INVITATION FOR BID #2018-01

DESCRIPTION

ENVIRONMENTAL CLEANUP
2649 PESTALOZZI STREET, ST. LOUIS, MISSOURI

See attached General Conditions, Specifications, and Bid Form for detailed information

The Near Southside Employment Coalition (NSEC) has received a grant funded by the Environmental Improvement and Energy Resources Authority (EIERA) Missouri Brownfield Revolving Loan Fund through the U.S. Environmental Protection Agency to conduct remedial activities at the 2649 Pestalozzi Street site to address the removal of contaminated soil.

Date Issued: December 14, 2018
Owner: Near Southside Employment Coalition
Owners Representative: Ohala Ward
Owner's Representative Email: oward@nsecworks.org
Telephone Number: 314-865-4453
Mandatory Pre-Bid Conference and Site Walk: 10:30 a.m., Wednesday, January 16, 2019

Submit Bids to:

Ohala Ward
Near Southside Employment Coalition
2649 Pestalozzi St.
St. Louis, MO 63118

SEALED BIDS MUST BE PHYSICALLY RECEIVED PRIOR TO **4:00 P.M. on Friday, January 25, 2019.** Bids will be opened by the Near Southside Employment Coalition at the location listed above.

- Bids shall be submitted on the Bid-Proposal Form provided and must be manually signed by the individual authorized to legally bind the company.
- Bids shall be submitted with the IFB number clearly indicated on the outside of the mailing envelope.
- Bids received after the opening date and time will be rejected.
- The attached Terms and Conditions shall become part of the contract resulting from this solicitation.
- ***FAXED/EMAILED BIDS WILL NOT BE ACCEPTED.***

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ATTACHMENTS

INSTRUCTION TO BIDDERS

01. Opening Location
The Bids will be opened at 2649 Pestalozzi Street, St. Louis, MO 63118

02. IFB Delivery Requirements
Any Bids received after the above stated time and date will not be considered. It shall be the sole responsibility of the bidder to have their Bid delivered before the due date and time indicated. If a Bid is sent by U.S. Mail, the bidder shall be responsible for its timely delivery. Bids delayed by mail shall not be considered, shall not be opened, and shall be rejected. Arrangements may be made for their return at the bidder's request and expense. Bids may be mailed and accepted if the signed bid form and required information was mailed and received prior to the due date and time. Bids sent by email will not be accepted.

03. Sealed and Marked
If sent by mail, one original signed Bid shall be submitted in one sealed package, clearly marked on the outside of the package with the Invitation for Bid number and addressed to:

Ohala Ward
Near Southside Employment Coalition
2649 Pestalozzi St.
St. Louis, MO 63118

04. Legal Name and Signature
Bids shall clearly indicate the legal name, address, and telephone number of the bidder (company, firm, corporation, partnership, or individual). Bids shall be manually signed above the printed name and title of signer on the Affidavit of Compliance page. The signer shall have the authority to bind the company to the submitted Bid. Failure to properly sign the Bid form shall invalidate same, and it shall not be considered for award.

05. Corrections
No erasures are permitted. If a correction is necessary, draw a single line through the entered figure and enter the corrected figure above it. Corrections must be initialed by the person signing the Bid.

06. Clarification and Addenda
Each bidder shall examine all Invitation for Bid documents and shall judge all matters relating to the adequacy and accuracy of such documents. Any inquiries or suggestions, concerning interpretation, clarification, or additional information pertaining to the Invitation for Bid shall be made through the listed representative for the Near Southside Employment Coalition (Owner) in writing or through email. The Near Southside Employment Coalition shall not be responsible for oral interpretations given by any representative. The issuance of written addenda is the official method whereby interpretation, clarification, or additional information can be given.

It shall be the responsibility of each bidder, prior to submitting their Bid, to contact the Owner's representative at phone number 314-865-4453, to determine if addenda were issued and to make such addenda a part of their Bid.

07. IFB Expenses
All expenses for bid making are to be borne by the bidder.

08. Irrevocable Offer
Any Bid may be withdrawn up until the due date and time set for opening of the IFB. Any Bid not so withdrawn shall, upon opening, constitute an irrevocable offer for a minimum period of 90 days to sell to the Owner the goods or services set forth in the IFB, until one or more of the Bids have been duly accepted by the Owner.

09. Responsive and Responsible Bidder
To be responsive, a bidder shall submit a Bid which conforms in all material respects to the requirements set forth in the Invitation for Bid. To be a responsible bidder, the bidder shall have the capability in all respects to perform fully the contract requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment and credit which will ensure good faith performance. The lowest responsible bidder shall mean the bidder who makes the lowest Bid to sell goods or services of a quality which conforms closest to the quality of goods or services set forth in the specifications or otherwise required by the Owner and who is known to be fit and capable to perform the Bid as made.

