NM	NM	NM	NM	NM	NM	73.6	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	6-8	NM	NM	NM	NM	NM	NM	22.6	NM	NM	NM	NM	NM	NM	NM
PB-10	11/24/2014	0-2	NM	NM	NM	NM	NM	NM	***702***	NM	NM	NM	NM	NM	NM	NM
	11/25/2014	6-8	NM	NM	NM	NM	NM	NM	5.8	NM	NM	NM	NM	NM	NM	NM
Urban Fill Background Concentrations			7	20	50	0.9	3	40	600	1	30	1	5	5	30	300
MCP RCS-1 Reportable Concentration			20	20	1,000	90	70	100	200	20	600	400	100	8	400	1,000
MCP Method 1 S-1/GW-2 Soil Standard[2]			20	20	1,000	90	70	100	200	20	600	400	100	8	400	1,000
MCP Method 1 S-1/GW-3 Soil Standard			20	20	1,000	90	70	100	200	20	600	400	100	8	400	1,000
MCP Method 1 S-3/GW-2 Soil Standard			30	50	5,000	200	100	200	600	30	1,000	700	200	80	700	5,000
MCP Method 1 S-3/GW-3 Soil Standard			30	50	5,000	200	100	200	600	30	1,000	700	200	80	700	5,000

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
[1] mg/Kg = milligrams per kilogram = parts per million (ppm).
[2] MCP Method 1 Soil Standards from Table 2, 310 CMR 40.0975 (6)(a)&(c), April, 2014.
Bold indicates concentration exceeds MCP RCS-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP S-1 and/or S-3 Soil Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 6
Concentrations of Volatile Organic Compounds (VOCs) Detected in Groundwater
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	ECS-2	ECS-3	ECS-8	ECS-9	Reportable Concentrations/Groundwater Standards[1]		
Sample Date	5/8/2014	5/8/2014	5/8/2014	5/8/2014			
Volatile Organic Compounds (VOCs)	Results/Method Detection Limits (µg/L[2])				RCGW-2	GW-2	GW-3
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND/1	1	ND/1	ND/1	NS	NS	NS
Acetone	ND/10	15.4	ND/10	ND/10	50,000	50,000	50,000
Acrylonitrile	ND/0.5	ND/0.5	ND/0.5	ND/0.5	10,000	NS	NS
Benzene	ND/1	ND/1	ND/1	ND/1	1,000	1,000	10,000
Bromobenzene	ND/1	ND/1	ND/1	ND/1	10,000	NS	NS
Bromochloromethane	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
Bromodichloromethane	ND/0.5	ND/0.5	ND/0.5	ND/0.5	6	6	50,000
Bromoform	ND/1	ND/1	ND/1	ND/1	700	700	50,000
Bromomethane	ND/2	ND/2	ND/2	ND/2	7	7	800
2-Butanone (MEK)	ND/10	ND/10	ND/10	ND/10	50,000	50,000	50,000
n-Butylbenzene	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
sec-Butylbenzene	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
tert-Butylbenzene	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
Carbon disulfide	ND/2	ND/2	ND/2	ND/2	10,000	NS	NS
Carbon tetrachloride	ND/1	ND/1	ND/1	ND/1	2	2	5,000
Chlorobenzene	ND/1	ND/1	ND/1	ND/1	200	200	1,000
Chloroethane	ND/2	ND/2	ND/2	ND/2	10,000	NS	NS
Chloroform	ND/1	ND/1	ND/1	ND/1	50	50	20,000
Chloromethane	ND/2	ND/2	ND/2	ND/2	10,000	NS	NS
2-Chlorotoluene	ND/1	ND/1	ND/1	ND/1	10,000	NS	NS
4-Chlorotoluene	ND/1	ND/1	ND/1	ND/1	10,000	NS	NS
1,2-Dibromo-3-chloropropane	ND/2	ND/2	ND/2	ND/2	1,000	NS	NS
Dibromochloromethane	ND/0.5	ND/0.5	ND/0.5	ND/0.5	20	20	50,000
1,2-Dibromoethane (EDB)	ND/0.5	ND/0.5	ND/0.5	ND/0.5	2	2	50,000
Dibromomethane	ND/1	ND/1	ND/1	ND/1	50,000	NS	NS
1,2-Dichlorobenzene	ND/1	ND/1	ND/1	ND/1	2,000	8,000	2,000
1,3-Dichlorobenzene	ND/1	ND/1	ND/1	ND/1	6,000	6,000	50,000
1,4-Dichlorobenzene	ND/1	ND/1	ND/1	ND/1	60	60	8,000
Dichlorodifluoromethane (Freon12)	ND/2	ND/2	ND/2	ND/2	100,000	NS	NS
1,1-Dichloroethane	ND/1	ND/1	ND/1	ND/1	2,000	2,000	20,000
1,2-Dichloroethane	ND/1	ND/1	ND/1	ND/1	5	5	20,000
1,1-Dichloroethene	ND/1	ND/1	ND/1	ND/1	80	80	30,000
cis-1,2-Dichloroethene	ND/1	ND/1	ND/1	ND/1	20	20	50,000
trans-1,2-Dichloroethene	ND/1	ND/1	ND/1	ND/1	80	80	50,000
1,2-Dichloropropane	ND/1	ND/1	ND/1	ND/1	3	3	50,000
1,3-Dichloropropane	ND/1	ND/1	ND/1	ND/1	50,000	NS	NS
2,2-Dichloropropane	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
1,1-Dichloropropene	ND/1	ND/1	ND/1	ND/1	10	NS	NS
cis-1,3-Dichloropropene	ND/0.5	ND/0.5	ND/0.5	ND/0.5	10	10	200
trans-1,3-Dichloropropene	ND/0.5	ND/0.5	ND/0.5	ND/0.5	10	10	200
Ethylbenzene	ND/1	ND/1	ND/1	ND/1	5,000	20,000	5,000
Hexachlorobutadiene	ND/0.5	ND/0.5	ND/0.5	ND/0.5	50	50	3,000
2-Hexanone (MBK)	ND/10	ND/10	ND/10	ND/10	10,000	NS	NS
Isopropylbenzene	ND/1	ND/1	ND/1	ND/1	100,000	NS	NS
4-Isopropyltoluene	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
Methyl tert-butyl ether	ND/1	ND/1	ND/1	ND/1	5,000	50,000	50,000
4-Methyl-2-pentanone (MIBK)	ND/10	ND/10	ND/10	ND/10	50,000	50,000	50,000
Methylene chloride	ND/2	ND/2	ND/2	ND/2	10,000	2,000	50,000
Naphthalene	ND/1	ND/1	ND/1	ND/1	700	700	20,000
n-Propylbenzene	ND/1	ND/1	ND/1	ND/1	10,000	NS	NS
Styrene	ND/1	ND/1	ND/1	ND/1	100	100	6,000
1,1,1,2-Tetrachloroethane	ND/1	ND/1	ND/1	ND/1	10	10	50,000
1,1,2,2-Tetrachloroethane	ND/0.5	ND/0.5	ND/0.5	ND/0.5	9	9	50,000
Tetrachloroethene	ND/1	ND/1	ND/1	ND/1	50	30	5,000
Toluene	ND/1	ND/1	ND/1	ND/1	40,000	50,000	40,000
1,2,3-Trichlorobenzene	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
1,2,4-Trichlorobenzene	ND/1	ND/1	ND/1	ND/1	200	200	50,000
1,3,5-Trichlorobenzene	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
1,1,1-Trichloroethane	ND/1	ND/1	ND/1	ND/1	4,000	4,000	20,000
1,1,2-Trichloroethane	ND/1	ND/1	ND/1	ND/1	900	900	50,000
Trichloroethene	ND/1	ND/1	ND/1	ND/1	5	5	5,000
Trichlorofluoromethane (Freon 11)	ND/1	ND/1	ND/1	ND/1	100,000	NS	NS
1,2,3-Trichloropropane	ND/1	ND/1	ND/1	ND/1	10,000	NS	NS
1,2,4-Trimethylbenzene	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
1,3,5-Trimethylbenzene	ND/1	ND/1	ND/1	ND/1	1,000	NS	NS
Vinyl chloride	ND/1	ND/1	ND/1	ND/1	2	2	50,000
m,p-Xylene	ND/2	ND/2	ND/2	ND/2	3,000	3,000	5,000
o-Xylene	ND/1	ND/1	ND/1	ND/1			
Tetrahydrofuran	ND/2	ND/2	ND/2	ND/2	50,000	NS	NS
Ethyl ether	ND/1	ND/1	ND/1	ND/1	10,000	NS	NS
Tert-amyl methyl ether	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
Ethyl tert-butyl ether	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
Di-isopropyl ether	ND/1	ND/1	ND/1	ND/1	NS	NS	NS
Tert-Butanol / butyl alcohol	ND/10	ND/10	ND/10	ND/10	10,000	NS	NS
1,4-Dioxane	ND/20	ND/20	ND/20	ND/20	6,000	6,000	50,000
trans-1,4-Dichloro-2-butene	ND/5	ND/5	ND/5	ND/5	1,000	NS	NS
Ethanol	ND/400	ND/400	ND/400	ND/400	10,000	NS	NS

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NS = No Standard.
[1]MCP Method 1 Groundwater Standards from Table 1, 310 CMR 40.0974(2), April, 2014.
[2]µg/L = micrograms per liter = parts per billion (ppb).
Bold indicates concentration exceeds MCP RCGW-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP GW-2 and/or GW-3 Groundwater Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 7
Concentrations of Volatile Petroleum Hydrocarbons (VPH) Detected in Groundwater
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	ECS-2	ECS-3	ECS-8	ECS-9	Reportable Concentrations/Groundwater Standards[1]		
Sample Date	5/8/2014	5/8/2014	5/8/2014	5/8/2014			
Volatile Petroleum Hydrocarbons (VPH)	Results/Method Detection Limits (µg/L[2])				RCGW-2	GW-2	GW-3
C5-C8 Aliphatic Hydrocarbons	ND/75	ND/75	ND/75	ND/75	3,000	3,000	50,000
C9-C12 Aliphatic Hydrocarbons	ND/25	ND/25	ND/25	ND/25	5,000	5,000	50,000
C9-C10 Aromatic Hydrocarbons	ND/25	ND/25	ND/25	ND/25	4,000	4,000	50,000
VPH Target Analytes	**Results/Method Detection Limits (µg/L)**						
Benzene	ND/5	ND/5	ND/5	ND/5	1,000	1,000	1,000
Ethylbenzene	ND/5	ND/5	ND/5	ND/5	5,000	20,000	5,000
Methyl tert-butyl ether	ND/5	ND/5	ND/5	ND/5	5,000	50,000	50,000
Naphthalene	ND/5	ND/5	ND/5	ND/5	700	700	20,000
Toluene	ND/5	ND/5	ND/5	ND/5	40,000	50,000	40,000
m,p-Xylene	ND/10	ND/10	ND/10	ND/10	3,000	3,000	5,000
o-Xylene	ND/5	ND/5	ND/5	ND/5			

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
[1]MCP Method 1 Groundwater Standards from Table 1, 310 CMR 40.0974(2), April, 2014.
[2]µg/L = micrograms per liter = parts per billion (ppb).
Bold indicates concentration exceeds MCP RCGW-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP GW-2 and/or GW-3 Groundwater Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 8
Concentrations of Extractable Petroleum Hydrocarbons (EPH) Detected in Groundwater
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	ECS-2	ECS-3	ECS-8	ECS-9	Reportable Concentrations/Groundwater Standards[1]		
Sample Date	5/8/2014	5/8/2014	5/8/2014	5/8/2014			
Extractable Petroleum Hydrocarbons (EPH)	Results/Method Detection Limits (µg/L[2])				RCGW-2	GW-2	GW-3
C9-C18 Aliphatic Hydrocarbons	ND/111	ND/182	ND/115	ND/112	5,000	5,000	50,000
C19-C36 Aliphatic Hydrocarbons	ND/111	ND/182	ND/115	ND/112	50,000	NS	50,000
C11-C22 Aromatic Hydrocarbons	ND/111	ND/182	ND/115	ND/112	5,000	50,000	5,000
Polycyclic Aromatic Hydrocarbons (PAHs)	Results/Method Detection Limits (µg/L)						
Naphthalene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	700	700	20,000
2-Methylnaphthalene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	2,000	2,000	20,000
Acenaphthylene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	40	10,000	40
Acenaphthene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	6,000	NS	10,000
Fluorene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	40	NS	40
Phenanthrene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	10,000	NS	10,000
Anthracene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	30	NS	30
Fluoranthene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	200	NS	200
Pyrene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	20	NS	20
Benzo (a) anthracene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	1,000	NS	1,000
Chrysene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	70	NS	70
Benzo (b) fluoranthene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	400	NS	400
Benzo (k) fluoranthene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	100	NS	100
Benzo (a) pyrene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	500	NS	500
Indeno (1,2,3-cd) pyrene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	100	NS	100
Dibenzo (a,h) anthracene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	40	NS	40
Benzo (g,h,i) perylene	ND/5.56	ND/9.09	ND/5.75	ND/5.62	20	NS	20

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NS = No Standard.
[1]MCP Method 1 Groundwater Standards from Table 1, 310 CMR 40.0974(2), April, 2014.
[2]µg/L = micrograms per liter = parts per billion (ppb).
Bold indicates concentration exceeds MCP RCGW-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP GW-2 and/or GW-3 Groundwater Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

Table 9
Concentrations of Dissolved Metals and Polychlorinated Biphenyls (PCBs) Detected in Groundwater
10 Poplar Street, Somerville, Massachusetts
ECS No. 05-221790

Sample Location	ECS-2	ECS-3	ECS-8	ECS-9	Reportable Concentrations/Groundwater Standards[1]		
Sample Date	5/8/2014	5/8/2014	5/8/2014	5/8/2014			
Dissolved Metals	Results/Method Detection Limits (mg/L)[2]				RCGW-2	GW-2	GW-3
Mercury	ND/0.0002	ND/0.0002	ND/0.0002	ND/0.0002	0.02	NS	0.02
Silver	ND/0.005	ND/0.005	ND/0.005	ND/0.005	0.007	NS	0.007
Arsenic	ND/0.004	ND/0.004	ND/0.004	ND/0.004	0.9	NS	0.9
Barium	0.0287	0.196	0.0467	0.114	50	NS	50
Beryllium	ND/0.002	ND/0.002	ND/0.002	ND/0.002	0.2	NS	0.2
Cadmium	ND/0.0025	ND/0.0025	ND/0.0025	ND/0.0025	0.004	NS	0.004
Chromium	ND/0.005	ND/0.005	ND/0.005	ND/0.005	0.3	NS	0.3
Nickel	0.0108	0.0081	0.0072	ND/0.005	0.2	NS	0.2
Lead	ND/0.0075	ND/0.0075	ND/0.0075	ND/0.0075	0.01	NS	0.01
Antimony	ND/0.006	ND/0.006	ND/0.006	ND/0.006	8	NS	8
Selenium	ND/0.015	ND/0.015	ND/0.015	ND/0.015	0.1	NS	0.1
Thallium	ND/0.005	ND/0.005	ND/0.005	ND/0.005	3	NS	3
Vanadium	ND/0.005	ND/0.005	ND/0.005	ND/0.005	4	NS	4
Zinc	0.017	0.0094	0.0072	0.0399	0.9	NS	0.9
Polychlorinated Biphenyls (PCBs)	Results/Method Detection Limits (µg/L[3])						
Aroclor-1016	ND/0.2	NA	ND/0.2	ND/0.2			
Aroclor-1221	ND/0.2	NA	ND/0.2	ND/0.2			
Aroclor-1232	ND/0.2	NA	ND/0.2	ND/0.2			
Aroclor-1242	ND/0.2	NA	ND/0.2	ND/0.2			
Aroclor-1248	ND/0.2	NA	ND/0.2	ND/0.2	5	5	10
Aroclor-1254	ND/0.2	NA	ND/0.2	ND/0.2			
Aroclor-1260	ND/0.2	NA	ND/0.2	ND/0.2			
Aroclor-1262	ND/0.2	NA	ND/0.2	ND/0.2			
Aroclor-1268	ND/0.2	NA	ND/0.2	ND/0.2			

Notes:
ND/(x) indicates parameter not detected at a concentration greater than the laboratory method detection limit (x).
NA = Not Analyzed.
NS = No Standard.
[1]MCP Method 1 Groundwater Standards from Table 1, 310 CMR 40.0974(2), April, 2014.
[2]mg/L = milligrams per liter = parts per million (ppm).
[3]µg/L = micrograms per liter = parts per billion (ppb).
Bold indicates concentration exceeds MCP RCGW-1 Reportable Concentration.
Italics and/or Underline indicate concentration exceeds applicable MCP GW-2 and/or GW-3 Groundwater Standard.

QA/QC Review:	
Last Updated By:	MC
Date:	2/9/2015
Last Checked By:	JH
Date:	2/12/2015

ATTACHMENT I

Environmental Compliance Services, Inc. *10 State Street, Woburn MA 01801*	SOIL BORING and MONITORING WELL INSTALLATION LOG	BORING NO.:	PB-1/ECS-1		
		DOCUMENT NO.:			
		SHEET	1	OF	1

						LOCATION
BORING COMPANY:	Drilex Environmental		JOB NUMBER:	05-221790		***See Site Plan***
LOCATION:	West Boylston, MA		PROJECT NAME:	Former Waste Mgmt - City of Somerville		
FOREMAN:	Jamie, Chris, Alex, and Rich		PROJECT ADDRESS:	10 Poplar Street		
ECS INSPECTOR:	A St.Mary		CLIENT NAME:	Mr. Vithal Deshpande		

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL		
Date	Depth (feet bgs)	Stabilization Time	TYPE				Casing Elevation (ft.)	
11/25/2014	10		INSIDE DIAMETER				PVC Elevation (ft.)	
			HAMMER WEIGHT				Surface Elevation (ft.)	
			HAMMER FALL				Date Started	11/24/2014
			NOTES:	Geoprobe			Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 6'			
0	PB-1 (0-2')	0-2				Damp, brown, medium to coarse grain SAND, some gravel, possibly RIL - many blocks and white concrete fragments		0.0	LAB
	PB-1 (1-3')	1-3				Same as 0-2'		0.0	LAB
		2-4				Damp, brown, fine to medium grain SAND, trace coarse sand and gravel, fill present		0.2	
		4-6				Same as 0-2'		0.2	
5	PB-1 (5-7')	5-7							LAB
	PB-1 (6-8')	6-8	48/20						
									LAB
		8-10				6-6.5' - Damp, brown, medium grain SAND and GRAVEL 6.5-10' - Damp, medium to coarse grain SAND		1.5	
10	PB-1 (10-11')	10-11	60/54						LAB
		11-13						0.5	
						10-12' - Wet, medium to coarse grain SAND 12-15' - Damp/dry, dense, gray/tan, CLAY			
		13-15						0.3	
15						End of Exploration			
20									
25									

Notes:

1. End of Exploration at 15'.

2. LAB- denotes sample was submitted for lab analysis. A sample from 0-2' was submitted for PCB analysis. Samples from 0-2' and 5-7' were submitted for Lead analysis. Samples from 1-3' and 6-8' were submitted for Semivolatile Organic Compounds analysis. A sample from 10-11' was submitted for VPH and EPH analyses.

3. PB-1 was finished as a PVC monitoring well with 5' of slotted screen from 15-10', sand from 15-9', bentonite from 9-8', and native backfill to grade. It was topped with a 6" roadbox and 1'x1' concrete pad

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc.
10 State Street, Woburn MA 01801

SOIL BORING and MONITORING WELL INSTALLATION LOG

BORING NO.: PB-2
DOCUMENT NO.:
SHEET 1 OF 1

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville
FOREMAN:	Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande

LOCATION

See Site Plan

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL	
Date	Depth (feet bgs)	Stabilization Time	TYPE				Casing Elevation (ft.)
11/25/2014	11		INSIDE DIAMETER				PVC Elevation (ft.)
			HAMMER WEIGHT				Surface Elevation (ft.)
			HAMMER FALL				Date Started: 11/25/2014
			NOTES:	Geoprobe			Date Completed: 11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 6'			
0	PB-2 (0-2')	0-2				Dry, loose, brown, medium grain SAND (possibly topsoil), trace concrete fragments		0.4	LAB
	PB-2 (1-3')	1-3'							LAB
		2-4				Dry, brown, fine to medium grain SAND, some Gravel		0.3	
		4-6				Same as above, trace gravel		0.2	
5	PB-2 (5-7')	5-7	48/20						LAB
	PB-2 (6-8')	6-8						0.5	LAB
						Dry, brown to tan, fine to medium grain SAND, some gravel at top, well sorted at bottom			
		8-10						0.3	
10		10-12	60/55			10-10.25' - Same as 6-10'		0.4	
						10.25-10.5' - Dry, brown, medium to coarse grain SAND and GRAVEL, asphalt at bottom			
						10.5-12' - Wet, medium grain SAND			
		13-15				12-14' - Wet, fine grain SAND		0.2	
						14-14.5' - Wet, coarse GRAVEL			
						14.5-15' - Wet, tan, CLAY			
15						End of Exploration			
20									
25									

Notes:

1. End of Exploration at 15'.

2. LAB- denotes sample was submitted for lab analysis. Samples from 0-2' and 6-8' were submitted for PCB analysis. Samples from 0-2' and 5-7' were submitted for Lead analysis. A sample from 1-3' was submitted for Semivolatile Organic Compounds analysis. A sample from 6-8' was submitted for VPH and EPH analyses.

3. PB-2 was finished as a 15' soil boring and backfilled to grade. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc.
10 State Street, Woburn MA 01801

SOIL BORING and MONITORING WELL INSTALLATION LOG

BORING NO.: PB-3
DOCUMENT NO.:
SHEET 1 OF 1

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville
FOREMAN:	Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande

LOCATION

See Site Plan

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL	
Date	Depth (feet bgs)	Stabilization Time	TYPE				Casing Elevation (ft.)
			INSIDE DIAMETER				PVC Elevation (ft.)
			HAMMER WEIGHT				Surface Elevation (ft.)
			HAMMER FALL				Date Started: 11/25/2014
			NOTES:	Geoprobe			Date Completed: 11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 5'			
0	PB-3 (0-2')	0-2				Dry, brown, medium grain SAND, trace gravel		0.6	LAB
	PB-3 (1-3')	1-3							LAB
		2-4				Cobbles		NM	
		4-6				Large boulder		NM	
5	PB-3 (5-7')	5-7	60/60			5-8.5' - Dry, dense, grey, CLAY		0.7	LAB
						Rock/gravel/SAND layers @ 5.25', 5.5', and 8'			
		7-9				Brick from 6-6.25'		1.5	
	PB-3 (8-10')					8.5-9' - Dry, brown/grey, medium to coarse grain SAND			LAB
		9-11				9-10' - Damp, dense, grey, CLAY, rock fragmments		0.5	
						At 9.5' - Possible ash/slag			
10									
		11-13	60/56			10-11.5' - Dry, grey to tan, medium grain SAND, some angular gravel		0.2	
						11.5-15' - Dry, dense, tan to grey, CLAY			
		13-15						0.1	
15						End of Exploration			
20									
25									

Notes:

1. End of Exploration at 15'.

2. LAB- denotes sample was submitted for lab analysis. A sample from 0-2' was submitted for PCB analysis. Samples from 0-2' and 8-10" were submitted for Lead analysis. Samples from 1-3' and 5-7" were submitted for Semivolatile Organic Compounds analysis.

3. PB-3 was finished as an 15' soil boring and backfilled to grade. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc.
10 State Street, Woburn MA 01801

SOIL BORING and MONITORING WELL INSTALLATION LOG

BORING NO.: PB-4
DOCUMENT NO.:
SHEET 1 OF 1

LOCATION

See Site Plan

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville
FOREMAN:	Jamie, Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL
Date	Depth (feet bgs)	Stabilization Time	TYPE			
			INSIDE DIAMETER			
			HAMMER WEIGHT			
			HAMMER FALL			
			NOTES:	Geoprobe		

Casing Elevation (ft.)	
PVC Elevation (ft.)	
Surface Elevation (ft.)	
Date Started	11/24/2014
Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 6'			
0	PB-4 (0-2')	0-2				Damp, brown, medium to coarse grain SAND, some gravel		0.1	LAB
	PB-4 (1-3')	1-3				Same as above, dark brown, some wood chips		0.1	LAB
		4				Brick		NM	
5	PB-4 (5-7')	5-7				At 6' - Fill - concrete, brick, some sand			LAB
	PB-4 (6-8')	6-8	48/23			6-6.25' - Damp, brown, medium grain SAND 6.25-6.5' - BRICK		0.4	LAB
						6.5-6.75' - Concrete			
		8-10				6.75-8' - Damp, tan, fine grain SAND, little silt		0.2	
						8-10' - Damp, brown, medium grain SAND, little gravel and coarse grain sand, brick present, wet clay at bottom			
10		10-12	60/50					0.1	
						Dry, dense, brown/tan/grey, CLAY			
		13-15						0.3	
15						End of Exploration			
20									
25									

Notes:

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

1. End of Exploration at 15'.

2. LAB- denotes sample was submitted for lab analysis. Samples from 0-2' and 6-8' were submitted for PCB analysis. Samples from 0-2' and 5-7' were submitted for Lead analyses. Samples from 1-3' and 6-8' were submitted for Semivolatile Organic Compounds analysis.

3. PB-4 was finished as a 15' soil boring, backfilled to grade and topped with cold patch. No monitoring well was installed.

Environmental Compliance Services, Inc.
10 State Street, Woburn MA 01801

SOIL BORING and MONITORING WELL INSTALLATION LOG

BORING NO.: PB-5
DOCUMENT NO.:
SHEET 1 OF 1

LOCATION

See Site Plan

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville
FOREMAN:	Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL
Date	Depth (feet bgs)	Stabilization Time	TYPE			
11/25/2014	10		INSIDE DIAMETER			
			HAMMER WEIGHT			
			HAMMER FALL			
			NOTES:	Geoprobe		

Casing Elevation (ft.)	
PVC Elevation (ft.)	
Surface Elevation (ft.)	
Date Started	11/25/2014
Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 6'			
0	PB-5 (0-2')	0-2				0-2' Dry, brown, medium grain SAND, trace gravel		0.1	LAB
	PB-5 (1-3')	1-3							LAB
		2-4				2-4' Damp, brown, fine to medium grain SAND, some gravel, fill present: concrete, plastic		0.1	
						4-6' Damp, tan to brown, fine grain SAND and SILT, some gravel, bricks present			
		4-6'						0.1	
5									
	PB-5 (6-8')	6-8	48/32			6-6.25' - Same as 2-4'		0.2	LAB
						6.25-9' - Damp, brown/black, fine grain SAND, some silt, plastic consistancy, organics present			
		8-10				9-10' - Damp, medium grain SAND, well sorted		0.4	
10		10-12	60/50					0.2	
						10-14' - Wet, medium grain SAND			
		13-15				14-15' - Wet, fine grain SAND		0.3	
15						End of Exploration			
20									
25									

Notes:

1. End of Exploration at 15'.

2. LAB- denotes sample was submitted for lab analysis. Samples from 0-2' and 6-8' were submitted for PCB and Lead analyses. A sample from 1-3' was submitted for Semivolatile Organic Compounds analysis.

3. PB-5 was finished as an 15' soil boring and backfilled to grade. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc.
10 State Street, Woburn MA 01801

SOIL BORING and MONITORING WELL INSTALLATION LOG

BORING NO.: PB-6
DOCUMENT NO.:
SHEET 1 OF 1

LOCATION

See Site Plan

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville
FOREMAN:	Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL
Date	Depth (feet bgs)	Stabilization Time	TYPE			
11/25/2014	11.5		INSIDE DIAMETER			
			HAMMER WEIGHT			
			HAMMER FALL			
			NOTES:	Geoprobe		

Casing Elevation (ft.)	
PVC Elevation (ft.)	
Surface Elevation (ft.)	
Date Started	11/25/2014
Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 5'			
0	PB-6 (0-2')	0-2				Dark black, medium to coarse grain SAND and GRAVEL, fill present		0.9	LAB
	PB-6 (1-3')	1-3							LAB
		2-4				Dry, black, medium to coarse grain SAND, bricks present		0.9	
		5				Dry, black, medium to coarse grain SAND, concrete present		0.6	
5		5-7	60/60			5-9.5' - Fill, dry, black medium to coarse grain SAND and GRAVEL, some concrete and bricks present Intermittent clay/silt layers 9.5-9.75' - Damp, grey, CLAY 9.75-10' - Organic layer (possibly peat) 10-11' - Same as 9.75-10'		0.5	
		7-9						1.6	
		9-11						0.9	
10									
		11-13	60/57			11-12.5' - Damp, tan to brown to grey, fine to mediumg grain SAND 12.5-15' - Dry, dense, grey, CLAY		0.2	
		13-15						0.4	LAB
15									
		16-18	60/60			16-18' -Damp, dense, grey, CLAY		0.2	
		18-20							
20						End of Exploration			
25									

Notes:

1. End of Exploration at 20'.
2. LAB- denotes sample was submitted for lab analysis. Samples from 0-2' and 13-15' were submitted for PCB analysis. Samples from 0-2' and 18-20' were submitted for Lead analysis. A sample from 1-3' was submitted for Semivolatile Organic Compounds analysis.
3. PB-6 was finished as an 20' soil boring, backfilled to grade and topped with cold patch. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc.
10 State Street, Woburn MA 01801

SOIL BORING and MONITORING WELL INSTALLATION LOG

BORING NO.: PB-7
DOCUMENT NO.:
SHEET 1 OF 1

LOCATION

See Site Plan

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville
FOREMAN:	Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL
Date	Depth (feet bgs)	Stabilization Time	TYPE			
			INSIDE DIAMETER			
			HAMMER WEIGHT			
			HAMMER FALL			
			NOTES:	Geoprobe		

Casing Elevation (ft.)	
PVC Elevation (ft.)	
Surface Elevation (ft.)	
Date Started	11/25/2014
Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 5.5'			
0	PB-7 (0-2')	0-2				Dry, loose, brown, medium grain SAND (possibly topsoil), some concrete fragments		0.2	LAB
	PB-7 (1-3')	1-3							LAB
		2-4				Same as 0-2' with organics and bricks present		0.2	
		4-6				Large boulder/rock		NM	
5									
	PB-7 (6-7.5')	6-7.5	18/16			6-6.25' - Damp, brown, medium grain SAND and GRAVEL 6.25-6.5' - Red to yellow Brick At 6.5' - Asphalt 6.5'-7.5' Same as 6-6.25', concrete at bottom Refusal at 7.5', End of Exploration		0.1	LAB
10									
15									
20									
25									

Notes:

1. End of Exploration at 7.5'.
2. LAB- denotes sample was submitted for lab analysis. A sample from 0-2' was submitted for PCB and Lead analyses. Samples from 1-3' and 6-7.5" were submitted for Semivolatile Organic Compounds analysis.
3. PB-7 was finished as an 15' soil boring and backfilled to grade. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc. *10 State Street, Woburn MA 01801*	SOIL BORING and MONITORING WELL INSTALLATION LOG	BORING NO.:	PB-8
		DOCUMENT NO.:	
		SHEET	1 OF 1
		LOCATION	

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790			
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville			
FOREMAN:	Jamie, Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street			
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande			
GROUNDWATER OBSERVATIONS			CASING	SAMPLER	CORE BARREL	
Date	Depth (feet bgs) / Stabilization Time	TYPE				
		INSIDE DIAMETER				
		HAMMER WEIGHT				
		HAMMER FALL				
		NOTES:	Geoprobe			

See Site Plan

Casing Elevation (ft.)	
PVC Elevation (ft.)	
Surface Elevation (ft.)	
Date Started	11/24/2014
Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 6'			
0	PB-8 (0-2')	0-2				Dry, medium grain SAND and GRAVEL, mostly dried concrete		0.3	LAB
	PB-8 (1-3')	1-3							LAB
		2-4				Same as 0-2'		0.2	
		4-6'				No sample, too many cobble		NM	
5									
		6-8	48/30			6-8' - Dry, brown/black, medium to coarse grain SAND and GRAVEL, some brick present		0.5	LAB
						8-9' - Concrete gragments			
		8-10				9-10' - Damp, black, medium grain SAND, odor, possible staining		0.7	LAB
10		10-11	12/4			10-10.5' - Same as 9-10'			
						10.5-11' - Brick and concrete			
						Refusal at 11', End of Exploration			
15									
20									
25									

Notes:

1. End of Exploration at 11'.

2. LAB- denotes sample was submitted for lab analysis. A sample from 0-2' was submitted for PCB analysis. Samples from 0-2' and 8-10' were submitted for Lead analysis. Samples from 1-3' and 6-8' were submitted for Semivolatile Organic Compounds analysis. A sample from 8-10' was submitted for VPH and EPH analyses.

