Chapin Spencer
PUBLIC WORKS DIRECTOR

Norman J. Baldwin, P.E.
CITY OWNER

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REQUEST FOR PROPOSALS
FOR SOIL DISPOSAL SERVICES

Pine Street Soil Stockpiles at Manhattan Drive Landfill

Date of Issuance:	Thursday, September 13, 2018
Issued by:	City of Burlington, Department of Public Works, Water Resources
Due Date for Proposals:	Monday, September 24, 2018 at 11:00 AM
Optional site visit:	Thursday, September 20, 2018 at 11:00 AM
Questions due:	Thursday, September 20, 2018 by 4:00 PM
Issuing Point of Contact:	Martin Lee, PE, Water Resources Engineer 53 Lavalley Lane, Burlington, VT 05401 (802) 497-7021 (c) mlee@burlingtonvt.gov

PROJECT BACKGROUND

The City of Burlington Department of Public Works ("City") is seeking proposals from qualified soil disposal contractors to remove and dispose of soil stockpiles of excavated soil at the Manhattan Drive Landfill.

In 2018, excavated soil from the waterline relining project on Pine Street and Summit Street were field screened, segregated, stockpiled, and poly-encapsulated. Soils were segregated based on the following criteria observed in the field: odor, tactile characteristics, staining, and sheen. When evidence of petroleum impacts were encountered, the City's resident soil engineer (The Johnson Company, JCO) inspected the soil, recorded volatile organic compound (VOC) readings with a photo-ionization detector PID, and contacted VTDEC to confirm material could be stockpiled at the Manhattan Drive soil staging area. PID readings of stockpiled soil ranged between 18 and 2,100 ppmV. Additionally, the soil in the area of access pit excavation was pre-characterized and determined that in several locations soils contained polycyclic aromatic hydrocarbon (PAH) concentrations that exceeded Vermont's Urban Background concentration of 0.58mg/kg. These soils are also stockpiled at the Manhattan Drive area. The following are the labeled stockpiles that are onsite:

Stockpile ID	Max PID (ppmv)	Approximate Volume (CY/Tons)	Analytical/Notes
3-1	18	15/22.5	Odor, trace discontinuous iridescent sheen
1-1	NA	25/37.5	Odor, no sheens or oil globules
1-3	2,100	10/15	Odor, discontinuous iridescent sheen, trace oily globules
3-1A	2,100	50/75	Odor, continuous iridescent sheen, trace oily globules
M	NA	10/15	Petroleum odors
1	NA	150/225	PAH concentrations exceeded Urb. Bkrnd. Conc.(0.58 mg/kg)

The soils have been tested, and detailed soil testing results may be made available to bidders upon request. Sampling of the stockpiled soils was performed in accordance with requirements of Casella and, based on the results, may be approved by Casella for disposal as solid waste and/or alternative daily cover at their Coventry, Vermont facility. The following are images of the stockpiles:

SCOPE OF WORK

Please carefully read the following information that details the City's expectations in relation to the project scope of work. The selected contractor will provide the City with professional services to realize the successful implementation of all aspects of this scope. The contractor will be responsible for coordinating work with all sub-contractors and the work will be subject to environmental oversight from the City's resident soil engineer (JCO). The list and order of activities outlined below may be amended and finalized with the contractor. The scope of work includes, but is not limited to, the following elements:

1. **Preliminary Arrangements (Bid Item 1)**
   - Prepare and obtain approval from VT DEC for disposal plan. Prior to submittal to VTDEC, this plan will be reviewed by the DPW and JCO. Disposal plan will have the following elements and detailed description of how the contractor will execute each element.
     - Health and Safety
     - Soil loadout procedure
       - Sequencing
       - Weather considerations
       - Approach / Methodology
       - Equipment to be used
       - Management / coordination with haulers and disposal facility
       - Method to eliminate soil tracking from truck tires
     - Dust mitigation strategy
     - Soil migration mitigation strategy
     - Truck inspection log (see Bid Item 3: *Site Cleanup / Close Out*)
     - Traffic Control
     - Final site cleanup
   - Obtain all applicable permits for transport and disposal of this material
   - Submit traffic control plan
   - Lump Sum payment shall be paid for this Bid Item when the Preliminary Arrangements tasks are complete

2. **Soil Removal – Trucking- Landfill – Tipping Fee (Bid Item 2)**
   - All material, inclusive of poly-encapsulation, to be properly disposed of. Contractor shall provide manifests and weight slips for all soil and any other construction debris that has come into contact with the stockpiled soils.
   - Retain all trucking manifests, load slips, and bills of lading, and submit to DPW and DPW's soils consultant for inclusion in closure report.
   - This bid item shall be paid per Ton of soil trucking performed as required by the contract documents.

3. **Site Cleanup / Close Out (Bid Item 3)**

- If the duration of the project will last more than one workday, the stockpile, security fencing and poly-encapsulation must be fully restored at the end of each workday.

- HAZWOPER certification required for all on site staff

- Removal and disposal of construction ribbon, tire ballasts, poly-sheeting and sand bags.

- Sequenced removal and proper disposal of poly-encapsulated soil (assume all soil is acceptable for disposal at the Waste USA Landfill in Coventry, Vermont)

- Contractor and any subcontractors shall provide written verification that all truck drivers and equipment operators are properly licensed and in good standing

- Work directly with DPW's resident soils engineer (JCO) to ensure compliance with EPA/DEC procedure/policy, ensure proper site management, including but not limited to the following:

    - Moving of material and loading of trucks in a manner that produces no visible dust (site may be subject to airborne particulate testing)

    - All of the trucks leave clean and free of any loose soil

    - All trucks should arrive free of offsite soil or mud.

    - No soil is tracked from the stockpile loading area, if tracking occurs, work will stop and tracked soils will be immediately removed (swept, hand shoveled, power washed, etc.), collected and returned to the stockpile.

    - Secure truck or trailer tailgate latches

    - No water leaking from the loaded soil transport truck

    - Load covers are functional and loads are completely covered prior to departure

    - No residual soil to be left anywhere on site (to be confirmed by JCO). Any methods of cleanup must be fully recoverable, over excavation of stockpiled soils (approximately 3-inches) will likely be required to ensure all stockpiled material is removed.

    - JCO may stop work at any time due to weather conditions, improper site management, etc.

    - If waste transport were to occur during subfreezing conditions (not anticipated), contractor shall devise a way in which soils will not freeze to the bed of the haul truck. The City is not responsible for any fees associated with truck bed soil scrape out.

    - The areas that are disturbed during the project and all areas under the soil stockpiles shall be stabilized with grass seed and mulch at the end of the project.

    - All earthwork shall be performed with a smooth nosed excavator bucket or loader. The soil stockpiles are close to an existing landfill cap which is not to be disturbed during construction.

- Clean topsoil shall be added to the disturbed areas to fill in any minor depressions caused by soil removal. The disturbed area shall be graded to match the surrounding elevation and prevent puddling.

- Lump Sum payment shall be paid for this Bid Item when the Site Cleanup / Close Out tasks are complete, and all disposal documentation has been satisfactorily received by the DPW and its resident soils engineer (JCO).

DEADLINE FOR RECEIPT OF BIDS

All replies and quotes in response to this RFP must either be received in a sealed envelope clearly marked "Pine Street Soil Stockpiles at Manhattan Drive Landfill" to the address and point of contact no later than 11:00 a.m., by the above due date and time, at which time all submitted materials will be publicly opened and recorded. Late proposals will not be accepted under any circumstances. Electronic proposals are preferred as long as they are received by the point of contact by the required deadline. It is the responsibility of the firm submitting replies and proposals to ensure that the point of contact has received a completed proposal by the required deadline.

ANSWERS TO QUESTIONS AND REVISIONS TO REQUEST FOR PROPOSAL

Questions concerning this Request for Proposals (RFP) must be made via email. Responses to all submitted questions will be posted at: http://www.burlingtonvt.gov/RFP. Any revisions, addendums and answers to questions received at least a week before the due date will be sent to Contractors who directly received this Invitation. In addition, revisions will be posted on the City's RFP web page http://burlingtonvt.gov/RFP/. It is advised that consultants sign up for the GovDelivery notification so that they will be notified of any changes to the RFP page.

SITE VISIT

A pre-bid meeting is optional and will take place at the above date and time. Contractors can inspect the location on their own, but the City recommends bidding contractors attend the pre-bid meeting.

PARTNERSHIPS

Consultants may partner with other firms, local or otherwise, in order to provide the best possible proposal for ensuring quality and efficient completion of the project tasks.

BID FORMAT

Contractors are encouraged to be concise. All proposals must include, at a minimum, the following:

1. Completed bid form including lump sum mobilization/demobilization charges (if filled out), unit prices for pipe rehabilitation, total estimate, estimated start date, and signature/date by an authorized representative for the firm

2. Signed Livable Wage, Outsourcing and Union Deterrence Certifications with the bid sheet and described in the Supplemental General Conditions.

Note that the selected Contractor shall be required to submit insurance certificates, and may be asked to provide a client list if they haven't already done work in the City of Burlington.

BID EVALUATION

Bids will be reviewed and evaluated by City staff based on the information provided in the proposal. Additional information may be requested prior to final selection. It is anticipated that a decision will be made in July for project completion by the end of August.

ANTICIPATED PROJECT SCHEDULE

The City requires that all related work, inclusive of design and construction, be completed by **November 5, 2018**. The City reserves the right to amend all dates. While this timeline may be subject to change, all participating parties will be notified.

· September 24, 2018	Proposals due
· October 15, 2018	Latest date for proposal review & contractor recommendation
· October 17, 2018	Latest date for Notice to Proceed
· November 5, 2018	Project Completion

CONTRACT REQUIREMENTS

The selected Contractor must be willing to enter into an agreement with the Owner similar to the Draft Agreement provided with this RFP. Contractors are advised to review all the attached sections of this document in advance of submitting a proposal. The City reserves the right to alter or amend any or all of these provisions in the project contract.

COSTS ASSOCIATED WITH PROPOSAL

Any costs incurred by any person in preparing or submitting a proposal are the sole responsibility of that person. The City will not reimburse any person for any costs incurred as a result of the preparation of proposals in response to this RFP.

COMPLIANCE WITH LAW

All proposals and work completed under a proposal must be performed in accordance with applicable rules, regulations, codes, and ordinances of local, state, and federal authorities. All such proposals and work completed must also be performed in accordance with the requirements of public utility corporations having jurisdiction over the work performed.

INDEMNIFICATION

The Contractor will act in an independent capacity and not as an officer or employee of the City. The Contractor will be required to agree to indemnify, defend, and hold harmless the City and its officers and employees from all liability and any claims, suits, expenses, losses, judgments, and damages arising as a result of the chosen Contractor's acts and/or omissions in the performance of the contract.

LIMITATIONS OF LIABILITY

The City assumes no responsibility and liability for costs incurred by parties responding to this RFP or responding to any further requests for interviews, additional data, etc., prior to the issuance of the contract.

REJECTION OF PROPOSALS

The City reserves the right to reject any or all proposals, to negotiate with one or more parties, or to award the contract in the City's best interests, including selecting which projects it can afford to do at this point in time or in consideration of the proposed contractor's schedule. The City reserves the right to re-advertise for additional proposals and to extend the deadline for submission of the proposals.

OWNERSHIP OF DOCUMENTS

Proposals, plans, specifications, and other documents prepared and submitted under this RFP shall become the property of the City. Proposals, plans, specifications, basis of designs, electronic data, designs and reports prepared under any agreement between the selected contractor or consultant and the city shall become the property of the City. Records shall be furnished to the City by the Contractor upon request at any time, however the Contractor or Consultant may retain copies of the original documents.

PUBLIC RECORDS

Any and all records submitted to the City, whether electronic, paper, or otherwise recorded, are subject to the

Vermont Public Records Act. The determination of how those records must be handled is solely within the purview of City. All records considered to be trade secrets, as that term is defined by subsection 317(c)(9) of the Vermont Public Records Act, must be identified, as shall all other records considered to be exempt under the Act. It is not sufficient to merely state generally that a proposal is proprietary, contains a trade secret, or is otherwise exempt. Particular records, pages, and sections which are believed to be exempt must be specifically identified as such and must be separated from other records with a convincing explanation and rationale sufficient to justify each exemption from release consistent with Section 317 of Title 1 of the Vermont Statutes Annotated.

OWNER SUPPLIED DOCUMENTS

The following owner supplied documents are provided in Appendix A at the very end of this RFP.

1.) Soil analytical data

BID FORM – SOIL DISPOSAL

Contractor:_____ Address:_____

Contact:_____ Telephone/Email:_____

Subcontractor(s), if applicable:_____

Bid Schedule: Complete the following bid schedule and include in your proposal.

Bid Item	Description	Unit	Qty	Unit Price	Total
1	Preliminary work	Lump sum	1		
2	Soil Removal – Trucking-Landfill – Tipping Fee	Ton	390		
3	Site cleanup/close out	Lump sum	1		

Total Base Bid (Sum of Bid Items 1, 2 and 3):_____

NOTES:

1. BIDDER hereby agrees to commence WORK under this contract on the date of issuance of the NOTICE TO PROCEED and to fully complete the PROJECT by November 5, 2018. If project delays are caused by the BIDDER, then the BIDDER further agrees to pay as liquidated damages, the sum of $200 for each consecutive calendar day thereafter as provided in Section 4 of the General Conditions.
2. The tonnage in the bid form is an estimate and the quantity will be used to compare bids. All bidders are responsible for reviewing the site and fully understanding the extent of the soil piles and the work necessary to complete this project.

There is no required Bonding.

BIDDER acknowledges receipt of the following ADDENDUM:

_____
_____
_____
_____

By signing this bid sheet, the Contractor agrees to abide by all specifications and conditions in these Contract Documents.

_____ Signature

_____ Title

_____ Date

Certification of Compliance with the City of Burlington's Livable Wage Ordinance

(TO BE SUBMITTED WITH BID)

I, _____ , on behalf of _____("the Contractor") in connection with a contract for _____services that we provide to the City, hereby certify under oath that the Contractor (and any subcontractors under this contract) is and will remain in compliance with the City of Burlington's Livable Wage Ordinance, B.C.O. 21-80 et seq., and that

(1) as a condition of entering into this contract or grant, we confirm that all covered employees as defined by Burlington's Livable Wage Ordinance (including the covered employees of subcontractors) shall be paid a livable wage (as determined, or adjusted, annually by the City of Burlington's chief administrative officer) and provided appropriate time off for the term of the contract;

(2) a notice regarding the applicability of the Livable Wage Ordinance shall be posted in the workplace(s) or other location(s) where covered employees work;

(3) we will provide verification of an employee's compensation, produce payroll or health insurance enrollment records or provide other relevant documentation (including that of any subcontractor), as deemed necessary by the chief administrative officer, within ten (10) business days from receipt of a request by the City;

(4) we will cooperate in any investigation conducted by the City of Burlington's City Attorney's office pursuant to this ordinance; and

(5) we will not retaliate (nor allow any subcontractor to retaliate) against an employee or other person because an employee has exercised rights or the person has cooperated in an investigation conducted pursuant to this ordinance.

Date: _____

By: _____

Contractor

Subscribed and sworn to before me: _____

Notary

Certification of Compliance with the City of Burlington's Outsourcing Ordinance

(TO BE SUBMITTED WITH BID)

I, _____, on behalf of _____ (Contractor) and in connection with the _____[project], hereby certify under oath that (1) Contractor shall comply with the City of Burlington's Outsourcing Ordinance (Ordinance §§ 21-90 – 21-93); (2) as a condition of entering into this contract or grant, Contractor confirms that the services provided under the above-referenced contract will be performed in the United States or Canada.

Dated at _____, Vermont this ____ day of _____, 20____.

By:_____

Duly Authorized Agent

Subscribed and sworn to before me: _____

Notary

Certification of Compliance with the City of Burlington's Union Deterrence Ordinance

(TO BE SUBMITTED WITH BID)

I, _____, on behalf of _____ (Contractor) and in connection with _____ (City contract/project/grant), hereby certify under oath that _____ (Contractor) has not advised the conduct of any illegal activity, and it does not currently, nor will it over the life of the contract advertise or provide union deterrence services in violation of the City's union deterrence ordinance.

Dated at _____, Vermont this ____ day of _____, 20____.

By:_____
Duly Authorized Agent

Subscribed and sworn to before me: _____
Notary

NOTICE OF AWARD

TO: _____

PROJECT Description: _____ OWNER's Project Number: __

The OWNER has considered the BID submitted by you for the above described WORK in response to its ADVERTISEMENT FOR BIDS dated __ _____, 20_18__, and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of _____

You are required to execute the Agreement ~~and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered.~~ The NOTICE OF AWARD shall be accompanied by the necessary Agreement ~~and BOND forms~~. In case of failure of the BIDDER to execute the Agreement, the OWNER may, at its option, consider the BIDDER in default, in which case the BID BOND or certified check accompanying the proposal shall become the property of the OWNER.

The OWNER, within ten (10) days of receipt of ~~acceptable performance BOND, payment BOND and~~ Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw their signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The OWNER shall issue the NOTICE TO PROCEED within ten (10) days of the execution of the Agreement. The "Date of Issuance" of the NOTICE TO PROCEED shall start the CONTRACT time. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended only by mutual written agreement between the OWNER and CONTRACTOR.

If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 20____.

_____
Chapin Spencer
Director of Public Works
City of Burlington

ACCEPTANCE OF NOTICE: Receipt of the above NOTICE OF AWARD is hereby acknowledged:

Dated this _____ day of _____, 20____.

_____
Print Name and Title

_____
Signature

CITY OF BURLINGTON
CONSTRUCTION SERVICES CONTRACT
For Soil Disposal Services at the Manhattan Drive Landfill

This Construction Services Contract ("Contract") is entered into by and between the City of Burlington ("City"), and _____ ("Contractor"), a Vermont corporation, with its principal place of business in _____, Vermont.. Contractor and the City agree to the terms and conditions of this Contract.

1. RECITALS

A. Authority. Authority to enter into this Contract exists in the City Charter. Required approvals, clearance, and coordination have been accomplished from and within each Party.

B. Consideration. The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Contract.

C. Purpose. The City seeks to employ the Contractor to remove and dispose of soil stockpiles of excavated soil at the Manhattan Drive Landfill.

2. EFFECTIVE DATE AND TERM

A. Effective Date. This Contract shall not be valid or enforceable until the Effective Date. The City shall not be bound by any provision of this Contract before the Effective Date, and shall have no obligation to pay Contractor for any performance or expense incurred before the Effective Date or after the expiration or termination of this Contract

B. Term. This Contract and the Parties respective performance shall commence on the Effective Date and expire on November 5, 2018. Contractor shall complete all services required under this Agreement prior to the expiration of this Contract.

C. Work Activities. The Contractor shall commence the Work required by the Contract Documents on the date the Notice to Proceed is issued. Contractor shall complete all Work required under this Contract and the Contract Documents by November 5, 2018, unless the period for completion is extended in accordance with the Contract Documents. The Contractor acknowledges that the commencement and completion dates for the Work are essential conditions and that failure to meet these deadlines constitutes a material breach of this Contract. Contractor shall pay the City the sum of $200 per day, for each consecutive calendar day that the Contractor is in breach of this Contract in accordance with the Contract Documents.

3. DEFINITIONS

A. "Effective Date" means the date on which this Contract is approved and signed by the City, as shown on the signature page of this Contract.