10. Reserved Rights
The Owner reserves the right to make such investigations as it deems necessary to make the determination of the bidder's responsiveness and responsibility. Such information may include, but shall not be limited to: current financial statement, verification of availability of equipment and personnel, and past performance records.

11. The Right to Audit
The bidder agrees to furnish supporting detail as may be required by the Owner to support charges or invoices, to make available for audit purposes all records covering charges pertinent to the purchase, and to make appropriate adjustments in the event discrepancies are found. The cost of any audit will be paid by the Owner. The Owner shall have the right to audit the bidder's records pertaining to the work/product for a period of three (3) years after final payment.

12. Applicable Law
All applicable laws and regulations of the State of Missouri, will apply to any resulting agreement, contract, or purchase order.

13. Right to Protest
Protestors shall seek resolution of their complaints with the Owner's representative.

Any protest shall state the basis upon which the solicitation or award is contested and shall be submitted within ten (10) calendar days after such aggrieved person knew or could have reasonably been expected to know of the facts giving rise thereto.

14. Ethical Standards
With respect to this IFB, if any bidder violates or is a party to a violation of the general ethical standards of the State of Missouri Statues, such bidder may be disqualified from furnishing the goods or services for which the Bid is submitted.

15. Collusion
By offering a submission to this Invitation for Bid, the bidder certifies the bidder has not divulged, discussed, or compared the Bid with other bidders and has not colluded with any other bidder or parties to this IFB whatsoever. Also, the bidder certifies, and in the case of a joint Bid, each party thereto certifies as to their own organization, that in connection with this IFB:

a. Any prices and/or cost data submitted have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices and/or cost data, with any other bidder or with any competitor.

b. Any prices and/or cost data for this Bid have not knowingly been disclosed by the bidder and will not knowingly be disclosed by the bidder prior to the scheduled opening directly or indirectly to any other bidder or to any competitor.

c. No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.

d. The only person or persons interested in this Bid, principal or principals are named therein and that no person other than therein mentioned has any interest in this Bid or in the contract to be entered into.

e. No person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee exempting bona fide employees or established commercial agencies maintained by the Purchaser for the purpose of doing business.

16. Contract Forms
Any agreement, contract, or purchase order resulting from the acceptance of a Bid shall be on forms either supplied by or approved by the Owner.

17. Liability and Indemnity

a. In no event shall the Owner be liable to the Contractor for special, indirect, or consequential damages, except those caused by the Owner's gross negligence or willful or wanton misconduct arising out of or in any way connected with a breach of this contract. The maximum liability of the Owner shall be limited to the amount of money to be paid or received by the Owner under this contract.

b. The Contractor shall defend, indemnify and save harmless the Owner, its elected or appointed officials, agents and employees from and against any and all liability, suits, damages, costs (including attorney fees), losses, outlays and expenses from claims in any manner caused by, or allegedly caused by, or arising out of, or connected with, this contract, or the work or any subcontract thereunder (the Contractor hereby assuming full responsibility for relations with subcontractors), including, but not limited to, claims for personal injuries, death, property damage, or for damages from the award of this contract to Contractor.

c. The Contractor shall indemnify and hold the Owner harmless from all wages or overtime compensation due any employees in rendering services pursuant to this agreement or any subcontract, including payment of reasonable attorneys' fees and costs in the defense of any claim made under the Fair Labor Standards Act, the Missouri Prevailing Wage Law or any other federal or state law.

18. IFB Forms, Variances, Alternates
Bids must be submitted on attached IFB forms, although additional information may be attached. Bidders must indicate any variances from the Owner's requested specifications and/or terms and conditions, on the IFB Affidavit of Compliance. Otherwise, bidders must fully comply with the Owner requested specifications and terms and conditions. Alternate Bids may or may not be considered at the sole discretion of the Owner.

19. Bid Form
All blank spaces must be completed with the appropriate response. The bidder must state the price, written in ink, for what is proposed to complete each item of the project. Bidders shall insert the words "no bid" in the space provided for an item for which no Bid is made. The bidder shall submit an executed Bid form, affidavit of compliance with other requested documents.

20. Modifications or Withdrawal of Bid
A modification for a Bid already received will be considered only if the modification is received prior to the time announced for opening of Bids. All

modifications shall be made in writing, executed, and submitted on the same form and manner as the original Bid. Modifications submitted by telephone, fax, or email will not be considered.