3. PB-8 was finished as an 11' soil boring and backfilled to grade. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc. *10 State Street, Woburn MA 01801*	SOIL BORING and MONITORING WELL INSTALLATION LOG	BORING NO.:	PB-9
		DOCUMENT NO.:	
		SHEET	1 OF 1
		LOCATION	

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790			
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville			
FOREMAN:	Jamie, Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street			
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande			
GROUNDWATER OBSERVATIONS			CASING	SAMPLER	CORE BARREL	
Date	Depth (feet bgs) / Stabilization Time	TYPE				
11/24/2014	10	INSIDE DIAMETER				
		HAMMER WEIGHT				
		HAMMER FALL				
		NOTES:	Geoprobe			

See Site Plan

Casing Elevation (ft.)	
PVC Elevation (ft.)	
Surface Elevation (ft.)	
Date Started	11/24/2014
Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 6'			
0	PB-9 (0-2')	0-2				0-2' Dry, brown, medium to coarse grain SAND, some gravel		0.2	LAB
	PB-9 (1-3')	1-3							LAB
		2-4				2-4' Dry, black, medium to coarse grain SAND, little concrete fill present		0.0	
						4-6' Damp, black, fine to medium grain SAND, little clay, possible peat, trace concrete			
		4-6'						0.2	
5									
	PB-9 (6-8')	6-8	48/12					NM	LAB
						Damp, grey, CLAY, trace very angular gravel			
	PB-9 (8-10')	8-10							LAB
10		10-12	60/30					0.3	
						10-12' - Same as 6-10'			
						12-15' - Loose, porous, SAND (possibly loam)			
	PB-9 (13-15')	13-15						0.4	LAB
15						End of Exploration			
20									
25									

Notes:

1. End of Exploration at 15'.

2. LAB- denotes sample was submitted for lab analysis. Samples from 0-2' and 8-10' were submitted for PCB analysis. Samples from 0-2' and 6-8' were submitted for Lead analysis. Samples from 1-3' and 13-15' was submitted for Semivolatile Organic Compounds analysis.

3. PB-9 was finished as an 15' soil boring and backfilled to grade. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

Environmental Compliance Services, Inc.
10 State Street, Woburn MA 01801

SOIL BORING and MONITORING WELL INSTALLATION LOG

BORING NO.:	PB-10		
DOCUMENT NO.:			
SHEET	1	OF	1

BORING COMPANY:	Drilex Environmental	JOB NUMBER:	05-221790
LOCATION:	West Boylston, MA	PROJECT NAME:	Former Waste Mgmt - City of Somerville
FOREMAN:	Jamie, Chris, Alex, and Rich	PROJECT ADDRESS:	10 Poplar Street
ECS INSPECTOR:	A St.Mary	CLIENT NAME:	Mr. Vithal Deshpande

LOCATION: ***See Site Plan***

GROUNDWATER OBSERVATIONS				CASING	SAMPLER	CORE BARREL
Date	Depth (feet bgs)	Stabilization Time	TYPE			
11/24/2014	6		INSIDE DIAMETER			
			HAMMER WEIGHT			
			HAMMER FALL			
			NOTES:	Geoprobe		

Casing Elevation (ft.)	
PVC Elevation (ft.)	
Surface Elevation (ft.)	
Date Started	11/24/2014
Date Completed	11/25/2014

Depth (feet)	Sample Number	Sample Depths (feet bgs)	Penetration/ Recovery (inches)	Blows per 6-inch penetration	Strata Changes	Soil Descriptions per Burmister System (Unified Soil Classification System designations in parenthises)	Well As Built	Field Testing	Notes
						Pre-cleared to 6'			
0	PB-10 (0-2')	0-2				Damp, brown/grey, medium to coarse grain SAND, some fill present - white plastic chips		0.7	LAB
	PB-10 (1-3')	1-3							LAB
		2-4				Same as 0-2', brown, no plastic chips, some brick present		1.1	
	PB-10 (4-6')	4-6'				Wet, brown, fine to medium grain SAND, some gravel		0.3	LAB
5									
	PB-10 (6-8')	6-8	48/22			Wet, brown, fine to medium grain SAND, some gravel		0.3	LAB
	PB-10 (8-10')	8-10				Same as above, black			
10		10-12	60/40					0.2	
						10-11' - Same as 8-10'			
						11-15' - Wet, grey, CLAY			
		13-15						0.1	
15						End of Exploration			
20									
25									

Notes:

1. End of Exploration at 15'.

2. LAB- denotes sample was submitted for lab analysis. Sample from 0-2' and 8-10' were submitted for PCB analysis. Samples from 0-2' and 6-8" were submitted for Lead analysis. Samples from 1-3' and 6-8' were submitted for Semivolatile Organic Compounds analysis. A sample from 6' was submitted for VPH and EPH analyses.

3. PB-10 was finished as an 15' soil boring and backfilled to grade. No monitoring well was installed.

= 0.010 slotted screen
= washed sand
= bentonite
= native backfill

ATTACHMENT II

e-Hardcopy 2.0
Automated Report

New England ACCUTEST LABORATORIES

12/05/14

Technical Report for

Environmental Compliance Service

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

05-221790

Accutest Job Number: MC35452

Sampling Dates: 11/24/14 - 11/25/14

Report to:

Environmental Compliance Service
10 State Street
Woburn, MA 01801
mcarey@ecsconsult.com

ATTN: Matt Carey

Total number of pages in report: **163**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Accutest Laboratories

Sample Summary

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC35452-1	11/24/14	09:30	AS	11/26/14	SO	Soil	PB-1(0-2')
MC35452-2	11/24/14	09:45	AS	11/26/14	SO	Soil	PB-1(1-3')
MC35452-3	11/25/14	09:00	AS	11/26/14	SO	Soil	PB-1(5-7')
MC35452-4	11/25/14	08:45	AS	11/26/14	SO	Soil	PB-1(6-8')
MC35452-5	11/25/14	09:15	AS	11/26/14	SO	Soil	PB-1(10-11')
MC35452-6	11/25/14	09:30	AS	11/26/14	SO	Soil	PB-2(0-2')
MC35452-7	11/25/14	09:45	AS	11/26/14	SO	Soil	PB-2(1-3')
MC35452-8	11/25/14	11:00	AS	11/26/14	SO	Soil	PB-2(5-7')
MC35452-9	11/25/14	11:15	AS	11/26/14	SO	Soil	PB-2(6-8')
MC35452-10	11/25/14	12:00	AS	11/26/14	SO	Soil	PB-3(0-2')
MC35452-11	11/25/14	12:15	AS	11/26/14	SO	Soil	PB-3(1-3')
MC35452-12	11/25/14	12:20	AS	11/26/14	SO	Soil	PB-3(5-7')
MC35452-13	11/25/14	12:30	AS	11/26/14	SO	Soil	PB-3(8-10')

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC35452-14	11/24/14	10:45	AS	11/26/14	SO	Soil	PB-4(0-2')
MC35452-15	11/24/14	11:00	AS	11/26/14	SO	Soil	PB-4(1-3')
MC35452-16	11/25/14	08:30	AS	11/26/14	SO	Soil	PB-4(5-7')
MC35452-17	11/25/14	08:45	AS	11/26/14	SO	Soil	PB-4(6-8')
MC35452-18	11/25/14	11:00	AS	11/26/14	SO	Soil	PB-5(0-2')
MC35452-19	11/25/14	11:15	AS	11/26/14	SO	Soil	PB-5(1-3')
MC35452-20	11/25/14	11:30	AS	11/26/14	SO	Soil	PB-5(6-8')
MC35452-21	11/25/14	12:30	AS	11/26/14	SO	Soil	PB-6(0-2')
MC35452-22	11/25/14	12:45	AS	11/26/14	SO	Soil	PB-6(1-3')
MC35452-23	11/25/14	13:00	AS	11/26/14	SO	Soil	PB-6(13-15')
MC35452-24	11/25/14	13:15	AS	11/26/14	SO	Soil	PB-6(18-20')
MC35452-25	11/25/14	07:15	AS	11/26/14	SO	Soil	PB-7(0-2')
MC35452-26	11/25/14	07:30	AS	11/26/14	SO	Soil	PB-7(1-3')

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC35452-27	11/25/14	07:45	AS	11/26/14	SO	Soil	PB-7(6-7.5')
MC35452-28	11/25/14	08:30	AS	11/26/14	SO	Soil	PB-8(0-2')
MC35452-29	11/25/14	08:45	AS	11/26/14	SO	Soil	PB-8(1-3')
MC35452-30	11/25/14	09:00	AS	11/26/14	SO	Soil	PB-8(6-8')
MC35452-31	11/25/14	09:15	AS	11/26/14	SO	Soil	PB-8(8-10')
MC35452-32	11/24/14	13:00	AS	11/26/14	SO	Soil	PB-9(0-2')
MC35452-33	11/24/14	13:15	AS	11/26/14	SO	Soil	PB-9(1-3')
MC35452-34	11/25/14	07:00	AS	11/26/14	SO	Soil	PB-9(6-8')
MC35452-35	11/25/14	07:20	AS	11/26/14	SO	Soil	PB-9(8-10')
MC35452-36	11/25/14	07:25	AS	11/26/14	SO	Soil	PB-9(13-15')
MC35452-37	11/24/14	12:00	AS	11/26/14	SO	Soil	PB-10(0-2')
MC35452-38	11/24/14	12:15	AS	11/26/14	SO	Soil	PB-10(1-3')
MC35452-39	11/24/14	12:30	AS	11/26/14	SO	Soil	PB-10(6')

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Accutest Laboratories

Sample Summary
(continued)

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC35452-40	11/25/14	07:15 AS	11/26/14	SO	Soil	PB-10(6-8')
MC35452-41	11/25/14	07:30 AS	11/26/14	SO	Soil	PB-10(8-10')

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Environmental Compliance Service **Job No** MC35452

Site: Former Waste Management - City of Somerville, 10 Poplar Street, So **Report Date** 12/5/2014 5:23:40 PM

41 Sample(s) were collected on between 11/24/2014 and 11/25/2014 and were received at Accutest on 11/26/2014 properly preserved, at 1.8 Deg. C and intact. These Samples received an Accutest job number of MC35452. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method SW846 8270D

Matrix SO **Batch ID:** OP41045

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification MSF3417-ICV3417 for Hexachlorocyclopentadiene exceed 30% Difference.
- Continuing calibration check standard MSF3419-CC3417 for 2,4-Dinitrophenol exceed 20% Difference. This check standard met MCP criteria.

Matrix SO **Batch ID:** OP41048

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard MSR1532-CC1481 for bis(2-Chloroethoxy)methane, 2,4-Dinitrophenol, 4-Nitrophenol exceeds 20% Difference. This check standard met MCP criteria.
- MC35452-7,15,27: Elevated RL due to dilution required for matrix interference.
- MC35452-29 for 2-Fluorophenol, 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- MC35452-30 for 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- Continuing calibration check standard MSR1531-CC1481 for bis(2-Chloroethoxy)methane exceeds 20% Difference. This check standard met MCP criteria.
- Quadratic regression is employed for initial calibration standard MSR1481-ICC1481 for bis(2-chloroisopropyl)ether, N-Nitroso-di-n-propylamine, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol.

Matrix SO **Batch ID:** OP41112

- MC35452-29, 30: Confirmation run for surrogate recoveries.

Volatiles by GC By Method MADEP VPH REV 1.1

Matrix SO **Batch ID:** GBH1929

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method MADEP EPH REV 1.1

Matrix SO **Batch ID:** OP41046

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8082A

Matrix SO **Batch ID:** OP41053

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MC35452-25 for Aroclor 1242: Estimated value due to the presence of other Aroclor pattern.
- MC35452-6,10,14 for Aroclor 1260: Estimated value due to the presence of other Aroclor pattern.

Metals By Method SW846 6010C

Matrix SO **Batch ID:** MP23971

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC35452-6PS, MC35452-6SDL were used as the QC samples for metals.
- Only Lead requested.

Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percents solids.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC35452).

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC35452-1	**PB-1(0-2')**					
Aroclor 1254		720	41		ug/kg	SW846 8082A
Lead		188	1.2		mg/kg	SW846 6010C
MC35452-2	**PB-1(1-3')**					
Benzo(a)anthracene		237	120		ug/kg	SW846 8270D
Benzo(a)pyrene		219	120		ug/kg	SW846 8270D
Benzo(b)fluoranthene		170	120		ug/kg	SW846 8270D
Benzo(g,h,i)perylene		127	120		ug/kg	SW846 8270D
Benzo(k)fluoranthene		199	120		ug/kg	SW846 8270D
Chrysene		233	120		ug/kg	SW846 8270D
Fluoranthene		465	120		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		136	120		ug/kg	SW846 8270D
Phenanthrene		297	120		ug/kg	SW846 8270D
Pyrene		453	120		ug/kg	SW846 8270D
MC35452-3	**PB-1(5-7')**					
Lead		297	0.88		mg/kg	SW846 6010C
MC35452-4	**PB-1(6-8')**					
No hits reported in this sample.						
MC35452-5	**PB-1(10-11')**					
No hits reported in this sample.						
MC35452-6	**PB-2(0-2')**					
Aroclor 1254		79.2	36		ug/kg	SW846 8082A
Aroclor 1260 [a]		53.4	36		ug/kg	SW846 8082A
Lead		195	0.99		mg/kg	SW846 6010C
MC35452-7	**PB-2(1-3')**					
Benzo(a)anthracene [b]		597	530		ug/kg	SW846 8270D
Benzo(a)pyrene [b]		565	530		ug/kg	SW846 8270D
Chrysene [b]		593	530		ug/kg	SW846 8270D
Fluoranthene [b]		1060	530		ug/kg	SW846 8270D
Phenanthrene [b]		594	530		ug/kg	SW846 8270D
Pyrene [b]		1030	530		ug/kg	SW846 8270D

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC35452-8	**PB-2(5-7')**					
Lead		68.6	1.1		mg/kg	SW846 6010C
MC35452-9	**PB-2(6-8')**					
Benzo(a)anthracene		532	460		ug/kg	MADEP EPH REV 1.1
Benzo(a)pyrene		487	460		ug/kg	MADEP EPH REV 1.1
Benzo(g,h,i)perylene		553	460		ug/kg	MADEP EPH REV 1.1
Benzo(k)fluoranthene		463	460		ug/kg	MADEP EPH REV 1.1
Chrysene		566	460		ug/kg	MADEP EPH REV 1.1
Fluoranthene		1090	460		ug/kg	MADEP EPH REV 1.1
Phenanthrene		696	460		ug/kg	MADEP EPH REV 1.1
Pyrene		849	460		ug/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.)		28900	18000		ug/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		16600	9200		ug/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		22800	18000		ug/kg	MADEP EPH REV 1.1
MC35452-10	**PB-3(0-2')**					
Aroclor 1254		646	38		ug/kg	SW846 8082A
Aroclor 1260 [a]		143	38		ug/kg	SW846 8082A
Lead		497	1.2		mg/kg	SW846 6010C
MC35452-11	**PB-3(1-3')**					
Acenaphthene		119	110		ug/kg	SW846 8270D
Acenaphthylene		112	110		ug/kg	SW846 8270D
Anthracene		283	110		ug/kg	SW846 8270D
Benzo(a)anthracene		832	110		ug/kg	SW846 8270D
Benzo(a)pyrene		883	110		ug/kg	SW846 8270D
Benzo(b)fluoranthene		730	110		ug/kg	SW846 8270D
Benzo(g,h,i)perylene		523	110		ug/kg	SW846 8270D
Benzo(k)fluoranthene		698	110		ug/kg	SW846 8270D
Chrysene		862	110		ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		166	110		ug/kg	SW846 8270D
Dibenzofuran		111	110		ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		1100	280		ug/kg	SW846 8270D
Fluoranthene		1700	110		ug/kg	SW846 8270D
Fluorene		150	110		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		555	110		ug/kg	SW846 8270D
Naphthalene		127	110		ug/kg	SW846 8270D
Phenanthrene		1120	110		ug/kg	SW846 8270D
Pyrene		1650	110		ug/kg	SW846 8270D

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC35452-12	**PB-3(5-7')**					
Acenaphthene		443	120		ug/kg	SW846 8270D
Acenaphthylene		182	120		ug/kg	SW846 8270D
Anthracene		943	120		ug/kg	SW846 8270D
Benzo(a)anthracene		1630	120		ug/kg	SW846 8270D
Benzo(a)pyrene		1540	120		ug/kg	SW846 8270D
Benzo(b)fluoranthene		1180	120		ug/kg	SW846 8270D
Benzo(g,h,i)perylene		893	120		ug/kg	SW846 8270D
Benzo(k)fluoranthene		1330	120		ug/kg	SW846 8270D
Chrysene		1670	120		ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		285	120		ug/kg	SW846 8270D
Dibenzofuran		323	120		ug/kg	SW846 8270D
Fluoranthene		3750	120		ug/kg	SW846 8270D
Fluorene		560	120		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		1020	120		ug/kg	SW846 8270D
2-Methylnaphthalene		361	120		ug/kg	SW846 8270D
Naphthalene		340	120		ug/kg	SW846 8270D
Phenanthrene		4100	120		ug/kg	SW846 8270D
Pyrene		3730	120		ug/kg	SW846 8270D
MC35452-13	**PB-3(8-10')**					
Lead		33.4	1.1		mg/kg	SW846 6010C
MC35452-14	**PB-4(0-2')**					
Aroclor 1254		145	36		ug/kg	SW846 8082A
Aroclor 1260 [a]		144	36		ug/kg	SW846 8082A
Lead		189	0.91		mg/kg	SW846 6010C
MC35452-15	**PB-4(1-3')**					
Benzo(a)anthracene [b]		1440	540		ug/kg	SW846 8270D
Benzo(a)pyrene [b]		1370	540		ug/kg	SW846 8270D
Benzo(b)fluoranthene [b]		1260	540		ug/kg	SW846 8270D
Benzo(g,h,i)perylene [b]		920	540		ug/kg	SW846 8270D
Benzo(k)fluoranthene [b]		1090	540		ug/kg	SW846 8270D
Chrysene [b]		1450	540		ug/kg	SW846 8270D
Fluoranthene [b]		2720	540		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [b]		949	540		ug/kg	SW846 8270D
Phenanthrene [b]		1670	540		ug/kg	SW846 8270D
Pyrene [b]		2590	540		ug/kg	SW846 8270D

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC35452-16	**PB-4(5-7')**					
Lead		377	0.94		mg/kg	SW846 6010C
MC35452-17	**PB-4(6-8')**					
No hits reported in this sample.						
MC35452-18	**PB-5(0-2')**					
Lead		204	0.98		mg/kg	SW846 6010C
MC35452-19	**PB-5(1-3')**					
Acenaphthylene		126	110		ug/kg	SW846 8270D
Anthracene		128	110		ug/kg	SW846 8270D
Benzo(a)anthracene		526	110		ug/kg	SW846 8270D
Benzo(a)pyrene		663	110		ug/kg	SW846 8270D
Benzo(b)fluoranthene		509	110		ug/kg	SW846 8270D
Benzo(g,h,i)perylene		385	110		ug/kg	SW846 8270D
Benzo(k)fluoranthene		485	110		ug/kg	SW846 8270D
Chrysene		524	110		ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		117	110		ug/kg	SW846 8270D
Fluoranthene		936	110		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		455	110		ug/kg	SW846 8270D
Phenanthrene		382	110		ug/kg	SW846 8270D
Pyrene		952	110		ug/kg	SW846 8270D
MC35452-20	**PB-5(6-8')**					
Lead		15.7	1.4		mg/kg	SW846 6010C
MC35452-21	**PB-6(0-2')**					
Aroclor 1254		59.2	37		ug/kg	SW846 8082A
Lead		527	0.95		mg/kg	SW846 6010C
MC35452-22	**PB-6(1-3')**					
Anthracene		241	110		ug/kg	SW846 8270D
Benzo(a)anthracene		539	110		ug/kg	SW846 8270D
Benzo(a)pyrene		483	110		ug/kg	SW846 8270D
Benzo(b)fluoranthene		440	110		ug/kg	SW846 8270D
Benzo(g,h,i)perylene		287	110		ug/kg	SW846 8270D
Benzo(k)fluoranthene		431	110		ug/kg	SW846 8270D

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chrysene		556	110		ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		3780	270		ug/kg	SW846 8270D
Fluoranthene		1270	110		ug/kg	SW846 8270D
Fluorene		142	110		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		317	110		ug/kg	SW846 8270D
2-Methylnaphthalene		144	110		ug/kg	SW846 8270D
Naphthalene		176	110		ug/kg	SW846 8270D
Phenanthrene		995	110		ug/kg	SW846 8270D
Pyrene		1140	110		ug/kg	SW846 8270D
MC35452-23	**PB-6(13-15')**					
No hits reported in this sample.						
MC35452-24	**PB-6(18-20')**					
Lead		15.3	1.0		mg/kg	SW846 6010C
MC35452-25	**PB-7(0-2')**					
Aroclor 1242 [a]		63.8	38		ug/kg	SW846 8082A
Aroclor 1254		71.5	38		ug/kg	SW846 8082A
Lead		298	1.0		mg/kg	SW846 6010C
MC35452-26	**PB-7(1-3')**					
Acenaphthene		862	570		ug/kg	SW846 8270D
Acenaphthylene		675	570		ug/kg	SW846 8270D
Anthracene		2670	570		ug/kg	SW846 8270D
Benzo(a)anthracene		6190	570		ug/kg	SW846 8270D
Benzo(a)pyrene		5400	570		ug/kg	SW846 8270D
Benzo(b)fluoranthene		4440	570		ug/kg	SW846 8270D
Benzo(g,h,i)perylene		2610	570		ug/kg	SW846 8270D
Benzo(k)fluoranthene		4430	570		ug/kg	SW846 8270D
Chrysene		5720	570		ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		957	570		ug/kg	SW846 8270D
Dibenzofuran		571	570		ug/kg	SW846 8270D
Fluoranthene		13400	570		ug/kg	SW846 8270D
Fluorene		872	570		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		3110	570		ug/kg	SW846 8270D
Phenanthrene		9660	570		ug/kg	SW846 8270D
Pyrene		11900	570		ug/kg	SW846 8270D

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC35452-27	**PB-7(6-7.5')**					
Benzo(a)anthracene [b]		1290	580		ug/kg	SW846 8270D
Benzo(a)pyrene [b]		1280	580		ug/kg	SW846 8270D
Benzo(b)fluoranthene [b]		1210	580		ug/kg	SW846 8270D
Benzo(g,h,i)perylene [b]		732	580		ug/kg	SW846 8270D
Benzo(k)fluoranthene [b]		1020	580		ug/kg	SW846 8270D
Chrysene [b]		1350	580		ug/kg	SW846 8270D
Fluoranthene [b]		2310	580		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [b]		824	580		ug/kg	SW846 8270D
Phenanthrene [b]		1400	580		ug/kg	SW846 8270D
Pyrene [b]		2180	580		ug/kg	SW846 8270D
MC35452-28	**PB-8(0-2')**					
Aroclor 1242		770	42		ug/kg	SW846 8082A
Lead		188	1.1		mg/kg	SW846 6010C
MC35452-29	**PB-8(1-3')**					
bis(2-Ethylhexyl)phthalate		621	290		ug/kg	SW846 8270D
Fluoranthene		171	120		ug/kg	SW846 8270D
Phenanthrene		125	120		ug/kg	SW846 8270D
Pyrene		175	120		ug/kg	SW846 8270D
MC35452-30	**PB-8(6-8')**					
Butyl benzyl phthalate		69700	2800		ug/kg	SW846 8270D
MC35452-31	**PB-8(8-10')**					
C19-C36 Aliphatics		16800	9300		ug/kg	MADEP EPH REV 1.1
Lead		4.0	0.89		mg/kg	SW846 6010C
MC35452-32	**PB-9(0-2')**					
Lead		73.6	1.0		mg/kg	SW846 6010C
MC35452-33	**PB-9(1-3')**					
Acenaphthene		10500	1100		ug/kg	SW846 8270D
Acenaphthylene		3710	1100		ug/kg	SW846 8270D
Anthracene		27700	1100		ug/kg	SW846 8270D
Benzo(a)anthracene		69700	1100		ug/kg	SW846 8270D
Benzo(a)pyrene		68200	1100		ug/kg	SW846 8270D

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(b)fluoranthene		77500	1100		ug/kg	SW846 8270D
Benzo(g,h,i)perylene		32200	1100		ug/kg	SW846 8270D
Benzo(k)fluoranthene		31600	1100		ug/kg	SW846 8270D
Chrysene		74100	1100		ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		12200	1100		ug/kg	SW846 8270D
Dibenzofuran		7600	1100		ug/kg	SW846 8270D
Fluoranthene		143000	5300		ug/kg	SW846 8270D
Fluorene		13600	1100		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		40400	1100		ug/kg	SW846 8270D
2-Methylnaphthalene		3270	1100		ug/kg	SW846 8270D
Naphthalene		6170	1100		ug/kg	SW846 8270D
Phenanthrene		120000	5300		ug/kg	SW846 8270D
Pyrene		110000	5300		ug/kg	SW846 8270D
MC35452-34	**PB-9(6-8')**					
Lead		22.6	1.1		mg/kg	SW846 6010C
MC35452-35	**PB-9(8-10')**					
Aroclor 1268		73.3	39		ug/kg	SW846 8082A
MC35452-36	**PB-9(13-15')**					
No hits reported in this sample.						
MC35452-37	**PB-10(0-2')**					
Lead		702	0.86		mg/kg	SW846 6010C
MC35452-38	**PB-10(1-3')**					
Benzo(a)anthracene		146	110		ug/kg	SW846 8270D
Benzo(a)pyrene		141	110		ug/kg	SW846 8270D
Benzo(b)fluoranthene		115	110		ug/kg	SW846 8270D
Benzo(k)fluoranthene		112	110		ug/kg	SW846 8270D
Chrysene		137	110		ug/kg	SW846 8270D
Fluoranthene		242	110		ug/kg	SW846 8270D
Phenanthrene		155	110		ug/kg	SW846 8270D
Pyrene		246	110		ug/kg	SW846 8270D
MC35452-39	**PB-10(6')**					
No hits reported in this sample.						

Summary of Hits

Job Number: MC35452
Account: Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Collected: 11/24/14 thru 11/25/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC35452-40	**PB-10(6-8')**					
Lead		5.8	1.1		mg/kg	SW846 6010C
MC35452-41	**PB-10(8-10')**					

No hits reported in this sample.

(a) Estimated value due to the presence of other Aroclor pattern.
(b) Elevated RL due to dilution required for matrix interference.