B. "Party" means the City or Contractor and "Parties" means both the City and Contractor.

C. "Project" means the soil disposal activities at the Manhattan Drive Landfill as described in the Contract Documents.

D. "Work" means the construction services described in **§4** of this Contract, along with the specifications contained in the Contract Documents.

4. SCOPE OF WORK

The Contractor shall remove and dispose of soil stockpiles of excavated soil at the Manhattan Drive Landfill in accordance with, and as specified in, the Contract Documents. The Contractor shall furnish all material, supplies, tools, equipment, labor and other services necessary to ensure the successful completion of the Work to the satisfaction of the City.

5. PAYMENT FOR SERVICES

A. Contractor Fee. The City shall pay the Contractor $_____ for completion of the Work. Contractor agrees to accept this payment as full compensation for all services and expenses incurred under this Contract.

B. Payment Schedule. The City shall pay the Contractor in the manner and at such times as set forth in the General Conditions.

6. CONTRACT DOCUMENTS

The following attachments, along with this Contract, constitute the Contract Documents:

A. Request for Proposal
B. Bid Sheet
C. Certifications of Compliance with City of Burlington Ordinances
D. Notice of Award
E. This Contract
F. Notice to Proceed
G. Partial Release and Waiver of Lien
H. Change Order Format
I. Certificate of Substantial Completion
J. Certificate of Final Completion and Acceptance of Work
K. General Conditions
L. Supplemental General Conditions
M. Hazardous Materials and Historic Preservation
N. Technical Specifications prepared and issued by the City, if applicable
O. ADDENDA: No. ____through ____, dated _____

The Contract Documents are hereby adopted, incorporated by reference, and made part of this Contract and the Contractor shall comply with the Contract Documents. The intention of the Contract Documents is to establish the necessary terms, conditions, labor, materials, equipment, and other items and services necessary for the proper execution and completion of the Work to ensure the intended results.

7. ORDER OF PRECEDENT

If a conflict or inconsistency exists between this Contract and the Contract Documents, this Contract shall control. The Notice of Award, General and Supplemental Conditions, and Technical Specifications issued by the City shall prevail over any inconsistency or contradictory provision between the Contract Documents.

8. INSURANCE

Contractor and subcontractors, if any, shall secure and at all times maintain insurance as required in the Contract Documents.

9. AUTHORITY

Each Party represents and warrants to the other that the execution and delivery of this Contract and the performance of such Party's obligations have been duly authorized.

10. BINDING EFFECT

All provisions of this Contract, including the benefits and burdens, shall extend to and be binding upon the Parties' respective successors and assigns.

11. SEVERABILITY

The provisions of this Contract and the Contract Documents are severable. The invalidity or unenforceability of any provision of this Contract or the Contract Documents shall not affect the validity or enforceability of any other provision, which shall remain in full force and effect, provided that the Parties can continue to perform their obligations under this Contract in accordance with the intent of this Contract.

12. ENTIRE AGREEMENT

This Contract and the Contract Documents constitute the entire agreement and understanding of the Parties with respect to the subject matter of this Contract. All prior representations and understandings related to the Work, oral or written, are merged into this Contract. Prior or contemporaneous additions, deletions, or other changes to this Contract shall not have any force or effect whatsoever, unless embodied herein.

13. MODIFICATION

Except as otherwise provided in this Contract or the Contract Documents, any modification to this Contract shall only be effective if agreed to in a formal amendment to this Contract, properly executed and approved by the Parties.

14. THIRD PARTY BENEFICIARIES

This Contract does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Contract and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Contract are incidental to this Contract, and do not create any rights for such third parties.

15. WAIVER

A Party's failure or delay in exercising any right, power, or privilege under this Contract, whether explicit or by lack of enforcement, shall not operate as a waiver, nor shall any single or partial exercise of any right, power, or privilege preclude any other or further exercise of such right, power, or privilege.

16. STANDARD OF PERFORMANCE

Contractor shall perform its obligations under this Contract in accordance with the highest standards of care, skill and diligence in Contractor's industry, trade, or profession. Contractor shall employ only qualified personnel and properly supervise all such personnel. The City shall have the right to require removal of any person employed by Contractor from Work under this Contract for misconduct, incompetence, negligence, or refusal to comply with the requirements of this Contract.

17. CHOICE OF LAW

Vermont law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Contract, to the extent capable of execution.

18. JURISDICTION

All suits or actions related to this Contract shall be filed and proceedings held in the State of Vermont.

19. ASSIGNMENT

Contractor's rights and obligations under this Contract are personal and may not be transferred or assigned without the prior, written consent of the City. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of Contractor's rights and obligations approved by the City shall be subject to the provisions of this Contract

The remainder of this page is intentionally left blank.

20. SIGNATURE PAGE

Persons signing for the Parties hereby swear and affirm that they are authorized to act on behalf of their respective Party and acknowledge that the other Party is relying on their representations to that effect.

The Parties hereto have executed this Construction Contract

CONTRACTOR

By: _____

Date; _____

City of Burlington
Department of Public Works

By: _____
Chapin Spencer
Director of Public Works

Date: _____

NOTICE TO PROCEED

To: _____ Date of Issuance: _____
(CONTRACTOR)

_____ Project: _____

_____ _____

_____ _____

You are hereby notified to commence all WORK on this date in accordance with the Agreement dated

_____, 20____. The date of completion of all WORK is _____, 20____

_____
(OWNER)

By:_____
(Printed or Typed Name)

By:_____
(Signature)

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED

is hereby acknowledged by _____,
(Name of CONTRACTOR)

this the ____ day of _____, 20___

By:_____
(Printed or Typed Name)

By:_____
(Signature)

INSTRUCTIONS FOR CONTRACTORS OR SUBCONTRACTORS RELEASE AND WAIVER OF LIEN FORM

1. At the preconstruction meeting, the OWNER will receive from the CONTRACTOR a list of all major items (s)he intends to SUBCONTRACT.

2. Prior to the first requisition for payment, the OWNER will inform the CONTRACTOR as to which of these SUBCONTRACTORs or vendors may be required to complete a Release of Lien Form. Note that 40 CFR §33.302 requires CONTRACTOR to pay their SUBCONTRACTORs for satisfactory performance within 30 days of payment to CONTRACTOR by OWNER. CONTRACTOR shall comply with this requirement.

3. The CONTRACTOR shall include in the payment package a Release of Lien Form for the overall CONTRACT and those of any SUBCONTRACTORs or vendors so identified by the OWNER.

4. For all interim payments prior to 90% completion of the CONTRACT, the CONTRACTOR may delete, "…the undersigned does hereby waive, release and relinquish any and all claims, demands and rights of lien for all work, labor, materials, machinery or other goods, equipment or services done, performed or furnished…" from the first statement.

5. Final payment requires complete wording in the first statement and a fully executed form.

GENERAL CONTRACTOR'S OR SUBCONTRACTOR'S RELEASE AND WAIVER OF LIEN

For and in consideration of the receipt of $_____, in payment for labor and/or materials furnished, the undersigned does hereby waive, release and relinquish any and all claims, demands and rights of lien for all work, labor, materials, machinery or other goods, equipment or services done, performed or furnished for the construction located at the site hereinafter described, to wit:

_____
(Project Name and OWNER)

_____

_____, Vermont as of _____
(Date)

The undersigned further warrants and represents that any and all valid labor and/or materials and equipment bills, now due and payable on the property herein above described in behalf of the undersigned, have been paid in full to date of this waiver, or will be paid from these funds.

$_____
Total Paid to Date This Contract

$_____
Current Payment Due

$_____
Total Billed to Date This Contract

_____
CONTRACTOR/SUBCONTRACTOR

_____
Witness Signature

By:_____

_____

Title: _____

Witness Printed Name

CHANGE ORDER

Date: _____
Contract #: _____ Agreement Date: _____
Contract Title: _____ ORIGINAL PRICE: $_____
Owner:_____ Notice to Proceed Date: _____
Contractor:_____ Calendar Days: _____
Owner: _____ Original Completion Date: _____

The following changes are hereby made to the CONTRACT DOCUMENTS:

DESCRIPTION:

JUSTIFICATION:

PRICE: This C.O.[1] will (not change/increase/decrease) the Contract Price By: $_____
Current Contract Price per most recent C.O.: $_____
The new Contract Price including this C.O. is: $_____

TIME: Current Contract Calendar Days as per most recent C.O.: Calendar Days _____
This C.O. will (not change/increase/decrease) the Contract Calendar Days by: Calendar Days _____
The new Contract Calendar Days including this C.O. is: Calendar Days _____
The new Contract Completion Date is, therefore: _____

NOTE: The CONTRACTOR must provide a Revised Project Schedule to reflect increases or decreases in Contract Time as authorized by this C.O.

REQUESTED BY: _____
Print or Type Name Signature

SIGNATURES/APPROVALS:
Stipulated price and time adjustment includes all costs and time associated with the above described change. CONTRACTOR waives all rights for additional compensation or time extension for said change. CONTRACTOR and OWNER agree that the price(s) and time adjustment(s) stated above are equitable and acceptable to both parties.

Recommended By (Owner): _____
Print or Type Name Signature

Accepted By (CONTRACTOR): _____
Print or Type Name Signature

Ordered By (OWNER): _____
Print or Type Name Signature

CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER _____ OWNER's Project Number _____

Project Name _____

==========

CONTRACTOR _____Contract Date _____

Contract for _____

==========

Project or Specified Part Shall Include _____

_____

_____

==========

DEFINITION OF SUBSTANTIAL COMPLETION

The date of Substantial Completion of a Project or specified part of a Project is the date when the construction is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part of the Project can be utilized for the purpose for which it was intended.

==========

To: _____
(OWNER)

And To: _____
(CONTRACTOR)

The WORK performed under this CONTRACT has been inspected by authorized representatives of the OWNER, CONTRACTOR, and OWNER, and the Project or Specified Part of the Project is hereby declared to be Substantially Completed as of the following date:

Date of Substantial Completion: _____

If a tentative list of items to be completed or corrected is appended hereto, the failure to include an item on it does not alter the responsibility of the CONTRACTOR to complete all the WORK in accordance with the CONTRACT DOCUMENTS and CONTRACT TIME.

Recommended By:

_____	_____	_____
OWNER	(Signature)	Date

_____

(Print or Type Name)

Approved By:

_____	_____	_____
OWNER	(Signature)	Date
	_____	
	(Print or Type Name)	

==========

The CONTRACTOR accepts the above Certificate of Substantial Completion.

_____	_____	_____
CONTRACTOR	(Signature)	Date
	_____	
	(Print or Type Name)	

==========

EXCEPTIONS AS TO GUARANTEES AND WARRANTIES:

==========

ATTACHMENTS:

1) Punch List Dated: _____

2) List the CONTRACTOR's Warranty Start and End Dates along with any Extended Warranty information here. Some items (such as roofing) may have a manufacturer's warranty longer than one year. Any documentation to support warranty requests (bill of sale, etc.) need to be supplied as part of the OWNER's O&M Manual under the warranty section.

CERTIFICATE OF FINAL COMPLETION AND ACCEPTANCE OF WORK

CONTRACT NO. _____ AGREEMENT DATE: _____

CONTRACT DESCRIPTION: _____

_____

Notice to Proceed Date of Issuance:_____

Completion Date per Agreement and Change Orders # _____thru # _____: _____
(Date)

FINAL CERTIFICATION OF CONTRACTOR

I hereby certify that the WORK as identified in the Final Estimate of Payment for construction CONTRACT WORK dated _____, represents full compensation for the actual value of WORK completed. All WORK completed conforms to the terms of the AGREEMENT and authorized changes.

_____
CONTRACTOR Signature

_____
Date Print or Type Name

_____
Title

FINAL CERTIFICATION OF OWNER

I have reviewed the CONTRACTOR'S Final Payment Request dated _____and hereby certify that to the best of my knowledge, the cost of the WORK identified on the Final Estimate represents full compensation for the actual value of WORK completed and that the WORK has been completed in accordance with the terms of the AGREEMENT and authorized changes. This certification is provided in accord with the terms of GENERAL CONDITION number 16.3.

_____
OWNER Signature

_____
Date Print or Type Name

FINAL ACCEPTANCE OF OWNER

I, as representative of the OWNER, accept the above Final Certifications and authorize Final Payment in the amount of $_____and direct the CONTRACTOR'S attention to the GENERAL CONDITION #5. The guaranty for all WORK completed subsequent to the date of SUBSTANTIAL COMPLETION, expires one (1) year from the date of this Final Acceptance.

_____
OWNER Signature

_____
Date Print or Type Name

_____

Title

GENERAL CONDITIONS

Adapted from Vermont Facilities Engineering Division CS-5 document dated December 2016.
Burlington changes in **UNDERLINED BOLD** font.

1. The CONTRACTOR shall furnish and pay the cost, including taxes (except tax exempt entities) and all applicable fees, of all the necessary materials and shall furnish and pay for full time on-site superintendence during any construction activity, labor, tools, equipment, and transportation, and perform all the Work required for the construction of all items listed and itemized under the Bid Schedule of the Bidder's Proposal attached hereto in strict accordance with the Plans, Specifications and requirements, general conditions and appendix which are attached hereto and made a part hereof, and any amendments thereto and such supplemental plans and specifications which may hereafter be approved.

2. The OWNER shall provide the land and/or construction easements upon which the Work under this Contract is to be done, and will, so far as is convenient, permit the CONTRACTOR to use as much of the land as is required for the erection of temporary construction facilities and storage of materials, together with the right of access to same, but beyond this, the CONTRACTOR shall provide at the CONTRACTOR's cost and expense any additional land required.

3. In the event the OWNER is dissatisfied with the slow progress or incompetence in the performance of the Work in accordance with the schedule for completion of the various aspects of construction, the OWNER shall give the CONTRACTOR written notice in which the OWNER shall specify in detail the cause of dissatisfaction. Should the CONTRACTOR fail or refuse to remedy the matters complained of within five days after the written notice is received by the CONTRACTOR the OWNER shall have the right to take control of the Work and either make good the deficiencies of the CONTRACTOR itself or direct the activities of the CONTRACTOR in doing so, employing such additional help as the OWNER deems advisable. In such events the OWNER shall be entitled to collect from the CONTRACTOR any expenses in completing the Work.

4. The OWNER may withhold liquidated damages at the rate specified in the Bid from the amount payable to the CONTRACTOR for each calendar day that the CONTRACTOR is in default after the time of completion stipulated in these Contract Documents. It is understood that the amount is approximately equal to the interest and other charges incurred by the OWNER.

5. The CONTRACTOR guarantees all material and equipment furnished and all Work performed for a period of one (1) year from the date of substantial completion of the Contract (or one (1) year from Final Completion of the Contract for all work completed after Substantial Completion). The CONTRACTOR guarantees that the facility is free from defects due to faulty materials or workmanship and the CONTRACTOR shall make the necessary corrections or repairs to correct these defects **as outlined further in Specification Section 01740. Longer equipment or material guarantees shall be documented in the Certificate of Substantial Completion.**

6. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the Work as specified in the Contract Documents. If the CONTRACTOR observes that the Contract Documents are at variation with any laws, ordinances, rules or regulations, the CONTRACTOR shall promptly notify the OWNER in writing and any necessary changes shall be adjusted through the use of Contract Change Orders.

7. The CONTRACTOR agrees to pay all claims for labor, materials, services and supplies and agrees to allow no such charge to be fixed on the property of the OWNER.

8. The CONTRACTOR agrees to comply with all laws, rules and regulations that apply to related Work.

9. The actual performance of Work and superintendence shall be performed by the CONTRACTOR, but the OWNER shall, at all times, have access to the premises for the purpose of observing or inspecting the Work performed by the CONTRACTOR.

10. It is fully understood and agreed that none of the requirements of this Contract shall be considered as waived unless changes are made in writing and then only by the persons executing this Contract.

11. The CONTRACTOR agrees not to sublet or assign this Work without the written consent of the OWNER.

12. The CONTRACTOR shall have full responsibility under these General Conditions, General Provisions, or Plans and Specifications for any SUBCONTRACTs which the CONTRACTOR may let.

13. All questions or controversies which may arise between the CONTRACTOR and the OWNER, under or in reference to this Contract, should be resolved, to the fullest extent possible at a meeting between the CONTRACTOR, the OWNER. The agreements reached at such meetings shall be carefully documented and become final and binding on all parties concerned.

14. **INDEMNIFICATION: The CONTRACTOR agrees that it shall indemnify, defend, and hold harmless the OWNER, its officers, agents and employees from and against all losses and all claims, including attorneys fees, demands, payments, suits, actions, recoveries, and judgments of every nature, and description brought or recovered against them by reason of any act or omission, intentional or negligent, of the said CONTRACTOR, its agents, or employees, in the execution of the Work or performance of the services to be provided under this Agreement or in guarding the same.**

OWNER is responsible for its own actions. The CONTRACTOR is not obligated to indemnify the OWNER or its officers, agents and employees for any liability of the OWNER, its officers, agents and employees attributable to its, or their own, negligent acts, errors or omissions.

In the event the OWNER, its officers, agents or employees are notified of any claims asserted against it or them to which this indemnification clause may apply, the OWNER or its officers, agents and employees shall immediately thereafter notify the CONTRACTOR in writing that a claim to which the indemnification agreement may apply has been filed.

15. PAYMENT

15.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the OWNER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the OWNER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. The OWNER will, within **ten (10)** days after receipt of each partial payment estimate, either indicate in writing approval of payment, or return the partial payment estimate to the CONTRACTOR indicating in writing reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within **thirty (30)** days of the presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all WORK covered by the CONTRACT DOCUMENTS. However, after fifty (50) percent of the WORK has been completed, if the OWNER finds that satisfactory quality and progress is being made, the OWNER shall reduce Retainage to five (5) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount shall be further reduced below five (5) percent to only that amount related to the punch list and necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

15.2 The entire balance found to be due the CONTRACTOR (through the Partial Payment Estimate), excepting such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR. Such payment shall be conditioned, however, upon the submission by the CONTRACTOR of evidence satisfactory to the OWNER that all claims for labor, material, and any other outstanding indebtedness in connection with this Contract have been paid (Release of Lien Form).

15.3 Upon final completion and acceptance of the WORK, the OWNER shall issue a certificate attached to the final payment request that the WORK has been accepted under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.

15.4 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance BOND or Payment BOND.

16. SUSPENSION OF WORK: The OWNER may suspend the work or any portion thereof for a period of not more than ninety days or such further time as agreed by the CONTRACTOR. The CONTRACTOR will be allowed an extension of contract time directly attributable to any suspension.

17. TERMINATION

17.1 After ten (10) days from delivery of a written notice to the CONTRACTOR, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case, the CONTRACTOR shall be paid for all work executed and any expense sustained.

17.2 Upon completion or termination of the Work, the CONTRACTOR shall remove from the vicinity of the Work all equipment and all temporary structures, waste materials and rubbish resulting from its operations, leaving the premises in a neat and presentable condition. In the event of failure to do so, the same may be done by the OWNER at the expense of the CONTRACTOR.

18. Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Vermont.

19. CONTRACT CHANGE ORDERS

19.1 All changes affecting the Project's construction cost, length of time, or modifications of the terms or conditions of the CONTRACT, must be authorized by means of a written CONTRACT Change Order which is mutually agreed to by the OWNER and CONTRACTOR. The CONTRACT Change Order will include extra WORK, WORK for which quantities have been altered from those shown in the BID Schedule, as well as decreases or increases in the quantities of installed units which are different from those shown in the BID Schedule because of final measurements. All changes must be recorded on a CONTRACT Change Order (which form is part of these CONTRACT Documents) and fully executed before they can be included in a partial payment estimate. Changes for WORK, quantities, and/or conditions will include any respective time adjustment, if justified. Time adjustments will require an updated Project Schedule with the Change Order.