21. Errors in Bids

Bidders or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting Bids; failure to do so will be at the bidder's own risk. Neither law nor regulations make allowance for errors either of omission or commission on the part of bidders. In case of error of extension of prices in the Bid, the unit price shall govern.

22. Prices Bid

Give both unit price and extended total. Price must be stated in units of quantity specified in the bidding specifications. In case of discrepancy in computing the amount of the Bid, the unit price of the Bid will govern. All prices shall be F.O.B. destination, freight prepaid (unless otherwise stated in special conditions). Each item must be bid separately and no attempt is to be made to tie any item or items in with any other item or items. If a bidder offers a discount on payment terms, the discount time will be computed from the date of satisfactory delivery at place of acceptance and receipt of correct invoice at the office specified. Payment terms shall be Net 30 if not otherwise specified. Pre-payment terms are not acceptable.

23. Discounts

Any and all discounts except cash discounts for prompt payments must be incorporated as a reduction in the Bid price and not shown separately. The price as shown on the Bid shall be the price used in determining award(s).

24. Descriptive Information

All equipment, materials, and articles incorporated in the product/work covered by this IFB are to be new and of suitable grade for the purpose intended. Brand or trade names referenced in specifications are for comparison purposes only. Bidders may submit Bids on items manufactured by other than the manufacturer specified when an "or equal" is stated.

25. Deviations to Specifications and Requirements

When bidding on an "or equal," Bids must be accompanied with all descriptive information necessary for an evaluation of the proposed material or equipment such as the detailed drawings and specifications, certified operation and test data, and experience records. Failure of any bidder to furnish the data necessary to determine whether the product is equivalent, may be cause for rejection of the specific item(s) to which it pertains. All deviations from the specifications must be noted in detail by the bidder on the Affidavit of Compliance form, at the time of submittal of Bid. The absence of listed deviations at the time of submittal of the Bid will hold the bidder strictly accountable to the specifications as written. Any deviation from the specifications as written and accepted by the Owner may be grounds for rejection of the material and/or equipment when delivered.

26. Quality Guaranty

If any product delivered does not meet applicable specifications or if the product will not produce the effect that the bidder represents to the Owner, the bidder shall pick up the product from the Owner at no expense. Also, the bidder shall refund to the Owner any money which has been paid for same. The bidder will be responsible for attorney fees in the event the bidder defaults and court action is required.

27. Quality Terms

The Owner reserves the right to reject any or all materials if, in its judgment, the item reflects unsatisfactory workmanship, manufacturing, or shipping damages.

28. Tax-Exempt

The Owner is exempt from sales taxes.

29. Awards

a. Unless otherwise stated in the Invitation for Bid, cash discounts for prompt payment of invoices will not be considered in the evaluation of prices. However, such discounts are encouraged to motivate prompt payment.

b. As the best interest of the Owner may require, the right is reserved to make awards by item, group of items, all or none, or a combination thereof; to reject any and all Bids or waive any minor irregularity or technicality in Bids received.

c. Awards will be made to the Bidder whose Bid (1) meets the specifications and all other requirements of the Invitation for Bid and (2) is the lowest and best Bid, considering price, delivery, responsibility of the bidder, and all other relevant factors.

30. Authorized Product Representation

The successful bidder(s) by virtue of submitting the name and specifications of a manufacturer's product will be required to furnish the named manufacturer's product. By virtue of submission of the stated documents, it will be presumed by the Owner that the bidder(s) is legally authorized to submit and the successful bidder(s) will be legally bound to perform according to the documents.

31. Regulations

It shall be the responsibility of each bidder to assure compliance with OSHA, EPA, Federal, and State of Missouri rules, regulations, or other requirements, as each may apply.

32. Termination of Award

Any failure of the bidder to satisfy the requirements of the Owner shall be reason for termination of the award. Any Bid may be rejected in whole or in part for good cause when in the best interest of the Owner.

33. Royalties and Patents

The successful bidder(s) shall pay all royalties and license fees for equipment or processes in conjunction with the equipment being furnished. Bidder

shall defend all suits or claims for infringement of any patent right and shall hold the Owner harmless from loss on account or cost and attorney's fees incurred.

34. Equal Employment Opportunity Clause
The City of LaGrange, in accordance with the provision of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Commerce (15 CFR, Part 8) issued pursuant to such Act, hereby notifies all bidders that affirmatively ensure that in any contract entered into pursuant to this advertisement that minority businesses will be afforded full opportunity to submit Bids in response to this advertisement and will not be discriminated against on the grounds of race, color, or national origin in consideration for award.

35. Bid Tabulation
Bidders may request a copy of the bid tabulation of the Invitation for Bid.

36. Budgetary Constraints
The Owner reserves the right to reduce or increase the quantity, retract any item from the Bid, or upon notification, terminate entire agreement without any obligations or penalty based upon availability of funds.