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	PB-1(0-2')		
Lab Sample ID:	MC35452-1	**Date Sampled:**	11/24/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	79.4
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44153.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	41	ug/kg	
11104-28-2	Aroclor 1221	ND	41	ug/kg	
11141-16-5	Aroclor 1232	ND	41	ug/kg	
53469-21-9	Aroclor 1242	ND	41	ug/kg	
12672-29-6	Aroclor 1248	ND	41	ug/kg	
11097-69-1	Aroclor 1254	720	41	ug/kg	
11096-82-5	Aroclor 1260	ND	41	ug/kg	
37324-23-5	Aroclor 1262	ND	41	ug/kg	
11100-14-4	Aroclor 1268	ND	41	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		30-150%
877-09-8	Tetrachloro-m-xylene	81%		30-150%
2051-24-3	Decachlorobiphenyl	99%		30-150%
2051-24-3	Decachlorobiphenyl	107%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	PB-1(0-2')		
Lab Sample ID:	MC35452-1	**Date Sampled:**	11/24/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	79.4
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	188	1.2	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-1(1-3')
Lab Sample ID: MC35452-2 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 82.3
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41658.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	600	ug/kg	
95-57-8	2-Chlorophenol	ND	300	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	600	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	600	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	600	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
95-48-7	2-Methylphenol	ND	600	ug/kg	
	3&4-Methylphenol	ND	600	ug/kg	
88-75-5	2-Nitrophenol	ND	600	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	600	ug/kg	
108-95-2	Phenol	ND	300	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	600	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	600	ug/kg	
83-32-9	Acenaphthene	ND	120	ug/kg	
208-96-8	Acenaphthylene	ND	120	ug/kg	
98-86-2	Acetophenone	ND	600	ug/kg	
62-53-3	Aniline	ND	600	ug/kg	
120-12-7	Anthracene	ND	120	ug/kg	
56-55-3	Benzo(a)anthracene	237	120	ug/kg	
50-32-8	Benzo(a)pyrene	219	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	170	120	ug/kg	
191-24-2	Benzo(g,h,i)perylene	127	120	ug/kg	
207-08-9	Benzo(k)fluoranthene	199	120	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	300	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	300	ug/kg	
91-58-7	2-Chloronaphthalene	ND	300	ug/kg	
106-47-8	4-Chloroaniline	ND	600	ug/kg	
218-01-9	Chrysene	233	120	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	300	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	300	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	300	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-1(1-3')
Lab Sample ID: MC35452-2 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 82.3
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	300	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	300	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	300	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	300	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	600	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	600	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	300	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	120	ug/kg	
132-64-9	Dibenzofuran	ND	120	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	300	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	300	ug/kg	
84-66-2	Diethyl phthalate	ND	300	ug/kg	
131-11-3	Dimethyl phthalate	ND	300	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	300	ug/kg	
206-44-0	Fluoranthene	465	120	ug/kg	
86-73-7	Fluorene	ND	120	ug/kg	
118-74-1	Hexachlorobenzene	ND	300	ug/kg	
87-68-3	Hexachlorobutadiene	ND	300	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	600	ug/kg	
67-72-1	Hexachloroethane	ND	300	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	136	120	ug/kg	
78-59-1	Isophorone	ND	300	ug/kg	
91-57-6	2-Methylnaphthalene	ND	120	ug/kg	
91-20-3	Naphthalene	ND	120	ug/kg	
98-95-3	Nitrobenzene	ND	300	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	300	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	300	ug/kg	
85-01-8	Phenanthrene	297	120	ug/kg	
129-00-0	Pyrene	453	120	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		30-130%
4165-62-2	Phenol-d5	75%		30-130%
118-79-6	2,4,6-Tribromophenol	71%		30-130%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	86%		30-130%
1718-51-0	Terphenyl-d14	105%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-1(5-7')
Lab Sample ID: MC35452-3 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 86.7
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	297	0.88	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-1(6-8')
Lab Sample ID: MC35452-4 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 93.1
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41659.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	530	ug/kg	
95-57-8	2-Chlorophenol	ND	270	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	530	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	530	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	530	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
95-48-7	2-Methylphenol	ND	530	ug/kg	
	3&4-Methylphenol	ND	530	ug/kg	
88-75-5	2-Nitrophenol	ND	530	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	530	ug/kg	
108-95-2	Phenol	ND	270	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	530	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	530	ug/kg	
83-32-9	Acenaphthene	ND	110	ug/kg	
208-96-8	Acenaphthylene	ND	110	ug/kg	
98-86-2	Acetophenone	ND	530	ug/kg	
62-53-3	Aniline	ND	530	ug/kg	
120-12-7	Anthracene	ND	110	ug/kg	
56-55-3	Benzo(a)anthracene	ND	110	ug/kg	
50-32-8	Benzo(a)pyrene	ND	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	110	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	270	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	270	ug/kg	
91-58-7	2-Chloronaphthalene	ND	270	ug/kg	
106-47-8	4-Chloroaniline	ND	530	ug/kg	
218-01-9	Chrysene	ND	110	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	270	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	270	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	270	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-1(6-8')
Lab Sample ID: MC35452-4 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 93.1
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	270	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	270	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	530	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	530	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	270	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	110	ug/kg	
132-64-9	Dibenzofuran	ND	110	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	270	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	270	ug/kg	
84-66-2	Diethyl phthalate	ND	270	ug/kg	
131-11-3	Dimethyl phthalate	ND	270	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	270	ug/kg	
206-44-0	Fluoranthene	ND	110	ug/kg	
86-73-7	Fluorene	ND	110	ug/kg	
118-74-1	Hexachlorobenzene	ND	270	ug/kg	
87-68-3	Hexachlorobutadiene	ND	270	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	530	ug/kg	
67-72-1	Hexachloroethane	ND	270	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	110	ug/kg	
78-59-1	Isophorone	ND	270	ug/kg	
91-57-6	2-Methylnaphthalene	ND	110	ug/kg	
91-20-3	Naphthalene	ND	110	ug/kg	
98-95-3	Nitrobenzene	ND	270	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	270	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	270	ug/kg	
85-01-8	Phenanthrene	ND	110	ug/kg	
129-00-0	Pyrene	ND	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	270	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	75%		30-130%
4165-62-2	Phenol-d5	78%		30-130%
118-79-6	2,4,6-Tribromophenol	74%		30-130%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	87%		30-130%
1718-51-0	Terphenyl-d14	115%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-1(10-11')
Lab Sample ID: MC35452-5 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: MADEP VPH REV 1.1 **Percent Solids:** 83.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH32899.D	1	12/01/14	TB	n/a	n/a	GBH1929
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	16.2 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	350	ug/kg	
100-41-4	Ethylbenzene	ND	350	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	70	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
108-88-3	Toluene	ND	350	ug/kg	
	m,p-Xylene	ND	350	ug/kg	
95-47-6	o-Xylene	ND	350	ug/kg	
	C5- C8 Aliphatics (Unadj.)	ND	7000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	7000	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	7000	ug/kg	
	C5- C8 Aliphatics	ND	7000	ug/kg	
	C9- C12 Aliphatics	ND	7000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	99%		70-130%
	2,3,4-Trifluorotoluene	93%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-1(10-11')
Lab Sample ID: MC35452-5 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: MADEP EPH REV 1.1 SW846 3546 **Percent Solids:** 83.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE7493.D	1	12/02/14	SZ	12/01/14	OP41046	GDE491
Run #2							

	Initial Weight	Final Volume
Run #1	11.6 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	520	ug/kg	
208-96-8	Acenaphthylene	ND	520	ug/kg	
120-12-7	Anthracene	ND	520	ug/kg	
56-55-3	Benzo(a)anthracene	ND	520	ug/kg	
50-32-8	Benzo(a)pyrene	ND	520	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	520	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	520	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	520	ug/kg	
218-01-9	Chrysene	ND	520	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	520	ug/kg	
206-44-0	Fluoranthene	ND	520	ug/kg	
86-73-7	Fluorene	ND	520	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	520	ug/kg	
91-57-6	2-Methylnaphthalene	ND	520	ug/kg	
91-20-3	Naphthalene	ND	520	ug/kg	
85-01-8	Phenanthrene	ND	520	ug/kg	
129-00-0	Pyrene	ND	520	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	21000	ug/kg	
	C9-C18 Aliphatics	ND	10000	ug/kg	
	C19-C36 Aliphatics	ND	10000	ug/kg	
	C11-C22 Aromatics	ND	21000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	115%		40-140%
321-60-8	2-Fluorobiphenyl	93%		40-140%
580-13-2	2-Bromonaphthalene	86%		40-140%
3386-33-2	1-Chlorooctadecane	74%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-2(0-2')
Lab Sample ID: MC35452-6 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8082A SW846 3546 **Percent Solids:** 90.3
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44154.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	36	ug/kg	
11104-28-2	Aroclor 1221	ND	36	ug/kg	
11141-16-5	Aroclor 1232	ND	36	ug/kg	
53469-21-9	Aroclor 1242	ND	36	ug/kg	
12672-29-6	Aroclor 1248	ND	36	ug/kg	
11097-69-1	Aroclor 1254	79.2	36	ug/kg	
11096-82-5	Aroclor 1260 [a]	53.4	36	ug/kg	
37324-23-5	Aroclor 1262	ND	36	ug/kg	
11100-14-4	Aroclor 1268	ND	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	71%		30-150%
877-09-8	Tetrachloro-m-xylene	77%		30-150%
2051-24-3	Decachlorobiphenyl	109%		30-150%
2051-24-3	Decachlorobiphenyl	123%		30-150%

(a) Estimated value due to the presence of other Aroclor pattern.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-2(0-2')
Lab Sample ID: MC35452-6
Matrix: SO - Soil
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 90.3

4.6
4

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	195	0.99	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-2(1-3')
Lab Sample ID: MC35452-7
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 90.9

4.7
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	R41660.D	5	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.8 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	2600	ug/kg	
95-57-8	2-Chlorophenol	ND	1300	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2600	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	2600	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2600	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5300	ug/kg	
95-48-7	2-Methylphenol	ND	2600	ug/kg	
	3&4-Methylphenol	ND	2600	ug/kg	
88-75-5	2-Nitrophenol	ND	2600	ug/kg	
100-02-7	4-Nitrophenol	ND	5300	ug/kg	
87-86-5	Pentachlorophenol	ND	2600	ug/kg	
108-95-2	Phenol	ND	1300	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	2600	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	2600	ug/kg	
83-32-9	Acenaphthene	ND	530	ug/kg	
208-96-8	Acenaphthylene	ND	530	ug/kg	
98-86-2	Acetophenone	ND	2600	ug/kg	
62-53-3	Aniline	ND	2600	ug/kg	
120-12-7	Anthracene	ND	530	ug/kg	
56-55-3	Benzo(a)anthracene	597	530	ug/kg	
50-32-8	Benzo(a)pyrene	565	530	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	530	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	530	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	530	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1300	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1300	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1300	ug/kg	
106-47-8	4-Chloroaniline	ND	2600	ug/kg	
218-01-9	Chrysene	593	530	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1300	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1300	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1300	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-2(1-3')		
Lab Sample ID:	MC35452-7	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	90.9
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

4.7
4

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	1300	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	1300	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1300	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1300	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	2600	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	2600	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1300	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	530	ug/kg	
132-64-9	Dibenzofuran	ND	530	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1300	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1300	ug/kg	
84-66-2	Diethyl phthalate	ND	1300	ug/kg	
131-11-3	Dimethyl phthalate	ND	1300	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1300	ug/kg	
206-44-0	Fluoranthene	1060	530	ug/kg	
86-73-7	Fluorene	ND	530	ug/kg	
118-74-1	Hexachlorobenzene	ND	1300	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1300	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	2600	ug/kg	
67-72-1	Hexachloroethane	ND	1300	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	530	ug/kg	
78-59-1	Isophorone	ND	1300	ug/kg	
91-57-6	2-Methylnaphthalene	ND	530	ug/kg	
91-20-3	Naphthalene	ND	530	ug/kg	
98-95-3	Nitrobenzene	ND	1300	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1300	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1300	ug/kg	
85-01-8	Phenanthrene	594	530	ug/kg	
129-00-0	Pyrene	1030	530	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	84%		30-130%
4165-62-2	Phenol-d5	93%		30-130%
118-79-6	2,4,6-Tribromophenol	78%		30-130%
4165-60-0	Nitrobenzene-d5	83%		30-130%
321-60-8	2-Fluorobiphenyl	102%		30-130%
1718-51-0	Terphenyl-d14	116%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-2(1-3')		
Lab Sample ID:	MC35452-7	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	90.9
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

4.7
4

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Elevated RL due to dilution required for matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-2(5-7')
Lab Sample ID: MC35452-8 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 91.3
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	68.6	1.1	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-2(6-8')
Lab Sample ID: MC35452-9 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: MADEP VPH REV 1.1 **Percent Solids:** 92.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH32900.D	1	12/01/14	TB	n/a	n/a	GBH1929
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	15.7 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	300	ug/kg	
100-41-4	Ethylbenzene	ND	300	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	59	ug/kg	
91-20-3	Naphthalene	ND	300	ug/kg	
108-88-3	Toluene	ND	300	ug/kg	
	m,p-Xylene	ND	300	ug/kg	
95-47-6	o-Xylene	ND	300	ug/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5900	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5900	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5900	ug/kg	
	C5- C8 Aliphatics	ND	5900	ug/kg	
	C9- C12 Aliphatics	ND	5900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	110%		70-130%
	2,3,4-Trifluorotoluene	104%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-2(6-8')
Lab Sample ID: MC35452-9
Matrix: SO - Soil
Method: SW846 8082A SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 92.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44155.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	36	ug/kg	
11104-28-2	Aroclor 1221	ND	36	ug/kg	
11141-16-5	Aroclor 1232	ND	36	ug/kg	
53469-21-9	Aroclor 1242	ND	36	ug/kg	
12672-29-6	Aroclor 1248	ND	36	ug/kg	
11097-69-1	Aroclor 1254	ND	36	ug/kg	
11096-82-5	Aroclor 1260	ND	36	ug/kg	
37324-23-5	Aroclor 1262	ND	36	ug/kg	
11100-14-4	Aroclor 1268	ND	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		30-150%
877-09-8	Tetrachloro-m-xylene	83%		30-150%
2051-24-3	Decachlorobiphenyl	98%		30-150%
2051-24-3	Decachlorobiphenyl	118%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: PB-2(6-8')
Lab Sample ID: MC35452-9
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 92.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE7494.D	1	12/02/14	SZ	12/01/14	OP41046	GDE491
Run #2							

	Initial Weight	Final Volume
Run #1	11.8 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	460	ug/kg	
208-96-8	Acenaphthylene	ND	460	ug/kg	
120-12-7	Anthracene	ND	460	ug/kg	
56-55-3	Benzo(a)anthracene	532	460	ug/kg	
50-32-8	Benzo(a)pyrene	487	460	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	460	ug/kg	
191-24-2	Benzo(g,h,i)perylene	553	460	ug/kg	
207-08-9	Benzo(k)fluoranthene	463	460	ug/kg	
218-01-9	Chrysene	566	460	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	460	ug/kg	
206-44-0	Fluoranthene	1090	460	ug/kg	
86-73-7	Fluorene	ND	460	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	460	ug/kg	
91-57-6	2-Methylnaphthalene	ND	460	ug/kg	
91-20-3	Naphthalene	ND	460	ug/kg	
85-01-8	Phenanthrene	696	460	ug/kg	
129-00-0	Pyrene	849	460	ug/kg	
	C11-C22 Aromatics (Unadj.)	28900	18000	ug/kg	
	C9-C18 Aliphatics	ND	9200	ug/kg	
	C19-C36 Aliphatics	16600	9200	ug/kg	
	C11-C22 Aromatics	22800	18000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	121%		40-140%
321-60-8	2-Fluorobiphenyl	91%		40-140%
580-13-2	2-Bromonaphthalene	87%		40-140%
3386-33-2	1-Chlorooctadecane	80%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-3(0-2')		
Lab Sample ID:	MC35452-10	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	84.4
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44156.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	38	ug/kg	
11104-28-2	Aroclor 1221	ND	38	ug/kg	
11141-16-5	Aroclor 1232	ND	38	ug/kg	
53469-21-9	Aroclor 1242	ND	38	ug/kg	
12672-29-6	Aroclor 1248	ND	38	ug/kg	
11097-69-1	Aroclor 1254	646	38	ug/kg	
11096-82-5	Aroclor 1260 [a]	143	38	ug/kg	
37324-23-5	Aroclor 1262	ND	38	ug/kg	
11100-14-4	Aroclor 1268	ND	38	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		30-150%
877-09-8	Tetrachloro-m-xylene	73%		30-150%
2051-24-3	Decachlorobiphenyl	95%		30-150%
2051-24-3	Decachlorobiphenyl	120%		30-150%

(a) Estimated value due to the presence of other Aroclor pattern.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

4.10
4

Client Sample ID:	PB-3(0-2')		
Lab Sample ID:	MC35452-10	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	84.4
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	497	1.2	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-3(1-3')
Lab Sample ID: MC35452-11 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.6
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41661.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.6 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	560	ug/kg	
95-57-8	2-Chlorophenol	ND	280	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	560	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	560	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	560	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
95-48-7	2-Methylphenol	ND	560	ug/kg	
	3&4-Methylphenol	ND	560	ug/kg	
88-75-5	2-Nitrophenol	ND	560	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	560	ug/kg	
108-95-2	Phenol	ND	280	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	560	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	560	ug/kg	
83-32-9	Acenaphthene	119	110	ug/kg	
208-96-8	Acenaphthylene	112	110	ug/kg	
98-86-2	Acetophenone	ND	560	ug/kg	
62-53-3	Aniline	ND	560	ug/kg	
120-12-7	Anthracene	283	110	ug/kg	
56-55-3	Benzo(a)anthracene	832	110	ug/kg	
50-32-8	Benzo(a)pyrene	883	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	730	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	523	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	698	110	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	280	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	280	ug/kg	
91-58-7	2-Chloronaphthalene	ND	280	ug/kg	
106-47-8	4-Chloroaniline	ND	560	ug/kg	
218-01-9	Chrysene	862	110	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	280	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	280	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	280	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-3(1-3')
Lab Sample ID: MC35452-11 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.6
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	280	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	280	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	280	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	280	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	560	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	560	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	280	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	166	110	ug/kg	
132-64-9	Dibenzofuran	111	110	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	280	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	280	ug/kg	
84-66-2	Diethyl phthalate	ND	280	ug/kg	
131-11-3	Dimethyl phthalate	ND	280	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	1100	280	ug/kg	
206-44-0	Fluoranthene	1700	110	ug/kg	
86-73-7	Fluorene	150	110	ug/kg	
118-74-1	Hexachlorobenzene	ND	280	ug/kg	
87-68-3	Hexachlorobutadiene	ND	280	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	560	ug/kg	
67-72-1	Hexachloroethane	ND	280	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	555	110	ug/kg	
78-59-1	Isophorone	ND	280	ug/kg	
91-57-6	2-Methylnaphthalene	ND	110	ug/kg	
91-20-3	Naphthalene	127	110	ug/kg	
98-95-3	Nitrobenzene	ND	280	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	280	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	280	ug/kg	
85-01-8	Phenanthrene	1120	110	ug/kg	
129-00-0	Pyrene	1650	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	280	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		30-130%
4165-62-2	Phenol-d5	76%		30-130%
118-79-6	2,4,6-Tribromophenol	77%		30-130%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	88%		30-130%
1718-51-0	Terphenyl-d14	112%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-3(5-7')
Lab Sample ID: MC35452-12 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 81.6
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41662.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	610	ug/kg	
95-57-8	2-Chlorophenol	ND	310	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	610	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	610	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	610	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
95-48-7	2-Methylphenol	ND	610	ug/kg	
	3&4-Methylphenol	ND	610	ug/kg	
88-75-5	2-Nitrophenol	ND	610	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	610	ug/kg	
108-95-2	Phenol	ND	310	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	610	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	610	ug/kg	
83-32-9	Acenaphthene	443	120	ug/kg	
208-96-8	Acenaphthylene	182	120	ug/kg	
98-86-2	Acetophenone	ND	610	ug/kg	
62-53-3	Aniline	ND	610	ug/kg	
120-12-7	Anthracene	943	120	ug/kg	
56-55-3	Benzo(a)anthracene	1630	120	ug/kg	
50-32-8	Benzo(a)pyrene	1540	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	1180	120	ug/kg	
191-24-2	Benzo(g,h,i)perylene	893	120	ug/kg	
207-08-9	Benzo(k)fluoranthene	1330	120	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	310	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	310	ug/kg	
91-58-7	2-Chloronaphthalene	ND	310	ug/kg	
106-47-8	4-Chloroaniline	ND	610	ug/kg	
218-01-9	Chrysene	1670	120	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	310	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	310	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	310	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-3(5-7')
Lab Sample ID: MC35452-12 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 81.6
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	310	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	310	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	310	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	310	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	610	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	610	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	310	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	285	120	ug/kg	
132-64-9	Dibenzofuran	323	120	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	310	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	310	ug/kg	
84-66-2	Diethyl phthalate	ND	310	ug/kg	
131-11-3	Dimethyl phthalate	ND	310	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	310	ug/kg	
206-44-0	Fluoranthene	3750	120	ug/kg	
86-73-7	Fluorene	560	120	ug/kg	
118-74-1	Hexachlorobenzene	ND	310	ug/kg	
87-68-3	Hexachlorobutadiene	ND	310	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	610	ug/kg	
67-72-1	Hexachloroethane	ND	310	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1020	120	ug/kg	
78-59-1	Isophorone	ND	310	ug/kg	
91-57-6	2-Methylnaphthalene	361	120	ug/kg	
91-20-3	Naphthalene	340	120	ug/kg	
98-95-3	Nitrobenzene	ND	310	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	310	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	310	ug/kg	
85-01-8	Phenanthrene	4100	120	ug/kg	
129-00-0	Pyrene	3730	120	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	310	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		30-130%
4165-62-2	Phenol-d5	76%		30-130%
118-79-6	2,4,6-Tribromophenol	72%		30-130%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	88%		30-130%
1718-51-0	Terphenyl-d14	113%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-3(8-10')
Lab Sample ID: MC35452-13 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 85.4
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	33.4	1.1	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-4(0-2')
Lab Sample ID: MC35452-14 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8082A SW846 3546 **Percent Solids:** 88.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44157.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	36	ug/kg	
11104-28-2	Aroclor 1221	ND	36	ug/kg	
11141-16-5	Aroclor 1232	ND	36	ug/kg	
53469-21-9	Aroclor 1242	ND	36	ug/kg	
12672-29-6	Aroclor 1248	ND	36	ug/kg	
11097-69-1	Aroclor 1254	145	36	ug/kg	
11096-82-5	Aroclor 1260 [a]	144	36	ug/kg	
37324-23-5	Aroclor 1262	ND	36	ug/kg	
11100-14-4	Aroclor 1268	ND	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		30-150%
877-09-8	Tetrachloro-m-xylene	73%		30-150%
2051-24-3	Decachlorobiphenyl	102%		30-150%
2051-24-3	Decachlorobiphenyl	125%		30-150%

(a) Estimated value due to the presence of other Aroclor pattern.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-4(0-2')
Lab Sample ID: MC35452-14 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 88.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	189	0.91	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-4(1-3')
Lab Sample ID: MC35452-15 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 89.1
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	R41663.D	5	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.6 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	2700	ug/kg	
95-57-8	2-Chlorophenol	ND	1400	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2700	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	2700	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2700	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5400	ug/kg	
95-48-7	2-Methylphenol	ND	2700	ug/kg	
	3&4-Methylphenol	ND	2700	ug/kg	
88-75-5	2-Nitrophenol	ND	2700	ug/kg	
100-02-7	4-Nitrophenol	ND	5400	ug/kg	
87-86-5	Pentachlorophenol	ND	2700	ug/kg	
108-95-2	Phenol	ND	1400	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	2700	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	2700	ug/kg	
83-32-9	Acenaphthene	ND	540	ug/kg	
208-96-8	Acenaphthylene	ND	540	ug/kg	
98-86-2	Acetophenone	ND	2700	ug/kg	
62-53-3	Aniline	ND	2700	ug/kg	
120-12-7	Anthracene	ND	540	ug/kg	
56-55-3	Benzo(a)anthracene	1440	540	ug/kg	
50-32-8	Benzo(a)pyrene	1370	540	ug/kg	
205-99-2	Benzo(b)fluoranthene	1260	540	ug/kg	
191-24-2	Benzo(g,h,i)perylene	920	540	ug/kg	
207-08-9	Benzo(k)fluoranthene	1090	540	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1400	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1400	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1400	ug/kg	
106-47-8	4-Chloroaniline	ND	2700	ug/kg	
218-01-9	Chrysene	1450	540	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1400	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1400	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1400	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-4(1-3')		
Lab Sample ID:	MC35452-15	**Date Sampled:**	11/24/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.1
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	1400	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	1400	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1400	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1400	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	2700	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	2700	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1400	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	540	ug/kg	
132-64-9	Dibenzofuran	ND	540	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1400	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1400	ug/kg	
84-66-2	Diethyl phthalate	ND	1400	ug/kg	
131-11-3	Dimethyl phthalate	ND	1400	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1400	ug/kg	
206-44-0	Fluoranthene	2720	540	ug/kg	
86-73-7	Fluorene	ND	540	ug/kg	
118-74-1	Hexachlorobenzene	ND	1400	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1400	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	2700	ug/kg	
67-72-1	Hexachloroethane	ND	1400	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	949	540	ug/kg	
78-59-1	Isophorone	ND	1400	ug/kg	
91-57-6	2-Methylnaphthalene	ND	540	ug/kg	
91-20-3	Naphthalene	ND	540	ug/kg	
98-95-3	Nitrobenzene	ND	1400	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1400	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1400	ug/kg	
85-01-8	Phenanthrene	1670	540	ug/kg	
129-00-0	Pyrene	2590	540	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	85%		30-130%
4165-62-2	Phenol-d5	90%		30-130%
118-79-6	2,4,6-Tribromophenol	75%		30-130%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	102%		30-130%
1718-51-0	Terphenyl-d14	115%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-4(1-3')		
Lab Sample ID:	MC35452-15	**Date Sampled:**	11/24/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.1
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Elevated RL due to dilution required for matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-4(5-7')
Lab Sample ID: MC35452-16 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 84.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	377	0.94	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-4(6-8')
Lab Sample ID: MC35452-17 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41664.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.6 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	560	ug/kg	
95-57-8	2-Chlorophenol	ND	280	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	560	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	560	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	560	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
95-48-7	2-Methylphenol	ND	560	ug/kg	
	3&4-Methylphenol	ND	560	ug/kg	
88-75-5	2-Nitrophenol	ND	560	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	560	ug/kg	
108-95-2	Phenol	ND	280	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	560	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	560	ug/kg	
83-32-9	Acenaphthene	ND	110	ug/kg	
208-96-8	Acenaphthylene	ND	110	ug/kg	
98-86-2	Acetophenone	ND	560	ug/kg	
62-53-3	Aniline	ND	560	ug/kg	
120-12-7	Anthracene	ND	110	ug/kg	
56-55-3	Benzo(a)anthracene	ND	110	ug/kg	
50-32-8	Benzo(a)pyrene	ND	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	110	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	280	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	280	ug/kg	
91-58-7	2-Chloronaphthalene	ND	280	ug/kg	
106-47-8	4-Chloroaniline	ND	560	ug/kg	
218-01-9	Chrysene	ND	110	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	280	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	280	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	280	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-4(6-8')
Lab Sample ID: MC35452-17 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	280	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	280	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	280	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	280	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	560	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	560	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	280	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	110	ug/kg	
132-64-9	Dibenzofuran	ND	110	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	280	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	280	ug/kg	
84-66-2	Diethyl phthalate	ND	280	ug/kg	
131-11-3	Dimethyl phthalate	ND	280	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	280	ug/kg	
206-44-0	Fluoranthene	ND	110	ug/kg	
86-73-7	Fluorene	ND	110	ug/kg	
118-74-1	Hexachlorobenzene	ND	280	ug/kg	
87-68-3	Hexachlorobutadiene	ND	280	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	560	ug/kg	
67-72-1	Hexachloroethane	ND	280	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	110	ug/kg	
78-59-1	Isophorone	ND	280	ug/kg	
91-57-6	2-Methylnaphthalene	ND	110	ug/kg	
91-20-3	Naphthalene	ND	110	ug/kg	
98-95-3	Nitrobenzene	ND	280	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	280	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	280	ug/kg	
85-01-8	Phenanthrene	ND	110	ug/kg	
129-00-0	Pyrene	ND	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	280	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	84%		30-130%
4165-62-2	Phenol-d5	87%		30-130%
118-79-6	2,4,6-Tribromophenol	81%		30-130%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	100%		30-130%
1718-51-0	Terphenyl-d14	124%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-4(6-8')
Lab Sample ID: MC35452-17 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8082A SW846 3546 **Percent Solids:** 86.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44158.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	36	ug/kg	
11104-28-2	Aroclor 1221	ND	36	ug/kg	
11141-16-5	Aroclor 1232	ND	36	ug/kg	
53469-21-9	Aroclor 1242	ND	36	ug/kg	
12672-29-6	Aroclor 1248	ND	36	ug/kg	
11097-69-1	Aroclor 1254	ND	36	ug/kg	
11096-82-5	Aroclor 1260	ND	36	ug/kg	
37324-23-5	Aroclor 1262	ND	36	ug/kg	
11100-14-4	Aroclor 1268	ND	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		30-150%
877-09-8	Tetrachloro-m-xylene	79%		30-150%
2051-24-3	Decachlorobiphenyl	93%		30-150%
2051-24-3	Decachlorobiphenyl	97%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-5(0-2')		
Lab Sample ID:	MC35452-18	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	90.6
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44159.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	35	ug/kg	
11104-28-2	Aroclor 1221	ND	35	ug/kg	
11141-16-5	Aroclor 1232	ND	35	ug/kg	
53469-21-9	Aroclor 1242	ND	35	ug/kg	
12672-29-6	Aroclor 1248	ND	35	ug/kg	
11097-69-1	Aroclor 1254	ND	35	ug/kg	
11096-82-5	Aroclor 1260	ND	35	ug/kg	
37324-23-5	Aroclor 1262	ND	35	ug/kg	
11100-14-4	Aroclor 1268	ND	35	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	80%		30-150%
877-09-8	Tetrachloro-m-xylene	85%		30-150%
2051-24-3	Decachlorobiphenyl	111%		30-150%
2051-24-3	Decachlorobiphenyl	132%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	PB-5(0-2')		
Lab Sample ID:	MC35452-18	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	90.6
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	204	0.98	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-5(1-3')
Lab Sample ID: MC35452-19 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 90.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41665.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	540	ug/kg	
95-57-8	2-Chlorophenol	ND	270	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	540	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	540	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	540	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
95-48-7	2-Methylphenol	ND	540	ug/kg	
	3&4-Methylphenol	ND	540	ug/kg	
88-75-5	2-Nitrophenol	ND	540	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	540	ug/kg	
108-95-2	Phenol	ND	270	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	540	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	540	ug/kg	
83-32-9	Acenaphthene	ND	110	ug/kg	
208-96-8	Acenaphthylene	126	110	ug/kg	
98-86-2	Acetophenone	ND	540	ug/kg	
62-53-3	Aniline	ND	540	ug/kg	
120-12-7	Anthracene	128	110	ug/kg	
56-55-3	Benzo(a)anthracene	526	110	ug/kg	
50-32-8	Benzo(a)pyrene	663	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	509	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	385	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	485	110	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	270	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	270	ug/kg	
91-58-7	2-Chloronaphthalene	ND	270	ug/kg	
106-47-8	4-Chloroaniline	ND	540	ug/kg	
218-01-9	Chrysene	524	110	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	270	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	270	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	270	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-5(1-3')
Lab Sample ID: MC35452-19 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 90.2
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	270	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	270	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	540	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	540	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	270	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	117	110	ug/kg	
132-64-9	Dibenzofuran	ND	110	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	270	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	270	ug/kg	
84-66-2	Diethyl phthalate	ND	270	ug/kg	
131-11-3	Dimethyl phthalate	ND	270	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	270	ug/kg	
206-44-0	Fluoranthene	936	110	ug/kg	
86-73-7	Fluorene	ND	110	ug/kg	
118-74-1	Hexachlorobenzene	ND	270	ug/kg	
87-68-3	Hexachlorobutadiene	ND	270	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	540	ug/kg	
67-72-1	Hexachloroethane	ND	270	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	455	110	ug/kg	
78-59-1	Isophorone	ND	270	ug/kg	
91-57-6	2-Methylnaphthalene	ND	110	ug/kg	
91-20-3	Naphthalene	ND	110	ug/kg	
98-95-3	Nitrobenzene	ND	270	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	270	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	270	ug/kg	
85-01-8	Phenanthrene	382	110	ug/kg	
129-00-0	Pyrene	952	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	270	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%		30-130%
4165-62-2	Phenol-d5	69%		30-130%
118-79-6	2,4,6-Tribromophenol	68%		30-130%
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	101%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-5(6-8')		
Lab Sample ID:	MC35452-20	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	60.2
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44160.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	54	ug/kg	
11104-28-2	Aroclor 1221	ND	54	ug/kg	
11141-16-5	Aroclor 1232	ND	54	ug/kg	
53469-21-9	Aroclor 1242	ND	54	ug/kg	
12672-29-6	Aroclor 1248	ND	54	ug/kg	
11097-69-1	Aroclor 1254	ND	54	ug/kg	
11096-82-5	Aroclor 1260	ND	54	ug/kg	
37324-23-5	Aroclor 1262	ND	54	ug/kg	
11100-14-4	Aroclor 1268	ND	54	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		30-150%
877-09-8	Tetrachloro-m-xylene	77%		30-150%
2051-24-3	Decachlorobiphenyl	103%		30-150%
2051-24-3	Decachlorobiphenyl	109%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