19.2 When the Contract sum is, in whole or in part, based on unit prices, the OWNER reserves the right to increase or decrease a unit price quantity as may be deemed reasonable or necessary in order to complete the WORK contemplated by this CONTRACTOR. Overhead and Profit (OHP) will not be included in a unit quantity Change Order.

19.3 **The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment to determine a mutually acceptable unit price.**

1. **The unit price may be re-evaluated and adjusted under the following conditions:**
    a. **if the variation in the quantity of a particular item of Unit Price Work performed by CONTRACTOR differs by more than 25% from the estimated quantity of such item indicated in the Agreement; and**
    b. **if there is no corresponding adjustment with respect to any other item of Work; and**
    c. **if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof; or if OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price.**
2. **Either OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.**

19.4 In addition, there may be added an amount to be agreed upon to cover the cost of general overhead and profit (OHP). The markup for OHP by the General CONTRACTOR may not exceed 10% if the General CONTRACTOR executes the WORK. If a SUBCONTRACTOR executes the WORK, the SUBCONTRACTOR's OHP may not exceed 10% of the cost of the actual WORK, and the General CONTRACTOR may not apply for more than a 5% markup for OHP on the actual WORK (not including the SUBCONTRACTOR's OHP).

19.5 **In the event that a unit cost cannot be agreed upon, or when Extra Work is requested at the direction of the Owner or Engineer the following shall be used to determine said unit cost. Any additional costs for Public Liability Insurance and Property Damage Insurance that are required in the Contract will be allowed and reimbursed at the actual cost to the Contractor.**

a. **Labor. For all machine or equipment operators, other workers, and supervisors in direct charge of the specific operation, the Contractor shall receive the actual wages agreed upon before beginning the work and were paid to the workers performing the work, to which shall be added an amount equal to 10 percent for profit. If the Contractor elects to use employee(s) more skilled than required to perform the extra work, the Agency reserves the right to allow compensation for said employee(s) to be capped at 125% of the applicable Davis-Bacon wage rate of the base skill level required to perform the work.**

   Workers Compensation Insurance, Unemployment Compensation Insurance, and Social Security charges on labor items as paid by the Contractor will be allowed. Other employee insurances (health, disability, e.g.) being paid by the Contractor just prior to the work being ordered will also be allowed, provided the Contractor submits an applicable notarized insurance rate schedule from its insurance agent. The Contractor shall submit an Agency form indicating all applicable insurances and overhead items for each employee involved in the extra work.

The Contractor will be allowed an additional 10% of the actual wages paid to the employee as compensation for administration charges and any other additional costs. Additional cost or charge for the Superintendent shall not be allowed.

b. **Materials. The Contractor shall receive the actual cost including freight charges (both as submitted on original receipted bills) for all materials furnished and used. Ten percent shall be added thereto for overhead, profit and any other costs incurred in supplying the materials. Vermont sales tax shall not be included.**

c. **Equipment. The Contractor will be reimbursed as described below. Equipment that is used shall be specifically described by year, manufacturer, model number, and any other information required to identify the appropriate hourly rate in the Rental Rate Blue Book published by Equipment Watch ("Blue Book"). In the event the Contractor elects to use equipment of a higher rental value than equipment suitable for the work, payment will be made at the rate applicable to suitable equipment.**

i. **Contractor Owned Equipment.**
   1. **Ownership Costs. The Contractor will be reimbursed for its ownership costs for self-owned equipment at the rates agreed to before the work begins. These rates shall be on an hourly basis and shall not exceed the monthly ownership rates listed in the current Blue Book divided by 176. The rates will be adjusted for depreciation as computed and published in the Blue Book rate adjustment tables, but will not be adjusted as recommended on the Blue Book regional adjustment maps. The rates for ownership costs will be total reimbursement to the Contractor for all non-operating costs of the equipment, including depreciation, insurance, taxes, interest, storage, overhead, repairs, and profit. The maximum duration for reimbursement in a day shall not exceed eight hours unless the equipment actually is operated for more than eight hours on a particular day, in which case the rate shall be paid for all hours the equipment actually worked on that day.**
   2. **Operating Costs. The rates for operating costs include fuel, lubricants, other operating expendables, and preventative and field maintenance. The Contractor will be reimbursed the amount derived as the product of the number of hours of actual use multiplied by the Blue Book estimated operating cost per hour. Operating costs do not apply to equipment idle time. Operating costs do not include the operators' wages. Except as otherwise provided, the rates to be used for computation shall be those in effect at the time the force account work is performed as reflected in the applicable publication of the Blue Book.**
   3. **In the event that an ownership cost rate and/or an operating cost rate is not established in the Blue Book for a particular piece of equipment, the Engineer shall establish a rate(s) for that piece of equipment consistent with its costs and expected life. The Contractor shall make no charge for small tools that are considered as having a replacement value of less than $500.**

ii. **Rented Equipment. In the event the Contractor does not own a specific type of equipment and must rent, the Contractor will be reimbursed the actual cost for the equipment, as submitted by invoice, for the time that the equipment is used to accomplish the work. Vermont sales tax shall not be included. The Agency reserves the right to limit the hourly rate to the maximum amount allowed by Blue Book in the event that the prime contractor is a subsidiary of, or has a close affiliation to, the firm supplying the rented equipment.**

iii. **Maximum Amount Payable. The maximum amount of reimbursement for the ownership cost of Contractor owned equipment or the rental cost of rented equipment is limited to the original purchase price of the equipment.**

iv. **Equipment Downtime. No rental cost or operating cost will be paid for downtime for either rented equipment or Contractor owned equipment.**

v. **Transportation Costs. The Contractor will be paid for the reasonable documented cost of transporting both Contractor owned and rented equipment to the work location and back to its original location or a new location if the cost is less.**

d. **Subcontracted Work. The Contractor shall receive the actual cost, as submitted on original receipted bills, for all extra and force account work subcontracted to others. 10 percent shall be added thereto for overhead, profit and any other costs incurred to perform the subcontracted work. However, the Agency reserves the right to use the force account procedures as depicted previously in this subsection in the event that the cost of reimbursable subcontracted work is deemed excessive. The compensation as herein provided shall be received by the Contractor as payment in full for Extra Work done on a force account basis. The Contractor's representative and the Engineer shall compare records of Extra Work on a force account basis at the end of each day.**

Copies of these records shall be made on Agency forms provided for this purpose and shall be signed by both the Engineer and Contractor's representative. All requests for compensation for Extra Work done on a force account basis, including original receipted bills to verify cost and freight charges for all materials, shall be submitted to the Agency as soon as possible; however, if the required request, invoices, and other documentation are not filed before 90 days have lapsed following final acceptance of the project, the costs associated with such Extra and force account work shall not be reimbursable.

20. PARTIAL PAYMENT ESTIMATES

20.1 A form acceptable to OWNER shall be used when estimating periodic payments due the CONTRACTOR.

20.2 The OWNER may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any approved partial payment estimate to such extent as may be necessary to protect the OWNER from loss on account of:

20.2.1 Defective work not remedied,

20.2.2 Claims filed,

20.2.3 Failure of CONTRACTOR to make payments properly to SUBCONTRACTORs or suppliers,

20.2.4 A reasonable doubt that the Work can be completed for the balance then unpaid,

20.2.5 Damage to another CONTRACTOR,

20.2.6 Performance of Work in violation of the terms of the CONTRACTOR Documents.

20.3 Where Work on unit price items is substantially complete but lacks testing, clean-up and/or corrections, amounts shall be deducted from unit prices in partial payment estimates to amply cover such testing, clean-up and/or corrections.

20.4 When the items in 20.2 and 20.3 are cured, payment shall be made for amounts withheld because of them.

20.5 Payments will not be made that would deplete the retainage nor place in escrow any funds that are required for retainage nor invest the retainage for the benefit of the CONTRACTOR.

21. PROTECTION OF LIVES AND PROPERTY

21.1 In order to protect the lives and health of its employees under the CONTRACTOR, the CONTRACTOR shall comply with all pertinent provisions of the Occupational Safety and Health Administration (OSHA) and any VOSHA (Vermont OSHA) Safety and Health requirements.

21.2 The CONTRACTOR alone shall be responsible for the safety, efficiency, and adequacy of its plant, appliances, and methods, and for any damages, which may result from their failure or their improper construction, maintenance or operation.

22. INSURANCE

22.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

22.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

22.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death or his employees;

22.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

22.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

22.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from.

22.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates **shall include the OWNER as additional insured and** shall contain a provision that coverage afforded under the policies will not be canceled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER

22.3 **INSURANCE REQUIREMENTS. Prior to beginning any work the CONTRACTOR shall obtain the following insurance coverage from an insurance company registered and licensed to do business in the State of Vermont and having an A.M. Best insurance rating of at least A-, financial size category VII or greater (www.ambest.com). The certificate of insurance coverage shall be documented on forms acceptable to the OWNER. Compliance with minimum limits and coverage, evidenced by a certificate of insurance showing policies and carriers that are acceptable to the OWNER, must be received prior to the effective date of the Agreement. The insurance policies shall provide that insurance coverage cannot be canceled or revised without thirty (30) days prior notice to the OWNER. Contractor is required to provide evidence of Products/Completed Operations coverage for a period of three years after the project is completed. We would prefer that the requirement of the three year term for Products/Completed Operations coverage be purchased on an up-front basis but will consider receiving an annual certificate of insurance indicating coverage remains in place for the period of three years. Certified copies of any insurance policies may be required. Each policy, with the exception of professional liability (if applicable) and workers compensation, shall name the OWNER as an additional insured for the possible liabilities resulting from the CONTRACTOR's actions or omissions. It is agreed that the liability insurance furnished by the CONTRACTOR is primary and non-contributory for all the additional insured.**

The CONTRACTOR is responsible to verify and confirm in writing to the OWNER that:

(a) All SUB-CONTRACTORs, agents or workers meet the minimum coverage and limits plus maintain current certificates of coverage for all SUB-CONTRACTORs, agents or workers. SUB-CONTRACTORs must comply with the same insurance requirements as the CONTRACTOR.

(b) All coverage shall include adequate protection for activities involving hazardous materials.

(c) All work activities related to the agreement shall meet minimum coverage and limits.

No warranty is made that the coverage and limits listed herein are adequate to cover and protect the interests of the CONTRACTOR for the CONTRACTOR's operations. These are solely minimums that

have been developed and must be met to protect the interests of the OWNER.

GENERAL LIABILITY AND PROPERTY DAMAGE:

With respect to all operations performed by the CONTRACTOR, SUB-CONTRACTORs, agents or workers, it is the CONTRACTOR's responsibility to insure that general liability insurance coverage, on an occurrence form, provides all major divisions of coverage including, but not limited to and with limits not less than:

1. Premises Operations
2. Independent CONTRACTORS' Protective
3. Products and Completed Operations
4. Personal Injury Liability
5. Contractual Liability
6. Broad Form Property Damage
7. Medical Expenses
8. Collapse, Underground and Explosion Hazards

1. General Aggregate	**$2,000,000**
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

***WORKERS' COMPENSATION*: With respect to all operations performed, the CONTRACTOR shall carry workers compensation insurance in accordance with the laws of the State of Vermont and ensure that all SUB-CONTRACTORs and SUBCONTRACTORs carry the same workers' compensation insurance for all work performed by them under this contract. Minimum limits for Employer's Liability:**

(a) Bodily Injury by Accident: $500,000 each accident
(b) Bodily Injury by Disease: $500,000 policy limit, $500,000 each employee

~~***PROFESSIONAL LIABILITY INSURANCE:***~~

~~**(a) General. The CONTRACTOR shall carry architects/Owners professional liability insurance covering errors and omissions made during their performance of contractile duties with the following minimum limits:**~~
~~**$3,000,000 - Annual Aggregate**~~
~~**$1,000,000 - Per Occurrence**~~

~~**(b) Deductibles. The CONSULTANT is responsible for any and all deductibles.**~~

~~**(c) Coverage. N/A**~~

***AUTOMOBILE LIABILITY:* The CONTRACTOR shall carry commercial automobile liability insurance covering all motor vehicles, including owned, non-owned and hired, used in connection with the agreement. Each policy shall provide coverage with a limit not less than: $1,000,000 - Combined Single Limit for each occurrence.**

UMBRELLA LIABILITY:
$2,000,000 Each Event Limit

$2,000,000 General Aggregate Limit

23. **SETTLEMENTS OF MISUNDERSTANDINGS: In order to prevent misunderstandings and litigation, it is mutually agreed by all parties that all questions arising under the terms of an Agreement will first be evaluated by the Local Project Manager. Should a claim be denied in whole or in part by the Local Project Manager the CONTRACTOR may appeal to the Director of Public Works, except that for claims involving payments, appeals shall be made to the Director of Public Works and the Chief Administrative Officer.**

In agreements subjecting costs to final audit, an administrative review regarding the audit will be sent to the CONTRACTOR. Any dispute arising from an administrative decision shall be appealed in writing within thirty (30) days of receipt.

A CONTRACTOR may appeal any determination regarding the contract by filing a notice of appeal by hand delivery or courier to the Local Project Manager. The notice of appeal shall specifically state the grounds of the protest. Within seven (7) calendar days of the notice of appeal the CONTRACTOR must file the Municipality a detailed statement of the grounds, legal authorities and facts, Including all documents and evidentiary statements, in support of the appeal. Evidentiary statements, if any, shall be submitted under penalty of perjury. The CONTRACTOR shall have the burden of proving its appeal by the preponderance of the evidence. Failure to file a notice of appeal or a detailed statement within the applicable period shall constitute an unconditional waiver of the right to appeal the evaluation or qualified process and decisions.

24. AUDIT AND ACCESS TO RECORDS: For all negotiated Contracts, the OWNER, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the CONTRACTOR, which are pertinent to the Contract, for the purpose of making audits, examinations, excerpts and transcriptions. The CONTRACTOR shall maintain all required records for three years after final payment is made and all other pending matters are closed.

25. If the CONTRACTOR was not required to obtain OWNER approval of the SUBCONTRACTOR(s) prior to Award of the CONTRACT, the CONTRACTOR shall provide written notification to the OWNER within 10 working days of the CONTRACTOR's intent to employ SUBCONTRACTOR(s) on site. The notification shall list the name, address and telephone number of the SUBCONTRACTOR(s); estimated dollar amounts of SUBCONTRACT(s); estimated start and completion dates of the SUBCONTRACTOR(s) work.

26. PUBLIC RECORDS: The CONTRACTOR understands that any and all records related to and acquired by the City, whether electronic, paper, or otherwise recorded, are subject to the Vermont Public Records Act and that the determination of how those records must be handled is solely within the purview of City. The CONTRACTOR shall identify all records that it considers to be trade secrets as that term is defined by subsection 317(c)(9) of the Vermont Public Records Act and shall also identify all other records it considers to be exempt under the Act. It is not sufficient to merely state generally that the record is proprietary or a trade secret or is otherwise exempt. Particular records, pages or section which are believed to be exempt must be specifically identified as such and must be separated from other records with a convincing explanation and rationale sufficient to justify each exemption from release consistent with Section 317 of Title 1 of the Vermont Statutes Annotated.

27. **RELATIONSHIP: The parties agree that the CONTRACTOR is an independent CONTRACTOR. To that end, the CONTRACTOR shall determine the method, details, and means of performing the work, but will comply with all legal requirements in doing so. OWNER shall provide the CONTRACTOR with no specific instructions or training in how to provide the required services, except to the extent required by law or regulation. The CONTRACTOR shall provide its own tools, materials or equipment. The parties agree that neither the CONTRACTOR nor its Principal is an employee of OWNER or any of its departments, agencies, or related entities. The parties also agree that neither the CONTRACTOR nor its Principal is entitled to any employee benefits from OWNER. CONTRACTOR understands and agrees that it and its Principal have no right to claim any benefits under the Burlington Employee Retirement System, OWNER'S**

worker's compensation benefits, health insurance, dental insurance, life insurance or any other employee benefit plan offered by OWNER. The CONTRACTOR agrees to execute any certifications or other documents and provide any certificates of insurance required by OWNER and understands that this contract is conditioned on its doing so, if requested.
The CONTRACTOR understands and agrees that it is responsible for the payment of all taxes on the above sums and that OWNER will not withhold or pay for Social Security, Medicare, or other taxes or benefits or be responsible for any unemployment benefits.

28. **GENERAL COMPLIANCE WITH LAWS: The CONTRACTOR shall comply with all applicable Federal, State and local laws, including but not limited to the Burlington Livable Wage Ordinance, the Non-Outsourcing Ordinance and the Union-Deterrence Ordinance and shall provide the required certifications attesting to compliance with these ordinances (see attached ordinances and certifications). CONTRACTOR shall be required to resubmit Livable Wage Ordinance compliance forms annually if the contract period is greater than one year. These forms are due by April 1st of the current year to indicate compliance with the ordinance. CONTRACTOR shall be required to meet the current Livable Wage rates posted by the City annually starting July 1st, regardless of the Livable Wage rate at the time of contract execution.**

Provisions of the Agreement shall be interpreted and implemented in a manner consistent with each other and using procedures that will achieve the intent of both parties. If, for any reason, a provision in the Agreement is unenforceable or invalid, that provision shall be deemed severed from the Agreement, and the remaining provisions shall be carried out with the same force and effect as if the severed provisions had never been a part of the Agreement.

This Agreement shall be governed under the laws of the state of Vermont.

29. **CIVIL RIGHTS and EQUAL EMPLOYMENT OPPORTUNITY: During performance of the Agreement, the CONTRACTOR will not discriminate against any employee or applicant for employment because of race, age, color, religion, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status or genetic information.**

30. **TAX REQUIREMENTS: By signing the Agreement, the CONTRACTOR certifies, as required by law under 32 VSA, Section 3113, that under the pains and penalties of perjury, he/she is in good standing with respect to payment, or in full compliance with a plan to pay, any and all taxes due the State of Vermont as of the date of signature on the Agreement.**

31. **REGISTRATION: The CONTRACTOR agrees to be registered with the Vermont Secretary of State's office as a business entity doing business in the State of Vermont at all times this contract is effective. This registration must be complete prior to contract execution.**

32. **WAIVER. No waiver by City of any breach of this Agreement by the CONTRACTOR shall constitute a waiver of any subsequent breach by the CONTRACTOR, and no delay in enforcement of any breach shall be deemed a waiver of that breach.**

SUPPLEMENTAL GENERAL CONDITIONS

The following is an index of documents required by the City of Burlington. These documents are made part of the CONTRACT DOCUMENTS. The BIDDERS and CONTRACTOR shall comply with all requirements, provisions, policies and permits contained in the SUPPLEMENTAL GENERAL CONDITIONS.

INDEX:

Livable Wage Ordinance
Outsourcing Ordinance
Union Deterrence Ordinance
Prequalification of Contractors Application
City of Burlington Holidays
EPSC Requirements and Application
Permits Pertaining to Work

NOTE: This ordinance only applies for contracts over $15,000.

ARTICLE VI. LIVABLE WAGES[1]

21-80 Findings and purpose.