37. Order of Precedence
Any and all Special/General Conditions and Specifications attached hereto, which varies from the instruction to bidders, shall take precedence.

38. Affidavit for Service Contracts
The Bidder represents, in accordance with RSMO 285.530.2 that they have not employed, or subcontracted with, unauthorized aliens in connection with the scope of work to be done under the IFB and agrees to provide an affidavit to the Owner affirming that they have not, and will not in connection with the IFB, knowingly employ, or subcontract with, any person who is an unauthorized alien.

39. Inspection and Acceptance
No item(s) received by the Owner pursuant to this contract shall be deemed accepted until the Owner has had reasonable opportunity to inspect the item(s). Any item(s) which are discovered to be defective or which do not conform to any warranty of the Seller upon inspection may be returned at the seller's expense for full credit or replacement. If at a later time, the defects were not ascertainable upon the initial inspection may also be returned at the Seller's expense for full credit or replacement. The Owner's return of defective items shall not exclude any other legal, equitable or contractual remedies the Owner may have.

2649 PESTALOZZI ST., ST. LOUIS, MO, MISSOURI - ENVIRNOMENTAL CLEANUP
INVITATION FOR BID #2018-01
GENERAL TERMS AND CONDITIONS

1. **INTRODUCTION:** The Near Southside Employment Coalition (Owner) plans to conduct remedial activities to address contaminated soil at the 2649 Pestalozzi St. site located in St. Louis, Missouri. The Owner is utilizing the EIERA's Missouri Brownfields Revolving Loan Fund Program to help facilitate the remedial activities. Currently, the project is enrolled in the Missouri Department of Natural Resources /Brownfields Voluntary Cleanup Program (MDNR/BVCP). This project is being conducted to remediate petroleum contaminated soil at the site. A Remedial Action Plan (RAP) describing the site and planned remedial activities has been completed by Seagull Environmental Technologies, Inc. (Seagull) and is provided as Attachment B.

   The contractor shall provide all labor and materials to complete the scope as specified herein, and will be responsible for finalizing the RAP for approval by MDNR/BVCP. This will include providing all necessary documentation, reports, sampling, and other required items for participation in the MDNR/BVCP as well as following all BVCP requirements. These requirements include a Health and Safety Plan and a Quality Assurance Project Plan (QAPP). The applicable MDNR generic QAPP may be used, however if deviation from the generic QAPP is necessary, a Site-specific QAPP Addendum shall be prepared and submitted to the MDNR/ BVCP. The selected contractor will be responsible for acquiring all permits required for the project. It will be the contractor's responsibility to obtain a Certificate of Completion from the MDNR/BVCP.

   Term: The selected contractor must be able to complete all remedial activities by October 31, 2019.

2. **PRE-BID SITE VISIT**: The contractor shall be presumed to have made a reasonable inspection of the premises prior to the time of bidding and shall be held responsible for all information available through such inspection. The contractor shall immediately upon discovery, bring to the attention of the Owner any conflicts that may occur among the various provisions of the specifications. The Owner shall resolve such conflicts and shall be responsible for any costs reasonably incurred by the contractor due to such conflict. Failure of the contractor to bring conflicts or exceptions to the attention of the Owner shall allow the Owner to require any change deemed necessary before acceptance by the Owner.

   A **mandatory pre-bid site visit** will be held for this bid on **January 16, 2018 at 10:30 a.m.** at 2649 Pestalozzi St., St. Louis, Missouri. At that time a site walk will be conducted to view the site.

3. **INVESTIGATION OF CONDITIONS**: Before submitting a bid, Bidders should carefully examine the specifications, visit the site of the work, and fully inform themselves as to all existing conditions and limitations including verification of measurements and quantities and shall include in the bid a sum to cover the cost of items of work to be performed and, if awarded the contract, shall not be allowed any extra compensation by reason of any matter or item concerning which such Bidder might have fully informed himself prior to the bidding, and the successful Contractor must employ, so far as possible such methods and means in carrying of his work as will not cause any interruption or interference with any other Contractor.