4.20
4

Client Sample ID:	PB-5(6-8')		
Lab Sample ID:	MC35452-20	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	60.2
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	15.7	1.4	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PB-6(0-2')		
Lab Sample ID:	MC35452-21	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	88.0
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44161.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	37	ug/kg	
11104-28-2	Aroclor 1221	ND	37	ug/kg	
11141-16-5	Aroclor 1232	ND	37	ug/kg	
53469-21-9	Aroclor 1242	ND	37	ug/kg	
12672-29-6	Aroclor 1248	ND	37	ug/kg	
11097-69-1	Aroclor 1254	59.2	37	ug/kg	
11096-82-5	Aroclor 1260	ND	37	ug/kg	
37324-23-5	Aroclor 1262	ND	37	ug/kg	
11100-14-4	Aroclor 1268	ND	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	106%		30-150%
877-09-8	Tetrachloro-m-xylene	85%		30-150%
2051-24-3	Decachlorobiphenyl	107%		30-150%
2051-24-3	Decachlorobiphenyl	131%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

4.21
4

Client Sample ID:	PB-6(0-2')		
Lab Sample ID:	MC35452-21	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	88.0
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	527	0.95	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-6(1-3')
Lab Sample ID: MC35452-22 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 90.5
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41666.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	550	ug/kg	
95-57-8	2-Chlorophenol	ND	270	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	550	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	550	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	550	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
95-48-7	2-Methylphenol	ND	550	ug/kg	
	3&4-Methylphenol	ND	550	ug/kg	
88-75-5	2-Nitrophenol	ND	550	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	550	ug/kg	
108-95-2	Phenol	ND	270	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	550	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	550	ug/kg	
83-32-9	Acenaphthene	ND	110	ug/kg	
208-96-8	Acenaphthylene	ND	110	ug/kg	
98-86-2	Acetophenone	ND	550	ug/kg	
62-53-3	Aniline	ND	550	ug/kg	
120-12-7	Anthracene	241	110	ug/kg	
56-55-3	Benzo(a)anthracene	539	110	ug/kg	
50-32-8	Benzo(a)pyrene	483	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	440	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	287	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	431	110	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	270	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	270	ug/kg	
91-58-7	2-Chloronaphthalene	ND	270	ug/kg	
106-47-8	4-Chloroaniline	ND	550	ug/kg	
218-01-9	Chrysene	556	110	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	270	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	270	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	270	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-6(1-3')
Lab Sample ID: MC35452-22 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 90.5
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	270	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	270	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	550	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	550	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	270	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	110	ug/kg	
132-64-9	Dibenzofuran	ND	110	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	270	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	270	ug/kg	
84-66-2	Diethyl phthalate	ND	270	ug/kg	
131-11-3	Dimethyl phthalate	ND	270	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	3780	270	ug/kg	
206-44-0	Fluoranthene	1270	110	ug/kg	
86-73-7	Fluorene	142	110	ug/kg	
118-74-1	Hexachlorobenzene	ND	270	ug/kg	
87-68-3	Hexachlorobutadiene	ND	270	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	550	ug/kg	
67-72-1	Hexachloroethane	ND	270	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	317	110	ug/kg	
78-59-1	Isophorone	ND	270	ug/kg	
91-57-6	2-Methylnaphthalene	144	110	ug/kg	
91-20-3	Naphthalene	176	110	ug/kg	
98-95-3	Nitrobenzene	ND	270	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	270	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	270	ug/kg	
85-01-8	Phenanthrene	995	110	ug/kg	
129-00-0	Pyrene	1140	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	270	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	69%		30-130%
4165-62-2	Phenol-d5	71%		30-130%
118-79-6	2,4,6-Tribromophenol	63%		30-130%
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	81%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-6(13-15')
Lab Sample ID: MC35452-23 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8082A SW846 3546 **Percent Solids:** 81.4
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44163.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	40	ug/kg	
11104-28-2	Aroclor 1221	ND	40	ug/kg	
11141-16-5	Aroclor 1232	ND	40	ug/kg	
53469-21-9	Aroclor 1242	ND	40	ug/kg	
12672-29-6	Aroclor 1248	ND	40	ug/kg	
11097-69-1	Aroclor 1254	ND	40	ug/kg	
11096-82-5	Aroclor 1260	ND	40	ug/kg	
37324-23-5	Aroclor 1262	ND	40	ug/kg	
11100-14-4	Aroclor 1268	ND	40	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	77%		30-150%
877-09-8	Tetrachloro-m-xylene	82%		30-150%
2051-24-3	Decachlorobiphenyl	100%		30-150%
2051-24-3	Decachlorobiphenyl	102%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-6(18-20')
Lab Sample ID: MC35452-24 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 74.8
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	15.3	1.0	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PB-7(0-2')		
Lab Sample ID:	MC35452-25	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	87.5
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44164.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	38	ug/kg	
11104-28-2	Aroclor 1221	ND	38	ug/kg	
11141-16-5	Aroclor 1232	ND	38	ug/kg	
53469-21-9	Aroclor 1242 [a]	63.8	38	ug/kg	
12672-29-6	Aroclor 1248	ND	38	ug/kg	
11097-69-1	Aroclor 1254	71.5	38	ug/kg	
11096-82-5	Aroclor 1260	ND	38	ug/kg	
37324-23-5	Aroclor 1262	ND	38	ug/kg	
11100-14-4	Aroclor 1268	ND	38	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	64%		30-150%
877-09-8	Tetrachloro-m-xylene	69%		30-150%
2051-24-3	Decachlorobiphenyl	94%		30-150%
2051-24-3	Decachlorobiphenyl	106%		30-150%

(a) Estimated value due to the presence of other Aroclor pattern.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	PB-7(0-2')		
Lab Sample ID:	MC35452-25	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	87.5
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	298	1.0	mg/kg	1	12/01/14	12/02/14 EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-7(1-3')
Lab Sample ID: MC35452-26
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 84.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41667.D	5	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.7 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	2900	ug/kg	
95-57-8	2-Chlorophenol	ND	1400	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2900	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	2900	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2900	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5700	ug/kg	
95-48-7	2-Methylphenol	ND	2900	ug/kg	
	3&4-Methylphenol	ND	2900	ug/kg	
88-75-5	2-Nitrophenol	ND	2900	ug/kg	
100-02-7	4-Nitrophenol	ND	5700	ug/kg	
87-86-5	Pentachlorophenol	ND	2900	ug/kg	
108-95-2	Phenol	ND	1400	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	2900	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	2900	ug/kg	
83-32-9	Acenaphthene	862	570	ug/kg	
208-96-8	Acenaphthylene	675	570	ug/kg	
98-86-2	Acetophenone	ND	2900	ug/kg	
62-53-3	Aniline	ND	2900	ug/kg	
120-12-7	Anthracene	2670	570	ug/kg	
56-55-3	Benzo(a)anthracene	6190	570	ug/kg	
50-32-8	Benzo(a)pyrene	5400	570	ug/kg	
205-99-2	Benzo(b)fluoranthene	4440	570	ug/kg	
191-24-2	Benzo(g,h,i)perylene	2610	570	ug/kg	
207-08-9	Benzo(k)fluoranthene	4430	570	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1400	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1400	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1400	ug/kg	
106-47-8	4-Chloroaniline	ND	2900	ug/kg	
218-01-9	Chrysene	5720	570	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1400	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1400	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1400	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-7(1-3')
Lab Sample ID: MC35452-26
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 84.2

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	1400	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	1400	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1400	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1400	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	2900	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	2900	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1400	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	957	570	ug/kg	
132-64-9	Dibenzofuran	571	570	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1400	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1400	ug/kg	
84-66-2	Diethyl phthalate	ND	1400	ug/kg	
131-11-3	Dimethyl phthalate	ND	1400	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1400	ug/kg	
206-44-0	Fluoranthene	13400	570	ug/kg	
86-73-7	Fluorene	872	570	ug/kg	
118-74-1	Hexachlorobenzene	ND	1400	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1400	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	2900	ug/kg	
67-72-1	Hexachloroethane	ND	1400	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	3110	570	ug/kg	
78-59-1	Isophorone	ND	1400	ug/kg	
91-57-6	2-Methylnaphthalene	ND	570	ug/kg	
91-20-3	Naphthalene	ND	570	ug/kg	
98-95-3	Nitrobenzene	ND	1400	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1400	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1400	ug/kg	
85-01-8	Phenanthrene	9660	570	ug/kg	
129-00-0	Pyrene	11900	570	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	69%		30-130%
4165-62-2	Phenol-d5	76%		30-130%
118-79-6	2,4,6-Tribromophenol	72%		30-130%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	87%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-7(6-7.5')
Lab Sample ID: MC35452-27 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.5
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	R41668.D	5	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	2900	ug/kg	
95-57-8	2-Chlorophenol	ND	1400	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2900	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	2900	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2900	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5800	ug/kg	
95-48-7	2-Methylphenol	ND	2900	ug/kg	
	3&4-Methylphenol	ND	2900	ug/kg	
88-75-5	2-Nitrophenol	ND	2900	ug/kg	
100-02-7	4-Nitrophenol	ND	5800	ug/kg	
87-86-5	Pentachlorophenol	ND	2900	ug/kg	
108-95-2	Phenol	ND	1400	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	2900	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	2900	ug/kg	
83-32-9	Acenaphthene	ND	580	ug/kg	
208-96-8	Acenaphthylene	ND	580	ug/kg	
98-86-2	Acetophenone	ND	2900	ug/kg	
62-53-3	Aniline	ND	2900	ug/kg	
120-12-7	Anthracene	ND	580	ug/kg	
56-55-3	Benzo(a)anthracene	1290	580	ug/kg	
50-32-8	Benzo(a)pyrene	1280	580	ug/kg	
205-99-2	Benzo(b)fluoranthene	1210	580	ug/kg	
191-24-2	Benzo(g,h,i)perylene	732	580	ug/kg	
207-08-9	Benzo(k)fluoranthene	1020	580	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1400	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1400	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1400	ug/kg	
106-47-8	4-Chloroaniline	ND	2900	ug/kg	
218-01-9	Chrysene	1350	580	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1400	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1400	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1400	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-7(6-7.5')
Lab Sample ID: MC35452-27 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 86.5
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	1400	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	1400	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1400	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1400	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	2900	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	2900	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1400	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	580	ug/kg	
132-64-9	Dibenzofuran	ND	580	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1400	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1400	ug/kg	
84-66-2	Diethyl phthalate	ND	1400	ug/kg	
131-11-3	Dimethyl phthalate	ND	1400	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1400	ug/kg	
206-44-0	Fluoranthene	2310	580	ug/kg	
86-73-7	Fluorene	ND	580	ug/kg	
118-74-1	Hexachlorobenzene	ND	1400	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1400	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	2900	ug/kg	
67-72-1	Hexachloroethane	ND	1400	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	824	580	ug/kg	
78-59-1	Isophorone	ND	1400	ug/kg	
91-57-6	2-Methylnaphthalene	ND	580	ug/kg	
91-20-3	Naphthalene	ND	580	ug/kg	
98-95-3	Nitrobenzene	ND	1400	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1400	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1400	ug/kg	
85-01-8	Phenanthrene	1400	580	ug/kg	
129-00-0	Pyrene	2180	580	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	84%		30-130%
4165-62-2	Phenol-d5	89%		30-130%
118-79-6	2,4,6-Tribromophenol	72%		30-130%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	101%		30-130%
1718-51-0	Terphenyl-d14	114%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-7(6-7.5')		
Lab Sample ID:	MC35452-27	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	86.5
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Elevated RL due to dilution required for matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-8(0-2')		
Lab Sample ID:	MC35452-28	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	78.9
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44165.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	42	ug/kg	
11104-28-2	Aroclor 1221	ND	42	ug/kg	
11141-16-5	Aroclor 1232	ND	42	ug/kg	
53469-21-9	Aroclor 1242	770	42	ug/kg	
12672-29-6	Aroclor 1248	ND	42	ug/kg	
11097-69-1	Aroclor 1254	ND	42	ug/kg	
11096-82-5	Aroclor 1260	ND	42	ug/kg	
37324-23-5	Aroclor 1262	ND	42	ug/kg	
11100-14-4	Aroclor 1268	ND	42	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	51%		30-150%
877-09-8	Tetrachloro-m-xylene	54%		30-150%
2051-24-3	Decachlorobiphenyl	69%		30-150%
2051-24-3	Decachlorobiphenyl	73%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-8(0-2')
Lab Sample ID: MC35452-28 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 78.9
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	188	1.1	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-8(1-3')
Lab Sample ID: MC35452-29 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 83.4
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41669.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2 [a]	F78401.D	1	12/05/14	MR	12/04/14	OP41112	MSF3423

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2	20.2 g	1.0 ml

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	590	ug/kg	
95-57-8	2-Chlorophenol	ND	290	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	590	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	590	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	590	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
95-48-7	2-Methylphenol	ND	590	ug/kg	
	3&4-Methylphenol	ND	590	ug/kg	
88-75-5	2-Nitrophenol	ND	590	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	590	ug/kg	
108-95-2	Phenol	ND	290	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	590	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	590	ug/kg	
83-32-9	Acenaphthene	ND	120	ug/kg	
208-96-8	Acenaphthylene	ND	120	ug/kg	
98-86-2	Acetophenone	ND	590	ug/kg	
62-53-3	Aniline	ND	590	ug/kg	
120-12-7	Anthracene	ND	120	ug/kg	
56-55-3	Benzo(a)anthracene	ND	120	ug/kg	
50-32-8	Benzo(a)pyrene	ND	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	120	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	120	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	120	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	290	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	290	ug/kg	
91-58-7	2-Chloronaphthalene	ND	290	ug/kg	
106-47-8	4-Chloroaniline	ND	590	ug/kg	
218-01-9	Chrysene	ND	120	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	290	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	290	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	290	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-8(1-3')		
Lab Sample ID:	MC35452-29	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.4
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	290	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	290	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	290	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	290	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	590	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	590	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	290	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	120	ug/kg	
132-64-9	Dibenzofuran	ND	120	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	290	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	290	ug/kg	
84-66-2	Diethyl phthalate	ND	290	ug/kg	
131-11-3	Dimethyl phthalate	ND	290	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	621	290	ug/kg	
206-44-0	Fluoranthene	171	120	ug/kg	
86-73-7	Fluorene	ND	120	ug/kg	
118-74-1	Hexachlorobenzene	ND	290	ug/kg	
87-68-3	Hexachlorobutadiene	ND	290	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	590	ug/kg	
67-72-1	Hexachloroethane	ND	290	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	120	ug/kg	
78-59-1	Isophorone	ND	290	ug/kg	
91-57-6	2-Methylnaphthalene	ND	120	ug/kg	
91-20-3	Naphthalene	ND	120	ug/kg	
98-95-3	Nitrobenzene	ND	290	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	290	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	290	ug/kg	
85-01-8	Phenanthrene	125	120	ug/kg	
129-00-0	Pyrene	175	120	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	290	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	12% [b]	11% [b]	30-130%
4165-62-2	Phenol-d5	60%	75%	30-130%
118-79-6	2,4,6-Tribromophenol	3% [b]	0% [b]	30-130%
4165-60-0	Nitrobenzene-d5	67%	83%	30-130%
321-60-8	2-Fluorobiphenyl	88%	93%	30-130%
1718-51-0	Terphenyl-d14	112%	110%	30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-8(1-3')		
Lab Sample ID:	MC35452-29	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.4
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-8(6-8')
Lab Sample ID: MC35452-30 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 87.5
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	F78402.D	1	12/05/14	MR	12/04/14	OP41112	MSF3423
Run #2	F78354.D	10	12/04/14	MR	12/01/14	OP41048	MSF3422

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2	20.2 g	1.0 ml

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND [b]	5700	ug/kg	
95-57-8	2-Chlorophenol	ND [b]	2800	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND [b]	5700	ug/kg	
120-83-2	2,4-Dichlorophenol	ND [b]	5700	ug/kg	
105-67-9	2,4-Dimethylphenol	ND [b]	5700	ug/kg	
51-28-5	2,4-Dinitrophenol	ND [b]	11000	ug/kg	
95-48-7	2-Methylphenol	ND [b]	5700	ug/kg	
	3&4-Methylphenol	ND [b]	5700	ug/kg	
88-75-5	2-Nitrophenol	ND [b]	5700	ug/kg	
100-02-7	4-Nitrophenol	ND [b]	11000	ug/kg	
87-86-5	Pentachlorophenol	ND [b]	5700	ug/kg	
108-95-2	Phenol	ND [b]	2800	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND [b]	5700	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND [b]	5700	ug/kg	
83-32-9	Acenaphthene	ND [b]	1100	ug/kg	
208-96-8	Acenaphthylene	ND [b]	1100	ug/kg	
98-86-2	Acetophenone	ND [b]	5700	ug/kg	
62-53-3	Aniline	ND [b]	5700	ug/kg	
120-12-7	Anthracene	ND [b]	1100	ug/kg	
56-55-3	Benzo(a)anthracene	ND [b]	1100	ug/kg	
50-32-8	Benzo(a)pyrene	ND [b]	1100	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND [b]	1100	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND [b]	1100	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND [b]	1100	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND [b]	2800	ug/kg	
85-68-7	Butyl benzyl phthalate	69700 [b]	2800	ug/kg	
91-58-7	2-Chloronaphthalene	ND [b]	2800	ug/kg	
106-47-8	4-Chloroaniline	ND [b]	5700	ug/kg	
218-01-9	Chrysene	ND [b]	1100	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND [b]	2800	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND [b]	2800	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND [b]	2800	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-8(6-8')
Lab Sample ID: MC35452-30 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 87.5
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND [b]	2800	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND [b]	2800	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND [b]	2800	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND [b]	2800	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND [b]	5700	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND [b]	5700	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND [b]	2800	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND [b]	1100	ug/kg	
132-64-9	Dibenzofuran	ND [b]	1100	ug/kg	
84-74-2	Di-n-butyl phthalate	ND [b]	2800	ug/kg	
117-84-0	Di-n-octyl phthalate	ND [b]	2800	ug/kg	
84-66-2	Diethyl phthalate	ND [b]	2800	ug/kg	
131-11-3	Dimethyl phthalate	ND [b]	2800	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [b]	2800	ug/kg	
206-44-0	Fluoranthene	ND [b]	1100	ug/kg	
86-73-7	Fluorene	ND [b]	1100	ug/kg	
118-74-1	Hexachlorobenzene	ND [b]	2800	ug/kg	
87-68-3	Hexachlorobutadiene	ND [b]	2800	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND [b]	5700	ug/kg	
67-72-1	Hexachloroethane	ND [b]	2800	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND [b]	1100	ug/kg	
78-59-1	Isophorone	ND [b]	2800	ug/kg	
91-57-6	2-Methylnaphthalene	ND [b]	1100	ug/kg	
91-20-3	Naphthalene	ND [b]	1100	ug/kg	
98-95-3	Nitrobenzene	ND [b]	2800	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND [b]	2800	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND [b]	2800	ug/kg	
85-01-8	Phenanthrene	ND [b]	1100	ug/kg	
129-00-0	Pyrene	ND [b]	1100	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND [b]	2800	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%	45%	30-130%
4165-62-2	Phenol-d5	102%	86%	30-130%
118-79-6	2,4,6-Tribromophenol	1% [c]	1% [c]	30-130%
4165-60-0	Nitrobenzene-d5	87%	82%	30-130%
321-60-8	2-Fluorobiphenyl	93%	82%	30-130%
1718-51-0	Terphenyl-d14	72%	80%	30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-8(6-8')		
Lab Sample ID:	MC35452-30	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.5
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Confirmation run for surrogate recoveries.
(b) Result is from Run# 2
(c) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-8(8-10')		
Lab Sample ID:	MC35452-31	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	MADEP VPH REV 1.1	**Percent Solids:**	90.9
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH32901.D	1	12/01/14	TB	n/a	n/a	GBH1929
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	17.5 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	280	ug/kg	
100-41-4	Ethylbenzene	ND	280	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	55	ug/kg	
91-20-3	Naphthalene	ND	280	ug/kg	
108-88-3	Toluene	ND	280	ug/kg	
	m,p-Xylene	ND	280	ug/kg	
95-47-6	o-Xylene	ND	280	ug/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5500	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5500	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5500	ug/kg	
	C5- C8 Aliphatics	ND	5500	ug/kg	
	C9- C12 Aliphatics	ND	5500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	109%		70-130%
	2,3,4-Trifluorotoluene	103%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-8(8-10')
Lab Sample ID: MC35452-31 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: MADEP EPH REV 1.1 SW846 3546 **Percent Solids:** 90.9
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE7491.D	1	12/02/14	SZ	12/01/14	OP41046	GDE491
Run #2							

	Initial Weight	Final Volume
Run #1	11.8 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	470	ug/kg	
208-96-8	Acenaphthylene	ND	470	ug/kg	
120-12-7	Anthracene	ND	470	ug/kg	
56-55-3	Benzo(a)anthracene	ND	470	ug/kg	
50-32-8	Benzo(a)pyrene	ND	470	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	470	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	470	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	470	ug/kg	
218-01-9	Chrysene	ND	470	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	470	ug/kg	
206-44-0	Fluoranthene	ND	470	ug/kg	
86-73-7	Fluorene	ND	470	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	470	ug/kg	
91-57-6	2-Methylnaphthalene	ND	470	ug/kg	
91-20-3	Naphthalene	ND	470	ug/kg	
85-01-8	Phenanthrene	ND	470	ug/kg	
129-00-0	Pyrene	ND	470	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	19000	ug/kg	
	C9-C18 Aliphatics	ND	9300	ug/kg	
	C19-C36 Aliphatics	16800	9300	ug/kg	
	C11-C22 Aromatics	ND	19000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	107%		40-140%
321-60-8	2-Fluorobiphenyl	85%		40-140%
580-13-2	2-Bromonaphthalene	79%		40-140%
3386-33-2	1-Chlorooctadecane	80%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

4.31
4

Client Sample ID: PB-8(8-10')
Lab Sample ID: MC35452-31 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 90.9
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	4.0	0.89	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PB-9(0-2')		
Lab Sample ID:	MC35452-32	**Date Sampled:**	11/24/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	90.0
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44166.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	36	ug/kg	
11104-28-2	Aroclor 1221	ND	36	ug/kg	
11141-16-5	Aroclor 1232	ND	36	ug/kg	
53469-21-9	Aroclor 1242	ND	36	ug/kg	
12672-29-6	Aroclor 1248	ND	36	ug/kg	
11097-69-1	Aroclor 1254	ND	36	ug/kg	
11096-82-5	Aroclor 1260	ND	36	ug/kg	
37324-23-5	Aroclor 1262	ND	36	ug/kg	
11100-14-4	Aroclor 1268	ND	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		30-150%
877-09-8	Tetrachloro-m-xylene	76%		30-150%
2051-24-3	Decachlorobiphenyl	100%		30-150%
2051-24-3	Decachlorobiphenyl	115%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

4.32
4

Client Sample ID:	PB-9(0-2')		
Lab Sample ID:	MC35452-32	**Date Sampled:**	11/24/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	90.0
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	73.6	1.0	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-9(1-3')
Lab Sample ID: MC35452-33
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/24/14
Date Received: 11/26/14
Percent Solids: 92.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41671.D	10	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2	F78355.D	50	12/04/14	MR	12/01/14	OP41048	MSF3422

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2	20.4 g	1.0 ml

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	5300	ug/kg	
95-57-8	2-Chlorophenol	ND	2600	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	5300	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	5300	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	5300	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	11000	ug/kg	
95-48-7	2-Methylphenol	ND	5300	ug/kg	
	3&4-Methylphenol	ND	5300	ug/kg	
88-75-5	2-Nitrophenol	ND	5300	ug/kg	
100-02-7	4-Nitrophenol	ND	11000	ug/kg	
87-86-5	Pentachlorophenol	ND	5300	ug/kg	
108-95-2	Phenol	ND	2600	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	5300	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	5300	ug/kg	
83-32-9	Acenaphthene	10500	1100	ug/kg	
208-96-8	Acenaphthylene	3710	1100	ug/kg	
98-86-2	Acetophenone	ND	5300	ug/kg	
62-53-3	Aniline	ND	5300	ug/kg	
120-12-7	Anthracene	27700	1100	ug/kg	
56-55-3	Benzo(a)anthracene	69700	1100	ug/kg	
50-32-8	Benzo(a)pyrene	68200	1100	ug/kg	
205-99-2	Benzo(b)fluoranthene	77500	1100	ug/kg	
191-24-2	Benzo(g,h,i)perylene	32200	1100	ug/kg	
207-08-9	Benzo(k)fluoranthene	31600	1100	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	2600	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	2600	ug/kg	
91-58-7	2-Chloronaphthalene	ND	2600	ug/kg	
106-47-8	4-Chloroaniline	ND	5300	ug/kg	
218-01-9	Chrysene	74100	1100	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	2600	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	2600	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2600	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-9(1-3')
Lab Sample ID: MC35452-33
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/24/14
Date Received: 11/26/14
Percent Solids: 92.6

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	2600	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	2600	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2600	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2600	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	5300	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	5300	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2600	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	12200	1100	ug/kg	
132-64-9	Dibenzofuran	7600	1100	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	2600	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	2600	ug/kg	
84-66-2	Diethyl phthalate	ND	2600	ug/kg	
131-11-3	Dimethyl phthalate	ND	2600	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2600	ug/kg	
206-44-0	Fluoranthene	143000 [a]	5300	ug/kg	
86-73-7	Fluorene	13600	1100	ug/kg	
118-74-1	Hexachlorobenzene	ND	2600	ug/kg	
87-68-3	Hexachlorobutadiene	ND	2600	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	5300	ug/kg	
67-72-1	Hexachloroethane	ND	2600	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	40400	1100	ug/kg	
78-59-1	Isophorone	ND	2600	ug/kg	
91-57-6	2-Methylnaphthalene	3270	1100	ug/kg	
91-20-3	Naphthalene	6170	1100	ug/kg	
98-95-3	Nitrobenzene	ND	2600	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	2600	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	2600	ug/kg	
85-01-8	Phenanthrene	120000 [a]	5300	ug/kg	
129-00-0	Pyrene	110000 [a]	5300	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	2600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%	71%	30-130%
4165-62-2	Phenol-d5	66%	60%	30-130%
118-79-6	2,4,6-Tribromophenol	59%	70%	30-130%
4165-60-0	Nitrobenzene-d5	61%	57%	30-130%
321-60-8	2-Fluorobiphenyl	75%	69%	30-130%
1718-51-0	Terphenyl-d14	89%	87%	30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-9(1-3')		
Lab Sample ID:	MC35452-33	**Date Sampled:**	11/24/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8270D SW846 3546	**Percent Solids:**	92.6
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PB-9(6-8')		
Lab Sample ID:	MC35452-34	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
		Percent Solids:	79.8
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	22.6	1.1	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-9(8-10')
Lab Sample ID: MC35452-35
Matrix: SO - Soil
Method: SW846 8082A SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 82.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44200.D	1	12/04/14	NK	12/01/14	OP41053	GBK1384
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	39	ug/kg	
11104-28-2	Aroclor 1221	ND	39	ug/kg	
11141-16-5	Aroclor 1232	ND	39	ug/kg	
53469-21-9	Aroclor 1242	ND	39	ug/kg	
12672-29-6	Aroclor 1248	ND	39	ug/kg	
11097-69-1	Aroclor 1254	ND	39	ug/kg	
11096-82-5	Aroclor 1260	ND	39	ug/kg	
37324-23-5	Aroclor 1262	ND	39	ug/kg	
11100-14-4	Aroclor 1268	73.3	39	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		30-150%
877-09-8	Tetrachloro-m-xylene	84%		30-150%
2051-24-3	Decachlorobiphenyl	111%		30-150%
2051-24-3	Decachlorobiphenyl	110%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-9(13-15')
Lab Sample ID: MC35452-36
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/25/14
Date Received: 11/26/14
Percent Solids: 80.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41672.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	620	ug/kg	
95-57-8	2-Chlorophenol	ND	310	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	620	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	620	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	620	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
95-48-7	2-Methylphenol	ND	620	ug/kg	
	3&4-Methylphenol	ND	620	ug/kg	
88-75-5	2-Nitrophenol	ND	620	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	620	ug/kg	
108-95-2	Phenol	ND	310	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	620	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	620	ug/kg	
83-32-9	Acenaphthene	ND	120	ug/kg	
208-96-8	Acenaphthylene	ND	120	ug/kg	
98-86-2	Acetophenone	ND	620	ug/kg	
62-53-3	Aniline	ND	620	ug/kg	
120-12-7	Anthracene	ND	120	ug/kg	
56-55-3	Benzo(a)anthracene	ND	120	ug/kg	
50-32-8	Benzo(a)pyrene	ND	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	120	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	120	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	120	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	310	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	310	ug/kg	
91-58-7	2-Chloronaphthalene	ND	310	ug/kg	
106-47-8	4-Chloroaniline	ND	620	ug/kg	
218-01-9	Chrysene	ND	120	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	310	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	310	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	310	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-9(13-15')
Lab Sample ID: MC35452-36 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 80.4
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	310	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	310	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	310	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	310	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	620	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	620	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	310	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	120	ug/kg	
132-64-9	Dibenzofuran	ND	120	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	310	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	310	ug/kg	
84-66-2	Diethyl phthalate	ND	310	ug/kg	
131-11-3	Dimethyl phthalate	ND	310	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	310	ug/kg	
206-44-0	Fluoranthene	ND	120	ug/kg	
86-73-7	Fluorene	ND	120	ug/kg	
118-74-1	Hexachlorobenzene	ND	310	ug/kg	
87-68-3	Hexachlorobutadiene	ND	310	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	620	ug/kg	
67-72-1	Hexachloroethane	ND	310	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	120	ug/kg	
78-59-1	Isophorone	ND	310	ug/kg	
91-57-6	2-Methylnaphthalene	ND	120	ug/kg	
91-20-3	Naphthalene	ND	120	ug/kg	
98-95-3	Nitrobenzene	ND	310	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	310	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	310	ug/kg	
85-01-8	Phenanthrene	ND	120	ug/kg	
129-00-0	Pyrene	ND	120	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	310	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		30-130%
4165-62-2	Phenol-d5	79%		30-130%
118-79-6	2,4,6-Tribromophenol	70%		30-130%
4165-60-0	Nitrobenzene-d5	74%		30-130%
321-60-8	2-Fluorobiphenyl	92%		30-130%
1718-51-0	Terphenyl-d14	110%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(0-2')
Lab Sample ID: MC35452-37 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8082A SW846 3546 **Percent Solids:** 88.3
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44168.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	37	ug/kg	
11104-28-2	Aroclor 1221	ND	37	ug/kg	
11141-16-5	Aroclor 1232	ND	37	ug/kg	
53469-21-9	Aroclor 1242	ND	37	ug/kg	
12672-29-6	Aroclor 1248	ND	37	ug/kg	
11097-69-1	Aroclor 1254	ND	37	ug/kg	
11096-82-5	Aroclor 1260	ND	37	ug/kg	
37324-23-5	Aroclor 1262	ND	37	ug/kg	
11100-14-4	Aroclor 1268	ND	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		30-150%
877-09-8	Tetrachloro-m-xylene	83%		30-150%
2051-24-3	Decachlorobiphenyl	114%		30-150%
2051-24-3	Decachlorobiphenyl	117%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(0-2')
Lab Sample ID: MC35452-37 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 88.3
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	702	0.86	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Report of Analysis