In enacting this article, the city council states the following findings and purposes:
(a) Income from full-time work should be sufficient to meet an individual's basic needs;
(b) The City of Burlington is committed to ensuring that its employees have an opportunity for a decent quality of life and are compensated such that they are not dependent on public assistance to meet their basic needs;
(c) The City of Burlington is committed, through its contracts with vendors and provision of financial assistance, to encourage the private sector to pay its employees a livable wage and contribute to employee health care benefits;
(d) The creation of jobs that pay livable wages promotes the prosperity and general welfare of the City of Burlington and its residents, increases consumer spending with local businesses, improves the economic welfare and security of affected employees and reduces expenditures for public assistance;
(e) It is the intention of the city council in passing this article to provide a minimum level of compensation for employees of the City of Burlington and employees of entities that enter into service contracts or receive financial assistance from the City of Burlington.
(Ord. of 11-19-01; Ord. of 10-21-13)

21-81 Definitions.

As used in this article, the following terms shall be defined as follows:
(a) *Contractor or vendor* is a person or entity that has a service contract with the City of Burlington where the total amount of the service contract or service contracts exceeds fifteen thousand dollars ($15,000.00) for any twelve (12) month period, including any subcontractors of such contractor or vendor.
(b) *Grantee* is a person or entity that is the recipient of financial assistance from the City of Burlington in the form of grants, including any contractors or subgrantees of the grantee, that exceed fifteen thousand dollars ($15,000.00) for any twelve (12) month period.
(c) *Covered employer* means the City of Burlington, a contractor or vendor or a grantee as defined above. The primary contractor, vendor, or grantee shall be responsible for the compliance of each of its subcontractors (or of each subgrantee) that is a covered employer.
(d) *Covered employee* means an "employee" as defined below, who is employed by a "covered employer," subject to the following:

(1) An employee who is employed by a contractor or vendor is a "covered employee" during the period of time he or she expends on furnishing services under a service contract with the City of Burlington, notwithstanding that the employee may be a temporary or seasonal employee;
(2) An employee who is employed by a grantee who expends at least half of his or her time on activities funded by the City of Burlington is a "covered employee."

(e) *Designated accountability monitor* shall mean a nonprofit corporation which has established and maintains valid nonprofit status under Section 501(c)(3) of the United States Internal Revenue Code of 1986, as amended, and that is independent of the parties it is monitoring.
(f) *Employee* means a person who is employed on a full-time or part-time regular basis. In addition, commencing with the next fiscal year, a seasonal or temporary employee of the City of Burlington who works ten (10) or more hours per week and has been employed by the City of Burlington for a period of four (4) years shall be considered a covered employee commencing in the fifth year of employment. "Employee" shall not refer to volunteers working without pay or for a nominal stipend, persons working in an approved apprenticeship program, persons who are hired for a prescribed period of six (6) months or less to fulfill the requirements to obtain a professional license as an attorney, persons who are hired through youth employment programs or student workers or interns participating in established educational internship programs.
(g) *Employer-assisted health care* means health care benefits provided by employers for employees (or employees and their dependents) at the employer's cost or at an employer contribution towards the purchase of such health care benefits, provided that the employer cost or contribution consists of at least one dollar and twenty cents ($1.20) per hour. (Said amount shall be adjusted every two (2) years for inflation, by the chief administrative officer of the city.)
(h) *Livable wage* has the meaning set forth in Section 21-82.
(i) *Retaliation* shall mean the denial of any right guaranteed under this article, and any threat, discipline, discharge, demotion, suspension, reduction of hours, or any other adverse action against an employee for exercising any right guaranteed under this article. Retaliation shall also include coercion, intimidation, threat, harassment, or interference in any manner with any investigation, proceeding, or hearing under this article.
(j) *Service contract* means a contract primarily for the furnishing of services to the City of Burlington (as opposed to the purchasing or leasing of goods or property). A contract involving the furnishing of financial products,

insurance products, or software, even if that contract also includes some support or other services related to the provision of the products, shall not be considered a service contract.
(Ord. of 11-19-01; Ord. of 10-21-13)

21-82 Livable wages required. (FY 19 update)

(a) Every covered employer shall pay each and every covered employee at least a livable wage no less than:

(1) For a covered employer that provides employer assisted health care, the livable wage shall be at least thirteen dollars and ninety-five cents **($14.52)** per hour on the effective date of the amendments to this article.

(2) For a covered employer that does not provide employer assisted health care, the livable wage shall be at least fifteen dollars and eighty-three cents **($16.20)** per hour on the effective date of the amendments to this article.

(3) Covered employees whose wage compensation consists of more or other than hourly wages, including, but not limited to, tips, commissions, flat fees or bonuses, shall be paid so that the total of all wage compensation will at least equal the livable wage as established under this article.

(b) The amount of the livable wage established in this section shall be adjusted by the chief administrative officer of the city as of July 1 of each year based upon a report of the Joint Fiscal Office of the State of Vermont that describes the basic needs budget for a single person but utilizes a model of two (2) adults residing in a two (2) bedroom living unit in an urban area with the moderate cost food plan. Should there be no such report from the Joint Fiscal Office, the chief administrative officer shall obtain and utilize a basic needs budget that applies a similar methodology. The livable wage rates derived from utilizing a model of two (2) adults residing in a two (2) bedroom living unit in an urban area with a moderate cost food plan shall not become effective until rates meet or exceed the 2010 posted livable wage rates. Prior to May 1 preceding any such adjustment and prior to May 1 of each calendar year thereafter, the chief administrative officer will provide public notice of this adjustment by posting a written notice in a prominent place in City Hall by sending written notice to the city council and, in the case of covered employers that have requested individual notice and provided contact information to the chief administrative officer, by notice to each such covered employer. However, once a livable wage is applied to an individual employee, no reduction in that employee's pay rate is permissible due to this annual adjustment.

(c) Covered employers shall provide at least twelve (12) compensated days off per year for full-time covered employees, and a proportionate amount for part-time covered employees, for sick leave, vacation, personal, or combined time off leave.
(Ord. of 11-19-01; Ord. of 5-2-11; Ord. of 6-13-11; Ord. of 10-21-13)

21-83 Applicability.

(a) This article shall apply to any service contract or grant, as provided by this article that is awarded or entered into after the effective date of the article. After the effective date of the article, entering into any agreement or an extension, renewal or amendment of any contract or grant as defined herein shall be subject to compliance with this article.

(b) The requirements of this article shall apply during the term of any service contract subject to the article. Covered employers who receive grants shall comply with this article during the period of time the funds awarded by the City of Burlington are being expended by the covered employer.
(Ord. of 11-19-01; Ord. of 10-21-13)

21-84 Enforcement.

(a) Each service contract or grant covered by this article shall contain provisions requiring that the covered employer or grantee submit a written certification, under oath, during each year during the term of the service contract or grant, that the covered employer or grantee (including all of its subcontractors and subgrantees, if any) is in compliance with this article. The failure of a contract to contain such provisions does not excuse a covered employer from its obligations under this article. The covered employer shall agree to post a notice regarding the applicability of this section in any workplace or other location where employees or other persons contracted for employment are working. The covered employer shall agree to provide payroll records or other documentation for itself and any subcontractors or subgrantees, as deemed necessary by the chief administrative officer of the City of Burlington, within ten (10) business days from receipt of the City of Burlington's request.

(b) The chief administrative officer of the City of Burlington may require that a covered employer submit proof of compliance with this article at any time, including but not limited to:

(1) Verification of an individual employee's compensation;

(2) Production of payroll, health insurance enrollment records, or other relevant documentation; or

(3) Evidence of proper posting of notice.

If a covered employer is not able to provide that information within ten (10) business days of the request, the chief administrative officer may turn the matter over to the city attorney's office for further enforcement proceedings.

(c) The City of Burlington shall appoint a designated accountability monitor that shall have the authority:

(1) To inform and educate employees of all applicable provisions of this article and other applicable laws, codes, and regulations;
(2) To create a telephonic and electronic accountability system under this article that shall be available at all times to receive complaints under this article;
(3) To establish and implement a system for processing employees' complaints under this article, including a system for investigating complaints and determining their initial credibility; and
(4) To refer credible complaints to the city attorney's office for potential enforcement action under this article.

The designated accountability monitor shall forward to the City of Burlington all credible complaints of violations within ten (10) days of their receipt.

(d) Any covered employee who believes his or her covered employer is not complying with this article may file a complaint in writing with the city attorney's office within one (1) year after the alleged violation. The city attorney's office shall conduct an investigation of the complaint, during which it may require from the covered employer evidence such as may be required to determine whether the covered employer has been compliant, and shall make a finding of compliance or noncompliance within a reasonable time after receiving the complaint. Prior to ordering any penalty provided in subsection (e), (f), or (g) of this section, the city attorney's office shall give notice to the covered employer. The covered employer may request a hearing within thirty (30) days of receipt of such notice. The hearing shall be conducted by a hearing officer appointed by the city attorney's office, who shall affirm or reverse the finding or the penalty based upon evidence presented by the city attorney's office and the covered employer.

(e) The City of Burlington shall have the right to modify, terminate and/or seek specific performance of any contract or grant with a covered employer from any court of competent jurisdiction, if the covered employer has not complied with this article.

(f) Any covered employer who violates this article may be barred from receiving a contract or grant from the city for a period up to two (2) years from the date of the finding of violation.

(g) A violation of this article shall be a civil offense subject to a civil penalty of from two hundred dollars ($200.00) to five hundred dollars ($500.00). All law enforcement officers and any other duly authorized municipal officials are authorized to issue a municipal complaint for a violation of this article. Each day any covered employee is not compensated as required by this article shall constitute a separate violation.

(h) If a complaint is received that implicates any City of Burlington employee in a possible violation of this article, that complaint will be handled through the City's personnel procedures, not through the process outlined in this article.

(i) Any covered employee aggrieved by a violation of this article may bring a civil action in a court of competent jurisdiction against the covered employer within two (2) years after discovery of the alleged violation. The court may award any covered employee who files suit pursuant to this section, as to the relevant period of time, the following:
(1) The difference between the livable wage required under this article and the amount actually paid to the covered employee;
(2) Equitable payment for any compensated days off that were unlawfully denied or were not properly compensated;
(3) Liquidated damages in an amount equal to the amount of back wages and/or compensated days off unlawfully withheld or fifty dollars ($50.00) for each employee or person whose rights under this article were violated for each day that the violation occurred or continued, whichever is greater;
(4) Reinstatement in employment and/or injunctive relief; and
(5) Reasonable attorneys' fees and costs.

(j) It shall be unlawful for an employer or any other person to interfere with, restrain, or deny the exercise of, or the attempt to exercise, any right protected under this article. No person shall engage in retaliation against an employee or threaten to do so because such employee has exercised rights or is planning to exercise rights protected under this article or has cooperated in any investigation conducted pursuant to this article.

(Ord. of 11-19-01; Ord. of 2-17-04; Ord. of 5-2-11; Ord. of 10-21-13)

21-85 Other provisions.

(a) No covered employer shall reduce the compensation, wages, fringe benefits or leave available to any covered employee in order to pay the livable wage required by this article. Any action in violation of this subsection shall be deemed a violation of this article subject to the remedies of Section 21-84.

(b) No covered employer with a current contract, as of the effective date of this provision, with the City of Burlington for the use of property located at the Burlington International Airport may reduce, during the term of that contract, the wages of a covered employee below the livable wage as a result of amendments to this article.

(c) Where pursuant to a contract for services with the city, the contractor or subcontractor incurs a contractual obligation to pay its employees certain wage rates, in no case except as stated in subsection (d) of this section,

shall the wage rates paid pursuant to that contract be less than the minimum livable wage paid pursuant to this article.

(d) Notwithstanding subsection (c) of this section, where employees are represented by a bargaining unit or labor union pursuant to rights conferred by state or federal law and a collective bargaining labor agreement is in effect governing the terms and conditions of employment of those employees, this chapter shall not apply to those employees, and the collective bargaining labor agreement shall control.

(e) Covered employers shall inform employees making less than twelve dollars ($12.00) per hour of their possible right to the Earned Income Tax Credit under federal and state law.

(f) The chief administrative officer of the city shall have the authority to promulgate rules as necessary to administer the provisions of this article, which shall become effective upon approval by the city council.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-86 Exemptions.

An exemption from any requirement of this article may be requested for a period not to exceed two (2) years:

(a) By a covered employer where payment of the livable wage would cause substantial economic hardship; and

(b) By the City of Burlington where application of this article to a particular contract or grant is found to violate specific state or federal statutory, regulatory or constitutional provisions or where granting the exemption would be in the best interests of the City.

A covered employer or grantee granted an exemption under this section may reapply for an exemption upon the expiration of the exemption. Requests for exemption may be granted by majority vote of the city council. All requests for exemption shall be submitted to the chief administrative officer. The finance committee of the City of Burlington shall first consider such request and make a recommendation to the city council. The decision of the city council shall be final.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-87 Severability.

If any part or parts or application of any part of this article is held invalid, such holding shall not affect the validity of the remaining parts of this article.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-88 Annual reporting.

On or before April 15 of each year, the city attorney's office shall submit a report to the city council that provides the following information:

(a) A list of all covered employers broken down by department;

(b) A list of all covered employers whose service contract did not contain the language required by this article; and

(c) All complaints filed and investigated by the city attorney's office and the results of such investigation.

(Ord. of 10-21-13)

21-89 Effective date.

The amendments to this article shall take effect on January 1, 2014, and shall not be retroactively applied.

(Ord. of 10-21-13)

1

Cross reference—Personnel, Ch. 24.

BURLINGTON'S OUTSOURCING ORDINANCE

ARTICLE VII. OUTSOURCING

21-90 Policy.

It is the policy of the City of Burlington to let service contracts to contractors, subcontractors and vendors who perform work in the United States.

(Ord. of 11-21-05/12-21-05)

21-91 Definitions.

(a) *Contractor* or *vendor.* A person or entity that has a contract with the City of Burlington primarily for the furnishing of services (as opposed to the purchasing of goods), including any subcontractors of such contractor or vendor.

(b) *Government funded project.* Any contract for services which involves any city funds and the total amount of the contract is fifty thousand dollars ($50,000.00) or more. Burlington School Department contracts shall not be considered government funded projects under this article.

(c) *Outsourcing.* The assigning or reassigning, directly, or indirectly through subcontracting, of services under a government funded project to workers performing the work outside of the United States.

(Ord. of 11-21-05/12-21-05)

21-92 Implementation.

(a) No contract for a government funded project shall be let to any contractor, subcontractor, or vendor who is outsourcing, or causing the work to be performed outside of the United States or Canada.

(b) Prior to the commencement of work on a government funded project a contractor, subcontractor or vendor shall provide written certification that the services provided under the contract will be performed in the United States or Canada.

(Ord. of 11-21-05/12-21-05)

21-93 Exemption.

An exemption from requirements of this article may be authorized by the chief administrative officer based upon a determination that the services to be performed for the government funded project are not available in the United States or Canada at a reasonable cost. Any such exemption decision by the chief administrative officer shall be reported to the board of finance in writing within five (5) days. The board of finance may, if it should vote to do so, override the exemption decision if such vote occurs within fourteen (14) days of the date of the chief administrative officer's communication to such board.

(Ord. of 11-21-05/12-21-05)

21-94 Enforcement.

(a) Any contractor, subcontractor or vendor who files false or materially misleading information in connection with an application, certification or request for information pursuant to the provisions of this article or outsources work on a government funded project shall be deemed to be in violation of this article.

(b) A violation of this article shall be a civil offense subject to a civil penalty of from one hundred dollars ($100.00) to five hundred ($500.00). All law enforcement officers and any other duly authorized municipal officials are authorized to issue a municipal complaint for a violation of this article. Each day any violation of any provision of this article shall continue shall constitute a separate violation.

(c) The City of Burlington shall have the right to modify, terminate and or seek specific performance of any contract for a government funded project if the contractor, subcontractor or vendor has not complied with this article.

(Ord. of 11-21-05/12-21-05)

21-95—21-99 Reserved.

BURLINGTON'S UNION DETERRENCE ORDINANCE

ARTICLE VIII. UNION DETERRENCE

21-100 Policy.

It is the policy of the City of Burlington to limit letting contracts to organizations that provide union deterrence services to other companies.
(Ord. of 3-27-06/4-26-06)

21-101 Definitions.

(a) *Contractor or vendor.* A person or entity that has a contract with the City of Burlington primarily for the furnishing of services (as opposed to the purchasing of goods), including any subcontractors of such contractor or vendor.

(b) *Government funded project.* Any contract for services which involves any City funds and the total amount of the contract is fifteen thousand dollars ($15,000.00) or more. Burlington School Department contracts shall not be considered government funded projects under this article.

(c) *Union deterrence services.* Services provided by a contractor, subcontractor or vendor that are not restricted to advice concerning what activities by an employer are prohibited and permitted by applicable laws and regulations, but extend beyond such legal advice to encouraging an employer to do any of the following:

1) Hold captive audience, (i.e., mandatory) meetings with employees encouraging employees to vote against the union;
2) Have supervisors force workers to meet individually with them to discuss the union;
3) Imply to employees, whether through written or oral communication, that their employer may have to shut down or lay people off if the union wins the election;
4) Discipline or fire workers for union activity;
5) Train managers on how to dissuade employees from supporting the union.

(d) *Substantial portion of income.* For the purposes of this article, substantial portion of income shall mean greater than ten (10) percent of annual gross revenues or one hundred thousand dollars ($100,000.00), whichever is less.
(Ord. of 3-27-06/4-26-06)

21-102 Implementation.

(a) No contract for a government funded project shall be let to any contractor, subcontractor, or vendor who

1) Advises or has advised an employer to conduct any illegal activity in its dealings with a union.
2) Advertises union deterrence services as specialty services;
3) Earns a substantial portion of its income by providing union deterrence services to other companies in order to defeat union organizing efforts.

(b) Prior to the commencement of work on a government funded project a contractor, subcontractor or vendor shall provide written certification that it has not advised the conduct of any illegal activity, it does not currently, nor will it over the life of the contract provide union deterrence services in violation of this article.
(Ord. of 3-27-06/4-26-06)

21-103 Enforcement.

(a) Any contractor, subcontractor or vendor who files false or materially misleading information in connection with an application, certification or request for information pursuant to the provisions of this article or provided union deterrence services during the life of a contract for a government funded project shall be deemed to be in violation of this article.

(b) The City of Burlington shall have the right to modify, terminate and or seek specific performance of any contract for a government funded project if the contractor, subcontractor or vendor has not complied with this article.(Ord. of 3-27-06/4-26-06)

21-104—21-110 Reserved.

HAZARDOUS MATERIALS AND HISTORIC PRESERVATION

1. If at any time during construction the presence of unanticipated hazardous materials at or proximate to a construction site is detected, the construction CONTRACTOR shall cease work in the affected area and perform the following immediately:

   a. Notify the OWNER verbally and in writing. The OWNER is responsible for notification of the Waste Management Division of the Agency of Natural Resources.

      THE HAZARDOUS MATERIALS SPILLS AND EMERGENCY REPORTING PHONE NUMBER IS Toll Free 1-800-641-5005.

   b. Take all action necessary and appropriate for the protection and safety of the public and persons at or about the site, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying OWNERs and users of adjacent sites and utilities.

2. Actions at the construction site following completion of these steps shall be at the direction of the Waste Management Division. Nothing in this Article shall be construed to require the CONSULTANT and/or the CONTRACTOR to perform work for which adequate compensation has not been contracted for other than to insure that basic measures necessary to protect the health and welfare of workers, residents and abutters are immediately adopted.