4. **PERFORMANCE BOND AND A LABOR, AND MATERIALS PAYMENT BOND:** The Contractor shall furnish a Performance Bond and a Labor and Materials Payment Bond with surety approved by the Owner and on the forms approved by the Owner (provided in this bid document as Attachment C), each bond shall be in the full amount of the contract conditioned upon the full and faithful performance of all major terms and conditions of this contract and payment of all labor and material suppliers. It is further mutually agreed between the parties hereto that if at any time after the execution of this agreement and the surety bond(s) hereto attached for its faithful performance and payment of labor and material suppliers, the Owner shall deem the surety or sureties

upon such bond(s) to be unsatisfactory, or if, for any reason, such bond(s) ceases to be adequate to cover the performance of the work, the Contractor shall, at its expense, within five (5) days after the receipt of notice from the Owner to do so, furnish an additional bond or bonds, in such form and amount, and with such surety or sureties as shall be satisfactory to the Owner. In such event no further payment to the Contractor shall be deemed to be due under this contract until such new or additional security for the faithful performance of the work and the payment of labor and material suppliers shall be furnished in a manner and form satisfactory to the Owner. The corporate surety on any performance or payment bond must be licensed by the State of Missouri and if the required bond exceeds $25,000 must be listed in United States Treasury Circular 570.

5. **PREVAILING WAGE REQUIREMENT:** The work performed under this Agreement is subject to the Davis-Bacon Act. It is agreed that all workman employed by the Contractor, and any subcontractor employed under him, will be paid not less than the prevailing wage as determined by appropriate governmental authority and the Annual Wage Order attached hereto and made a part hereof. It is agreed that the contract or sums payable to the Contractor for the performance of this agreement are not subject to increase as a result of any change in the amount of such wage determined pursuant to Section 290.210 et. seq. R.S.Mo. The Federal Prevailing Wage rates are provided as Attachment G. The Contractor shall be required to complete an affidavit stating that he or she has complied with the prevailing wage law prior to final payment by the Owner.

6. **QUANTITIES:** The quantities listed herein are estimates. The Owner will not guarantee any amount of work related to the contract. The contractor will be paid for quantities actually constructed or performed as determined by field measurement agreed upon by the Contractor and the Owner (or Owner's representative).

7. **FUNDING:** The funding for this project is through the EIERA Missouri Brownfields Revolving Loan Fund from the U.S. Environmental Protection Agency (EPA); therefore, the contractor shall be responsible for necessary reports to satisfy the requirements of the granting agencies. The following requirements shall be applied to the current requirements of the RFP, and shall be followed as applicable.

(A) Nondiscrimination in Employment - Bidders on this work will be required to comply with the President's Executive Order Number 11246. Requirements for bidders and contractors under this order are explained in the specifications.

(B) Davis-Bacon - The sub-recipient assures that it, as well as its sub-recipients if required by future OMB guidance, shall fully comply with said section in that all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by and through the federal government shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40,. United States Code (Davis-Bacon Act). It is understood that the Secretary of Labor has the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (64 Stat. 1267; 5 U.S.C. App.) and section 3145 of title 40, United States Code, if applicable.

(C) Non-segregated Facilities – The successful bidder will be required to submit a certification of Non-segregated Facilities and to notify prospective subcontractors of the requirement for such a certification where the subcontract exceeds $10,000.

(D) Equal Employment Opportunity - 41 CFR 6044 published April 7, 1978 and amended October 3, 1980, "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity" (Executive Order 11246) (Notice) and Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246) (Specifications), as applicable.

(E) Debarment and Suspension - Executive Order 12549 - Debarment and Suspension establishes procedures which require EPA to deny any individual, organization, or unit of government the opportunity to participate in federally-assisted programs because of misconduct or poor performance. The General Services Administration (GSA) publication entitled "Lists of Parties Excluded from Federal Procurement or Non-procurement Programs" will identify those who are prohibited from the bidding process. Bidders are required to submit the certification included as Attachment F with their bid proposal, if applicable.

(F) Project Sign - A project sign must be prominently displayed at the construction site. This sign will be provided by the Owner.

(G) Access to Construction Site and Contract Records - The contractor shall provide access to the project site and project records by the, Environmental Improvement and Energy Resources Authority, Missouri Department of Natural Resources, the EPA, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

(H) Historical or Archaeological - Required by P.L. 93-291, if applicable.

If during the course of construction evidence of deposits of historical or archaeological interest is found, the contractor shall cease operations affecting the find and shall notify the owner who shall notify the Missouri Department of Natural Resources and the Director, Division of Parks, P.O. Box 176, 1101 Riverside Dr., Jefferson City, Missouri 65102, Telephone (573) 751-2479. No further disturbances of the deposits shall ensue until the contractor has been notified by the owner to proceed. The owner will issue a notice to proceed only after the state official has surveyed the find and made a determination to the Missouri Department of Natural Resources and the owner. Compensation to the contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or change order provisions of the specifications.

(I) Late Payment Clause - If the Owner fails to make payment thirty (30) days after receipt of the CONTRACTORS application for payment, in addition to other remedies available to the CONTRACTOR, then interest shall be added to each such payment in accordance with section 34.057 RSMo. (Supp. 1991).