Client Sample ID: PB-10(1-3')
Lab Sample ID: MC35452-38 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 90.4
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R41673.D	1	12/03/14	KD	12/01/14	OP41048	MSR1532
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	540	ug/kg	
95-57-8	2-Chlorophenol	ND	270	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	540	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	540	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	540	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
95-48-7	2-Methylphenol	ND	540	ug/kg	
	3&4-Methylphenol	ND	540	ug/kg	
88-75-5	2-Nitrophenol	ND	540	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	540	ug/kg	
108-95-2	Phenol	ND	270	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	540	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	540	ug/kg	
83-32-9	Acenaphthene	ND	110	ug/kg	
208-96-8	Acenaphthylene	ND	110	ug/kg	
98-86-2	Acetophenone	ND	540	ug/kg	
62-53-3	Aniline	ND	540	ug/kg	
120-12-7	Anthracene	ND	110	ug/kg	
56-55-3	Benzo(a)anthracene	146	110	ug/kg	
50-32-8	Benzo(a)pyrene	141	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	115	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	112	110	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	270	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	270	ug/kg	
91-58-7	2-Chloronaphthalene	ND	270	ug/kg	
106-47-8	4-Chloroaniline	ND	540	ug/kg	
218-01-9	Chrysene	137	110	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	270	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	270	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	270	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(1-3')
Lab Sample ID: MC35452-38
Matrix: SO - Soil
Method: SW846 8270D SW846 3546
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/24/14
Date Received: 11/26/14
Percent Solids: 90.4

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	270	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	270	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	540	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	540	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	270	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	110	ug/kg	
132-64-9	Dibenzofuran	ND	110	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	270	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	270	ug/kg	
84-66-2	Diethyl phthalate	ND	270	ug/kg	
131-11-3	Dimethyl phthalate	ND	270	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	270	ug/kg	
206-44-0	Fluoranthene	242	110	ug/kg	
86-73-7	Fluorene	ND	110	ug/kg	
118-74-1	Hexachlorobenzene	ND	270	ug/kg	
87-68-3	Hexachlorobutadiene	ND	270	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	540	ug/kg	
67-72-1	Hexachloroethane	ND	270	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	110	ug/kg	
78-59-1	Isophorone	ND	270	ug/kg	
91-57-6	2-Methylnaphthalene	ND	110	ug/kg	
91-20-3	Naphthalene	ND	110	ug/kg	
98-95-3	Nitrobenzene	ND	270	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	270	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	270	ug/kg	
85-01-8	Phenanthrene	155	110	ug/kg	
129-00-0	Pyrene	246	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	270	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		30-130%
4165-62-2	Phenol-d5	78%		30-130%
118-79-6	2,4,6-Tribromophenol	61%		30-130%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	91%		30-130%
1718-51-0	Terphenyl-d14	110%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(6')
Lab Sample ID: MC35452-39
Matrix: SO - Soil
Method: MADEP VPH REV 1.1
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Date Sampled: 11/24/14
Date Received: 11/26/14
Percent Solids: 79.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH32902.D	1	12/01/14	TB	n/a	n/a	GBH1929
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	16.8 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	360	ug/kg	
100-41-4	Ethylbenzene	ND	360	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	72	ug/kg	
91-20-3	Naphthalene	ND	360	ug/kg	
108-88-3	Toluene	ND	360	ug/kg	
	m,p-Xylene	ND	360	ug/kg	
95-47-6	o-Xylene	ND	360	ug/kg	
	C5- C8 Aliphatics (Unadj.)	ND	7200	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	7200	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	7200	ug/kg	
	C5- C8 Aliphatics	ND	7200	ug/kg	
	C9- C12 Aliphatics	ND	7200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	103%		70-130%
	2,3,4-Trifluorotoluene	98%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(6')
Lab Sample ID: MC35452-39 **Date Sampled:** 11/24/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: MADEP EPH REV 1.1 SW846 3546 **Percent Solids:** 79.8
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE7492.D	1	12/02/14	SZ	12/01/14	OP41046	GDE491
Run #2							

	Initial Weight	Final Volume
Run #1	11.4 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	550	ug/kg	
208-96-8	Acenaphthylene	ND	550	ug/kg	
120-12-7	Anthracene	ND	550	ug/kg	
56-55-3	Benzo(a)anthracene	ND	550	ug/kg	
50-32-8	Benzo(a)pyrene	ND	550	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	550	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	550	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	550	ug/kg	
218-01-9	Chrysene	ND	550	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	550	ug/kg	
206-44-0	Fluoranthene	ND	550	ug/kg	
86-73-7	Fluorene	ND	550	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	550	ug/kg	
91-57-6	2-Methylnaphthalene	ND	550	ug/kg	
91-20-3	Naphthalene	ND	550	ug/kg	
85-01-8	Phenanthrene	ND	550	ug/kg	
129-00-0	Pyrene	ND	550	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	22000	ug/kg	
	C9-C18 Aliphatics	ND	11000	ug/kg	
	C19-C36 Aliphatics	ND	11000	ug/kg	
	C11-C22 Aromatics	ND	22000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	114%		40-140%
321-60-8	2-Fluorobiphenyl	91%		40-140%
580-13-2	2-Bromonaphthalene	67%		40-140%
3386-33-2	1-Chlorooctadecane	80%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(6-8')
Lab Sample ID: MC35452-40 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 82.9
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F78320.D	1	12/03/14	MR	12/01/14	OP41045	MSF3420
Run #2							

	Initial Weight	Final Volume
Run #1	20.9 g	1.0 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	580	ug/kg	
95-57-8	2-Chlorophenol	ND	290	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	580	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	580	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	580	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
95-48-7	2-Methylphenol	ND	580	ug/kg	
	3&4-Methylphenol	ND	580	ug/kg	
88-75-5	2-Nitrophenol	ND	580	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	580	ug/kg	
108-95-2	Phenol	ND	290	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	580	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	580	ug/kg	
83-32-9	Acenaphthene	ND	120	ug/kg	
208-96-8	Acenaphthylene	ND	120	ug/kg	
98-86-2	Acetophenone	ND	580	ug/kg	
62-53-3	Aniline	ND	580	ug/kg	
120-12-7	Anthracene	ND	120	ug/kg	
56-55-3	Benzo(a)anthracene	ND	120	ug/kg	
50-32-8	Benzo(a)pyrene	ND	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	120	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	120	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	120	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	290	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	290	ug/kg	
91-58-7	2-Chloronaphthalene	ND	290	ug/kg	
106-47-8	4-Chloroaniline	ND	580	ug/kg	
218-01-9	Chrysene	ND	120	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	290	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	290	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	290	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(6-8')
Lab Sample ID: MC35452-40 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Method: SW846 8270D SW846 3546 **Percent Solids:** 82.9
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	290	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	290	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	290	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	290	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	580	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	580	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	290	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	120	ug/kg	
132-64-9	Dibenzofuran	ND	120	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	290	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	290	ug/kg	
84-66-2	Diethyl phthalate	ND	290	ug/kg	
131-11-3	Dimethyl phthalate	ND	290	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	290	ug/kg	
206-44-0	Fluoranthene	ND	120	ug/kg	
86-73-7	Fluorene	ND	120	ug/kg	
118-74-1	Hexachlorobenzene	ND	290	ug/kg	
87-68-3	Hexachlorobutadiene	ND	290	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	580	ug/kg	
67-72-1	Hexachloroethane	ND	290	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	120	ug/kg	
78-59-1	Isophorone	ND	290	ug/kg	
91-57-6	2-Methylnaphthalene	ND	120	ug/kg	
91-20-3	Naphthalene	ND	120	ug/kg	
98-95-3	Nitrobenzene	ND	290	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	290	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	290	ug/kg	
85-01-8	Phenanthrene	ND	120	ug/kg	
129-00-0	Pyrene	ND	120	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	290	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		30-130%
4165-62-2	Phenol-d5	85%		30-130%
118-79-6	2,4,6-Tribromophenol	77%		30-130%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	83%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PB-10(6-8')
Lab Sample ID: MC35452-40 **Date Sampled:** 11/25/14
Matrix: SO - Soil **Date Received:** 11/26/14
Percent Solids: 82.9
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	5.8	1.1	mg/kg	1	12/01/14	12/02/14	EAL	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA17739
(2) Prep QC Batch: MP23971

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	PB-10(8-10')		
Lab Sample ID:	MC35452-41	**Date Sampled:**	11/25/14
Matrix:	SO - Soil	**Date Received:**	11/26/14
Method:	SW846 8082A SW846 3546	**Percent Solids:**	79.1
Project:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK44169.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	40	ug/kg	
11104-28-2	Aroclor 1221	ND	40	ug/kg	
11141-16-5	Aroclor 1232	ND	40	ug/kg	
53469-21-9	Aroclor 1242	ND	40	ug/kg	
12672-29-6	Aroclor 1248	ND	40	ug/kg	
11097-69-1	Aroclor 1254	ND	40	ug/kg	
11096-82-5	Aroclor 1260	ND	40	ug/kg	
37324-23-5	Aroclor 1262	ND	40	ug/kg	
11100-14-4	Aroclor 1268	ND	40	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	62%		30-150%
877-09-8	Tetrachloro-m-xylene	67%		30-150%
2051-24-3	Decachlorobiphenyl	84%		30-150%
2051-24-3	Decachlorobiphenyl	88%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

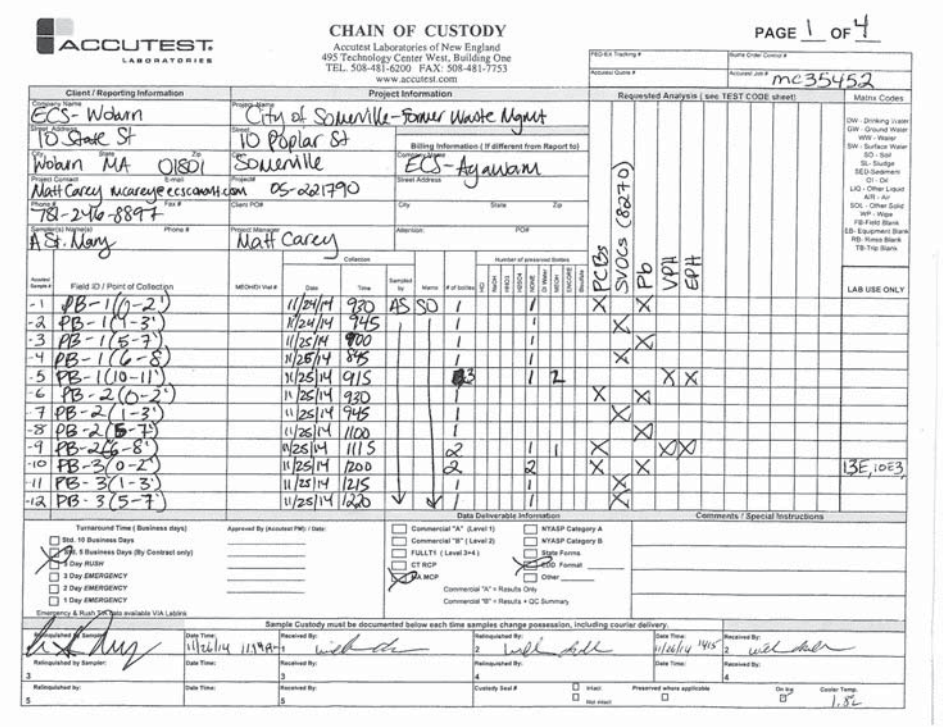
New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- EPH Form
- VPH Form
- Sample Tracking Chronicle



ACCUTEST. LABORATORIES

CHAIN OF CUSTODY

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Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

Accutest Quote # | Accutest Job # mc35452

Client / Reporting Information: Company Name ECS- Woburn; Street Address 10 State St; City Woburn State MA Zip 01801; Project Contact Matt Carey mcarey@ecscorp.com; Phone # 781-246-8897; Fax #; Sampler(s) Name(s) A.St. Mary

Project Information: Project Name City of Somerville-Former Waste Mgmt; Street 10 Poplar St; City Somerville; Project # 05-221790; Client PO#; Project Manager Matt Carey

Billing Information (If different from Report to): Company Name ECS-Agawam; Street Address; City State Zip; Attention: PO#

Requested Analysis (see TEST CODE sheet): PCBs, SVOCs (8270), Pb, VPH, EPH

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB- Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	PCBs	SVOCs (8270)	Pb	VPH	EPH	LAB USE ONLY
-1	PB-1(0-2')		11/24/14	930	AS	SO	1					1					X		X			
-2	PB-1(1-3')		11/24/14	945			1					1						X				
-3	PB-1(5-7')		11/25/14	900			1					1							X			
-4	PB-1(6-8')		11/25/14	845			1					1					X					
-5	PB-1(10-11')		11/25/14	915			1					1								X	X	
-6	PB-2(0-2')		11/25/14	930			1					1					X		X			
-7	PB-2(1-3')		11/25/14	945			1					1						X				
-8	PB-2(5-7')		11/25/14	1100			1					1							X			
-9	PB-2(6-8')		11/25/14	1115			2					1	1				X			X	X	
-10	PB-3(0-2')		11/25/14	1200			2					2					X		X			13E, 10E3
-11	PB-3(1-3')		11/25/14	1215			1					1						X				
-12	PB-3(5-7')		11/25/14	1220			1					1						X				

Turnaround Time (Business days): Std. 10 Business Days; 5 Business Days (By Contract only); 5 Day RUSH; 3 Day EMERGENCY; 2 Day EMERGENCY; 1 Day EMERGENCY; Emergency & Rush T/A data available VIA Labline

Approved By (Accutest PM) / Date:

Data Deliverable Information: Commercial "A" (Level 1); Commercial "B" (Level 2); FULLT1 (Level 3+4); CT RCP; MA MCP; NYASP Category A; NYASP Category B; State Forms; EQuIS Format; Other; Commercial "A" = Results Only; Commercial "B" = Results + QC Summary

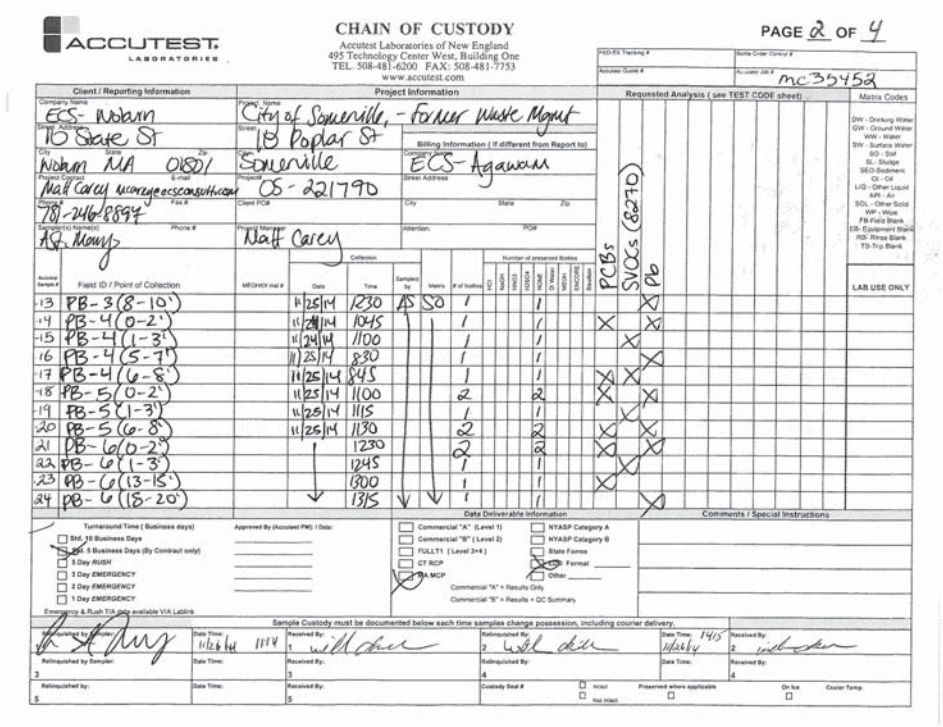
Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	11/26/14 1199	1	2	11/26/14 1415	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Intact / Not Intact	Preserved where applicable	On Ice / Cooler Temp. 1.8C

5.1 5

MC35452: Chain of Custody
Page 1 of 5



ACCUTEST. LABORATORIES

CHAIN OF CUSTODY

PAGE 2 OF 4

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

Accutest Quote # | Accutest Job # mc35452

Client / Reporting Information: Company Name ECS- Woburn; Street Address 10 State St; City Woburn State MA Zip 01801; Project Contact Matt Carey mcarey@ecscorp.com; Phone # 781-246-8897; Fax #; Sampler(s) Name(s) A.St. Mary

Project Information: Project Name City of Somerville, - Former Waste Mgmt; Street 10 Poplar St; City Somerville; Project # 05-221790; Client PO#; Project Manager Matt Carey

Billing Information (If different from Report to): Company Name ECS-Agawam; Street Address; City State Zip; Attention: PO#

Requested Analysis (see TEST CODE sheet): PCBs, SVOCs (8270), Pb

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB- Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	PCBs	SVOCs (8270)	Pb	LAB USE ONLY
13	PB-3(8-10')		11/25/14	1230	AS	SO	1					1							X	
14	PB-4(0-2')		11/24/14	1045			1					1					X		X	
15	PB-4(1-3')		11/24/14	1100			1					1						X		
16	PB-4(5-7')		11/25/14	830			1					1							X	
17	PB-4(6-8')		11/25/14	845			1					1					X	X		
18	PB-5(0-2')		11/25/14	1100			2					2					X		X	
19	PB-5(1-3')		11/25/14	1115			1					1						X		
20	PB-5(6-8')		11/25/14	1130			2					2					X		X	
21	PB-6(0-2')			1230			2					2					X		X	
22	PB-6(1-3')			1245			1					1						X		
23	PB-6(13-15')			1300			1					1					X			
24	PB-6(18-20')			1315			1					1						X		

Turnaround Time (Business days): Std. 10 Business Days; 5 Business Days (By Contract only); 5 Day RUSH; 3 Day EMERGENCY; 2 Day EMERGENCY; 1 Day EMERGENCY; Emergency & Rush T/A data available VIA Labline

Approved By (Accutest PM) / Date:

Data Deliverable Information: Commercial "A" (Level 1); Commercial "B" (Level 2); FULLT1 (Level 3+4); CT RCP; MA MCP; NYASP Category A; NYASP Category B; State Forms; EQuIS Format; Other; Commercial "A" = Results Only; Commercial "B" = Results + QC Summary

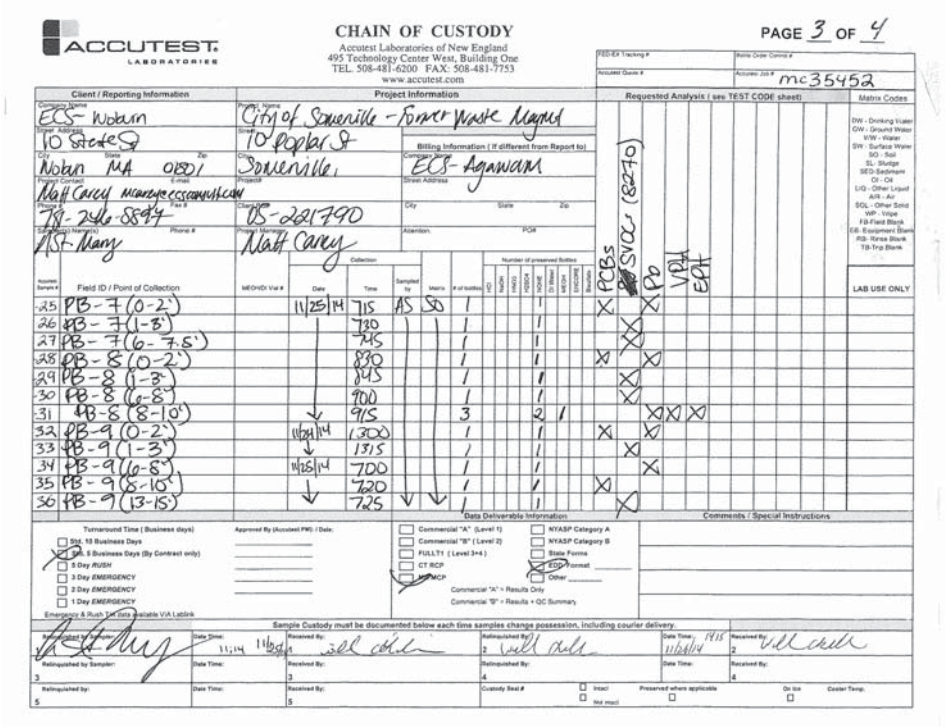
Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	11/26/14 1114	1	2	11/26/14 1415	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Intact / Not Intact	Preserved where applicable	On Ice / Cooler Temp.

5.1 5

MC35452: Chain of Custody
Page 2 of 5



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CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
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PAGE 3 OF 4

Accutest Job # MC35452

Client / Reporting Information: ECS- Woburn; 10 State St; Woburn MA 01801; Matt Carey Mcarey@ecscorp.com; 781-246-8894; Sampler(s): AS, Mary

Project Information: City of Somerville - Former Waste Mgmt; 10 Poplar St; Somerville; Project #: 05-221790; Project Manager: Matt Carey

Billing Information (If different from Report to): ECS- Aganwani

Requested Analysis (see TEST CODE sheet): PCBs, SVOCs (8270), PD, VPH, EPH

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB- Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	H2SO4	HNO3	NONE	DI Water	MEOH	ENCORE	Bisulfate	PCBs	SVOCs (8270)	PD	VPH	EPH
25	PB-7(0-2')		11/25/14	715	AS	SO	1				1					X		X		
26	PB-7(1-3')			730			1				1						X	X		
27	PB-7(6-7.5')			745			1				1						X	X		
28	PB-8(0-2')			830			1				1					X		X		
29	PB-8(1-3')			845			1				1						X	X		
30	PB-8(6-8')			900			1				1						X	X		
31	PB-8(8-10')			915			3				2	1						X	X	X
32	PB-9(0-2')		11/24/14	1300			1				1					X		X		
33	PB-9(1-3')			1315			1				1						X	X		
34	PB-9(6-8')		11/25/14	700			1				1							X		
35	PB-9(8-10')			720			1				1					X				
36	PB-9(13-15')			725			1				1						X			

Turnaround Time (Business days): Std. 10 Business Days; 5 Business Days (By Contract only); 5 Day RUSH; 3 Day EMERGENCY; 2 Day EMERGENCY; 1 Day EMERGENCY; Emergency & Rush T/A data available VIA Labtink

Approved By (Accutest PM) / Date:

Data Deliverable Information: Commercial "A" (Level 1); Commercial "B" (Level 2); FULLT1 (Level 3+4); CT RCP; MCP; NYASP Category A; NYASP Category B; State Forms; EDD Format; Other; Commercial "A" = Results Only; Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		11:14 11/24/14		2	11/24/14 1915	2
3			3	4		4
5			5			

Custody Seal # | Intact | Not Intact | Preserved where applicable | On Ice | Cooler Temp.

MC35452: Chain of Custody
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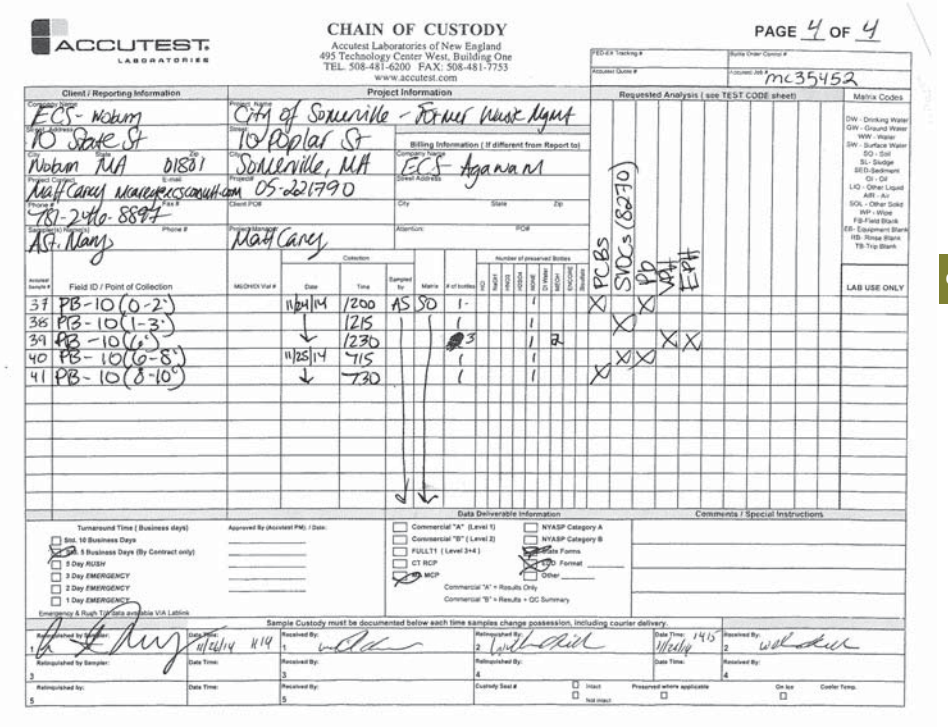

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

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Accutest Job # MC35452

Client / Reporting Information: ECS- Woburn; 10 State St; Woburn MA 01801; Matt Carey Mcarey@ecscorp.com; 781-246-8897; Sampler(s): AS, Mary

Project Information: City of Somerville - Former Waste Mgmt; 10 Poplar St; Somerville, MA; Project #: 05-221790; Project Manager: Matt Carey

Billing Information (If different from Report to): ECS- Aganwani

Requested Analysis (see TEST CODE sheet): PCBs, SVOCs (8270), PD, VPH, EPH

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB- Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	H2SO4	HNO3	NONE	DI Water	MEOH	ENCORE	Bisulfate	PCBs	SVOCs (8270)	PD	VPH	EPH
37	PB-10(0-2')		11/24/14	1200	AS	SO	1				1					X		X		
38	PB-10(1-3')			1215			1				1						X	X		
39	PB-10(6')			1230			3				1				2			X	X	X
40	PB-10(6-8')		11/25/14	715			1				1						X	X	X	
41	PB-10(8-10')			730			1				1					X				

Turnaround Time (Business days): Std. 10 Business Days; 5 Business Days (By Contract only); 3 Day RUSH; 3 Day EMERGENCY; 2 Day EMERGENCY; 1 Day EMERGENCY; Emergency & Rush T/A data available VIA Labtink

Approved By (Accutest PM) / Date:

Data Deliverable Information: Commercial "A" (Level 1); Commercial "B" (Level 2); FULLT1 (Level 3+4); CT RCP; MCP; NYASP Category A; NYASP Category B; State Forms; EDD Format; Other; Commercial "A" = Results Only; Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		11/24/14 1119	1	2	11/24/14 1915	2
3			3	4		4
5			5			

Custody Seal # | Intact | Not Intact | Preserved where applicable | On Ice | Cooler Temp.