3. At construction sites where the presence of contaminated or hazardous materials are suspected to exist and provisions have been made in the Contract Documents for their management, the requirements in the Contract Documents will determine the appropriate actions of the CONTRACTOR. In any event, discovery of contaminated soils require the immediate notification of the OWNER. If sites other than the suspected areas previously delineated in the Contract Documents are discovered, Item 1 above shall apply.

HISTORIC PRESERVATION

1. If at any time during construction, the presence of possible human remains are discovered at or proximate to a construction site, the CONTRACTOR shall cease work in the affected area and immediately contact the local medical examiner or law enforcement official in addition to notifying the OWNER or OWNER's representative. The CONTRACTOR shall take all action necessary and appropriate for the protection and safety of the public and the site.

   a. Notify the OWNER verbally and in writing. The OWNER is responsible for notification of the Agency of Natural Resources and FED Construction Project Owner

2. If at any time during construction, the presence of unanticipated historic and archeological resources are detected at or proximate to a construction site, the construction CONTRACTOR shall cease work in the affected area, take all action necessary and appropriate for the protection and safety of the public and the site, and inform the following immediately:

   a. Notify the OWNER verbally and in writing. The OWNER is responsible for notification of the Agency of Natural Resources.

   b. Notify the Vermont Division of Historic Preservation at: **(802) 828-3050 landline or (802) 477-2517 cell Or (802) 828-3048 landline or (802) 310-0289 cell**

3. Actions at the construction site following completion of these steps shall be at the direction of the local medical examiner, law enforcement agent or Historic Preservation Division as appropriate. Nothing in this Article shall be construed to require the CONSULTANT and/or the CONTRACTOR to perform work for which adequate compensation has not been contracted for other than to insure that basic measures necessary to protect the safety and welfare of the workers and the site.

APPENDIX A

Eastern Analytical, Inc.

professional laboratory and drilling services

J. Kurt Muller
The Johnson Company
100 State Street
Montpelier , VT 05602

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 185143
Client Identification: Pine Street Relining | 3-3016-04
Date Received: 8/7/2018

Dear Mr. Muller :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.easternanalytical.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012) and New York (12072).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample (s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director | 8.16.18 Date | 33 # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Temperature upon receipt (°C): 1.5 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
185143.01	COMP-1-PI	8/7/18	8/6/18	soil	83.0	Adheres to Sample Acceptance Policy
185143.02	COMP-2	8/7/18	8/6/18	soil	90.5	Adheres to Sample Acceptance Policy
185143.03	Trip Blank	8/7/18	8/6/18	soil	100.0	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.
All results contained in this report relate only to the above listed samples.
References include:
1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd Edition or noted Revision year.
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 4th edition, 1992

LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2	Trip Blank
Lab Sample ID:	185143.01	185143.02	185143.03
Matrix:	soil	soil	soil
Date Sampled:	8/6/18	8/6/18	8/6/18
Date Received:	8/7/18	8/7/18	8/7/18
Units:	mg/kg	mg/kg	mg/kg
Date of Analysis:	8/8/18	8/8/18	8/8/18
Analyst:	VG	VG	VG
Method:	8260C	8260C	8260C
Dilution Factor:	1	1	1
Dichlorodifluoromethane	< 0.1	< 0.1	< 0.1
Chloromethane	< 0.1	< 0.1	< 0.1
Vinyl chloride	< 0.1	< 0.1	< 0.1
Bromomethane	< 0.2	< 0.2	< 0.2
Chloroethane	< 0.1	< 0.1	< 0.1
Trichlorofluoromethane	< 0.1	< 0.1	< 0.1
Diethyl Ether	< 0.05	< 0.05	< 0.05
Acetone	< 2	< 2	< 2
1,1-Dichloroethene	< 0.05	< 0.05	< 0.05
Methylene chloride	< 0.1	< 0.1	< 0.1
Carbon disulfide	< 0.1	< 0.1	< 0.1
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	< 0.05	< 0.05	< 0.05
2,2-Dichloropropane	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05
2-Butanone(MEK)	< 0.5	< 0.5	< 0.5
Bromochloromethane	< 0.05	< 0.05	< 0.05
Tetrahydrofuran(THF)	< 0.5	< 0.5	< 0.5
Chloroform	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	< 0.05	< 0.05	< 0.05
Carbon tetrachloride	< 0.05	< 0.05	< 0.05
1,1-Dichloropropene	< 0.05	< 0.05	< 0.05
Benzene	**0.26**	**0.12**	< 0.05
1,2-Dichloroethane	< 0.05	< 0.05	< 0.05
Trichloroethene	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	< 0.05	< 0.05	< 0.05
Dibromomethane	< 0.05	< 0.05	< 0.05
Bromodichloromethane	< 0.05	< 0.05	< 0.05
4-Methyl-2-pentanone(MIBK)	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05
Toluene	**1.0**	< 0.05	< 0.05
trans-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	< 0.05	< 0.05	< 0.05
2-Hexanone	< 0.1	< 0.1	< 0.1
Tetrachloroethene	< 0.05	< 0.05	< 0.05
1,3-Dichloropropane	< 0.05	< 0.05	< 0.05
Dibromochloromethane	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane(EDB)	< 0.05	< 0.05	< 0.05
Chlorobenzene	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05
Ethylbenzene	**1.7**	< 0.05	< 0.05
mp-Xylene	**2.9**	< 0.05	< 0.05
o-Xylene	**1.4**	< 0.05	< 0.05
Styrene	**0.77**	< 0.05	< 0.05
Bromoform	< 0.05	< 0.05	< 0.05
IsoPropylbenzene	**0.16**	< 0.05	< 0.05

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LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2	Trip Blank
Lab Sample ID:	185143.01	185143.02	185143.03
Matrix:	soil	soil	soil
Date Sampled:	8/6/18	8/6/18	8/6/18
Date Received:	8/7/18	8/7/18	8/7/18
Units:	mg/kg	mg/kg	mg/kg
Date of Analysis:	8/8/18	8/8/18	8/8/18
Analyst:	VG	VG	VG
Method:	8260C	8260C	8260C
Dilution Factor:	1	1	1
Bromobenzene	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05
1,2,3-Trichloropropane	< 0.05	< 0.05	< 0.05
n-Propylbenzene	**0.26**	< 0.05	< 0.05
2-Chlorotoluene	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	< 0.05	< 0.05	< 0.05
1,3,5-Trimethylbenzene	**0.61**	< 0.05	< 0.05
tert-Butylbenzene	< 0.05	< 0.05	< 0.05
1,2,4-Trimethylbenzene	**1.7**	< 0.05	< 0.05
sec-Butylbenzene	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	< 0.05	< 0.05	< 0.05
p-Isopropyltoluene	**0.060**	< 0.05	< 0.05
1,4-Dichlorobenzene	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	< 0.05	< 0.05	< 0.05
n-Butylbenzene	**0.080**	< 0.05	< 0.05
1,2-Dibromo-3-chloropropane	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	< 0.05	< 0.05	< 0.05
Naphthalene	**2.2**	**0.14**	< 0.1
1,2,3-Trichlorobenzene	< 0.05	< 0.05	< 0.05
4-Bromofluorobenzene (surr)	**104 %R**	**103 %R**	**100 %R**
1,2-Dichlorobenzene-d4 (surr)	**102 %R**	**99 %R**	**100 %R**
2,5-Dibromotoluene (surr)	**154 %R**	**143 %R**	**86 %R**
Toluene-d8 (surr)	**104 %R**	**102 %R**	**102 %R**

The value(s) for n-Butylbenzene may be elevated due to non-target interference.

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QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 0.1			8/8/2018	mg/kg			8260C
Chloromethane	< 0.1			8/8/2018	mg/kg			8260C
Vinyl chloride	< 0.1			8/8/2018	mg/kg			8260C
Bromomethane	< 0.2			8/8/2018	mg/kg			8260C
Chloroethane	< 0.1			8/8/2018	mg/kg			8260C
Trichlorofluoromethane	< 0.1			8/8/2018	mg/kg			8260C
Diethyl Ether	< 0.05			8/8/2018	mg/kg			8260C
Acetone	< 2			8/8/2018	mg/kg			8260C
1,1-Dichloroethene	< 0.05	0.78 (78 %R)	0.79 (79 %R) (1 RPD)	8/8/2018	mg/kg	59 - 172	20	8260C
tert-Butyl Alcohol (TBA)	< 2			8/8/2018	mg/kg			8260C
Methylene chloride	< 0.1			8/8/2018	mg/kg			8260C
Carbon disulfide	< 0.1			8/8/2018	mg/kg			8260C
Methyl-t-butyl ether(MTBE)	< 0.1			8/8/2018	mg/kg			8260C
Ethyl-t-butyl ether(ETBE)	< 0.1			8/8/2018	mg/kg			8260C
Isopropyl ether(DIPE)	< 0.1			8/8/2018	mg/kg			8260C
tert-amyl methyl ether(TAME)	< 0.1			8/8/2018	mg/kg			8260C
trans-1,2-Dichloroethene	< 0.05			8/8/2018	mg/kg			8260C
1,1-Dichloroethane	< 0.05			8/8/2018	mg/kg			8260C
2,2-Dichloropropane	< 0.05			8/8/2018	mg/kg			8260C
cis-1,2-Dichloroethene	< 0.05			8/8/2018	mg/kg			8260C
2-Butanone(MEK)	< 0.5			8/8/2018	mg/kg			8260C
Bromochloromethane	< 0.05			8/8/2018	mg/kg			8260C
Tetrahydrofuran(THF)	< 0.5			8/8/2018	mg/kg			8260C
Chloroform	< 0.05			8/8/2018	mg/kg			8260C
1,1,1-Trichloroethane	< 0.05			8/8/2018	mg/kg			8260C
Carbon tetrachloride	< 0.05			8/8/2018	mg/kg			8260C
1,1-Dichloropropene	< 0.05			8/8/2018	mg/kg			8260C
Benzene	< 0.05	1.1 (106 %R)	1.1 (105 %R) (0 RPD)	8/8/2018	mg/kg	66 - 142	20	8260C
1,2-Dichloroethane	< 0.05			8/8/2018	mg/kg			8260C
Trichloroethene	< 0.05	1.0 (101 %R)	1.0 (100 %R) (1 RPD)	8/8/2018	mg/kg	62 - 137	20	8260C
1,2-Dichloropropane	< 0.05			8/8/2018	mg/kg			8260C
Dibromomethane	< 0.05			8/8/2018	mg/kg			8260C
Bromodichloromethane	< 0.05			8/8/2018	mg/kg			8260C
1,4-Dioxane	< 3			8/8/2018	mg/kg			8260C
4-Methyl-2-pentanone(MIBK)	< 0.5			8/8/2018	mg/kg			8260C
cis-1,3-Dichloropropene	< 0.05			8/8/2018	mg/kg			8260C
Toluene	< 0.05	1.0 (104 %R)	1.0 (103 %R) (1 RPD)	8/8/2018	mg/kg	59 - 139	20	8260C
trans-1,3-Dichloropropene	< 0.05			8/8/2018	mg/kg			8260C
1,1,2-Trichloroethane	< 0.05			8/8/2018	mg/kg			8260C
2-Hexanone	< 0.1			8/8/2018	mg/kg			8260C
Tetrachloroethene	< 0.05			8/8/2018	mg/kg			8260C
1,3-Dichloropropane	< 0.05			8/8/2018	mg/kg			8260C
Dibromochloromethane	< 0.05			8/8/2018	mg/kg			8260C
1,2-Dibromoethane(EDB)	< 0.05			8/8/2018	mg/kg			8260C
Chlorobenzene	< 0.05	1.1 (106 %R)	1.1 (106 %R) (0 RPD)	8/8/2018	mg/kg	60 - 133	20	8260C
1,1,1,2-Tetrachloroethane	< 0.05			8/8/2018	mg/kg			8260C

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QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	< 0.05			8/8/2018	mg/kg			8260C
mp-Xylene	< 0.05			8/8/2018	mg/kg			8260C
o-Xylene	< 0.05			8/8/2018	mg/kg			8260C
Styrene	< 0.05			8/8/2018	mg/kg			8260C
Bromoform	< 0.05			8/8/2018	mg/kg			8260C
IsoPropylbenzene	< 0.05			8/8/2018	mg/kg			8260C
Bromobenzene	< 0.05			8/8/2018	mg/kg			8260C
1,1,2,2-Tetrachloroethane	< 0.05			8/8/2018	mg/kg			8260C
1,2,3-Trichloropropane	< 0.05			8/8/2018	mg/kg			8260C
n-Propylbenzene	< 0.05			8/8/2018	mg/kg			8260C
2-Chlorotoluene	< 0.05			8/8/2018	mg/kg			8260C
4-Chlorotoluene	< 0.05			8/8/2018	mg/kg			8260C
1,3,5-Trimethylbenzene	< 0.05			8/8/2018	mg/kg			8260C
tert-Butylbenzene	< 0.05			8/8/2018	mg/kg			8260C
1,2,4-Trimethylbenzene	< 0.05			8/8/2018	mg/kg			8260C
sec-Butylbenzene	< 0.05			8/8/2018	mg/kg			8260C
1,3-Dichlorobenzene	< 0.05			8/8/2018	mg/kg			8260C
p-Isopropyltoluene	< 0.05			8/8/2018	mg/kg			8260C
1,4-Dichlorobenzene	< 0.05			8/8/2018	mg/kg			8260C
1,2-Dichlorobenzene	< 0.05			8/8/2018	mg/kg			8260C
n-Butylbenzene	< 0.05			8/8/2018	mg/kg			8260C
1,2-Dibromo-3-chloropropane	< 0.05			8/8/2018	mg/kg			8260C
1,3,5-Trichlorobenzene	< 0.05			8/8/2018	mg/kg			8260C
1,2,4-Trichlorobenzene	< 0.05			8/8/2018	mg/kg			8260C
Hexachlorobutadiene	< 0.05			8/8/2018	mg/kg			8260C
Naphthalene	< 0.1			8/8/2018	mg/kg			8260C
1,2,3-Trichlorobenzene	< 0.05			8/8/2018	mg/kg			8260C
4-Bromofluorobenzene (surr)	99 %R	97 %R	99 %R	8/8/2018	% Rec	70 - 130	20	8260C
1,2-Dichlorobenzene-d4 (surr)	98 %R	99 %R	99 %R	8/8/2018	% Rec	70 - 130	20	8260C
2,5-Dibromotoluene (surr)	72 %R	77 %R	71 %R	8/8/2018	% Rec	40 - 160	20	8260C
Toluene-d8 (surr)	102 %R	102 %R	103 %R	8/8/2018	% Rec	70 - 130	20	8260C
1,2-Dichloroethane-d4 (surr)	105 %R	109 %R	107 %R	8/8/2018	% Rec	70 - 130	20	8260C

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.
Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.

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LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2	Trip Blank
Lab Sample ID:	185143.01	185143.02	185143.03
Matrix:	soil	soil	soil
Date Sampled:	8/6/18	8/6/18	8/6/18
Date Received:	8/7/18	8/7/18	8/7/18
Units:	mg/kg	mg/kg	mg/kg
Date of Analysis:	8/8/18	8/8/18	8/8/18
Analyst:	VG	VG	VG
Method:	8015Cmod	8015Cmod	8015Cmod
Dilution Factor:	2	1	1
TPH (Gasoline Range C6-C12)	**47**	< 3	< 3
FID 2,5-Dibromotoluene (surr)	**122 %R**	**109 %R**	**105 %R**

QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
TPH (Gasoline Range C6-C12)	< 3	5.4 (108 %R)	5.6 (112 %R) (4 RPD)	mg/kg	8/8/18	80 - 120	30	8015Cmod
FID 2,5-Dibromotoluene (surr)	97 %R	103 %R	101 %R	% Rec	8/8/18	70 - 130	30	8015Cmod

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Client Sample ID:	COMP-1-PI		**Date Prepared:**	8/8/18	
Lab Sample ID:	185143.01		**Units:**	mg/kg	
Matrix:	soil		**Method:**	8270D	
Date Sampled:	8/6/18		**Analyst:**	JMR	
Date Received:	8/7/18	**Dilution Factor**	**Date Analyzed**	**TEF**	**TEQ**
alpha-Terpineol	< 0.4	1	8/9/18		
Phenol	< 0.08	1	8/9/18		
2-Chlorophenol	< 0.08	1	8/9/18		
2,4-Dichlorophenol	< 0.08	1	8/9/18		
2,4,5-Trichlorophenol	< 0.08	1	8/9/18		
2,4,6-Trichlorophenol	< 0.08	1	8/9/18		
Pentachlorophenol	< 0.4	1	8/9/18		
2-Nitrophenol	< 0.4	1	8/9/18		
4-Nitrophenol	< 0.4	1	8/9/18		
2,4-Dinitrophenol	< 0.8	1	8/9/18		
2-Methylphenol	< 0.08	1	8/9/18		
3/4-Methylphenol	< 0.08	1	8/9/18		
2,4-Dimethylphenol	< 0.4	1	8/9/18		
4-Chloro-3-methylphenol	< 0.08	1	8/9/18		
4,6-Dinitro-2-methylphenol	< 0.4	1	8/9/18		
Benzoic Acid	< 4	1	8/9/18		
N-Nitrosodimethylamine	< 0.08	1	8/9/18		
n-Nitroso-di-n-propylamine	< 0.08	1	8/9/18		
n-Nitrosodiphenylamine	< 0.08	1	8/9/18		
bis(2-Chloroethyl)ether	< 0.08	1	8/9/18		
bis(2-chloroisopropyl)ether	< 0.08	1	8/9/18		
bis(2-Chloroethoxy)methane	< 0.08	1	8/9/18		
1,3-Dichlorobenzene	< 0.08	1	8/9/18		
Acetophenone	< 0.8	1	8/9/18		
1,4-Dichlorobenzene	< 0.08	1	8/9/18		
1,2-Dichlorobenzene	< 0.08	1	8/9/18		
1,2,4-Trichlorobenzene	< 0.08	1	8/9/18		
2-Chloronaphthalene	< 0.08	1	8/9/18		
4-Chlorophenyl-phenylether	< 0.08	1	8/9/18		
4-Bromophenyl-phenylether	< 0.08	1	8/9/18		
Hexachloroethane	< 0.08	1	8/9/18		
Hexachlorobutadiene	< 0.08	1	8/9/18		
Hexachlorocyclopentadiene	< 0.4	1	8/9/18		
Hexachlorobenzene	< 0.08	1	8/9/18		
4-Chloroaniline	< 0.08	1	8/9/18		
2,3-Dichloroaniline	< 0.08	1	8/9/18		
2-Nitroaniline	< 0.4	1	8/9/18		
3-Nitroaniline	< 0.4	1	8/9/18		
4-Nitroaniline	< 0.4	1	8/9/18		
Aniline	< 0.08	1	8/9/18		
Benzyl alcohol	< 0.8	1	8/9/18		
Nitrobenzene	< 0.08	1	8/9/18		
Isophorone	< 0.08	1	8/9/18		
2,4-Dinitrotoluene	< 0.4	1	8/9/18		
2,6-Dinitrotoluene	< 0.4	1	8/9/18		
Benzidine (estimated)	< 0.4	1	8/9/18		