(J) Clean Air Act - The contractor shall comply with the Clean Air Act (42 U.S.C. 7506(C)), if applicable.

(K) Clean Water Act - The contractor shall comply with the Clean Water Act (33 U.S.C. 1368), if applicable.

(L) Contract Work Hours and Safety Standards Act - The contractor shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR part 5), if applicable.

(M) Energy Efficiency Requirements - The contractor shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163, 89 Stat. 871). CFR 31.36(i)(13), if applicable.

(N) False Claims Act -- The contractor, as well as its subcontractors, if required by future OMB guidance, shall promptly refer to the State of Missouri or other appropriate Inspector General any credible evidence that a principal, employee, agent, contractor, sub-grantee, subcontractor or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict or interest, bribery, gratuity or similar misconduct involving those funds.

(O) Recycled Materials - In accordance with Section 6002 of the Resource Conservation and Recovery Act (RCRA) (U.S.C. 6962), preference shall be given to the procurement of specific products containing recycled materials identified in guidelines developed by the Environmental Protection Agency. Current guidelines are contained in 40 CFR 247-254.

(P) Small Business Act - Prior to awarding contracts, the loan recipient and any contractor awarding subcontracts must take the following affirmative steps in accordance with Section 129 of Public Law 100-590, Small Business Administration Reauthorization and Amendment Act of 1988, if applicable:

a. Placing Small Business in Rural Areas (SBRA) on solicitation lists;

b. Ensuring that SBRAs are solicited whenever they are potential sources;

c. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by SBRAs;

d. Establishing delivery schedules, where the requirements of work will permit which would encourage participation by SBRAs;

e. Utilizing the services of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce, as appropriate.

(Q) Storm Water Permit - In accordance with 10 CSR 20-6.200(l)(A) and (1)(B)(7), if the proposed project disturbs one (1) contiguous surface acre or more of land, then a land disturbance permit to discharge storm water is required. If the owner's population is greater than ten thousand (10,000) or is located within an urbanized area and/or the design flow of the wastewater treatment plant is greater than or equal to 1 MGD, then storm water discharges should be included in the existing NPDES permit. In the first case, the owner must ensure that the storm water discharges are covered by their municipal separate storm sewer system (MS4) permit. In the second case, the owner should check with the appropriate Regional Office to ensure that storm water discharges are covered in the existing permit for the wastewater treatment plant. For further information, contact the Missouri Department of Natural Resources, Water Protection Program, Permits Section, P.O. Box 176, Jefferson City, Missouri 65102. Telephone: (573) 751-6825.

(R) Employment of Unauthorized Aliens Prohibited - The contractor must comply with section 285.530 RSMo. and, if required, future OMB guidance regarding employment of unauthorized aliens prohibited. (See Attached Affidavit in Attachment D).

Pursuant to §285.530.1, RSMo, the subrecipient assures that it, as well as its subrecipients if required by future OMB guidance, do not knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the State of Missouri, and shall affirm, by sworn affidavit and provision of documentation, its enrollment and participation in a federal work

authorization program with respect to the employees working in connection with the contracted services. Further, the subrecipient assures that it, as well as its subrecipients if required by future OMB guidance, shall sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

In accordance with sections 285.525 to 285.550, RSMo a general contractor or subcontractor of any tier shall not be liable when such contractor or subcontractor contracts with its direct subcontractor who violates subsection 1 of section 285.530, RSMo if the contract binding the contractor and subcontractor affirmatively states that the direct subcontractor is not knowingly in violation of subsection 1 of section 285.530, RSMo and shall not henceforth be in such violation and the contractor or subcontractor receives a sworn affidavit under the penalty of perjury attesting to the fact that the direct subcontractor's employees are lawfully present in the United States.

(S) Privity of Contract - Neither the Environmental Improvement and Energy Resources Authority nor its employees are or will be a party to the contract(s) at any tier.

(T) Geographical Preference Prohibited -40 CFR 31.36 (c)(2) prohibits the use of geographical preferences, if applicable.

(U) Records Retention – The contractor and all sub-contractors shall retain all project related records for three years after final payment(s) and all other pending matters are closed.

(V) MBE/WBE – The following documents will need to be completed if applicable: Missouri State Revolving Fund and State Grant & Loan Program' Procedures for Implementation of Minority Business Enterprise/Women's Business Enterprise requirements and the Minority and Women's Business Enterprise Utilization Worksheet. The contractor shall make and document a good faith effort to use MBE/WBE's and fill out the reporting forms as applicable. The goals are 10% MBE and 5% WBE.