MC35452: Chain of Custody
Page 4 of 5

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC35452 **Client:** ECS WOBURN **Project:** CIT OF SOMERVILLE FMR WASTE MGMNT

Date / Time Received: 11/26/2014 2:15:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (1.8/1.8);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Thermometer ID:	G1;	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:(508) 481-6200
495 Technology Center West, Bldg One
F: (508) 481-7753
Marlborough, MA 01752
www/accutest.com

MC35452: Chain of Custody
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Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name:	Accutest Laboratories of New England	Project #:	MC35452
Project Location:	Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC35452-1 through MC35452-41

Matrices: Groundwater/Surface Water ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below):

8260 VOC ( ) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH (X) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC (X) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH (X) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB (X) CAM V A	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No	
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No	
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No	
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No	
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☑ Yes	☐ No ☐ No	
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No	

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☐ Yes	☑ No [1]	
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.			
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No [1]	
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No [1]	

[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: **Position:** Laboratory Director

Printed Name: Reza Tand **Date:** 12/05/2014

MADEP EPH FORM

Matrix	Aqueous	☐	Soil	☑	Sediment	☐	Other	☐	
Containers	Satisfactory	☑	Broken	☐	Leaking	☐			
Aqueous Preservative	N/A	☑	pH <= 2	☐	pH > 2	☐			
Temperature	Received on Ice	☐	Received at 4 Deg. C	☐	Other	☑	Rec'd at 1.8 Deg. C		
Extraction Method	SW846 3546								

Method for Ranges: MADEP EPH REV 1.1
Method for Targets: MADEP EPH REV 1.1
EPH Surrogate Stds. Aliphatic: 1-Chlorooctadecane; Aromatic: o-Terphenyl
EPH Fractionation Surrogate Standards. 2-Fluorobiphenyl; 2-Bromonaphthalene

Client ID: PB-1(10-11') **Lab ID:** MC35452-5
Date Collected: 11/25/2014 **Date Received:** 11/26/2014
Date Extracted: 12/1/2014 7:00:00 PM **First Date Run:** 12/2/2014 **Last Date Run:** N/A
% Solids: 83.2 **Low Dilution:** 1 **High Dilution:** N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/kg	ND [A]	21000	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/kg	ND	520	
Phenanthrene	85-01-8	ug/kg	ND	520	
Acenaphthene	83-32-9	ug/kg	ND	520	
Naphthalene	91-20-3	ug/kg	ND	520	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/kg	ND	520	
Anthracene	120-12-7	ug/kg	ND	520	
Benzo(a)anthracene	56-55-3	ug/kg	ND	520	
Benzo(a)pyrene	50-32-8	ug/kg	ND	520	
Benzo(b)fluoranthene	205-99-2	ug/kg	ND	520	
Benzo(g,h,i)perylene	191-24-2	ug/kg	ND	520	
Benzo(k)fluoranthene	207-08-9	ug/kg	ND	520	
Chrysene	218-01-9	ug/kg	ND	520	
Dibenz(a,h)anthracene	53-70-3	ug/kg	ND	520	
Fluoranthene	206-44-0	ug/kg	ND	520	
Fluorene	86-73-7	ug/kg	ND	520	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	ND	520	
Pyrene	129-00-0	ug/kg	ND	520	
Adjusted Ranges					
C9-C18 Aliphatics		ug/kg	ND [A]	10000	
C19-C36 Aliphatics		ug/kg	ND [A]	10000	
C11-C22 Aromatics		ug/kg	ND [C]	21000	

Surrogate Recoveries		Acceptance Range
1-Chlorooctadecane	74 %	40-140 %
o-Terphenyl	115 %	40-140 %
2-Fluorobiphenyl	93 %	40-140 %
2-Bromonaphthalene	86 %	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature Postition Laboratory Director
Printed Name Reza Tand Date 12/5/2014

MADEP EPH FORM

Matrix	Aqueous	☐	Soil	☑	Sediment	☐	Other	☐	
Containers	Satisfactory	☑	Broken	☐	Leaking	☐			
Aqueous Preservative	N/A	☑	pH <= 2	☐	pH > 2	☐			
Temperature	Received on Ice	☐	Received at 4 Deg. C	☐	Other	☑	Rec'd at 1.8 Deg. C		
Extraction Method	SW846 3546								

Method for Ranges: MADEP EPH REV 1.1
Method for Targets: MADEP EPH REV 1.1
EPH Surrogate Stds. Aliphatic: 1-Chlorooctadecane; Aromatic: o-Terphenyl
EPH Fractionation Surrogate Standards. 2-Fluorobiphenyl; 2-Bromonaphthalene

Client ID: PB-2(6-8') **Lab ID:** MC35452-9
Date Collected: 11/25/2014 **Date Received:** 11/26/2014
Date Extracted: 12/1/2014 7:00:00 PM **First Date Run:** 12/2/2014 **Last Date Run:** N/A
% Solids: 92.2 **Low Dilution:** 1 **High Dilution:** N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/kg	28900 [A]	18000	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/kg	ND	460	
Phenanthrene	85-01-8	ug/kg	696	460	
Acenaphthene	83-32-9	ug/kg	ND	460	
Naphthalene	91-20-3	ug/kg	ND	460	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/kg	ND	460	
Anthracene	120-12-7	ug/kg	ND	460	
Benzo(a)anthracene	56-55-3	ug/kg	532	460	
Benzo(a)pyrene	50-32-8	ug/kg	487	460	
Benzo(b)fluoranthene	205-99-2	ug/kg	ND	460	
Benzo(g,h,i)perylene	191-24-2	ug/kg	553	460	
Benzo(k)fluoranthene	207-08-9	ug/kg	463	460	
Chrysene	218-01-9	ug/kg	566	460	
Dibenz(a,h)anthracene	53-70-3	ug/kg	ND	460	
Fluoranthene	206-44-0	ug/kg	1090	460	
Fluorene	86-73-7	ug/kg	ND	460	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	ND	460	
Pyrene	129-00-0	ug/kg	849	460	
Adjusted Ranges					
C9-C18 Aliphatics		ug/kg	ND [A]	9200	
C19-C36 Aliphatics		ug/kg	16600 [A]	9200	
C11-C22 Aromatics		ug/kg	22800 [C]	18000	

Surrogate Recoveries		Acceptance Range
1-Chlorooctadecane	80 %	40-140 %
o-Terphenyl	121 %	40-140 %
2-Fluorobiphenyl	91 %	40-140 %
2-Bromonaphthalene	87 %	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature Postition Laboratory Director
Printed Name Reza Tand Date 12/5/2014

MADEP EPH FORM

Matrix	Aqueous	☐	Soil	☑	Sediment	☐	Other	☐	
Containers	Satisfactory	☑	Broken	☐	Leaking	☐			
Aqueous Preservative	N/A	☑	pH <= 2	☐	pH > 2	☐			
Temperature	Received on Ice	☐	Received at 4 Deg. C	☐	Other	☑	Rec'd at 1.8 Deg. C		
Extraction Method	SW846 3546								

Method for Ranges:	MADEP EPH REV 1.1	Client ID:	PB-8(8-10')	Lab ID:	MC35452-31
Method for Targets:	MADEP EPH REV 1.1	Date Collected:	11/25/2014	Date Received:	11/26/2014
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic: o-Terphenyl	12/1/2014 7:00:00 PM	12/2/2014		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	90.9	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/kg	ND [A]	19000	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/kg	ND	470	
Phenanthrene	85-01-8	ug/kg	ND	470	
Acenaphthene	83-32-9	ug/kg	ND	470	
Naphthalene	91-20-3	ug/kg	ND	470	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/kg	ND	470	
Anthracene	120-12-7	ug/kg	ND	470	
Benzo(a)anthracene	56-55-3	ug/kg	ND	470	
Benzo(a)pyrene	50-32-8	ug/kg	ND	470	
Benzo(b)fluoranthene	205-99-2	ug/kg	ND	470	
Benzo(g,h,i)perylene	191-24-2	ug/kg	ND	470	
Benzo(k)fluoranthene	207-08-9	ug/kg	ND	470	
Chrysene	218-01-9	ug/kg	ND	470	
Dibenz(a,h)anthracene	53-70-3	ug/kg	ND	470	
Fluoranthene	206-44-0	ug/kg	ND	470	
Fluorene	86-73-7	ug/kg	ND	470	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	ND	470	
Pyrene	129-00-0	ug/kg	ND	470	
Adjusted Ranges					
C9-C18 Aliphatics		ug/kg	ND [A]	9300	
C19-C36 Aliphatics		ug/kg	16800 [A]	9300	
C11-C22 Aromatics		ug/kg	ND [C]	19000	

Surrogate Recoveries		Acceptance Range
1-Chlorooctadecane	80	40-140 %
o-Terphenyl	107	40-140 %
2-Fluorobiphenyl	85	40-140 %
2-Bromonaphthalene	79	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name Reza Tand Date 12/5/2014

MADEP EPH FORM

Matrix	Aqueous	☐	Soil	☑	Sediment	☐	Other	☐	
Containers	Satisfactory	☑	Broken	☐	Leaking	☐			
Aqueous Preservative	N/A	☑	pH <= 2	☐	pH > 2	☐			
Temperature	Received on Ice	☐	Received at 4 Deg. C	☐	Other	☑	Rec'd at 1.8 Deg. C		
Extraction Method	SW846 3546								

Method for Ranges:	MADEP EPH REV 1.1	Client ID:	PB-10(6')	Lab ID:	MC35452-39
Method for Targets:	MADEP EPH REV 1.1	Date Collected:	11/24/2014	Date Received:	11/26/2014
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic: o-Terphenyl	12/1/2014 7:00:00 PM	12/2/2014		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
	2-Bromonaphthalene	79.8	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		ug/kg	ND [A]	22000	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	ug/kg	ND	550	
Phenanthrene	85-01-8	ug/kg	ND	550	
Acenaphthene	83-32-9	ug/kg	ND	550	
Naphthalene	91-20-3	ug/kg	ND	550	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	ug/kg	ND	550	
Anthracene	120-12-7	ug/kg	ND	550	
Benzo(a)anthracene	56-55-3	ug/kg	ND	550	
Benzo(a)pyrene	50-32-8	ug/kg	ND	550	
Benzo(b)fluoranthene	205-99-2	ug/kg	ND	550	
Benzo(g,h,i)perylene	191-24-2	ug/kg	ND	550	
Benzo(k)fluoranthene	207-08-9	ug/kg	ND	550	
Chrysene	218-01-9	ug/kg	ND	550	
Dibenz(a,h)anthracene	53-70-3	ug/kg	ND	550	
Fluoranthene	206-44-0	ug/kg	ND	550	
Fluorene	86-73-7	ug/kg	ND	550	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	ND	550	
Pyrene	129-00-0	ug/kg	ND	550	
Adjusted Ranges					
C9-C18 Aliphatics		ug/kg	ND [A]	11000	
C19-C36 Aliphatics		ug/kg	ND [A]	11000	
C11-C22 Aromatics		ug/kg	ND [C]	22000	

Surrogate Recoveries		Acceptance Range
1-Chlorooctadecane	80	40-140 %
o-Terphenyl	114	40-140 %
2-Fluorobiphenyl	91	40-140 %
2-Bromonaphthalene	67	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name Reza Tand Date 12/5/2014

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.8 Deg. C			
Methanol	Methanol Covering Soil. (mL Methanol/g soil: 1:1 +/- 25%)						

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID:
FID:

Client ID: PB-1(10-11')
Lab ID: MC35452-5
Date Collected: 11/25/2014
Date Received: 11/26/2014

Date Extracted:	First Date Run:	Last Date Run:
N/A	12/1/2014	N/A
% Solids:	**Low Dilution:**	**High Dilution:**
83.2	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	7000	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND [A]	7000	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	7000	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	ND	350	
Toluene	108-88-3	C5-C8	ug/kg	ND	350	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	ND	70	
Benzene	71-43-2	C5-C8	ug/kg	ND	350	
Naphthalene	91-20-3	N/A	ug/kg	ND	350	
o-Xylene	95-47-6	C9-C12	ug/kg	ND	350	
m,p-Xylene		C9-C12	ug/kg	ND	350	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	ND [B]	7000	
C9- C12 Aliphatics		N/A	ug/kg	ND [D]	7000	

Surrogate Recoveries		Acceptance Range
FID:2,3,4-Trifluorotoluene	% 93	70-130 %
PID:2,3,4-Trifluorotoluene	% 99	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director
Printed Name Reza Tand Date 12/5/2014

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.8 Deg. C			
Methanol	Methanol Covering Soil. (mL Methanol/g soil: 1:1 +/- 25%)						

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID:
FID:

Client ID: PB-2(6-8')
Lab ID: MC35452-9
Date Collected: 11/25/2014
Date Received: 11/26/2014

Date Extracted:	First Date Run:	Last Date Run:
N/A	12/1/2014	N/A
% Solids:	**Low Dilution:**	**High Dilution:**
92.2	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	5900	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND [A]	5900	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	5900	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	ND	300	
Toluene	108-88-3	C5-C8	ug/kg	ND	300	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	ND	59	
Benzene	71-43-2	C5-C8	ug/kg	ND	300	
Naphthalene	91-20-3	N/A	ug/kg	ND	300	
o-Xylene	95-47-6	C9-C12	ug/kg	ND	300	
m,p-Xylene		C9-C12	ug/kg	ND	300	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	ND [B]	5900	
C9- C12 Aliphatics		N/A	ug/kg	ND [D]	5900	

Surrogate Recoveries		Acceptance Range
FID:2,3,4-Trifluorotoluene	% 104	70-130 %
PID:2,3,4-Trifluorotoluene	% 110	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director
Printed Name Reza Tand Date 12/5/2014

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.8 Deg. C			
Methanol	Methanol Covering Soil. (mL Methanol/g soil: 1:1 +/- 25%)						

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID:
FID:

Client ID: PB-8(8-10')
Lab ID: MC35452-31
Date Collected: 11/25/2014
Date Received: 11/26/2014

Date Extracted:	First Date Run:	Last Date Run:
N/A	12/1/2014	N/A
% Solids:	**Low Dilution:**	**High Dilution:**
90.9	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	5500	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND [A]	5500	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	5500	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	ND	280	
Toluene	108-88-3	C5-C8	ug/kg	ND	280	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	ND	55	
Benzene	71-43-2	C5-C8	ug/kg	ND	280	
Naphthalene	91-20-3	N/A	ug/kg	ND	280	
o-Xylene	95-47-6	C9-C12	ug/kg	ND	280	
m,p-Xylene		C9-C12	ug/kg	ND	280	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	ND [B]	5500	
C9- C12 Aliphatics		N/A	ug/kg	ND [D]	5500	

Surrogate Recoveries		Acceptance Range
FID:2,3,4-Trifluorotoluene	% 103	70-130 %
PID:2,3,4-Trifluorotoluene	% 109	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director
Printed Name Reza Tand Date 12/5/2014

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 1.8 Deg. C			
Methanol	Methanol Covering Soil. (mL Methanol/g soil: 1:1 +/- 25%)						

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID:
FID:

Client ID: PB-10(6')
Lab ID: MC35452-39
Date Collected: 11/24/2014
Date Received: 11/26/2014

Date Extracted:	First Date Run:	Last Date Run:
N/A	12/1/2014	N/A
% Solids:	**Low Dilution:**	**High Dilution:**
79.8	1	N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	7200	
C9- C10 Aromatics (Unadj.)		N/A	ug/kg	ND [A]	7200	
C9- C12 Aliphatics (Unadj.)		N/A	ug/kg	ND [A]	7200	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	ug/kg	ND	360	
Toluene	108-88-3	C5-C8	ug/kg	ND	360	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	ug/kg	ND	72	
Benzene	71-43-2	C5-C8	ug/kg	ND	360	
Naphthalene	91-20-3	N/A	ug/kg	ND	360	
o-Xylene	95-47-6	C9-C12	ug/kg	ND	360	
m,p-Xylene		C9-C12	ug/kg	ND	360	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	ug/kg	ND [B]	7200	
C9- C12 Aliphatics		N/A	ug/kg	ND [D]	7200	

Surrogate Recoveries		Acceptance Range
FID:2,3,4-Trifluorotoluene	% 98	70-130 %
PID:2,3,4-Trifluorotoluene	% 103	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director
Printed Name Reza Tand Date 12/5/2014

Internal Sample Tracking Chronicle

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC35452-1	Collected: 24-NOV-14 09:30 By: AS		Received: 26-NOV-14	By:		
PB-1(0-2')						
MC35452-1	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-1	SW846 6010C	02-DEC-14 14:39	EAL	01-DEC-14	EAL	PB
MC35452-1	SW846 8082A	03-DEC-14 18:22	NK	01-DEC-14	AJ	P8082MCP
MC35452-2	Collected: 24-NOV-14 09:45 By: AS		Received: 26-NOV-14	By:		
PB-1(1-3')						
MC35452-2	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-2	SW846 8270D	03-DEC-14 16:54	KD	01-DEC-14	PA	AB8270MCP
MC35452-3	Collected: 25-NOV-14 09:00 By: AS		Received: 26-NOV-14	By:		
PB-1(5-7')						
MC35452-3	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-3	SW846 6010C	02-DEC-14 14:44	EAL	01-DEC-14	EAL	PB
MC35452-4	Collected: 25-NOV-14 08:45 By: AS		Received: 26-NOV-14	By:		
PB-1(6-8')						
MC35452-4	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-4	SW846 8270D	03-DEC-14 17:19	KD	01-DEC-14	PA	AB8270MCP
MC35452-5	Collected: 25-NOV-14 09:15 By: AS		Received: 26-NOV-14	By:		
PB-1(10-11')						
MC35452-5	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-5	MADEP VPH REV 1.1	01-DEC-14 14:12	TB			VMAVPH
MC35452-5	MADEP EPH REV 1.1	02-DEC-14 21:14	SZ	01-DEC-14	AJ	BMAEPH
MC35452-6	Collected: 25-NOV-14 09:30 By: AS		Received: 26-NOV-14	By:		
PB-2(0-2')						
MC35452-6	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-6	SW846 6010C	02-DEC-14 14:19	EAL	01-DEC-14	EAL	PB
MC35452-6	SW846 8082A	03-DEC-14 18:35	NK	01-DEC-14	AJ	P8082MCP

Internal Sample Tracking Chronicle

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC35452-7	Collected: 25-NOV-14 09:45 By: AS		Received: 26-NOV-14	By:		
PB-2(1-3')						
MC35452-7	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-7	SW846 8270D	03-DEC-14 17:43	KD	01-DEC-14	PA	AB8270MCP
MC35452-8	Collected: 25-NOV-14 11:00 By: AS		Received: 26-NOV-14	By:		
PB-2(5-7')						
MC35452-8	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-8	SW846 6010C	02-DEC-14 14:49	EAL	01-DEC-14	EAL	PB
MC35452-9	Collected: 25-NOV-14 11:15 By: AS		Received: 26-NOV-14	By:		
PB-2(6-8')						
MC35452-9	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-9	MADEP VPH REV 1.1	01-DEC-14 14:47	TB			VMAVPH
MC35452-9	MADEP EPH REV 1.1	02-DEC-14 21:48	SZ	01-DEC-14	AJ	BMAEPH
MC35452-9	SW846 8082A	03-DEC-14 18:47	NK	01-DEC-14	AJ	P8082MCP
MC35452-10	Collected: 25-NOV-14 12:00 By: AS		Received: 26-NOV-14	By:		
PB-3(0-2')						
MC35452-10	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-10	SW846 6010C	02-DEC-14 14:54	EAL	01-DEC-14	EAL	PB
MC35452-10	SW846 8082A	03-DEC-14 18:59	NK	01-DEC-14	AJ	P8082MCP
MC35452-11	Collected: 25-NOV-14 12:15 By: AS		Received: 26-NOV-14	By:		
PB-3(1-3')						
MC35452-11	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-11	SW846 8270D	03-DEC-14 18:08	KD	01-DEC-14	PA	AB8270MCP
MC35452-12	Collected: 25-NOV-14 12:20 By: AS		Received: 26-NOV-14	By:		
PB-3(5-7')						
MC35452-12	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-12	SW846 8270D	03-DEC-14 18:32	KD	01-DEC-14	PA	AB8270MCP

Internal Sample Tracking Chronicle

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC35452-13	Collected: 25-NOV-14 12:30 By: AS		Received: 26-NOV-14	By:		
PB-3(8-10')						
MC35452-13	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-13	SW846 6010C	02-DEC-14 14:59	EAL	01-DEC-14	EAL	PB
MC35452-14	Collected: 24-NOV-14 10:45 By: AS		Received: 26-NOV-14	By:		
PB-4(0-2')						
MC35452-14	SM 2540G-97 MOD	01-DEC-14	HS			%SOL
MC35452-14	SW846 6010C	02-DEC-14 15:04	EAL	01-DEC-14	EAL	PB
MC35452-14	SW846 8082A	03-DEC-14 19:11	NK	01-DEC-14	AJ	P8082MCP
MC35452-15	Collected: 24-NOV-14 11:00 By: AS		Received: 26-NOV-14	By:		
PB-4(1-3')						
MC35452-15	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-15	SW846 8270D	03-DEC-14 18:56	KD	01-DEC-14	PA	AB8270MCP
MC35452-16	Collected: 25-NOV-14 08:30 By: AS		Received: 26-NOV-14	By:		
PB-4(5-7')						
MC35452-16	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-16	SW846 6010C	02-DEC-14 15:18	EAL	01-DEC-14	EAL	PB
MC35452-17	Collected: 25-NOV-14 08:45 By: AS		Received: 26-NOV-14	By:		
PB-4(6-8')						
MC35452-17	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-17	SW846 8270D	03-DEC-14 19:21	KD	01-DEC-14	PA	AB8270MCP
MC35452-17	SW846 8082A	03-DEC-14 19:23	NK	01-DEC-14	AJ	P8082MCP
MC35452-18	Collected: 25-NOV-14 11:00 By: AS		Received: 26-NOV-14	By:		
PB-5(0-2')						
MC35452-18	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-18	SW846 6010C	02-DEC-14 15:23	EAL	01-DEC-14	EAL	PB
MC35452-18	SW846 8082A	03-DEC-14 19:36	NK	01-DEC-14	AJ	P8082MCP

Internal Sample Tracking Chronicle

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC35452-19	Collected: 25-NOV-14 11:15 By: AS		Received: 26-NOV-14	By:		
PB-5(1-3')						
MC35452-19	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-19	SW846 8270D	03-DEC-14 19:45	KD	01-DEC-14	PA	AB8270MCP
MC35452-20	Collected: 25-NOV-14 11:30 By: AS		Received: 26-NOV-14	By:		
PB-5(6-8')						
MC35452-20	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-20	SW846 6010C	02-DEC-14 15:28	EAL	01-DEC-14	EAL	PB
MC35452-20	SW846 8082A	03-DEC-14 19:48	NK	01-DEC-14	AJ	P8082MCP
MC35452-21	Collected: 25-NOV-14 12:30 By: AS		Received: 26-NOV-14	By:		
PB-6(0-2')						
MC35452-21	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-21	SW846 6010C	02-DEC-14 15:33	EAL	01-DEC-14	EAL	PB
MC35452-21	SW846 8082A	03-DEC-14 20:00	NK	01-DEC-14	AJ	P8082MCP
MC35452-22	Collected: 25-NOV-14 12:45 By: AS		Received: 26-NOV-14	By:		
PB-6(1-3')						
MC35452-22	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-22	SW846 8270D	03-DEC-14 20:10	KD	01-DEC-14	PA	AB8270MCP
MC35452-23	Collected: 25-NOV-14 13:00 By: AS		Received: 26-NOV-14	By:		
PB-6(13-15')						
MC35452-23	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-23	SW846 8082A	03-DEC-14 20:25	NK	01-DEC-14	AJ	P8082MCP
MC35452-24	Collected: 25-NOV-14 13:15 By: AS		Received: 26-NOV-14	By:		
PB-6(18-20')						
MC35452-24	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-24	SW846 6010C	02-DEC-14 15:38	EAL	01-DEC-14	EAL	PB

Internal Sample Tracking Chronicle

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC35452-25	Collected: 25-NOV-14 07:15 By: AS			Received: 26-NOV-14	By:	
PB-7(0-2')						
MC35452-25	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-25	SW846 6010C	02-DEC-14 15:43	EAL	01-DEC-14	EAL	PB
MC35452-25	SW846 8082A	03-DEC-14 20:37	NK	01-DEC-14	AJ	P8082MCP
MC35452-26	Collected: 25-NOV-14 07:30 By: AS			Received: 26-NOV-14	By:	
PB-7(1-3')						
MC35452-26	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-26	SW846 8270D	03-DEC-14 20:34	KD	01-DEC-14	PA	AB8270MCP
MC35452-27	Collected: 25-NOV-14 07:45 By: AS			Received: 26-NOV-14	By:	
PB-7(6-7.5')						
MC35452-27	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-27	SW846 8270D	03-DEC-14 20:59	KD	01-DEC-14	PA	AB8270MCP
MC35452-28	Collected: 25-NOV-14 08:30 By: AS			Received: 26-NOV-14	By:	
PB-8(0-2')						
MC35452-28	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-28	SW846 6010C	02-DEC-14 15:48	EAL	01-DEC-14	EAL	PB
MC35452-28	SW846 8082A	03-DEC-14 20:49	NK	01-DEC-14	AJ	P8082MCP
MC35452-29	Collected: 25-NOV-14 08:45 By: AS			Received: 26-NOV-14	By:	
PB-8(1-3')						
MC35452-29	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-29	SW846 8270D	03-DEC-14 21:23	KD	01-DEC-14	PA	AB8270MCP
MC35452-29	SW846 8270D	05-DEC-14 11:52	MR	04-DEC-14	FC	AB8270MCP
MC35452-30	Collected: 25-NOV-14 09:00 By: AS			Received: 26-NOV-14	By:	
PB-8(6-8')						
MC35452-30	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-30	SW846 8270D	04-DEC-14 16:47	MR	01-DEC-14	PA	AB8270MCP
MC35452-30	SW846 8270D	05-DEC-14 12:15	MR	04-DEC-14	FC	AB8270MCP

Internal Sample Tracking Chronicle

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC35452-31	Collected: 25-NOV-14 09:15 By: AS			Received: 26-NOV-14	By:	
PB-8(8-10')						
MC35452-31	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-31	MADEP VPH REV 1.1	01-DEC-14 15:22	TB			VMAVPH
MC35452-31	SW846 6010C	02-DEC-14 15:52	EAL	01-DEC-14	EAL	PB
MC35452-31	MADEP EPH REV 1.1	02-DEC-14 20:06	SZ	01-DEC-14	AJ	BMAEPH
MC35452-32	Collected: 24-NOV-14 13:00 By: AS			Received: 26-NOV-14	By:	
PB-9(0-2')						
MC35452-32	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-32	SW846 6010C	02-DEC-14 15:57	EAL	01-DEC-14	EAL	PB
MC35452-32	SW846 8082A	03-DEC-14 21:01	NK	01-DEC-14	AJ	P8082MCP
MC35452-33	Collected: 24-NOV-14 13:15 By: AS			Received: 26-NOV-14	By:	
PB-9(1-3')						
MC35452-33	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-33	SW846 8270D	03-DEC-14 22:12	KD	01-DEC-14	PA	AB8270MCP
MC35452-33	SW846 8270D	04-DEC-14 17:10	MR	01-DEC-14	PA	AB8270MCP
MC35452-34	Collected: 25-NOV-14 07:00 By: AS			Received: 26-NOV-14	By:	
PB-9(6-8')						
MC35452-34	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-34	SW846 6010C	02-DEC-14 16:02	EAL	01-DEC-14	EAL	PB
MC35452-35	Collected: 25-NOV-14 07:20 By: AS			Received: 26-NOV-14	By:	
PB-9(8-10')						
MC35452-35	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-35	SW846 8082A	04-DEC-14 11:03	NK	01-DEC-14	AJ	P8082MCP
MC35452-36	Collected: 25-NOV-14 07:25 By: AS			Received: 26-NOV-14	By:	
PB-9(13-15')						
MC35452-36	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-36	SW846 8270D	03-DEC-14 22:36	KD	01-DEC-14	PA	AB8270MCP

Internal Sample Tracking Chronicle

Environmental Compliance Service

Job No: MC35452

Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA
Project No: 05-221790

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC35452-37	Collected: 24-NOV-14 12:00 By: AS		Received: 26-NOV-14	By:		
PB-10(0-2')						
MC35452-37	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-37	SW846 6010C	02-DEC-14 16:17	EAL	01-DEC-14	EAL	PB
MC35452-37	SW846 8082A	03-DEC-14 21:26	NK	01-DEC-14	AJ	P8082MCP
MC35452-38	Collected: 24-NOV-14 12:15 By: AS		Received: 26-NOV-14	By:		
PB-10(1-3')						
MC35452-38	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-38	SW846 8270D	03-DEC-14 23:01	KD	01-DEC-14	PA	AB8270MCP
MC35452-39	Collected: 24-NOV-14 12:30 By: AS		Received: 26-NOV-14	By:		
PB-10(6')						
MC35452-39	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-39	MADEP VPH REV 1.1	01-DEC-14 15:56	TB			VMAVPH
MC35452-39	MADEP EPH REV 1.1	02-DEC-14 20:40	SZ	01-DEC-14	AJ	BMAEPH
MC35452-40	Collected: 25-NOV-14 07:15 By: AS		Received: 26-NOV-14	By:		
PB-10(6-8')						
MC35452-40	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-40	SW846 6010C	02-DEC-14 16:22	EAL	01-DEC-14	EAL	PB
MC35452-40	SW846 8270D	03-DEC-14 23:50	MR	01-DEC-14	AJ	AB8270MCP
MC35452-41	Collected: 25-NOV-14 07:30 By: AS		Received: 26-NOV-14	By:		
PB-10(8-10')						
MC35452-41	SM 2540G-97 MOD	01-DEC-14	CF			%SOL
MC35452-41	SW846 8082A	03-DEC-14 21:38	NK	01-DEC-14	AJ	P8082MCP

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41045-MB	F78286.D	1	12/03/14	MR	12/01/14	OP41045	MSF3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC35452-40