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LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Client Sample ID:	COMP-1-PI		**Date Prepared:**		8/8/18
Lab Sample ID:	185143.01		**Units:**		mg/kg
Matrix:	soil		**Method:**		8270D
Date Sampled:	8/6/18		**Analyst:**		JMR
Date Received:	8/7/18	**Dilution Factor**	**Date Analyzed**	**TEF**	**TEQ**
3,3'-Dichlorobenzidine	< 0.08	1	8/9/18		
Pyridine	< 0.4	1	8/9/18		
Azobenzene	< 0.08	1	8/9/18		
Carbazole	< 0.08	1	8/9/18		
Dimethylphthalate	< 0.08	1	8/9/18		
Diethylphthalate	< 0.4	1	8/9/18		
Di-n-butylphthalate	< 0.4	1	8/9/18		
Butylbenzylphthalate	< 0.4	1	8/9/18		
bis(2-Ethylhexyl)phthalate	< 0.4	1	8/9/18		
Di-n-octylphthalate	< 0.4	1	8/9/18		
Dibenzofuran	< 0.08	1	8/9/18		
Naphthalene	**0.28**	1	8/9/18		
2-Methylnaphthalene	**0.039**	1	8/9/18		
1-Methylnaphthalene	**0.024**	1	8/9/18		
Acenaphthylene	**0.021**	1	8/9/18		
Acenaphthene	< 0.008	1	8/9/18		
Fluorene	< 0.008	1	8/9/18		
Phenanthrene	**0.037**	1	8/9/18		
Anthracene	**0.015**	1	8/9/18		
Fluoranthene	**0.067**	1	8/9/18		
Pyrene	**0.070**	1	8/9/18		
Benzo[a]anthracene	**0.043**	1	8/9/18	0.1	.0043
Chrysene	**0.050**	1	8/9/18	0.001	.00005
Benzo[b]fluoranthene	**0.070**	1	8/9/18	0.1	.007
Benzo[k]fluoranthene	**0.025**	1	8/9/18	0.01	.00025
Benzo[a]pyrene	**0.057**	1	8/9/18	1	.057
Indeno[1,2,3-cd]pyrene	**0.054**	1	8/9/18	0.1	.0054
Dibenz[a,h]anthracene	**0.013**	1	8/9/18	1	.013
Benzo[g,h,i]perylene	**0.051**	1	8/9/18		
n-Decane	< 0.4	1	8/9/18		
n-Octadecane	< 0.4	1	8/9/18		
2-Fluorophenol (surr)	**67 %R**		8/9/18		
Phenol-d6 (surr)	**73 %R**		8/9/18		
2,4,6-Tribromophenol (surr)	**81 %R**		8/9/18		
Nitrobenzene-D5 (surr)	**68 %R**		8/9/18		
2-Fluorobiphenyl (surr)	**69 %R**		8/9/18		
p-Terphenyl-D14 (surr)	**86 %R**		8/9/18		

TEF: Toxicity Equivalent Factor TEQ: Toxicity Equivalence to Benzo[a]pyrene

The TEF factors set forth in this report are taken from the following EPA document: "Mid- Atlantic Risk Assessment User's Guide: November 2013". This guidance document sets forth a recommended, but not mandatory approach based upon currently available information with respect to risk assessment for response actions at CERCLA sites. This document does not establish binding rules. This document contains the most current TEF values per VT IROCP.

LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Client Sample ID:	COMP-2	**Date Prepared:**	8/8/18
Lab Sample ID:	185143.02	**Units:**	mg/kg
Matrix:	soil	**Method:**	8270D
Date Sampled:	8/6/18	**Analyst:**	JMR
Date Received:	8/7/18		

		Dilution Factor	Date Analyzed	TEF	TEQ
alpha-Terpineol	< 0.4	1	8/9/18		
Phenol	< 0.08	1	8/9/18		
2-Chlorophenol	< 0.08	1	8/9/18		
2,4-Dichlorophenol	< 0.08	1	8/9/18		
2,4,5-Trichlorophenol	< 0.08	1	8/9/18		
2,4,6-Trichlorophenol	< 0.08	1	8/9/18		
Pentachlorophenol	< 0.4	1	8/9/18		
2-Nitrophenol	< 0.4	1	8/9/18		
4-Nitrophenol	< 0.4	1	8/9/18		
2,4-Dinitrophenol	< 0.7	1	8/9/18		
2-Methylphenol	< 0.08	1	8/9/18		
3/4-Methylphenol	< 0.08	1	8/9/18		
2,4-Dimethylphenol	< 0.4	1	8/9/18		
4-Chloro-3-methylphenol	< 0.08	1	8/9/18		
4,6-Dinitro-2-methylphenol	< 0.4	1	8/9/18		
Benzoic Acid	< 4	1	8/9/18		
N-Nitrosodimethylamine	< 0.08	1	8/9/18		
n-Nitroso-di-n-propylamine	< 0.08	1	8/9/18		
n-Nitrosodiphenylamine	< 0.08	1	8/9/18		
bis(2-Chloroethyl)ether	< 0.08	1	8/9/18		
bis(2-chloroisopropyl)ether	< 0.08	1	8/9/18		
bis(2-Chloroethoxy)methane	< 0.08	1	8/9/18		
1,3-Dichlorobenzene	< 0.08	1	8/9/18		
Acetophenone	< 0.7	1	8/9/18		
1,4-Dichlorobenzene	< 0.08	1	8/9/18		
1,2-Dichlorobenzene	< 0.08	1	8/9/18		
1,2,4-Trichlorobenzene	< 0.08	1	8/9/18		
2-Chloronaphthalene	< 0.08	1	8/9/18		
4-Chlorophenyl-phenylether	< 0.08	1	8/9/18		
4-Bromophenyl-phenylether	< 0.08	1	8/9/18		
Hexachloroethane	< 0.08	1	8/9/18		
Hexachlorobutadiene	< 0.08	1	8/9/18		
Hexachlorocyclopentadiene	< 0.4	1	8/9/18		
Hexachlorobenzene	< 0.08	1	8/9/18		
4-Chloroaniline	< 0.08	1	8/9/18		
2,3-Dichloroaniline	< 0.08	1	8/9/18		
2-Nitroaniline	< 0.4	1	8/9/18		
3-Nitroaniline	< 0.4	1	8/9/18		
4-Nitroaniline	< 0.4	1	8/9/18		
Aniline	< 0.08	1	8/9/18		
Benzyl alcohol	< 0.7	1	8/9/18		
Nitrobenzene	< 0.08	1	8/9/18		
Isophorone	< 0.08	1	8/9/18		
2,4-Dinitrotoluene	< 0.4	1	8/9/18		
2,6-Dinitrotoluene	< 0.4	1	8/9/18		
Benzidine (estimated)	< 0.4	1	8/9/18		

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LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Client Sample ID:	COMP-2		**Date Prepared:**		8/8/18
Lab Sample ID:	185143.02		**Units:**		mg/kg
Matrix:	soil		**Method:**		8270D
Date Sampled:	8/6/18		**Analyst:**		JMR
Date Received:	8/7/18	**Dilution Factor**	**Date Analyzed**	**TEF**	**TEQ**
3,3'-Dichlorobenzidine	< 0.08	1	8/9/18		
Pyridine	< 0.4	1	8/9/18		
Azobenzene	< 0.08	1	8/9/18		
Carbazole	< 0.08	1	8/9/18		
Dimethylphthalate	< 0.08	1	8/9/18		
Diethylphthalate	< 0.4	1	8/9/18		
Di-n-butylphthalate	< 0.4	1	8/9/18		
Butylbenzylphthalate	< 0.4	1	8/9/18		
bis(2-Ethylhexyl)phthalate	< 0.4	1	8/9/18		
Di-n-octylphthalate	< 0.4	1	8/9/18		
Dibenzofuran	**0.12**	1	8/9/18		
Naphthalene	**0.23**	1	8/9/18		
2-Methylnaphthalene	**0.16**	1	8/9/18		
1-Methylnaphthalene	**0.15**	1	8/9/18		
Acenaphthylene	**0.58**	1	8/9/18		
Acenaphthene	**0.060**	1	8/9/18		
Fluorene	**0.15**	1	8/9/18		
Phenanthrene	**0.46**	1	8/9/18		
Anthracene	**0.35**	1	8/9/18		
Fluoranthene	**1.1**	1	8/9/18		
Pyrene	**1.3**	1	8/9/18		
Benzo[a]anthracene	**0.88**	1	8/9/18	0.1	.088
Chrysene	**1.0**	1	8/9/18	0.001	.001
Benzo[b]fluoranthene	**1.5**	1	8/9/18	0.1	.15
Benzo[k]fluoranthene	**0.48**	1	8/9/18	0.01	.0048
Benzo[a]pyrene	**1.4**	1	8/9/18	1	1.4
Indeno[1,2,3-cd]pyrene	**0.78**	1	8/9/18	0.1	.078
Dibenz[a,h]anthracene	**0.23**	1	8/9/18	1	.23
Benzo[g,h,i]perylene	**0.58**	1	8/9/18		
n-Decane	< 0.4	1	8/9/18		
n-Octadecane	< 0.4	1	8/9/18		
2-Fluorophenol (surr)	**68 %R**		8/9/18		
Phenol-d6 (surr)	**75 %R**		8/9/18		
2,4,6-Tribromophenol (surr)	**87 %R**		8/9/18		
Nitrobenzene-D5 (surr)	**73 %R**		8/9/18		
2-Fluorobiphenyl (surr)	**77 %R**		8/9/18		
p-Terphenyl-D14 (surr)	**91 %R**		8/9/18		

TEF: Toxicity Equivalent Factor TEQ: Toxicity Equivalence to Benzo[a]pyrene

The TEF factors set forth in this report are taken from the following EPA document: "Mid- Atlantic Risk Assessment User's Guide: November 2013". This guidance document sets forth a recommended, but not mandatory approach based upon currently available information with respect to risk assessment for response actions at CERCLA sites. This document does not establish binding rules. This document contains the most current TEF values per VT IROCP.

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QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Batch ID: 636693-20797/S080818ABN1

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
alpha-Terpineol	< 0.34	1.3 (81 %R)	1.3 (79 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Phenol	< 0.07	2.4 (73 %R)	2.4 (71 %R) (3 RPD)	8/9/2018	mg/kg	15 - 130	30	8270D
2-Chlorophenol	< 0.07	2.5 (74 %R)	2.4 (72 %R) (3 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
2,4-Dichlorophenol	< 0.07	2.7 (81 %R)	2.6 (79 %R) (2 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
2,4,5-Trichlorophenol	< 0.07	2.9 (86 %R)	2.7 (82 %R) (5 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
2,4,6-Trichlorophenol	< 0.07	2.8 (85 %R)	2.7 (82 %R) (4 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
Pentachlorophenol	< 0.34	3.5 (104 %R)	3.3 (100 %R) (3 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
2-Nitrophenol	< 0.34	2.6 (78 %R)	2.6 (77 %R) (1 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
4-Nitrophenol	< 0.34	3.0 (91 %R)	2.9 (88 %R) (3 RPD)	8/9/2018	mg/kg	15 - 130	30	8270D
2,4-Dinitrophenol	< 0.7	3.0 (90 %R)	3.1 (92 %R) (2 RPD)	8/9/2018	mg/kg	15 - 130	30	8270D
2-Methylphenol	< 0.07	2.6 (77 %R)	2.5 (75 %R) (2 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
3/4-Methylphenol	< 0.07	2.7 (82 %R)	2.7 (81 %R) (1 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
2,4-Dimethylphenol	< 0.34	2.4 (72 %R)	2.3 (68 %R) (6 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
4-Chloro-3-methylphenol	< 0.07	2.8 (85 %R)	2.8 (83 %R) (3 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
4,6-Dinitro-2-methylphenol	< 0.34	2.9 (87 %R)	2.8 (85 %R) (3 RPD)	8/9/2018	mg/kg	30 - 130	30	8270D
Benzoic Acid	< 3.4	< 3.4 (72 %R)	< 3.4 (81 %R) (11 RPD)	8/9/2018	mg/kg	15 - 130	30	8270D
N-Nitrosodimethylamine	< 0.07	1.2 (70 %R)	1.1 (69 %R) (1 RPD)	8/9/2018	mg/kg	15 - 140	30	8270D
n-Nitroso-di-n-propylamine	< 0.07	1.3 (78 %R)	1.3 (77 %R) (1 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
n-Nitrosodiphenylamine	< 0.07	1.4 (83 %R)	1.3 (79 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
bis(2-Chloroethyl)ether	< 0.07	1.2 (72 %R)	1.2 (72 %R) (1 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
bis(2-chloroisopropyl)ether	< 0.07	1.2 (74 %R)	1.2 (72 %R) (2 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
bis(2-Chloroethoxy)methane	< 0.07	1.3 (78 %R)	1.3 (75 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
1,3-Dichlorobenzene	< 0.07	1.1 (67 %R)	1.1 (67 %R) (0 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Acetophenone	< 0.7	1.3 (77 %R)	1.2 (75 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
1,4-Dichlorobenzene	< 0.07	1.1 (68 %R)	1.1 (68 %R) (0 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
1,2-Dichlorobenzene	< 0.07	1.2 (69 %R)	1.1 (68 %R) (1 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
1,2,4-Trichlorobenzene	< 0.07	1.2 (73 %R)	1.2 (71 %R) (2 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
2-Chloronaphthalene	< 0.07	1.3 (80 %R)	1.3 (77 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
4-Chlorophenyl-phenylether	< 0.07	1.4 (85 %R)	1.4 (81 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
4-Bromophenyl-phenylether	< 0.07	1.4 (82 %R)	1.3 (78 %R) (5 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Hexachloroethane	< 0.07	1.1 (67 %R)	1.1 (67 %R) (1 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Hexachlorobutadiene	< 0.07	1.2 (72 %R)	1.2 (70 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Hexachlorocyclopentadiene	< 0.34	0.61 (37 %R)	0.59 (36 %R) (3 RPD)	8/9/2018	mg/kg	15 - 140	30	8270D
Hexachlorobenzene	< 0.07	1.3 (80 %R)	1.3 (75 %R) (7 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
4-Chloroaniline	< 0.07	1.3 (78 %R)	1.3 (76 %R) (2 RPD)	8/9/2018	mg/kg	15 - 140	30	8270D
2,3-Dichloroaniline	< 0.07	1.3 (81 %R)	1.3 (78 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
2-Nitroaniline	< 0.34	1.4 (83 %R)	1.3 (81 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
3-Nitroaniline	< 0.34	1.4 (84 %R)	1.3 (80 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
4-Nitroaniline	< 0.34	1.4 (85 %R)	1.3 (81 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Aniline	< 0.07	1.2 (74 %R)	1.2 (72 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Benzyl alcohol	< 0.7	1.3 (78 %R)	1.3 (77 %R) (1 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Nitrobenzene	< 0.07	1.3 (76 %R)	1.2 (74 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Isophorone	< 0.07	1.3 (79 %R)	1.3 (77 %R) (2 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
2,4-Dinitrotoluene	< 0.34	1.4 (84 %R)	1.4 (82 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
2,6-Dinitrotoluene	< 0.34	1.4 (82 %R)	1.3 (80 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Benzidine (estimated)	< 0.34	0.62 (37 %R)	0.50 (30 %R) (23 RPD)	8/9/2018	mg/kg	1 - 200	50	8270D

QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Batch ID: 636693-20797/S080818ABN1

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Pyridine	< 0.34	1.1 (65 %R)	1.1 (63 %R) (2 RPD)	8/9/2018	mg/kg	15 - 140	30	8270D
Azobenzene	< 0.07	1.4 (84 %R)	1.3 (80 %R) (5 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Carbazole	< 0.07	1.5 (89 %R)	1.4 (85 %R) (5 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Dimethylphthalate	< 0.07	1.4 (85 %R)	1.4 (82 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Diethylphthalate	< 0.34	1.4 (85 %R)	1.4 (82 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Di-n-butylphthalate	< 0.34	1.6 (97 %R)	1.5 (92 %R) (5 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Butylbenzylphthalate	< 0.34	1.5 (91 %R)	1.4 (85 %R) (7 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
bis(2-Ethylhexyl)phthalate	< 0.34	1.5 (91 %R)	1.4 (86 %R) (7 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Di-n-octylphthalate	< 0.34	1.6 (94 %R)	1.5 (88 %R) (6 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Dibenzofuran	< 0.07	1.4 (84 %R)	1.4 (82 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Naphthalene	< 0.007	1.3 (78 %R)	1.3 (76 %R) (2 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
2-Methylnaphthalene	< 0.007	1.3 (80 %R)	1.3 (79 %R) (1 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
1-Methylnaphthalene	< 0.007	1.3 (81 %R)	1.3 (79 %R) (2 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Acenaphthylene	< 0.007	1.4 (83 %R)	1.3 (79 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Acenaphthene	< 0.007	1.4 (82 %R)	1.3 (77 %R) (7 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Fluorene	< 0.007	1.4 (86 %R)	1.4 (83 %R) (3 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Phenanthrene	< 0.007	1.4 (86 %R)	1.4 (81 %R) (6 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Anthracene	< 0.007	1.5 (88 %R)	1.4 (83 %R) (6 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Fluoranthene	< 0.007	1.5 (90 %R)	1.4 (86 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Pyrene	< 0.007	1.5 (91 %R)	1.4 (86 %R) (5 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Benzo[a]anthracene	< 0.007	1.4 (84 %R)	1.3 (79 %R) (6 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Chrysene	< 0.007	1.5 (89 %R)	1.4 (83 %R) (7 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Benzo[b]fluoranthene	< 0.007	1.5 (88 %R)	1.4 (83 %R) (6 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Benzo[k]fluoranthene	< 0.007	1.4 (87 %R)	1.4 (83 %R) (5 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Benzo[a]pyrene	< 0.007	1.4 (85 %R)	1.3 (80 %R) (6 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Indeno[1,2,3-cd]pyrene	< 0.007	1.4 (85 %R)	1.4 (81 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Dibenz[a,h]anthracene	< 0.007	1.4 (86 %R)	1.4 (85 %R) (1 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
Benzo[g,h,i]perylene	< 0.007	1.4 (84 %R)	1.3 (81 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
n-Decane	< 0.34	1.0 (61 %R)	1.0 (60 %R) (2 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
n-Octadecane	< 0.34	1.4 (86 %R)	1.4 (82 %R) (6 RPD)	8/9/2018	mg/kg	40 - 140	30	8270D
2-Fluorophenol (surr)	71 %R	72 %R	69 %R	8/9/2018	mg/kg	30 - 130	30	8270D
Phenol-d6 (surr)	76 %R	80 %R	77 %R	8/9/2018	mg/kg	30 - 130	30	8270D
2,4,6-Tribromophenol (surr)	79 %R	88 %R	83 %R	8/9/2018	mg/kg	30 - 130	30	8270D
Nitrobenzene-D5 (surr)	74 %R	78 %R	76 %R	8/9/2018	mg/kg	30 - 130	30	8270D
2-Fluorobiphenyl (surr)	77 %R	83 %R	79 %R	8/9/2018	mg/kg	30 - 130	30	8270D
p-Terphenyl-D14 (surr)	90 %R	96 %R	89 %R	8/9/2018	mg/kg	30 - 130	30	8270D

Samples were extracted and analyzed within holding time limits.Instrumentation was calibrated in accordance with the method requirements.The method blanks were free of contamination at the reporting limits.Sample surrogate recoveries met the above stated criteria.The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.There were no exceptions in the analyses, unless noted.*/!Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2
Lab Sample ID:	185143.01	185143.02
Matrix:	soil	soil
Date Sampled:	8/6/18	8/6/18
Date Received:	8/7/18	8/7/18
Units:	mg/kg	mg/kg
Date of Extraction/Prep:	8/9/18	8/9/18
Date of Analysis:	8/9/18	8/9/18
Analyst:	MA	MA
Method:	8100mod	8100mod
Dilution Factor:	1	1
TPH (C9-C40)	**51**	**150**
p-Terphenyl-D14 (surr)	**62 %R**	**75 %R**

QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Batch ID: 636693-96535/S080918TPHL11

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
TPH (C9-C40)	< 20	55 (69 %R)	59 (74 %R) (6 RPD)	8/9/2018	mg/kg	30 - 160	30	8100mod
p-Terphenyl-D14 (surr)	75 %R	75 %R	80 %R	8/9/2018	% Rec	30 - 130		8100mod

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2
Lab Sample ID:	185143.01	185143.02
Matrix:	soil	soil
Date Sampled:	8/6/18	8/6/18
Date Received:	8/7/18	8/7/18
Units:	mg/kg	mg/kg
Date of Extraction/Prep:	8/8/18	8/8/18
Date of Analysis:	8/14/18	8/14/18
Analyst:	SG	SG
Method:	8081B	8081B
Dilution Factor:	12	11
Aldrin	< 0.06	< 0.05
alpha-BHC	< 0.06	< 0.05
beta-BHC	< 0.06	< 0.05
Lindane(gamma-BHC)	< 0.06	< 0.05
delta-BHC	< 0.06	< 0.05
Chlordane	< 0.2	< 0.2
4,4'-DDT	< 0.06	< 0.05
4,4'-DDE	< 0.06	< 0.05
4,4'-DDD	< 0.06	< 0.05
Dieldrin	< 0.06	< 0.05
Endosulfan I	< 0.06	< 0.05
Endosulfan II	< 0.06	< 0.05
Endosulfan Sulfate	< 0.06	< 0.05
Endrin	< 0.06	< 0.05
Endrin Aldehyde	< 0.06	< 0.05
Endrin Ketone	< 0.06	< 0.05
Heptachlor	< 0.06	< 0.05
Heptachlor Epoxide	< 0.06	< 0.05
Methoxychlor	< 0.06	< 0.05
Toxaphene	< 0.6	< 0.5
TMX (surr)	**63 %R**	**65 %R**
DCB (surr)	**63 %R**	**52 %R**

Florisil clean-up was performed on the sample and associated batch QC. Detection limits elevated due to sample matrix causing closing calibration verification failures in undiluted analysis. 4,4'-DDT exhibited recovery below acceptance limits in the closing calibration verification. Sample matrix interference is suspected as batch QC was in control. This compound was not detected in the sample.

QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Batch ID: 636693-20677/S080818Pest1

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Aldrin	< 0.005	0.022 (67 %R)	0.021 (63 %R) (6 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
alpha-BHC	< 0.005	0.022 (66 %R)	0.021 (63 %R) (5 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
beta-BHC	< 0.005	0.022 (65 %R)	0.020 (61 %R) (6 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Lindane(gamma-BHC)	< 0.005	0.023 (68 %R)	0.021 (64 %R) (6 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
delta-BHC	< 0.005	0.023 (70 %R)	0.023 (68 %R) (3 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Chlordane	< 0.02	0.023 (68 %R)	0.021 (64 %R) (6 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
4,4'-DDT	< 0.005	0.026 (78 %R)	0.025 (74 %R) (5 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
4,4'-DDE	< 0.005	0.023 (70 %R)	0.022 (67 %R) (4 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
4,4'-DDD	< 0.005	0.024 (73 %R)	0.023 (70 %R) (4 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Dieldrin	< 0.005	0.024 (71 %R)	0.022 (67 %R) (6 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Endosulfan I	< 0.005	0.023 (70 %R)	0.022 (67 %R) (4 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Endosulfan II	< 0.005	0.024 (71 %R)	0.023 (69 %R) (3 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Endosulfan Sulfate	< 0.005	0.024 (71 %R)	0.024 (71 %R) (0 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Endrin	< 0.005	0.025 (76 %R)	0.024 (73 %R) (4 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Endrin Aldehyde	< 0.005	0.022 (65 %R)	0.022 (66 %R) (2 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Endrin Ketone	< 0.005	0.023 (68 %R)	0.022 (66 %R) (3 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Heptachlor	< 0.005	0.020 (61 %R)	0.019 (57 %R) (7 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Heptachlor Epoxide	< 0.005	0.022 (66 %R)	0.021 (62 %R) (6 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Methoxychlor	< 0.005	0.027 (81 %R)	0.026 (77 %R) (5 RPD)	8/14/2018	mg/kg	40 - 140	30	8081B
Toxaphene	< 0.05	< 0.05 (%R N/A)	< 0.05 (%R N/A) (RPD N/A)	8/14/2018	mg/kg			8081B
TMX (surr)	66 %R	63 %R	60 %R	8/14/2018	mg/kg	30 - 150	30	8081B
DCB (surr)	66 %R	61 %R	57 %R	8/14/2018	mg/kg	30 - 150	30	8081B

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2
Lab Sample ID:	185143.01	185143.02
Matrix:	soil	soil
Date Sampled:	8/6/18	8/6/18
Date Received:	8/7/18	8/7/18
% Solid:	83	90.5
Units:	mg/kg	mg/kg
Date of Extraction/Prep:	8/8/18	8/8/18
Date of Analysis:	8/9/18	8/9/18
Analyst:	SG	SG
Extraction Method:	3540C	3540C
Analysis Method:	8082A	8082A
Dilution Factor:	1	1
PCB-1016	< 0.02	< 0.02
PCB-1221	< 0.02	< 0.02
PCB-1232	< 0.02	< 0.02
PCB-1242	< 0.02	< 0.02
PCB-1248	< 0.02	< 0.02
PCB-1254	< 0.02	< 0.02
PCB-1260	< 0.02	< 0.02
PCB-1262	< 0.02	< 0.02
PCB-1268	< 0.02	< 0.02
TMX (surr)	**89 %R**	**80 %R**
DCB (surr)	**75 %R**	**60 %R**

Acid clean-up was performed on the samples and associated batch QC.

QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Batch ID: 636693-20584/S080818PCB1

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.02	0.13 (98 %R)	0.15 (109 %R) (11 RPD)	8/9/2018	mg/kg	40 - 140	30	8082A
PCB-1221	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/9/2018	mg/kg			8082A
PCB-1232	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/9/2018	mg/kg			8082A
PCB-1242	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/9/2018	mg/kg			8082A
PCB-1248	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/9/2018	mg/kg			8082A
PCB-1254	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/9/2018	mg/kg			8082A
PCB-1260	< 0.02	0.14 (104 %R)	0.15 (109 %R) (4 RPD)	8/9/2018	mg/kg	40 - 140	30	8082A
PCB-1262	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/9/2018	mg/kg			8082A
PCB-1268	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/9/2018	mg/kg			8082A
TMX (surr)	92 %R	91 %R	93 %R	8/9/2018	% Rec	30 - 150	30	8082A
DCB (surr)	93 %R	92 %R	95 %R	8/9/2018	% Rec	30 - 150	30	8082A

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2					
Lab Sample ID:	185143.01	185143.02					
Matrix:	soil	soil					
Date Sampled:	8/6/18	8/6/18	**Analysis**				
Date Received:	8/7/18	8/7/18	**Units**	**Date**	**Time**	**Method**	**Analyst**
pH	**7.56**	**8.52**	SU	8/08/18	10:25	9045	ATA
Ignitability	**Pass**	**Pass**	None	8/09/18	14:15	1030	SWC
Reactive Cyanide	< 1	< 1	mg/kg	8/09/18	11:00	7.3.3.2	ATA
Reactive Sulfide	< 10	< 10	mg/kg	8/09/18	11:00	7.3.4.2	ATA

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QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
pH	NA	7.95 (99 %R)	7.98 (100 %R) (0 RPD)	SU	8/8/18	7.89 - 8.07	10	9045
Reactive Cyanide	< 1	18 (18 %R)	NA	mg/kg	8/9/18	0 - 73		7.3.3.2
Reactive Sulfide	< 10	12 (58 %R)	NA	mg/kg	8/9/18	10 - 160		7.3.4.2

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

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LABORATORY REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Sample ID:	COMP-1-PI	COMP-2					
Lab Sample ID:	185143.01	185143.02					
Matrix:	soil	soil					
Date Sampled:	8/6/18	8/6/18	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	8/7/18	8/7/18					
Arsenic	**6.6**	**6.0**	SolTotDry	mg/kg	8/9/18	6020	DS
Barium	**97**	**57**	SolTotDry	mg/kg	8/9/18	6020	DS
Cadmium	< 0.5	< 0.5	SolTotDry	mg/kg	8/9/18	6020	DS
Chromium	**41**	**21**	SolTotDry	mg/kg	8/9/18	6020	DS
Lead	**18**	**23**	SolTotDry	mg/kg	8/9/18	6020	DS
Mercury	< 0.1	< 0.1	SolTotDry	mg/kg	8/9/18	6020	DS
Selenium	**1.6**	< 0.5	SolTotDry	mg/kg	8/9/18	6020	DS
Silver	< 0.5	< 0.5	SolTotDry	mg/kg	8/9/18	6020	DS

QC REPORT

EAI ID#: **185143**

Client: **The Johnson Company**

Client Designation: **Pine Street Relining | 3-3016-04**

Parameter Name	Blank	LCS	LCSD		Units	Date of Analysis	Limits	RPD	Method
Arsenic	< 0.5	40 (99 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020
Barium	< 0.5	39 (98 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020
Cadmium	< 0.5	40 (99 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020
Chromium	< 0.5	40 (99 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020
Lead	< 0.5	38 (96 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020
Mercury	< 0.1	0.38 (95 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020
Selenium	< 0.5	38 (95 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020
Silver	< 0.5	42 (106 %R)		NA	mg/kg	8/9/18	80 - 120	20	6020

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

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PHOENIX
Environmental Laboratories, Inc.

Monday, August 13, 2018

Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Project ID: 185143
Sample ID#s: CB07951 - CB07952

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone (860) 645-1102 Fax (860) 645-0823

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 13, 2018

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/06/18	12:55
Location Code:	EASTANAL	Received by:	SW	08/09/18	12:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	48557				

Laboratory Data

SDG ID: GCB07951
Phoenix ID: CB07951

Project ID: 185143
Client ID: COMP-1-PI

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	87		%		08/09/18	Q	SW846-%Solid
Soil Extraction for Herbicide	Completed				08/09/18	S/DRD	SW8151A
Chlorinated Herbicides							
2,4,5-T	ND	96	ug/Kg	10	08/10/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	96	ug/Kg	10	08/10/18	CW	SW8151A
2,4-D	ND	190	ug/Kg	10	08/10/18	CW	SW8151A
2,4-DB	ND	960	ug/Kg	10	08/10/18	CW	SW8151A
Dalapon	ND	96	ug/Kg	10	08/10/18	CW	SW8151A
Dicamba	ND	96	ug/Kg	10	08/10/18	CW	SW8151A
Dichloroprop	ND	140	ug/Kg	10	08/10/18	CW	SW8151A
Dinoseb	ND	96	ug/Kg	10	08/10/18	CW	SW8151A
MCPA	ND	29000	ug/Kg	10	08/10/18	CW	SW8151A
MCPP	ND	29000	ug/Kg	10	08/10/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	66		%	10	08/10/18	CW	30 - 150 %

Project ID: 185143
Client ID: COMP-1-PI

Phoenix I.D.: CB07951

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
August 13, 2018
Reviewed and Released by: Bobbi Aloisa, Vice President

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 13, 2018

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/06/18	13:55
Location Code:	EASTANAL	Received by:	SW	08/09/18	12:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	48557				

Laboratory Data

SDG ID: GCB07951
Phoenix ID: CB07952

Project ID: 185143
Client ID: COMP-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	90		%		08/09/18	Q	SW846-%Solid
Soil Extraction for Herbicide	Completed				08/09/18	S/DRD	SW8151A
Chlorinated Herbicides							
2,4,5-T	ND	93	ug/Kg	10	08/10/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	93	ug/Kg	10	08/10/18	CW	SW8151A
2,4-D	ND	190	ug/Kg	10	08/10/18	CW	SW8151A
2,4-DB	ND	930	ug/Kg	10	08/10/18	CW	SW8151A
Dalapon	ND	93	ug/Kg	10	08/10/18	CW	SW8151A
Dicamba	ND	93	ug/Kg	10	08/10/18	CW	SW8151A
Dichloroprop	ND	140	ug/Kg	10	08/10/18	CW	SW8151A
Dinoseb	ND	93	ug/Kg	10	08/10/18	CW	SW8151A
MCPA	ND	28000	ug/Kg	10	08/10/18	CW	SW8151A
MCPP	ND	28000	ug/Kg	10	08/10/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	61		%	10	08/10/18	CW	30 - 150 %

Project ID: 185143
Client ID: COMP-2

Phoenix I.D.: CB07952

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 13, 2018
Reviewed and Released by: Bobbi Aloisa, Vice President

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

August 13, 2018

QA/QC Data

SDG I.D.: GCB07951

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 442478 (ug/Kg), QC Sample No: CB08450 10X (CB07951, CB07952)											
Chlorinated Herbicides - Soil											
2,4,5-T	ND	83	73	71	2.8	77	73	5.3	40 - 140	30	
2,4,5-TP (Silvex)	ND	83	79	79	0.0	81	80	1.2	40 - 140	30	
2,4-D	ND	170	119	120	0.8	117	107	8.9	40 - 140	30	
2,4-DB	ND	1700	96	96	0.0	112	96	15.4	40 - 140	30	
Dalapon	ND	83	69	60	14.0	41	57	32.7	40 - 140	30	r
Dicamba	ND	83	79	78	1.3	77	80	3.8	40 - 140	30	
Dichloroprop	ND	170	102	101	1.0	102	82	21.7	40 - 140	30	
Dinoseb	ND	170	81	70	14.6	68	72	5.7	40 - 140	30	
MCPA	ND	25000	54	70	25.8	67	70	4.4	40 - 140	30	
MCPP	ND	25000	66	78	16.7	78	79	1.3	40 - 140	30	
% DCAA (Surrogate Rec)	60	%	68	67	1.5	68	69	1.5	30 - 150	30	

r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller

Phyllis Shiller, Laboratory Director
August 13, 2018

Sample Criteria Exceedances Report

GCB07951 - EASTANAL

Monday, August 13, 2018

Criteria: None

State: VT

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

August 13, 2018 SDG I.D.: GCB07951

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

4.2 OKX ICE 32

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# 185143 Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
COMP-1-PI	8/6/2018 12:55	soil	Subcontract - Herbicides 8151 Soil/water Subcontract	07951
COMP-2	8/6/2018 13:55	soil	Subcontract - Herbicides 8151 Soil/water Subcontract	07952

EAI ID# 185143 **Project State: VT**

Project ID:

Company Phoenix Environmental Labs
Address 587 East Middle Turnpike
Address Manchester , CT 06040
Account #
Phone # (860) 645-1102

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #:48557 **EAI ID# 185143**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: [signature] 8/8/18 1500 UPS

Relinquished by	Date/Time	Received by
UPS	8/9/18 12:20	[signature]
Relinquished by	**Date/Time**	**Received by**

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

As a subcontract lab to EAI, you will defend, indemnify and hold Eastern Analytical, Inc., its officers, employees, and agents harmless from and against any and all liability, loss, expense or claims for injury or damages arising out of the performance against this chain of custody but only in proportion to and to the extent such liability, loss, expense, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of you as a subcontract lab, your officers, agents or employees

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

185143

33

Sample I.D.	Sampling Date / Time (*If Composite, Indicate Both Start & Finish Date / Time)	Matrix (see below)	Grab/*Composite	VOC: 524.2 BTEX / 524.2 MTBE only	VOC: 524.2 / 8260 / 624 VTICs	VOC: 1,4 Dioxane	VOC: 8021 BTEX / HALOS	VOC: 8015 GRO / MAVPH	SVOC: 8270 / 625 SVTICs / EDB / DBCP	SVOC: ABN / A / BN / PAH	SVOC: TPH8100 / L1 / L2	SVOC: 8015 DRO / MAEPH	SVOC: PEST 608 / PCB 608	SVOC: PEST 8081 / PCB 8082	SVOC: Oil & Grease 1664 / TPH 1664	TCLP: TCLP 1311 / VOC / ABN / Metals / Pest / Herb	Metals: Dissolved Metals (List Below)	Metals: Total Metals (List Below)	Inorganics: TS / TSS / TDS / Spec. Con.	Inorganics: Br / Cl / F / SO_4 / NO_2 / NO_3 / NO_2NO_3	Inorganics: BOD / CBOD / T. Alk.	Inorganics: TKN / NH_3 / T. Phos. / O. Phos.	Inorganics: pH / T. Res. Chlorine	Inorganics: COD / Phenols / TOC / DOC	Inorganics: Total Cyanide / Total Sulfide	Inorganics: Reactive Cyanide / Reactive Sulfide / Flashpoint / Ignitability	Micro: Total Coliform / E. Coli / Fecal Coliform	Micro: Enterococci / Heterotrophic Plate Count	Other: Herbicides	# of Containers	Notes: MeOH Vial #
COMP-1-PI	8/6/18/1255	S	C		X			X	X		X		X					X					X			X			X		6	46231
COMP-2	8/6/18/1355	S	C		X			X	X		X		X					X					X			X			X		6	46232
Trip Blank	~~8/2/18/SGH~~ 8/6/18 Lab Prepared				X			X																							1	46233

Matrix: A-Air; S-Soil; GW-Ground Water; SW-Surface Water; DW-Drinking Water; WW-Waste water

Preservative: H-HCL; N-HNO_3; S-H_2SO_4; Na-NaOH; M-MEOH

Project Manager: Kurt Muller

Company: The Johnson Companies

Address: 100 State Street, Suite 600

City: Montpelier **State:** VT **Zip:** 05602

Phone: 802-229-4600 **Ext.:**

Fax: 802-229-5876

E-Mail: JKM@jcomail.com / SGH@jcomail.com

Site Name: Pine Street Relining

Project #: 3-3016-04

State: NH MA ME (VT) **Other:**

Regulatory Program: NPDES: RGP POTW Stormwater or GWP, Oil Fund, Brownfield or Other:

Quote #: 161538 9 **PO #:**

Date Needed: Standard TAT

QA/QC Reporting Level A B C OR Presumptive Certainty

Reporting Options Prelims (Yes) or No

Electronic Options E-Mail (PDF) Equis (Excel)

Temp. 1.5 °C

Ice? (Yes) No

Sampler(s): Steve Hilfiker

Relinquished By:	Date:	Time:	Received By:
[illegible]	8/7/18	9:55	8/7/18 [illegible]
[illegible]	8/7/18	1610	[illegible]

Metals: (8 RCRA) 13 PP Fe, Mn Pb, Cu

Other Metals:

Samples Field Filtered? ☐ Yes ☒ No

Notes: (ie: Special Detection Limits, Billing Info, If Different)

1 on-hold container for both samples for contingency TCLP analysis. JCO to review totals results before determining analyses.