8. **CENTRAL CONTRACTOR REGISTRATION:** In accordance with the Federal Funding Accountability Act of 2006, the contractor assures that it, as well as its subcontractor(s), shall register in the Central Contractor Registration (CCR) database at https://www.sam.gov/portal/public/SAM/, and maintain current registration at all times during the pendency of this contract. In order to register in CCR, a valid Dun and Bradstreet Data Universal Numbering System (DUNS) Number is required. See www.dnb.com

9. **INSURANCE REQUIREMENTS:** Without limiting any of the other obligations or liabilities of the Contractor, the Contractor shall secure and maintain at its own cost and expense, throughout the duration of this Contract and until the work is completed and accepted by the Owner, insurance of such types and in such amounts as may be necessary to protect it and the interests of the Owner against all hazards or risks of loss as hereunder specified or which may arise out of the performance of the Contract Documents. The form and limits of such insurance, together with the underwriter thereof in each case, are subject to approval by the Owner. Regardless of such approval, it shall be the responsibility of the contractor to maintain adequate insurance coverage at all times during the term of the Contract. Failure of the Contractor to maintain coverage shall not relieve it of any contractual responsibility or obligation or liability under the Contract Documents.

The minimum coverage for the insurance referred to herein shall be in accordance with the requirements established below:

A. **Workers' Compensation** Statutory

Employer's Liability	
Bodily Injury by Accident	$100,000 Each Accident
Bodily Injury by Disease	$500,000 Policy Limit
Bodily Injury by Disease	$100,000 Each Employee

B. Commercial General Liability Limits: Bodily Injury and Property Damage

Each Occurrence, including Products:	$1,000,000
Personal & Advertising Injury	$1,000,000
General Aggregate:	$2,000,000

C. Automobile Liability Insurance: Policy shall protect the Contractor against claims for bodily injury and/or property damage arising out of the ownership or use of any owned, hired, and/or non-owned vehicle:

Bodily Injury Limits:	$1,000,000 for each person and $1,000,000 for each accident
Property Damage Limits:	$1,000,000 for each accident
	OR
	$1,000,000 Combined Single Limits, including bodily injury and property damage

D. **Subcontracts**: In case any or all of this work is sublet, the Contractor shall require the subcontractor to procure and maintain all insurance required in subparagraphs (A), (B) and (C) hereof and in like amounts. Contractor shall require any and all subcontractors with whom it enters into a contract to perform work on this project to protect the Owner through insurance against applicable hazards or risks and shall provide evidence of such insurance.

E. **Notice:** The Contractor and/or subcontractor shall furnish the Owner prior to beginning the work, satisfactory proof of carriage of all the insurance required by this contract, with the provision that policies shall not be canceled, modified or non-renewed without thirty (30) days written notice to the Owner.

10. REPAIR OF DAMAGES: It is the responsibility of the Contractor to repair any damages incurred in the area that is directly related to the project. When damages occur, the Owner is to be notified and shall inspect the repairs upon completion.

11. SAFETY: Contractor shall comply with all applicable OSHA, State of Missouri Safety Regulations and comply with all construction safety requirements of local authorities having jurisdiction. Contractor shall exercise all due caution to exclude the public from the work area and especially from contact with any hazardous materials.

A project-specific Health and Safety Plan (HASP) will be prepared by the Contractor to govern the Contractor's field work activities at the site. The Contractor will provide qualified staff with proper/required training to perform remediation activities. The Owner reserves the right to ask Contractor for documentation of training.

12. TRAINING AND CERTIFICATION REQUIREMENTS: The Contractor must meet specific training requirements specified by State and Federal laws and regulations. The Contractor shall remain responsible for compliance with these requirements through completion of the project. The Site Safety Officer and field personnel must have appropriate health and safety training as specified in OSHA, 29 CFR 1910.120 (HAZWOPER). Specific safety measures shall be clearly outlined in the project Health and Safety Plan.

13. SITE CLEANLINESS: The Contractor shall give special attention to keeping the work site clean and free from trash and debris.

14. **PERMITS:** All permits necessary to complete the project shall be secured and paid for by the Contractor. The Contractor shall give all notices and comply with all laws, ordinances and regulations bearing on the conduct of the work (as specified).

15. **SANITARY PROVISIONS:** The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as may be necessary to comply with the regulations of the State Board of Health and any sanitary regulations of the community in which work is being performed. Temporary toilets shall be provided as required.