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	480	ug/kg	
95-57-8	2-Chlorophenol	ND	240	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	480	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	480	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	480	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	ug/kg	
95-48-7	2-Methylphenol	ND	480	ug/kg	
	3&4-Methylphenol	ND	480	ug/kg	
88-75-5	2-Nitrophenol	ND	480	ug/kg	
100-02-7	4-Nitrophenol	ND	950	ug/kg	
87-86-5	Pentachlorophenol	ND	480	ug/kg	
108-95-2	Phenol	ND	240	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	480	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	480	ug/kg	
83-32-9	Acenaphthene	ND	95	ug/kg	
208-96-8	Acenaphthylene	ND	95	ug/kg	
98-86-2	Acetophenone	ND	480	ug/kg	
62-53-3	Aniline	ND	480	ug/kg	
120-12-7	Anthracene	ND	95	ug/kg	
56-55-3	Benzo(a)anthracene	ND	95	ug/kg	
50-32-8	Benzo(a)pyrene	ND	95	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	95	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	95	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	95	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	240	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	240	ug/kg	
91-58-7	2-Chloronaphthalene	ND	240	ug/kg	
106-47-8	4-Chloroaniline	ND	480	ug/kg	
218-01-9	Chrysene	ND	95	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	240	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	240	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	240	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	240	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	240	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	240	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	240	ug/kg	

Method Blank Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41045-MB	F78286.D	1	12/03/14	MR	12/01/14	OP41045	MSF3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC35452-40

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene	ND	480	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	480	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	240	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	95	ug/kg	
132-64-9	Dibenzofuran	ND	95	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	240	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	240	ug/kg	
84-66-2	Diethyl phthalate	ND	240	ug/kg	
131-11-3	Dimethyl phthalate	ND	240	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	240	ug/kg	
206-44-0	Fluoranthene	ND	95	ug/kg	
86-73-7	Fluorene	ND	95	ug/kg	
118-74-1	Hexachlorobenzene	ND	240	ug/kg	
87-68-3	Hexachlorobutadiene	ND	240	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	480	ug/kg	
67-72-1	Hexachloroethane	ND	240	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	95	ug/kg	
78-59-1	Isophorone	ND	240	ug/kg	
91-57-6	2-Methylnaphthalene	ND	95	ug/kg	
91-20-3	Naphthalene	ND	95	ug/kg	
98-95-3	Nitrobenzene	ND	240	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	240	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	ug/kg	
85-01-8	Phenanthrene	ND	95	ug/kg	
129-00-0	Pyrene	ND	95	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	240	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	93%	30-130%
4165-62-2	Phenol-d5	96%	30-130%
118-79-6	2,4,6-Tribromophenol	89%	30-130%
4165-60-0	Nitrobenzene-d5	83%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	102%	30-130%

Method Blank Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41048-MB	R41645.D	1	12/03/14	KD	12/01/14	OP41048	MSR1531

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC35452-2, MC35452-4, MC35452-7, MC35452-11, MC35452-12, MC35452-15, MC35452-17, MC35452-19, MC35452-22, MC35452-26, MC35452-27, MC35452-29, MC35452-30, MC35452-33, MC35452-36, MC35452-38

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	480	ug/kg	
95-57-8	2-Chlorophenol	ND	240	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	480	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	480	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	480	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	960	ug/kg	
95-48-7	2-Methylphenol	ND	480	ug/kg	
	3&4-Methylphenol	ND	480	ug/kg	
88-75-5	2-Nitrophenol	ND	480	ug/kg	
100-02-7	4-Nitrophenol	ND	960	ug/kg	
87-86-5	Pentachlorophenol	ND	480	ug/kg	
108-95-2	Phenol	ND	240	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	480	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	480	ug/kg	
83-32-9	Acenaphthene	ND	96	ug/kg	
208-96-8	Acenaphthylene	ND	96	ug/kg	
98-86-2	Acetophenone	ND	480	ug/kg	
62-53-3	Aniline	ND	480	ug/kg	
120-12-7	Anthracene	ND	96	ug/kg	
56-55-3	Benzo(a)anthracene	ND	96	ug/kg	
50-32-8	Benzo(a)pyrene	ND	96	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	96	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	96	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	96	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	240	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	240	ug/kg	
91-58-7	2-Chloronaphthalene	ND	240	ug/kg	
106-47-8	4-Chloroaniline	ND	480	ug/kg	
218-01-9	Chrysene	ND	96	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	240	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	240	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	240	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	240	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	240	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	240	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	240	ug/kg	

Method Blank Summary
Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41048-MB	R41645.D	1	12/03/14	KD	12/01/14	OP41048	MSR1531

The QC reported here applies to the following samples: Method: SW846 8270D

MC35452-2, MC35452-4, MC35452-7, MC35452-11, MC35452-12, MC35452-15, MC35452-17, MC35452-19, MC35452-22, MC35452-26, MC35452-27, MC35452-29, MC35452-30, MC35452-33, MC35452-36, MC35452-38

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene	ND	480	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	480	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	240	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	96	ug/kg	
132-64-9	Dibenzofuran	ND	96	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	240	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	240	ug/kg	
84-66-2	Diethyl phthalate	ND	240	ug/kg	
131-11-3	Dimethyl phthalate	ND	240	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	240	ug/kg	
206-44-0	Fluoranthene	ND	96	ug/kg	
86-73-7	Fluorene	ND	96	ug/kg	
118-74-1	Hexachlorobenzene	ND	240	ug/kg	
87-68-3	Hexachlorobutadiene	ND	240	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	480	ug/kg	
67-72-1	Hexachloroethane	ND	240	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	96	ug/kg	
78-59-1	Isophorone	ND	240	ug/kg	
91-57-6	2-Methylnaphthalene	ND	96	ug/kg	
91-20-3	Naphthalene	ND	96	ug/kg	
98-95-3	Nitrobenzene	ND	240	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	240	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	ug/kg	
85-01-8	Phenanthrene	ND	96	ug/kg	
129-00-0	Pyrene	ND	96	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	240	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	74%	30-130%
4165-62-2	Phenol-d5	77%	30-130%
118-79-6	2,4,6-Tribromophenol	71%	30-130%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	89%	30-130%
1718-51-0	Terphenyl-d14	108%	30-130%

6.1.2
6

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41045-BS	F78287.D	1	12/03/14	MR	12/01/14	OP41045	MSF3419
OP41045-BSD	F78288.D	1	12/03/14	MR	12/01/14	OP41045	MSF3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC35452-40

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	2390	2250	94	2170	88	4	30-130/30
95-57-8	2-Chlorophenol	2390	2050	86	1850	75	10	30-130/30
59-50-7	4-Chloro-3-methyl phenol	2390	2160	90	2170	88	0	30-130/30
120-83-2	2,4-Dichlorophenol	2390	2160	90	1990	81	8	30-130/30
105-67-9	2,4-Dimethylphenol	2390	1900	79	1920	78	1	30-130/30
51-28-5	2,4-Dinitrophenol	2390	1670	70	1600	65	4	30-130/30
95-48-7	2-Methylphenol	2390	2080	87	2020	82	3	30-130/30
	3&4-Methylphenol	4780	4250	89	3890	79	9	30-130/30
88-75-5	2-Nitrophenol	2390	1930	81	1990	81	3	30-130/30
100-02-7	4-Nitrophenol	2390	2090	87	1970	80	6	30-130/30
87-86-5	Pentachlorophenol	2390	2040	85	2010	82	1	30-130/30
108-95-2	Phenol	2390	2150	90	1920	78	11	30-130/30
95-95-4	2,4,5-Trichlorophenol	2390	2210	92	2300	93	4	30-130/30
88-06-2	2,4,6-Trichlorophenol	2390	2240	94	2310	94	3	30-130/30
83-32-9	Acenaphthene	2390	2110	88	2030	82	4	40-140/30
208-96-8	Acenaphthylene	2390	1990	83	1850	75	7	40-140/30
98-86-2	Acetophenone	2390	2050	86	1970	80	4	40-140/30
62-53-3	Aniline	2390	1650	69	1630	66	1	40-140/30
120-12-7	Anthracene	2390	2070	87	1760	71	16	40-140/30
56-55-3	Benzo(a)anthracene	2390	2300	96	2180	88	5	40-140/30
50-32-8	Benzo(a)pyrene	2390	2170	91	2060	84	5	40-140/30
205-99-2	Benzo(b)fluoranthene	2390	2280	95	2150	87	6	40-140/30
191-24-2	Benzo(g,h,i)perylene	2390	2210	92	2070	84	7	40-140/30
207-08-9	Benzo(k)fluoranthene	2390	2130	89	2050	83	4	40-140/30
101-55-3	4-Bromophenyl phenyl ether	2390	2170	91	2050	83	6	40-140/30
85-68-7	Butyl benzyl phthalate	2390	2210	92	2130	86	4	40-140/30
91-58-7	2-Chloronaphthalene	2390	2330	97	2330	95	0	40-140/30
106-47-8	4-Chloroaniline	2390	1540	64	1520	62	1	40-140/30
218-01-9	Chrysene	2390	2120	89	2020	82	5	40-140/30
111-91-1	bis(2-Chloroethoxy)methane	2390	1940	81	1900	77	2	40-140/30
111-44-4	bis(2-Chloroethyl)ether	2390	2010	84	1800	73	11	40-140/30
108-60-1	bis(2-Chloroisopropyl)ether	2390	2420	101	2380	97	2	40-140/30
95-50-1	1,2-Dichlorobenzene	2390	2000	84	1810	73	10	40-140/30
122-66-7	1,2-Diphenylhydrazine	2390	2080	87	1900	77	9	40-140/30
541-73-1	1,3-Dichlorobenzene	2390	2000	84	1940	79	3	40-140/30
106-46-7	1,4-Dichlorobenzene	2390	1960	82	1900	77	3	40-140/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41045-BS	F78287.D	1	12/03/14	MR	12/01/14	OP41045	MSF3419
OP41045-BSD	F78288.D	1	12/03/14	MR	12/01/14	OP41045	MSF3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC35452-40

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
121-14-2	2,4-Dinitrotoluene	2390	2250	94	2150	87	5	40-140/30
606-20-2	2,6-Dinitrotoluene	2390	2410	101	2040	83	17	40-140/30
91-94-1	3,3'-Dichlorobenzidine	2390	1980	83	1880	76	5	40-140/30
53-70-3	Dibenzo(a,h)anthracene	2390	2290	96	2160	88	6	40-140/30
132-64-9	Dibenzofuran	2390	2030	85	2000	81	1	40-140/30
84-74-2	Di-n-butyl phthalate	2390	2170	91	1850	75	16	40-140/30
117-84-0	Di-n-octyl phthalate	2390	2270	95	2170	88	5	40-140/30
84-66-2	Diethyl phthalate	2390	2140	90	2080	84	3	40-140/30
131-11-3	Dimethyl phthalate	2390	2350	98	2260	92	4	40-140/30
117-81-7	bis(2-Ethylhexyl)phthalate	2390	2260	95	2180	88	4	40-140/30
206-44-0	Fluoranthene	2390	2240	94	1950	79	14	40-140/30
86-73-7	Fluorene	2390	2140	90	2060	84	4	40-140/30
118-74-1	Hexachlorobenzene	2390	2190	92	2000	81	9	40-140/30
87-68-3	Hexachlorobutadiene	2390	2060	86	1930	78	7	40-140/30
77-47-4	Hexachlorocyclopentadiene	2390	1420	59	1330	54	7	40-140/30
67-72-1	Hexachloroethane	2390	1920	80	1840	75	4	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	2390	2320	97	2110	86	9	40-140/30
78-59-1	Isophorone	2390	1720	72	1910	77	10	40-140/30
91-57-6	2-Methylnaphthalene	2390	1990	83	2010	82	1	40-140/30
91-20-3	Naphthalene	2390	2050	86	1920	78	7	40-140/30
98-95-3	Nitrobenzene	2390	1850	77	2110	86	13	40-140/30
621-64-7	N-Nitroso-di-n-propylamine	2390	2280	95	2240	91	2	40-140/30
86-30-6	N-Nitrosodiphenylamine	2390	1990	83	1760	71	12	40-140/30
85-01-8	Phenanthrene	2390	2150	90	1850	75	15	40-140/30
129-00-0	Pyrene	2390	2120	89	2030	82	4	40-140/30
120-82-1	1,2,4-Trichlorobenzene	2390	2020	85	1900	77	6	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	100%	79%	30-130%
4165-62-2	Phenol-d5	99%	90%	30-130%
118-79-6	2,4,6-Tribromophenol	105%	97%	30-130%
4165-60-0	Nitrobenzene-d5	84%	92%	30-130%
321-60-8	2-Fluorobiphenyl	93%	86%	30-130%
1718-51-0	Terphenyl-d14	100%	95%	30-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41048-BS	R41646.D	1	12/03/14	KD	12/01/14	OP41048	MSR1531
OP41048-BSD	R41647.D	1	12/03/14	KD	12/01/14	OP41048	MSR1531

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC35452-2, MC35452-4, MC35452-7, MC35452-11, MC35452-12, MC35452-15, MC35452-17, MC35452-19, MC35452-22, MC35452-26, MC35452-27, MC35452-29, MC35452-30, MC35452-33, MC35452-36, MC35452-38

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	2400	1500	63	1620	67	8	30-130/30
95-57-8	2-Chlorophenol	2400	1700	71	1820	76	7	30-130/30
59-50-7	4-Chloro-3-methyl phenol	2400	1670	70	1750	73	5	30-130/30
120-83-2	2,4-Dichlorophenol	2400	1970	82	2080	86	5	30-130/30
105-67-9	2,4-Dimethylphenol	2400	1660	69	1750	73	5	30-130/30
51-28-5	2,4-Dinitrophenol	2400	2160	90	2300	96	6	30-130/30
95-48-7	2-Methylphenol	2400	1560	65	1660	69	6	30-130/30
	3&4-Methylphenol	4800	3380	70	3670	76	8	30-130/30
88-75-5	2-Nitrophenol	2400	1900	79	2010	84	6	30-130/30
100-02-7	4-Nitrophenol	2400	1080	45	1150	48	6	30-130/30
87-86-5	Pentachlorophenol	2400	1220	51	1420	59	15	30-130/30
108-95-2	Phenol	2400	1580	66	1690	70	7	30-130/30
95-95-4	2,4,5-Trichlorophenol	2400	1860	78	2000	83	7	30-130/30
88-06-2	2,4,6-Trichlorophenol	2400	1740	73	1860	77	7	30-130/30
83-32-9	Acenaphthene	2400	1950	81	2080	86	6	40-140/30
208-96-8	Acenaphthylene	2400	1530	64	1640	68	7	40-140/30
98-86-2	Acetophenone	2400	1570	65	1710	71	9	40-140/30
62-53-3	Aniline	2400	1050	44	1250	52	17	40-140/30
120-12-7	Anthracene	2400	1930	80	2060	86	7	40-140/30
56-55-3	Benzo(a)anthracene	2400	1960	82	2120	88	8	40-140/30
50-32-8	Benzo(a)pyrene	2400	2040	85	2140	89	5	40-140/30
205-99-2	Benzo(b)fluoranthene	2400	2130	89	2260	94	6	40-140/30
191-24-2	Benzo(g,h,i)perylene	2400	1890	79	2030	84	7	40-140/30
207-08-9	Benzo(k)fluoranthene	2400	2100	88	2190	91	4	40-140/30
101-55-3	4-Bromophenyl phenyl ether	2400	1990	83	2150	89	8	40-140/30
85-68-7	Butyl benzyl phthalate	2400	1950	81	2080	86	6	40-140/30
91-58-7	2-Chloronaphthalene	2400	2130	89	2270	94	6	40-140/30
106-47-8	4-Chloroaniline	2400	1430	60	1630	68	13	40-140/30
218-01-9	Chrysene	2400	1900	79	2040	85	7	40-140/30
111-91-1	bis(2-Chloroethoxy)methane	2400	1310	55	1390	58	6	40-140/30
111-44-4	bis(2-Chloroethyl)ether	2400	1040	43	1120	47	7	40-140/30
108-60-1	bis(2-Chloroisopropyl)ether	2400	2320	97	2530	105	9	40-140/30
95-50-1	1,2-Dichlorobenzene	2400	1770	74	1930	80	9	40-140/30
122-66-7	1,2-Diphenylhydrazine	2400	1850	77	1960	81	6	40-140/30
541-73-1	1,3-Dichlorobenzene	2400	1780	74	1900	79	7	40-140/30
106-46-7	1,4-Dichlorobenzene	2400	1780	74	1890	79	6	40-140/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41048-BS	R41646.D	1	12/03/14	KD	12/01/14	OP41048	MSR1531
OP41048-BSD	R41647.D	1	12/03/14	KD	12/01/14	OP41048	MSR1531

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC35452-2, MC35452-4, MC35452-7, MC35452-11, MC35452-12, MC35452-15, MC35452-17, MC35452-19, MC35452-22, MC35452-26, MC35452-27, MC35452-29, MC35452-30, MC35452-33, MC35452-36, MC35452-38

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
121-14-2	2,4-Dinitrotoluene	2400	2010	84	2200	91	9	40-140/30
606-20-2	2,6-Dinitrotoluene	2400	1930	80	2130	89	10	40-140/30
91-94-1	3,3'-Dichlorobenzidine	2400	1750	73	1940	81	10	40-140/30
53-70-3	Dibenzo(a,h)anthracene	2400	1960	82	2080	86	6	40-140/30
132-64-9	Dibenzofuran	2400	1850	77	1970	82	6	40-140/30
84-74-2	Di-n-butyl phthalate	2400	1870	78	1990	83	6	40-140/30
117-84-0	Di-n-octyl phthalate	2400	2200	92	2300	96	4	40-140/30
84-66-2	Diethyl phthalate	2400	1860	78	2010	84	8	40-140/30
131-11-3	Dimethyl phthalate	2400	1840	77	2010	84	9	40-140/30
117-81-7	bis(2-Ethylhexyl)phthalate	2400	1970	82	2100	87	6	40-140/30
206-44-0	Fluoranthene	2400	1990	83	2160	90	8	40-140/30
86-73-7	Fluorene	2400	1960	82	2110	88	7	40-140/30
118-74-1	Hexachlorobenzene	2400	1950	81	2090	87	7	40-140/30
87-68-3	Hexachlorobutadiene	2400	2060	86	2170	90	5	40-140/30
77-47-4	Hexachlorocyclopentadiene	2400	1210	50	1310	54	8	40-140/30
67-72-1	Hexachloroethane	2400	1750	73	1850	77	6	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	2400	2430	101	2580	107	6	40-140/30
78-59-1	Isophorone	2400	1410	59	1520	63	8	40-140/30
91-57-6	2-Methylnaphthalene	2400	1960	82	2080	86	6	40-140/30
91-20-3	Naphthalene	2400	1850	77	1990	83	7	40-140/30
98-95-3	Nitrobenzene	2400	1560	65	1670	69	7	40-140/30
621-64-7	N-Nitroso-di-n-propylamine	2400	1400	58	1510	63	8	40-140/30
86-30-6	N-Nitrosodiphenylamine	2400	1800	75	1900	79	5	40-140/30
85-01-8	Phenanthrene	2400	2020	84	2150	89	6	40-140/30
129-00-0	Pyrene	2400	2060	86	2200	91	7	40-140/30
120-82-1	1,2,4-Trichlorobenzene	2400	1980	83	2100	87	6	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	74%	76%	30-130%
4165-62-2	Phenol-d5	78%	80%	30-130%
118-79-6	2,4,6-Tribromophenol	73%	73%	30-130%
4165-60-0	Nitrobenzene-d5	74%	75%	30-130%
321-60-8	2-Fluorobiphenyl	91%	93%	30-130%
1718-51-0	Terphenyl-d14	103%	105%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std: MSF3419-CC3417 **Injection Date:** 12/03/14
Lab File ID: F78285.D **Injection Time:** 10:08
Instrument ID: GCMSF **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	53295	2.98	201957	4.01	117143	5.49	215838	6.74	254446	9.02	259921	10.43
Upper Limit [a]	106590	3.48	403914	4.51	234286	5.99	431676	7.24	508892	9.52	519842	10.93
Lower Limit [b]	26648	2.48	100979	3.51	58572	4.99	107919	6.24	127223	8.52	129961	9.93
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
OP41045-MB	62246	2.98	231150	4.01	142044	5.49	282661	6.73	273223	9.02	268513	10.42
OP41045-BS	62292	2.98	241521	4.01	132871	5.49	235382	6.74	262553	9.02	257488	10.42
OP41045-BSD	68963	2.98	233666	4.01	141258	5.49	276011	6.74	272628	9.02	267730	10.42
OP41045-MS	69882	2.98	225514	4.01	156472	5.49	270012	6.74	310092	9.02	277068	10.42
OP41045-MSD	61650	2.98	221757	4.01	125768	5.49	247500	6.74	250653	9.02	268102	10.42
MC35422-1	56933	2.98	203432	4.01	129080	5.49	236438	6.73	268470	9.02	265593	10.42
ZZZZZZ	64688	2.98	231121	4.01	146195	5.49	271209	6.73	296009	9.02	301298	10.42
ZZZZZZ	60260	2.98	241910	4.01	152680	5.49	273494	6.73	294086	9.01	257692	10.42
ZZZZZZ	60273	2.98	221107	4.00	137358	5.49	247977	6.74	270165	9.01	262800	10.42
ZZZZZZ	58524	2.98	210713	4.00	131835	5.49	243352	6.73	294460	9.02	277879	10.42
ZZZZZZ	64579	2.98	231111	4.01	145073	5.49	261352	6.73	284549	9.01	274209	10.42
ZZZZZZ	53792	2.98	199033	4.00	125479	5.49	237214	6.73	273359	9.01	259825	10.42

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std: MSF3420-ICC3420 **Injection Date:** 12/03/14
Lab File ID: F78307.D **Injection Time:** 18:46
Instrument ID: GCMSF **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	56789	2.95	205001	3.98	127455	5.47	247321	6.71	250289	8.99	264971	10.38
Upper Limit [a]	113578	3.45	410002	4.48	254910	5.97	494642	7.21	500578	9.49	529942	10.88
Lower Limit [b]	28395	2.45	102501	3.48	63728	4.97	123661	6.21	125145	8.49	132486	9.88
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ	48376	2.96	183947	3.98	116737	5.47	218886	6.71	254966	8.99	252979	10.38
ZZZZZZ	58055	2.96	204351	3.98	128362	5.47	235908	6.71	271167	8.99	278301	10.39
ZZZZZZ	62270	2.96	222825	3.98	135056	5.47	246383	6.71	267187	8.99	257044	10.39
ZZZZZZ	66630	2.96	256833	3.98	160324	5.47	259466	6.71	286603	8.99	248906	10.39
ZZZZZZ	61828	2.96	220137	3.98	138265	5.47	246814	6.71	260262	8.99	291109	10.39
ZZZZZZ	67677	2.96	247232	3.98	156419	5.47	294934	6.71	285276	8.99	254417	10.39
ZZZZZZ	67715	2.96	236551	3.98	143232	5.47	244768	6.71	255322	8.99	252750	10.39
ZZZZZZ	64928	2.96	231132	3.98	142149	5.47	244717	6.71	278000	8.99	268202	10.39
ZZZZZZ	64163	2.96	209588	3.98	138608	5.47	237216	6.71	252073	8.99	261018	10.39
MC35452-40	66670	2.96	255140	3.98	137010	5.47	267465	6.71	262004	8.98	252345	10.38
OP41070-MB	63451	2.96	218813	3.98	133914	5.47	230951	6.71	233480	8.99	227945	10.38
OP41070-BS	56816	2.96	199374	3.98	123589	5.47	216392	6.71	218600	8.99	226475	10.39
ZZZZZZ	61902	2.96	213483	3.98	121753	5.47	224613	6.71	266218	8.99	262672	10.39
ZZZZZZ	61507	2.96	223384	3.98	146930	5.47	223920	6.71	237738	8.99	255247	10.38
ZZZZZZ	50093	2.96	175442	3.98	110688	5.47	201414	6.71	229635	8.99	232227	10.39
ZZZZZZ	59850	2.96	220807	3.98	145695	5.47	247093	6.71	226239	8.99	222945	10.38
ZZZZZZ	61969	2.96	238248	3.98	131518	5.47	247987	6.71	242156	8.99	254088	10.38
ZZZZZZ	60831	2.96	210235	3.98	126987	5.47	223512	6.71	227777	8.99	225246	10.38

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std:	MSF3422-CC3417	**Injection Date:**	12/04/14
Lab File ID:	F78353.D	**Injection Time:**	16:24
Instrument ID:	GCMSF	**Method:**	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	48388	2.91	178022	3.93	128356	5.41	239524	6.66	282063	8.92	281903	10.30
Upper Limit [a]	96776	3.41	356044	4.43	256712	5.91	479048	7.16	564126	9.42	563806	10.80
Lower Limit [b]	24194	2.41	89011	3.43	64178	4.91	119762	6.16	141032	8.42	140952	9.80

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC35452-30	53954	2.90	201802	3.93	126404	5.41	238934	6.65	293193	8.92	297373	10.30
MC35452-33	51883	2.90	197897	3.93	126070	5.41	229618	6.65	284197	8.92	292456	10.30
ZZZZZZ	53784	2.91	191255	3.93	118593	5.41	215306	6.65	251499	8.93	260585	10.30
OP41082-MB	49332	2.91	183245	3.93	129778	5.41	241146	6.65	282970	8.92	291228	10.30
OP41082-BS	56497	2.91	209595	3.93	128303	5.41	240397	6.65	286320	8.92	287009	10.30
ZZZZZZ	50846	2.91	183745	3.93	126918	5.41	238413	6.65	280054	8.92	283267	10.30
OP41082-MS	52495	2.91	192288	3.94	122639	5.42	226779	6.66	274114	8.93	318660	10.31
OP41082-MSD	55243	2.91	192884	3.94	130339	5.41	251483	6.66	305084	8.94	320918	10.31
MC35477-4	54930	2.91	193680	3.93	133827	5.42	257560	6.65	303180	8.92	312307	10.30
ZZZZZZ	63121	2.91	240724	3.93	157402	5.41	298013	6.65	355607	8.92	360791	10.30
ZZZZZZ	65975	2.91	217799	3.93	139336	5.42	252812	6.65	311877	8.95	332857	10.32
ZZZZZZ	67394	2.91	245765	3.93	154767	5.42	286126	6.66	353134	8.97	382483	10.35
ZZZZZZ	65018	2.91	248841	3.94	151879	5.42	271968	6.66	317573	8.93	339276	10.32
ZZZZZZ	51403	2.91	204497	3.93	123884	5.42	227451	6.66	264024	8.93	270815	10.31
ZZZZZZ	72597	2.91	258212	3.94	159017	5.42	293567	6.66	346333	8.93	353513	10.32
ZZZZZZ	62128	2.91	230421	3.94	142666	5.42	259216	6.66	305218	8.93	312810	10.31
ZZZZZZ	58606	2.91	226572	3.93	136932	5.42	250744	6.66	289333	8.93	294514	10.31
ZZZZZZ	52355	2.91	185797	3.93	127922	5.42	234386	6.65	277477	8.93	282814	10.30
ZZZZZZ	62438	2.91	249082	3.93	149121	5.42	274090	6.65	315984	8.92	326307	10.31
ZZZZZZ	59384	2.91	213408	3.93	129299	5.42	255670	6.65	295631	8.92	293793	10.31
ZZZZZZ	67019	2.91	240841	3.93	149648	5.42	266076	6.65	293224	8.92	288677	10.30
ZZZZZZ	73060	2.91	247350	3.93	163907	5.42	291866	6.66	292572	8.93	292315	10.31
ZZZZZZ	70882	2.91	257497	3.93	143697	5.42	264598	6.66	326037	8.93	347145	10.31
ZZZZZZ	67063	2.91	240066	3.93	153457	5.42	279654	6.65	311149	8.93	326601	10.31
ZZZZZZ	55616	2.91	199807	3.93	124859	5.42	233504	6.65	316138	8.93	336629	10.31
ZZZZZZ	61952	2.91	237783	3.93	136457	5.42	275079	6.66	290866	8.93	342169	10.31
OP40980-MB	69473	2.91	249552	3.93	154931	5.42	266084	6.66	324246	8.93	387064	10.31
OP40980-BS	67753	2.91	251417	3.94	157081	5.42	286995	6.66	380437	8.93	392317	10.31
OP40980-MS	67739	2.91	242756	3.94	155293	5.42	292034	6.66	331833	8.93	367482	10.31
OP40980-MSD	66001	2.91	241540	3.93	150309	5.42	274115	6.66	323830	8.93	345242	10.31
ZZZZZZ	63772	2.91	229624	3.93	149196	5.42	281664	6.66	358266	8.96	383246	10.34
OP40935-MB	64477	2.91	251207	3.93	144285	5.42	295511	6.66	355851	8.93	361301	10.31

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8

6.3.3
6

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std:	MSF3422-CC3417	**Injection Date:**	12/04/14
Lab File ID:	F78353.D	**Injection Time:**	16:24
Instrument ID:	GCMSF	**Method:**	SW846 8270D

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT

IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.3.3
6

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std: MSF3423-CC3417 **Injection Date:** 12/05/14
Lab File ID: F78391.D **Injection Time:** 08:03
Instrument ID: GCMSF **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	52584	2.89	193645	3.91	121723	5.40	229390	6.64	242294	8.91	245090	10.28
Upper Limit [a]	105168	3.39	387290	4.41	243446	5.90	458780	7.14	484588	9.41	490180	10.78
Lower Limit [b]	26292	2.39	96823	3.41	60862	4.90	114695	6.14	121147	8.41	122545	9.78
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
OP41061-LB	49345	2.89	181512	3.91	116090	5.39	221699	6.63	268173	8.90	265922	10.27
OP41061-MB	49345	2.89	181512	3.91	116090	5.39	221699	6.63	268173	8.90	265922	10.27
OP41061-BS	53121	2.89	193250	3.91	132228	5.40	248094	6.64	300467	8.91	295080	10.28
OP41061-MS	53686	2.89	198467	3.91	126585	5.39	244663	6.64	294071	8.91	297601	10.28
OP41061-MSD	54923	2.89	196587	3.91	120317	5.39	223826	6.64	267161	8.90	273225	10.28
MC35420-8	53284	2.89	196698	3.91	128327	5.39	257333	6.63	303862	8.90	304633	10.27
ZZZZZZ	52892	2.89	184933	3.91	118937	5.39	244219	6.63	301806	8.90	300323	10.27
OP41112-MB	57490	2.89	224755	3.91	132298	5.39	251728	6.63	300414	8.90	304288	10.27
OP41112-BS	61102	2.89	222308	3.91	137591	5.39	250228	6.64	287261	8.91	289828	10.28
OP41112-BSD	59893	2.89	210100	3.91	136428	5.39	254962	6.63	289523	8.90	280129	10.28
MC35452-29 [c]	60618	2.89	220088	3.91	133424	5.39	249507	6.63	300231	8.90	316846	10.28
MC35452-30 [c]	66009	2.89	223030	3.91	144109	5.39	245662	6.63	303418	8.91	328461	10.29
ZZZZZZ	60816	2.89	229690	3.91	144723	5.39	281247	6.63	338963	8.91	368185	10.28
OP40972-MB	51557	2.89	189575	3.91	119515	5.39	224650	6.63	307496	8.90	315095	10.28
OP40972-BS	55535	2.89	195308	3.91	128102	5.40	219488	6.64	261397	8.91	271394	10.28
OP40972-MS	53106	2.89	205668	3.91	129029	5.39	244995	6.64	281966	8.91	273550	10.28
OP40972-MSD	51290	2.89	189356	3.91	117872	5.39	220794	6.64	256996	8.91	264690	10.28
MC35302-12	52652	2.89	192025	3.91	121266	5.39	227003	6.63	266386	8.90	300036	10.28

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Confirmation run for surrogate recoveries.