Site History:

Suspected Contamination: Petroleum VOC

Field Readings: 0 - 280 ppm

Eastern Analytical, Inc.
professional laboratory and drilling services
25 Chenell Drive | Concord, NH 03301 | Tel: 603.228.0525 | 1.800.287.0525 | E-Mail: CustomerService@EasternAnalytical.com | www.EasternAnalytical.com

(WHITE: Original GREEN: Project Manager)

Eastern Analytical, Inc.

professional laboratory and drilling services

PRELIMINARY ANALYTICAL RESULTS ATTACHED

The attached .pdf file contains results that have not been subjected to a final QA/QC review. If you have any questions, please contact us at customerservice@easternanalytical.com or call 1-800-287-0525.

EAI will be closed on Labor Day - Monday, September 3rd

Please keep this date in mind when planning your sample collection schedule especially when parameters with immediate or short hold times are needed.

Please call us or email customerservice@easternanalytical.com, if you have any questions.

Bedrock Wells Now Available!

Thanks to the addition of a 4" air hammer we can now set rock wells down to **60 feet**!

Sites with boulders or prone to refusals pose problems for many direct push rigs; But the 7822DT is a versatile drill rig. Hollow Stem Augers, Air Hammer or Direct Push, our drillers are ready to meet your most challenging job sites in New Hampshire, Massachusetts, Vermont and Maine.

Eastern Analytical, Inc. (EAI) has offered drilling services, to compliment those of our fixed environmental laboratory, since 1995. The EAI drilling crew is licensed, experienced and 40-hour OSHA certified.

Please let us know if you have questions regarding our drilling capabilities or would like to schedule an upcoming project by calling 1-800-287-0525 or emailing customerservice@easternanalytical.com

---

Best Tasting Drinking Water Competitors Wanted!

Do you want bragging rights as having the best tasting drinking water in New Hampshire? Would you like to qualify to enter the Great American Taste Test contest held by National Rural Water Association in Washington, DC? Then enter this year's Granite State Rural Water Association (GSRWA) New Hampshire Drinking Water Taste Test Contest!

Eastern Analytical, Inc. is a proud sponsor of the GSRWA's competition again this year. The event will be held during the day of the GSRWA Operator Field Day & Exhibit Show on Tuesday, September 11th at the Mount Sunapee Resort in Newbury, NH.

To enter, please call the GSRWA Walpole Administrative Office at 603-756-3670 to obtain the sample bottles and an entry form.

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID: COMP-3-M

Lab Sample ID: 186086.01
Matrix: soil
Date Sampled: 8/30/18
Date Received: 8/31/18

		Analytical Matrix	Units	Date of Analysis	Method	Analyst
Arsenic	**4.2**	SolTotDry	mg/kg	9/4/18	6020	DS
Barium	**110**	SolTotDry	mg/kg	9/4/18	6020	DS
Cadmium	< 0.5	SolTotDry	mg/kg	9/4/18	6020	DS
Chromium	**29**	SolTotDry	mg/kg	9/4/18	6020	DS
Lead	**12**	SolTotDry	mg/kg	9/4/18	6020	DS
Mercury	< 0.1	SolTotDry	mg/kg	9/4/18	6020	DS
Selenium	**1.5**	SolTotDry	mg/kg	9/4/18	6020	DS
Silver	< 0.5	SolTotDry	mg/kg	9/4/18	6020	DS

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID:	COMP-3-M
Lab Sample ID:	186086.01
Matrix:	soil
Date Sampled:	8/30/18
Date Received:	8/31/18
Units:	mg/kg
Date of Extraction/Prep:	9/5/18
Date of Analysis:	9/6/18
Analyst:	MA
Method:	8100mod
Dilution Factor:	1

TPH (C9-C40)	**82**
p-Terphenyl-D14 (surr)	**72 %R**

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Client Sample ID:	COMP-3-M	**Date Prepared:**	9/4/18
Lab Sample ID:	186086.01	**Units:**	mg/kg
Matrix:	soil	**Method:**	8270D
Date Sampled:	8/30/18	**Analyst:**	JMR
Date Received:	8/31/18		

		Dilution Factor	Date Analyzed	TEF	TEQ
alpha-Terpineol	< 0.4	1	9/6/18		
Phenol	< 0.08	1	9/6/18		
2-Chlorophenol	< 0.08	1	9/6/18		
2,4-Dichlorophenol	< 0.08	1	9/6/18		
2,4,5-Trichlorophenol	< 0.08	1	9/6/18		
2,4,6-Trichlorophenol	< 0.08	1	9/6/18		
Pentachlorophenol	< 0.4	1	9/6/18		
2-Nitrophenol	< 0.4	1	9/6/18		
4-Nitrophenol	< 0.4	1	9/6/18		
2,4-Dinitrophenol	< 0.7	1	9/6/18		
2-Methylphenol	< 0.08	1	9/6/18		
3/4-Methylphenol	< 0.08	1	9/6/18		
2,4-Dimethylphenol	< 0.4	1	9/6/18		
4-Chloro-3-methylphenol	< 0.08	1	9/6/18		
4,6-Dinitro-2-methylphenol	< 0.4	1	9/6/18		
Benzoic Acid	< 4	1	9/6/18		
N-Nitrosodimethylamine	< 0.08	1	9/6/18		
n-Nitroso-di-n-propylamine	< 0.08	1	9/6/18		
n-Nitrosodiphenylamine	< 0.08	1	9/6/18		
bis(2-Chloroethyl)ether	< 0.08	1	9/6/18		
bis(2-chloroisopropyl)ether	< 0.08	1	9/6/18		
bis(2-Chloroethoxy)methane	< 0.08	1	9/6/18		
1,3-Dichlorobenzene	< 0.08	1	9/6/18		
Acetophenone	< 0.7	1	9/6/18		
1,4-Dichlorobenzene	< 0.08	1	9/6/18		
1,2-Dichlorobenzene	< 0.08	1	9/6/18		
1,2,4-Trichlorobenzene	< 0.08	1	9/6/18		
2-Chloronaphthalene	< 0.08	1	9/6/18		
4-Chlorophenyl-phenylether	< 0.08	1	9/6/18		
4-Bromophenyl-phenylether	< 0.08	1	9/6/18		
Hexachloroethane	< 0.08	1	9/6/18		
Hexachlorobutadiene	< 0.08	1	9/6/18		
Hexachlorocyclopentadiene	< 0.4	1	9/6/18		
Hexachlorobenzene	< 0.08	1	9/6/18		
4-Chloroaniline	< 0.08	1	9/6/18		
2,3-Dichloroaniline	< 0.08	1	9/6/18		
2-Nitroaniline	< 0.4	1	9/6/18		
3-Nitroaniline	< 0.4	1	9/6/18		
4-Nitroaniline	< 0.4	1	9/6/18		
Aniline	< 0.08	1	9/6/18		
Benzyl alcohol	< 0.7	1	9/6/18		
Nitrobenzene	< 0.08	1	9/6/18		
Isophorone	< 0.08	1	9/6/18		
2,4-Dinitrotoluene	< 0.4	1	9/6/18		
2,6-Dinitrotoluene	< 0.4	1	9/6/18		
Benzidine (estimated)	< 0.4	1	9/6/18		

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Client Sample ID:	COMP-3-M		**Date Prepared:**		9/4/18
Lab Sample ID:	186086.01		**Units:**		mg/kg
Matrix:	soil		**Method:**		8270D
Date Sampled:	8/30/18		**Analyst:**		JMR
Date Received:	8/31/18	**Dilution Factor**	**Date Analyzed**	**TEF**	**TEQ**
3,3'-Dichlorobenzidine	< 0.08	1	9/6/18		
Pyridine	< 0.4	1	9/6/18		
Azobenzene	< 0.08	1	9/6/18		
Carbazole	< 0.08	1	9/6/18		
Dimethylphthalate	< 0.08	1	9/6/18		
Diethylphthalate	< 0.4	1	9/6/18		
Di-n-butylphthalate	< 0.4	1	9/6/18		
Butylbenzylphthalate	< 0.4	1	9/6/18		
bis(2-Ethylhexyl)phthalate	< 0.4	1	9/6/18		
Di-n-octylphthalate	< 0.4	1	9/6/18		
Dibenzofuran	< 0.08	1	9/6/18		
Naphthalene	**0.047**	1	9/6/18		
2-Methylnaphthalene	**0.016**	1	9/6/18		
1-Methylnaphthalene	**0.019**	1	9/6/18		
Acenaphthylene	**0.083**	1	9/6/18		
Acenaphthene	**0.029**	1	9/6/18		
Fluorene	**0.098**	1	9/6/18		
Phenanthrene	**0.46**	1	9/6/18		
Anthracene	**0.17**	1	9/6/18		
Fluoranthene	**0.84**	1	9/6/18		
Pyrene	**0.79**	1	9/6/18		
Benzo[a]anthracene	**0.35**	1	9/6/18	0.1	.035
Chrysene	**0.38**	1	9/6/18	0.001	.00038
Benzo[b]fluoranthene	**0.41**	1	9/6/18	0.1	.041
Benzo[k]fluoranthene	**0.15**	1	9/6/18	0.01	.0015
Benzo[a]pyrene	**0.36**	1	9/6/18	1	.36
Indeno[1,2,3-cd]pyrene	**0.20**	1	9/6/18	0.1	.02
Dibenz[a,h]anthracene	**0.048**	1	9/6/18	1	.048
Benzo[g,h,i]perylene	**0.15**	1	9/6/18		
n-Decane	< 0.4	1	9/6/18		
n-Octadecane	< 0.4	1	9/6/18		
2-Fluorophenol (surr)	**69 %R**		9/6/18		
Phenol-d6 (surr)	**77 %R**		9/6/18		
2,4,6-Tribromophenol (surr)	**80 %R**		9/6/18		
Nitrobenzene-D5 (surr)	**73 %R**		9/6/18		
2-Fluorobiphenyl (surr)	**77 %R**		9/6/18		
p-Terphenyl-D14 (surr)	**87 %R**		9/6/18		

TEF: Toxicity Equivalent Factor TEQ: Toxicity Equivalence to Benzo[a]pyrene

The TEF factors set forth in this report are taken from the following EPA document: "Mid- Atlantic Risk Assessment User's Guide: November 2013". This guidance document sets forth a recommended, but not mandatory approach based upon currently available information with respect to risk assessment for response actions at CERCLA sites. This document does not establish binding rules. This document contains the most current TEF values per VT IROCP.

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID:	COMP-3-M	Trip Blank
Lab Sample ID:	186086.01	186086.02
Matrix:	soil	soil
Date Sampled:	8/30/18	8/30/18
Date Received:	8/31/18	8/31/18
Units:	mg/kg	mg/kg
Date of Analysis:	9/6/18	9/6/18
Analyst:	VG	VG
Method:	8260C	8260C
Dilution Factor:	1	1
Dichlorodifluoromethane	< 0.1	< 0.1
Chloromethane	< 0.1	< 0.1
Vinyl chloride	< 0.1	< 0.1
Bromomethane	< 0.2	< 0.2
Chloroethane	< 0.1	< 0.1
Trichlorofluoromethane	< 0.1	< 0.1
Diethyl Ether	< 0.05	< 0.05
Acetone	< 2	< 2
1,1-Dichloroethene	< 0.05	< 0.05
Methylene chloride	< 0.1	< 0.1
Carbon disulfide	< 0.1	< 0.1
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.1
trans-1,2-Dichloroethene	< 0.05	< 0.05
1,1-Dichloroethane	< 0.05	< 0.05
2,2-Dichloropropane	< 0.05	< 0.05
cis-1,2-Dichloroethene	< 0.05	< 0.05
2-Butanone(MEK)	< 0.5	< 0.5
Bromochloromethane	< 0.05	< 0.05
Tetrahydrofuran(THF)	< 0.5	< 0.5
Chloroform	< 0.05	< 0.05
1,1,1-Trichloroethane	< 0.05	< 0.05
Carbon tetrachloride	< 0.05	< 0.05
1,1-Dichloropropene	< 0.05	< 0.05
Benzene	< 0.05	< 0.05
1,2-Dichloroethane	< 0.05	< 0.05
Trichloroethene	< 0.05	< 0.05
1,2-Dichloropropane	< 0.05	< 0.05
Dibromomethane	< 0.05	< 0.05
Bromodichloromethane	< 0.05	< 0.05
4-Methyl-2-pentanone(MIBK)	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.05	< 0.05
Toluene	< 0.05	< 0.05
trans-1,3-Dichloropropene	< 0.05	< 0.05
1,1,2-Trichloroethane	< 0.05	< 0.05
2-Hexanone	< 0.1	< 0.1
Tetrachloroethene	< 0.05	< 0.05
1,3-Dichloropropane	< 0.05	< 0.05
Dibromochloromethane	< 0.05	< 0.05
1,2-Dibromoethane(EDB)	< 0.05	< 0.05
Chlorobenzene	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05
Ethylbenzene	**0.063**	< 0.05
mp-Xylene	**0.068**	< 0.05
o-Xylene	< 0.05	< 0.05
Styrene	< 0.05	< 0.05
Bromoform	< 0.05	< 0.05
IsoPropylbenzene	< 0.05	< 0.05

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID:	COMP-3-M	Trip Blank
Lab Sample ID:	186086.01	186086.02
Matrix:	soil	soil
Date Sampled:	8/30/18	8/30/18
Date Received:	8/31/18	8/31/18
Units:	mg/kg	mg/kg
Date of Analysis:	9/6/18	9/6/18
Analyst:	VG	VG
Method:	8260C	8260C
Dilution Factor:	1	1
Bromobenzene	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05
1,2,3-Trichloropropane	< 0.05	< 0.05
n-Propylbenzene	< 0.05	< 0.05
2-Chlorotoluene	< 0.05	< 0.05
4-Chlorotoluene	< 0.05	< 0.05
1,3,5-Trimethylbenzene	< 0.05	< 0.05
tert-Butylbenzene	< 0.05	< 0.05
1,2,4-Trimethylbenzene	**0.083**	< 0.05
sec-Butylbenzene	< 0.05	< 0.05
1,3-Dichlorobenzene	< 0.05	< 0.05
p-Isopropyltoluene	< 0.05	< 0.05
1,4-Dichlorobenzene	< 0.05	< 0.05
1,2-Dichlorobenzene	< 0.05	< 0.05
n-Butylbenzene	< 0.05	< 0.05
1,2-Dibromo-3-chloropropane	< 0.05	< 0.05
1,2,4-Trichlorobenzene	< 0.05	< 0.05
Hexachlorobutadiene	< 0.05	< 0.05
Naphthalene	< 0.1	< 0.1
1,2,3-Trichlorobenzene	< 0.05	< 0.05
4-Bromofluorobenzene (surr)	**100 %R**	**92 %R**
1,2-Dichlorobenzene-d4 (surr)	**109 %R**	**108 %R**
2,5-Dibromotoluene (surr)	**130 %R**	**158 %R**
Toluene-d8 (surr)	**97 %R**	**98 %R**

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID:	COMP-3-M	Trip Blank
Lab Sample ID:	186086.01	186086.02
Matrix:	soil	soil
Date Sampled:	8/30/18	8/30/18
Date Received:	8/31/18	8/31/18
Units:	mg/kg	mg/kg
Date of Analysis:	9/6/18	9/6/18
Analyst:	BAM	BAM
Method:	8015Cmod	8015Cmod
Dilution Factor:	1	1
TPH (Gasoline Range C6-C12)	**6**	< 3
FID 2,5-Dibromotoluene (surr)	**112 %R**	**127 %R**

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID:	COMP-3-M
Lab Sample ID:	186086.01
Matrix:	soil
Date Sampled:	8/30/18
Date Received:	8/31/18
% Solid:	88.6
Units:	mg/kg
Date of Extraction/Prep:	9/5/18
Date of Analysis:	9/6/18
Analyst:	SG
Extraction Method:	3540C
Analysis Method:	8082A
Dilution Factor:	1

PCB-1016	< 0.02
PCB-1221	< 0.02
PCB-1232	< 0.02
PCB-1242	< 0.02
PCB-1248	< 0.02
PCB-1254	< 0.02
PCB-1260	< 0.02
PCB-1262	< 0.02
PCB-1268	< 0.02
TMX (surr)	**86 %R**
DCB (surr)	**69 %R**

Acid clean-up was performed on the samples and associated batch QC.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 10, 2018

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/30/18	8:45
Location Code:	EASTANAL	Received by:	CP	09/05/18	11:18
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	48696				

Laboratory Data

SDG ID: GCB24308
Phoenix ID: CB24308

Project ID: 186086
Client ID: COMP-3-M

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	88		%		09/05/18	IG	SW846-%Solid
Soil Extraction for Herbicide	Completed				09/05/18	C/D	SW8151A
Chlorinated Herbicides							
2,4,5-T	ND	94	ug/Kg	10	09/06/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	94	ug/Kg	10	09/06/18	CW	SW8151A
2,4-D	ND	190	ug/Kg	10	09/06/18	CW	SW8151A
2,4-DB	ND	940	ug/Kg	10	09/06/18	CW	SW8151A
Dalapon	ND	94	ug/Kg	10	09/06/18	CW	SW8151A
Dicamba	ND	94	ug/Kg	10	09/06/18	CW	SW8151A
Dichloroprop	ND	140	ug/Kg	10	09/06/18	CW	SW8151A
Dinoseb	ND	94	ug/Kg	10	09/06/18	CW	SW8151A
MCPA	ND	28000	ug/Kg	10	09/06/18	CW	SW8151A
MCPP	ND	28000	ug/Kg	10	09/06/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	62		%	10	09/06/18	CW	30 - 150 %

Project ID: 186086
Client ID: COMP-3-M

Phoenix I.D.: CB24308

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
September 10, 2018
Reviewed and Released by: Bobbi Aloisa, Vice President

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID:	COMP-3-M
Lab Sample ID:	186086.01
Matrix:	soil
Date Sampled:	8/30/18
Date Received:	8/31/18
Units:	mg/kg
Date of Extraction/Prep:	9/5/18
Date of Analysis:	9/7/18
Analyst:	SG
Method:	8081B
Dilution Factor:	1
Aldrin	< 0.006
alpha-BHC	< 0.006
beta-BHC	< 0.006
Lindane(gamma-BHC)	< 0.006
delta-BHC	< 0.006
Chlordane	< 0.02
4,4'-DDT	< 0.006
4,4'-DDE	< 0.006
4,4'-DDD	< 0.006
Dieldrin	< 0.006
Endosulfan I	< 0.006
Endosulfan II	< 0.006
Endosulfan Sulfate	< 0.006
Endrin	< 0.006
Endrin Aldehyde	< 0.006
Endrin Ketone	< 0.006
Heptachlor	< 0.006
Heptachlor Epoxide	< 0.006
Methoxychlor	< 0.006
Toxaphene	< 0.06
TMX (surr)	**59 %R**
DCB (surr)	**47 %R**

Florisil clean-up was performed on the sample and associated batch QC.

LABORATORY REPORT

EAI ID#: **186086**

Client: **The Johnson Company**

Client Designation: **Manhattan Drive Stockpile M / 3-3016-04**

Sample ID: COMP-3-M

Lab Sample ID: 186086.01

Matrix: soil

Date Sampled: 8/30/18

Date Received: 8/31/18

		Analysis			
		Units	**Date**	**Time**	**Method**	**Analyst**
pH	**7.89**	SU	8/31/18	16:25	9045	SEL
Ignitability	**Pass**	None	9/06/18	8:05	1030	SWC
Reactive Cyanide	< 1	mg/kg	9/11/18	13:45	7.3.3.2	ATA
Reactive Sulfide	< 10	mg/kg	9/06/18	13:45	7.3.4.2	ATA

Ignitability: "Pass" = Not Ignitable, "Fail" = Ignitable