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std: MSR1531-CC1481 **Injection Date:** 12/03/14
Lab File ID: R41637.D **Injection Time:** 08:21
Instrument ID: GCMSR **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	296239	4.38	1090157	5.49	695033	7.00	1164694	8.27	1191829	10.61	971029	12.12
Upper Limit [a]	592478	4.88	2180314	5.99	1390066	7.50	2329388	8.77	2383658	11.11	1942058	12.62
Lower Limit [b]	148120	3.88	545079	4.99	347517	6.50	582347	7.77	595915	10.11	485515	11.62
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ	278931	4.38	1000201	5.48	632362	7.00	1053806	8.26	975619	10.60	860136	12.11
ZZZZZZ	267192	4.38	954209	5.48	608082	7.00	1019629	8.26	938199	10.60	822833	12.11
OP41050-MB	252431	4.38	910628	5.48	580550	7.00	979978	8.26	929099	10.60	807566	12.11
OP41050-BS	260269	4.38	922896	5.49	575889	7.00	952022	8.27	934829	10.61	756451	12.12
ZZZZZZ	260820	4.38	934642	5.48	597052	7.00	993343	8.26	917448	10.60	813157	12.11
ZZZZZZ	256272	4.38	920853	5.48	577865	7.00	963470	8.26	905961	10.60	802817	12.11
OP41048-MB	303487	4.38	1086886	5.48	700302	7.00	1168948	8.26	1070835	10.60	912181	12.11
OP41048-BS	289078	4.38	1025926	5.48	647507	7.00	1055581	8.26	1017869	10.61	813745	12.11
OP41048-BSD	270719	4.38	967548	5.48	609375	7.00	1009681	8.26	991108	10.61	812953	12.11
OP41048-MS	321414	4.38	1136568	5.48	716196	7.00	1172098	8.26	1113202	10.61	906635	12.11
OP41048-MSD	313287	4.38	1102933	5.48	702062	7.00	1141545	8.26	1075131	10.61	873082	12.11
MC35436-2	298312	4.38	1073131	5.48	679315	7.00	1125125	8.26	1001174	10.60	841482	12.11
ZZZZZZ	270526	4.38	954869	5.48	609881	7.01	995790	8.27	871558	10.60	771538	12.11
ZZZZZZ	311381	4.38	1100352	5.48	690346	7.00	1123214	8.26	971088	10.60	813973	12.11

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std:	MSR1532-CC1481	**Injection Date:**	12/03/14
Lab File ID:	R41656.D	**Injection Time:**	16:06
Instrument ID:	GCMSR	**Method:**	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	245604	4.36	928796	5.46	601682	6.98	1065216	8.24	1145962	10.59	956816	12.09
Upper Limit [a]	491208	4.86	1857592	5.96	1203364	7.48	2130432	8.74	2291924	11.09	1913632	12.59
Lower Limit [b]	122802	3.86	464398	4.96	300841	6.48	532608	7.74	572981	10.09	478408	11.59
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ	258682	4.36	936503	5.46	597517	6.98	995521	8.24	920093	10.58	785473	12.08
MC35452-2	243128	4.36	886393	5.46	568027	6.98	952617	8.24	900104	10.58	793176	12.09
MC35452-4	237124	4.36	856141	5.46	556558	6.98	943720	8.24	894307	10.58	802782	12.09
MC35452-7 [c]	198896	4.36	733108	5.46	470841	6.98	790803	8.24	772405	10.58	693603	12.09
MC35452-11	245206	4.36	902414	5.46	565785	6.98	948088	8.24	894885	10.59	813705	12.10
MC35452-12	250830	4.36	909918	5.46	581881	6.98	967223	8.24	910773	10.59	838680	12.10
MC35452-15 [c]	203601	4.36	732404	5.46	470873	6.98	792752	8.24	771878	10.59	722091	12.09
MC35452-17	254698	4.36	923809	5.46	584846	6.98	969190	8.24	883129	10.58	775437	12.09
MC35452-19	236704	4.36	847607	5.46	538198	6.98	898394	8.24	862089	10.59	811180	12.10
MC35452-22	251220	4.36	915150	5.46	578758	6.99	971542	8.24	928274	10.59	856551	12.11
MC35452-26	206549	4.36	747024	5.46	483643	6.98	820963	8.24	792321	10.59	726281	12.10
MC35452-27 [c]	216257	4.36	771210	5.46	501281	6.98	833879	8.24	797134	10.59	725964	12.10
MC35452-29	270741	4.37	969978	5.47	607028	6.99	1017791	8.24	921187	10.59	863215	12.10
MC35452-33	205791	4.36	740364	5.47	481976	6.99	817904	8.25	840919	10.61	756853	12.12
MC35452-36	210179	4.37	746926	5.47	475832	6.99	797057	8.25	716912	10.59	654436	12.10
MC35452-38	235702	4.36	850129	5.47	542277	6.99	889032	8.24	799753	10.59	730323	12.10
OP41050-MS	226874	4.36	823688	5.47	533781	6.99	896948	8.25	903112	10.59	764167	12.10
OP41050-MSD	216944	4.36	794167	5.47	512624	6.99	877673	8.25	893060	10.59	740767	12.10
MC35453-1	224135	4.36	814797	5.46	531439	6.99	890272	8.24	842166	10.59	758956	12.10
ZZZZZZ	224708	4.36	827800	5.46	534575	6.99	898594	8.24	838504	10.59	742620	12.09
ZZZZZZ	218884	4.36	785951	5.46	510426	6.99	839287	8.24	780773	10.59	688256	12.09
ZZZZZZ	220797	4.36	808321	5.46	526290	6.98	894949	8.24	836828	10.59	741721	12.10
ZZZZZZ	223595	4.36	803098	5.46	519960	6.99	861868	8.24	806397	10.59	706357	12.09
ZZZZZZ	245617	4.36	877100	5.46	569029	6.98	948476	8.24	875005	10.59	770452	12.09
OP40981-MB	239315	4.36	853383	5.46	541388	6.98	882133	8.24	768876	10.59	658267	12.09
OP40981-BS	316159	4.36	1121644	5.47	706559	6.99	1134379	8.25	984102	10.59	792382	12.10

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Check Std:	MSR1532-CC1481	**Injection Date:**	12/03/14
Lab File ID:	R41656.D	**Injection Time:**	16:06
Instrument ID:	GCMSR	**Method:**	SW846 8270D

Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Elevated RL due to dilution required for matrix interference.

Semivolatile Surrogate Recovery Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC35452-2	R41658.D	72	75	71	70	86	105
MC35452-4	R41659.D	75	78	74	73	87	115
MC35452-7	R41660.D	84	93	78	83	102	116
MC35452-11	R41661.D	72	76	77	68	88	112
MC35452-12	R41662.D	74	76	72	71	88	113
MC35452-15	R41663.D	85	90	75	82	102	115
MC35452-17	R41664.D	84	87	81	81	100	124
MC35452-19	R41665.D	65	69	68	63	80	101
MC35452-22	R41666.D	69	71	63	66	81	95
MC35452-26	R41667.D	69	76	72	72	87	104
MC35452-27	R41668.D	84	89	72	82	101	114
MC35452-29	R41669.D	12* [a]	60	3* [a]	67	88	112
MC35452-29	F78401.D	11* [a]	75	0* [a]	83	93	110
MC35452-30	F78402.D	44	102	1* [a]	87	93	72
MC35452-30	F78354.D	45	86	1* [a]	82	82	80
MC35452-33	F78355.D	71	60	70	57	69	87
MC35452-33	R41671.D	63	66	59	61	75	89
MC35452-36	R41672.D	76	79	70	74	92	110
MC35452-38	R41673.D	76	78	61	73	91	110
MC35452-40	F78320.D	80	85	77	76	83	96
OP41045-BS	F78287.D	100	99	105	84	93	100
OP41045-BSD	F78288.D	79	90	97	92	86	95
OP41045-MB	F78286.D	93	96	89	83	82	102
OP41048-BS	R41646.D	74	78	73	74	91	103
OP41048-BSD	R41647.D	76	80	73	75	93	105
OP41048-MB	R41645.D	74	77	71	72	89	108

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	30-130%
S2 = Phenol-d5	30-130%
S3 = 2,4,6-Tribromophenol	30-130%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH1929-MB	BH32896.D	1	12/01/14	TB	n/a	n/a	GBH1929

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

MC35452-5, MC35452-9, MC35452-31, MC35452-39

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	250	ug/kg	
100-41-4	Ethylbenzene	ND	250	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	ug/kg	
91-20-3	Naphthalene	ND	250	ug/kg	
108-88-3	Toluene	ND	250	ug/kg	
	m,p-Xylene	ND	250	ug/kg	
95-47-6	o-Xylene	ND	250	ug/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5000	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5000	ug/kg	
	C5- C8 Aliphatics	ND	5000	ug/kg	
	C9- C12 Aliphatics	ND	5000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	87%	70-130%
	2,3,4-Trifluorotoluene	83%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH1929-BSP	BH32897.D	1	12/01/14	TB	n/a	n/a	GBH1929
GBH1929-BSD	BH32898.D	1	12/01/14	TB	n/a	n/a	GBH1929

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

MC35452-5, MC35452-9, MC35452-31, MC35452-39

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2500	2470	99	2480	99	0	70-130/25
100-41-4	Ethylbenzene	2500	2410	96	2430	97	1	70-130/25
1634-04-4	Methyl Tert Butyl Ether	2500	2350	94	2360	94	0	70-130/25
91-20-3	Naphthalene	2500	2400	96	2400	96	0	70-130/25
108-88-3	Toluene	2500	2450	98	2460	98	0	70-130/25
	m,p-Xylene	5000	4790	96	4790	96	0	70-130/25
95-47-6	o-Xylene	2500	2370	95	2380	95	0	70-130/25
	C5- C8 Aliphatics (Unadj.)	7500	6010	80	5980	80	1	70-130/25
	C9- C12 Aliphatics (Unadj.)	7500	6450	86	6460	86	0	70-130/25
	C9- C10 Aromatics (Unadj.)	2500	2380	95	2380	95	0	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	90%	95%	70-130%
	2,3,4-Trifluorotoluene	86%	91%	70-130%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Method: MADEP VPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC35452-5	BH32899.D	99	93
MC35452-9	BH32900.D	110	104
MC35452-31	BH32901.D	109	103
MC35452-39	BH32902.D	103	98
GBH1929-BSD	BH32898.D	95	91
GBH1929-BSP	BH32897.D	90	86
GBH1929-MB	BH32896.D	87	83

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	70-130%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

New England ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41046-MB	DE7488.D	1	12/02/14	SZ	12/01/14	OP41046	GDE491

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC35452-5, MC35452-9, MC35452-31, MC35452-39

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	430	ug/kg	
208-96-8	Acenaphthylene	ND	430	ug/kg	
120-12-7	Anthracene	ND	430	ug/kg	
56-55-3	Benzo(a)anthracene	ND	430	ug/kg	
50-32-8	Benzo(a)pyrene	ND	430	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	430	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	430	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	430	ug/kg	
218-01-9	Chrysene	ND	430	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	430	ug/kg	
206-44-0	Fluoranthene	ND	430	ug/kg	
86-73-7	Fluorene	ND	430	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	430	ug/kg	
91-57-6	2-Methylnaphthalene	ND	430	ug/kg	
91-20-3	Naphthalene	ND	430	ug/kg	
85-01-8	Phenanthrene	ND	430	ug/kg	
129-00-0	Pyrene	ND	430	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	17000	ug/kg	
	C9-C18 Aliphatics	ND	8500	ug/kg	
	C19-C36 Aliphatics	ND	8500	ug/kg	
	C11-C22 Aromatics	ND	17000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	119%	40-140%
321-60-8	2-Fluorobiphenyl	99%	40-140%
580-13-2	2-Bromonaphthalene	98%	40-140%
3386-33-2	1-Chlorooctadecane	81%	40-140%

Method Blank Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41053-MB	BK44149.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383

The QC reported here applies to the following samples: **Method:** SW846 8082A

MC35452-1, MC35452-6, MC35452-9, MC35452-10, MC35452-14, MC35452-17, MC35452-18, MC35452-20, MC35452-21, MC35452-23, MC35452-25, MC35452-28, MC35452-32, MC35452-35, MC35452-37, MC35452-41

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	33	ug/kg	
11104-28-2	Aroclor 1221	ND	33	ug/kg	
11141-16-5	Aroclor 1232	ND	33	ug/kg	
53469-21-9	Aroclor 1242	ND	33	ug/kg	
12672-29-6	Aroclor 1248	ND	33	ug/kg	
11097-69-1	Aroclor 1254	ND	33	ug/kg	
11096-82-5	Aroclor 1260	ND	33	ug/kg	
37324-23-5	Aroclor 1262	ND	33	ug/kg	
11100-14-4	Aroclor 1268	ND	33	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	78%	30-150%
877-09-8	Tetrachloro-m-xylene	82%	30-150%
2051-24-3	Decachlorobiphenyl	87%	30-150%
2051-24-3	Decachlorobiphenyl	89%	30-150%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41046-BS	DE7489.D	1	12/02/14	SZ	12/01/14	OP41046	GDE491
OP41046-BSD	DE7490.D	1	12/02/14	SZ	12/01/14	OP41046	GDE491

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC35452-5, MC35452-9, MC35452-31, MC35452-39

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	4190	3530	84	3530	82	0	40-140/25
208-96-8	Acenaphthylene	4190	3370	80	3350	78	1	40-140/25
120-12-7	Anthracene	4190	3990	95	4090	95	2	40-140/25
56-55-3	Benzo(a)anthracene	4190	4120	98	4210	98	2	40-140/25
50-32-8	Benzo(a)pyrene	4190	3720	89	3800	88	2	40-140/25
205-99-2	Benzo(b)fluoranthene	4190	3950	94	4060	94	3	40-140/25
191-24-2	Benzo(g,h,i)perylene	4190	4110	98	4200	97	2	40-140/25
207-08-9	Benzo(k)fluoranthene	4190	4150	99	4210	98	1	40-140/25
218-01-9	Chrysene	4190	4080	97	4180	97	2	40-140/25
53-70-3	Dibenz(a,h)anthracene	4190	4200	100	4290	99	2	40-140/25
206-44-0	Fluoranthene	4190	4010	96	4140	96	3	40-140/25
86-73-7	Fluorene	4190	3530	84	3610	84	2	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	4190	3890	93	3980	92	2	40-140/25
91-57-6	2-Methylnaphthalene	4190	3140	75	3290	76	5	40-140/25
91-20-3	Naphthalene	4190	3110	74	3160	73	2	40-140/25
85-01-8	Phenanthrene	4190	3630	87	3740	87	3	40-140/25
129-00-0	Pyrene	4190	3830	91	3960	92	3	40-140/25
	C11-C22 Aromatics (Unadj.)	67100	70300	105	70400	102	0	40-140/25
	C9-C18 Aliphatics	25200	18500	74	16900	65	9	40-140/25
	C19-C36 Aliphatics	33600	28400	85	26800	78	6	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	113%	113%	40-140%
321-60-8	2-Fluorobiphenyl	87%	91%	40-140%
580-13-2	2-Bromonaphthalene	69%	87%	40-140%
3386-33-2	1-Chlorooctadecane	100%	86%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP41046-BS	2-Methylnaphthalene	3140	47.0	1.5%	5.0
OP41046-BS	Naphthalene	3110	86.1	2.7%	5.0
OP41046-BSD	2-Methylnaphthalene	3290	9.8	0.3%	5.0
OP41046-BSD	Naphthalene	3160	24.9	0.8%	5.0

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41053-BS	BK44150.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383
OP41053-BSD	BK44152.D	1	12/03/14	NK	12/01/14	OP41053	GBK1383

The QC reported here applies to the following samples: **Method:** SW846 8082A

MC35452-1, MC35452-6, MC35452-9, MC35452-10, MC35452-14, MC35452-17, MC35452-18, MC35452-20, MC35452-21, MC35452-23, MC35452-25, MC35452-28, MC35452-32, MC35452-35, MC35452-37, MC35452-41

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	263	173	66	187	71	8	40-140/30
11104-28-2	Aroclor 1221		ND		ND		nc	40-140/30
11141-16-5	Aroclor 1232		ND		ND		nc	40-140/30
53469-21-9	Aroclor 1242		ND		ND		nc	40-140/30
12672-29-6	Aroclor 1248		ND		ND		nc	40-140/30
11097-69-1	Aroclor 1254		ND		ND		nc	40-140/30
11096-82-5	Aroclor 1260	263	197	75	208	79	5	40-140/30
37324-23-5	Aroclor 1262		ND		ND		nc	40-140/30
11100-14-4	Aroclor 1268		ND		ND		nc	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	72%	77%	30-150%
877-09-8	Tetrachloro-m-xylene	74%	85%	30-150%
2051-24-3	Decachlorobiphenyl	77%	89%	30-150%
2051-24-3	Decachlorobiphenyl	79%	91%	30-150%

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
MC35452-1	BK44153.D	73	81	99	107
MC35452-6	BK44154.D	71	77	109	123
MC35452-9	BK44155.D	81	83	98	118
MC35452-10	BK44156.D	67	73	95	120
MC35452-14	BK44157.D	70	73	102	125
MC35452-17	BK44158.D	76	79	93	97
MC35452-18	BK44159.D	80	85	111	132
MC35452-20	BK44160.D	74	77	103	109
MC35452-21	BK44161.D	106	85	107	131
MC35452-23	BK44163.D	77	82	100	102
MC35452-25	BK44164.D	64	69	94	106
MC35452-28	BK44165.D	51	54	69	73
MC35452-32	BK44166.D	69	76	100	115
MC35452-35	BK44200.D	78	84	111	110
MC35452-37	BK44168.D	76	83	114	117
MC35452-41	BK44169.D	62	67	84	88
OP41053-BS	BK44150.D	72	74	77	79
OP41053-BSD	BK44152.D	77	85	89	91
OP41053-MB	BK44149.D	78	82	87	89

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.3.1

8

Semivolatile Surrogate Recovery Summary

Job Number: MC35452
Account: ECSMAW Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

Method: MADEP EPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [a]	S4 [b]
MC35452-5	DE7493.D	115	93	86	74
MC35452-9	DE7494.D	121	91	87	80
MC35452-31	DE7491.D	107	85	79	80
MC35452-39	DE7492.D	114	91	67	80
OP41046-BS	DE7489.D	113	87	69	100
OP41046-BSD	DE7490.D	113	91	87	86
OP41046-MB	DE7488.D	119	99	98	81

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 2-Bromonaphthalene	40-140%
S4 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.3.2

8

New England ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/01/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	.84	1.6		
Antimony	1.0	.09	.12		
Arsenic	1.0	.11	.2		
Barium	5.0	.028	.054		
Beryllium	0.40	.0098	.022		
Bismuth	5.0	.096	.14		
Boron	10	.13	.12		
Cadmium	0.40	.018	.024		
Calcium	500	.51	.57		
Chromium	1.0	.023	.059		
Cobalt	5.0	.025	.05		
Copper	2.5	.076	.16		
Gold	5.0	.088	.12		
Iron	10	.24	.63		
Lead	1.0	.06	.23	0.11	<1.0
Lithium	50	.14	.58		
Magnesium	500	1.5	4.2		
Manganese	1.5	.019	.043		
Molybdenum	10	.12	.19		
Nickel	4.0	.027	.057		
Palladium	5.0	.091	.13		
Platinum	5.0	.31	.45		
Potassium	500	2.9	3.6		
Selenium	1.0	.14	.25		
Silicon	10	.24	1.3		
Silver	0.50	.22	.043		
Sodium	500	.67	1.9		
Sulfur	5.0	.24	.75		
Strontium	1.0	.004	.015		
Thallium	1.0	.1	.14		
Tin	10	.044	.18		
Titanium	5.0	.04	.063		
Tungsten	10	.21	.73		

Page 1

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/01/14

Metal	RL	IDL	MDL	MB raw	MB final
Vanadium	1.0	.03	.044		
Zinc	2.0	.012	.26		
Zirconium	5.0	.019	.16		

Associated samples MP23971: MC35452-1, MC35452-3, MC35452-6, MC35452-8, MC35452-10, MC35452-13, MC35452-14, MC35452-16, MC35452-18, MC35452-20, MC35452-21, MC35452-24, MC35452-25, MC35452-28, MC35452-31, MC35452-32, MC35452-34, MC35452-37, MC35452-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.1.1

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/01/14 12/01/14

Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron									
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt									
Copper	anr								
Gold									
Iron									
Lead	104	100	104.0	80-120	104	100	104.0	0.0	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel	anr								
Palladium									
Platinum									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium									
Sulfur									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									

9.1.2

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:		12/01/14				12/01/14			
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Vanadium									
Zinc	anr								
Zirconium									

Associated samples MP23971: MC35452-1, MC35452-3, MC35452-6, MC35452-8, MC35452-10, MC35452-13, MC35452-14, MC35452-16, MC35452-18, MC35452-20, MC35452-21, MC35452-24, MC35452-25, MC35452-28, MC35452-31, MC35452-32, MC35452-34, MC35452-37, MC35452-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.1.2
9

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:		12/01/14			
Metal	LCS Result	Spikelot MPLCS82	% Rec	QC Limits	
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Bismuth					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Gold					
Iron					
Lead	175	176	99.4	81-119	
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Palladium					
Platinum					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					

9.1.2
9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/01/14

Metal	LCS Result	Spikelot MPLCS82	% Rec	QC Limits
Vanadium				
Zinc	anr			
Zirconium				

Associated samples MP23971: MC35452-1, MC35452-3, MC35452-6, MC35452-8, MC35452-10, MC35452-13, MC35452-14, MC35452-16, MC35452-18, MC35452-20, MC35452-21, MC35452-24, MC35452-25, MC35452-28, MC35452-31, MC35452-32, MC35452-34, MC35452-37, MC35452-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.1.2

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/01/14

Metal	MC35452-6 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Bismuth				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Gold				
Iron				
Lead	1970	2040	3.5	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Palladium				
Platinum				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				

9.1.3

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 12/01/14

Metal	MC35452-6 Original	SDL 1:5	%DIF	QC Limits
Vanadium				
Zinc	anr			
Zirconium				

Associated samples MP23971: MC35452-1, MC35452-3, MC35452-6, MC35452-8, MC35452-10, MC35452-13, MC35452-14, MC35452-16, MC35452-18, MC35452-20, MC35452-21, MC35452-24, MC35452-25, MC35452-28, MC35452-31, MC35452-32, MC35452-34, MC35452-37, MC35452-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.1.3

POST DIGESTATE SPIKE SUMMARY

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 12/01/14

Metal	Sample ml	Final ml	MC35452-6 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Gold										
Iron										
Lead	10	10.1	1970	1950.495	5946	.1	400	3960.396	100.9	80-120
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Palladium										
Platinum										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Sulfur										
Strontium										
Thallium										
Tin										
Titanium										
Tungsten										

9.1.4

POST DIGESTATE SPIKE SUMMARY

Login Number: MC35452
Account: ECSMAW - Environmental Compliance Service
Project: Former Waste Management - City of Somerville, 10 Poplar Street, Somerville, MA

QC Batch ID: MP23971
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

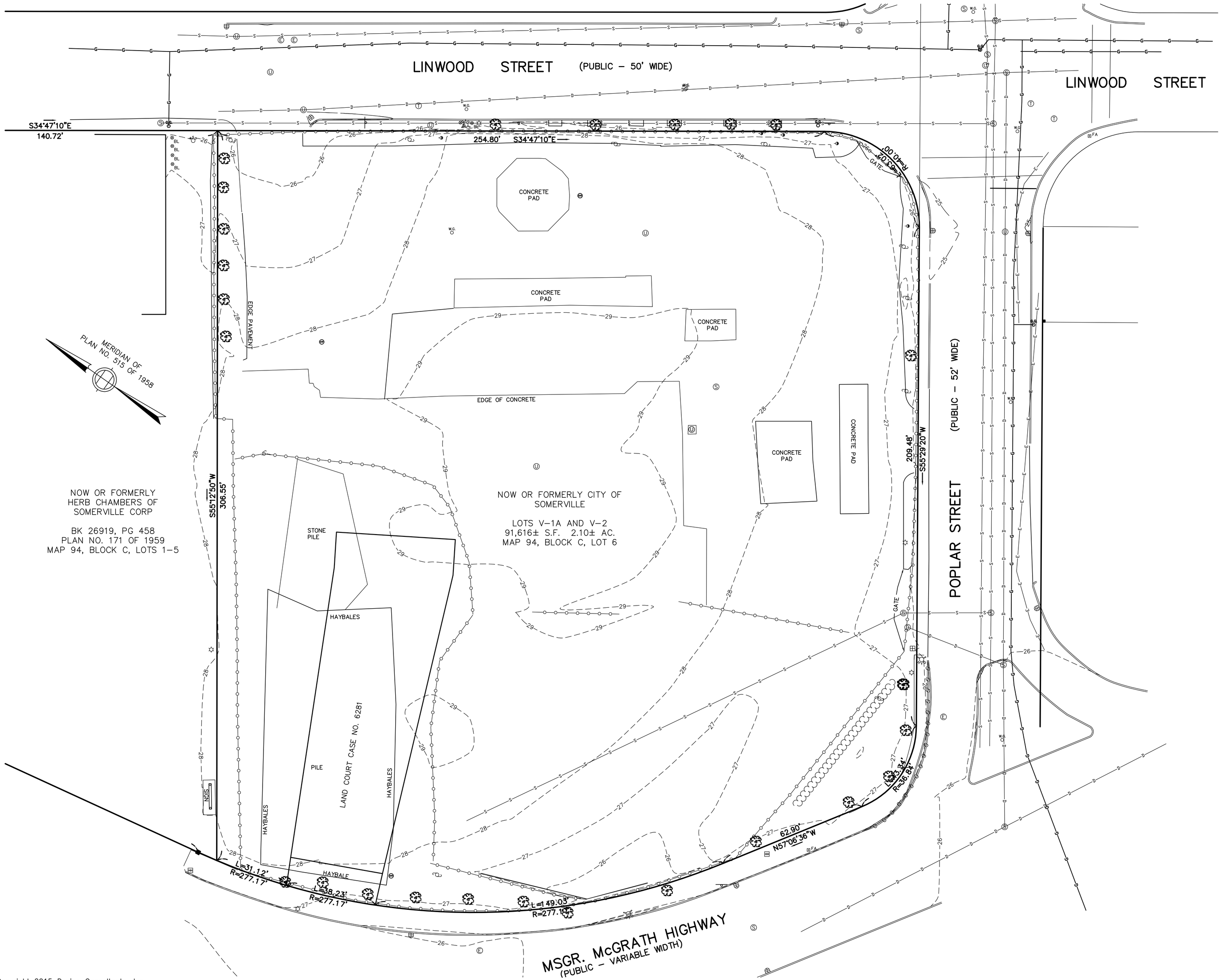
Prep Date: 12/01/14

Metal	Sample ml	Final ml	MC35452-6 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Vanadium										
Zinc										
Zirconium										

Associated samples MP23971: MC35452-1, MC35452-3, MC35452-6, MC35452-8, MC35452-10, MC35452-13, MC35452-14, MC35452-16, MC35452-18, MC35452-20, MC35452-21, MC35452-24, MC35452-25, MC35452-28, MC35452-31, MC35452-32, MC35452-34, MC35452-37, MC35452-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Attachment 3
Site Survey



THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING ON THE LOCUS PROPERTY. THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE RESULT OF AN ON–THE–GROUND INSTRUMENT SURVEY PERFORMED ON october 27–30, 2014 BY DESIGN CONSULTANTS, INC.

OWNERSHIP INFORMATION USED IN THE PREPARATION OF THIS PLAN WAS OBTAINED FROM THE CITY OF SOMERVILLE ASSESSOR'S OFFICES.

THE BUILDINGS HAVE BEEN REMOVED FROM THE SITE. THE LOCATIONS OF WHERE THE THE UTILITIES SERVICING THE BUILDING WERE CAPPED OFF ARE UNKNOWN.

VERTICAL DATUM IS CITY OF SOMERVILLE BASED ON BM #1 NGVD 29 ELEVATION OF 21.73' BM SHOWN ON PLAN NO. 929 OF 1977 BROUGHT UP BY 5.39' TO OBTAIN CITY DATUM.

TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THIS PLAN CONFORMS TO THE TECHNICAL AND PROCEDURAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS.

LOCUS TITLE INFORMATION

10 POPLAR STREET

OWNER:	CITY OF SOMERVILLE
DEED REFERENCE:	DEED NOT PROVIDED
PLAN REFERENCE:	PLAN NO. 515 OF 1958
ASSESSORS:	MAP 94, BLOCK C, LOT 6

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UPDATE USING "DAYSTAMP DRAWING"

Design Consultants, Inc.
Consulting Engineers and Surveyors
120 MIDDLESEX AVENUE
SOMERVILLE, MA 02145
617–776–3350
68 PLEASANT STREET
NEWBURYPORT, MA 01950
978–358–7173

SCALE:
HORIZ: 1"= 20'
VERT:

NO.	DATE	BY	REVISIONS

FIELD: JM
CALCS: BD
CHECKED: EJC
APPROVED: EJC

EXISTING CONDITIONS PLAN

10 POPLAR STREET

PLAN OF LAND IN
SOMERVILLE, MASSACHUSETTS
SURVEYED FOR
CITY OF SOMERVILLE

PROJECT NO. 2014–121
DATE: FEB. 13, 2015
SHEET NO. 1 OF 1