16. **OTHER DELAYS:** If the Contractor or his subcontractor experiences documented hindrances or delays which, in his opinion, are not usually to be expected in the performance of the work, and which affect the performance of the work, he may request a change in the agreement. The Contractor shall be entitled to an extension of the time for contract completion, but such contract time of completion shall be extended no more than one day for each day of delay. Any such agreement to modify or extend the time of contract completion shall be made in writing by formal addendum to the contract. The time of application of liquidated damages shall not begin until after the amended date for contract/phase completion. Such hindrances and delays may include, but not be limited to, acts or failures to act by other contractors employed by the Owner, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

17. **PUNCH LIST:** A list of incomplete items (typically referred to as a "punch list") will be issued at Substantial Completion provided that no incomplete item will prevent the Owner's use of the space/facility as it is intended to be used, including life safety components. After Substantial Completion and issuance of the "punch list", subsequently discovered items which are not complete, and/or in nonconformance with the Contract may be added to the list until such time as Final Acceptance. Payment and/or exclusion of any item from a "punch list" shall not relieve the Contractor of the obligation to fulfill all requirements of the Contract. All punch list items shall be completed within thirty (30) days of Final Acceptance by the Owner and prior to final payment.

18. **CHANGES IN WORK:** The Owner, without giving notice to the surety and without invalidating this contract may make changes by altering, adding or deducting from the work with the contract sum being adjusted accordingly. All such work and any approved time extensions shall be added to the contract by Contract addendum. Each contract change shall include all cost required to perform the work including all labor, material, equipment, overhead, profit, delays, disruptions or other miscellaneous expenses. The Contractor shall provide a detailed cost breakdown for all changes in work to the Owner. The percentage of overhead and profit shall not increase as a result of any change in work.

19. **PROTECTION OF WORK:** The Contractor shall continuously maintain adequate protection of all his work from damage and shall protect from injury or loss arising in connection with the contract. He shall make good any such damage, injury, or loss, except as such may be directly due to error in Contract documents.

20. **BASIS FOR AWARD:** Other factors that will be considered besides the lowest price are:

    A. Quality of workmanship as represented by references;

    B. Capabilities to do required work; and

    C. Completion Date.

    The contract resulting from this solicitation will be awarded to that responsible offerer whose offer, conforming to the invitation is determined most advantageous to the Owner, price and other factors considered. The

offerer's proposal shall be in the form prescribed by this invitation and shall contain a response to each of the areas identified which affects the evaluation factors for an award.

Exceptions to the bid may be considered if determined minor in nature and acceptable to the Owner's application. All exceptions shall be noted on the attached "Affidavit of Compliance" form included as Attachment D.

21. **PAYMENT TERMS:** The Bidder shall clearly state their prompt payment discount and net payment terms in the space provided on the Owner's Bid Form or Proposal page. If this section is not completed, the Owner will assume terms are net 30 days.

22. **PAYMENTS:** Progress payments will be made each month in the amount of 95 percent of the estimated value of the services provided at the job site during the previous calendar month, providing the work is reasonably complete. The Owner will withhold 5 percent of the amount of each progress payment. The last payment due for each contract will be paid by the Owner to the Contractor only after the project has received a Certificate of Completion from the MDNR/BVCP and the Contractor has furnished the Owner with an affidavit stating that all persons, firms, or corporations who have furnished labor or materials, employed directly or indirectly in the work, have been paid in full. The Owner shall rely on said affidavit at face value. The Owner shall have the right to demand and receive from the Contractor an affidavit stating that payment in full has been made for all labor, services, and materials incorporated into the work, for the period of time for which the progress payment is due. The Contractor does hereby release, remise, and quit claim any and all rights he may enjoy to perfect any lien or any other type of statutory common law or equitable lien against this project.

23. **PAYMENTS WITHHELD:** The Owner may withhold or nullify in whole or part any payment to the Contractor to such extent as may be necessary to protect the Owner from loss on account of:

    A. Defective work not remedied. When a notice of noncompliance is issued on an item or items, corrective action shall be undertaken immediately. Until corrective action is completed, no monies will be paid and no additional time will be allowed for correction of the item or items. The cost of corrective action(s) shall be solely borne by the Contractor.

    B. A reasonable doubt that the contract can be completed for the balance then unpaid.

    C. Failure of the Contractor to maintain satisfactory progress in accordance with the Contractors progress schedule.

    D. When the Owner is satisfied the Contractor has remedied the above ground(s) for withholding payment, payment shall be made for the amounts withheld.

24. **SUPERINTENDENT:** The Contractor shall keep on site, during progress of the work, a competent Superintendent satisfactory to the Owner. The Superintendent shall represent the contractor in his absence and all direction given to him shall be as if given to the Contractor. He shall carefully study and compare all drawings, specifications and other instruction and shall, at once, report to the Owner and its representatives any errors, inconsistency or omission which he may discover. The Superintendent shall not be changed except for good cause, and with the consent of the Owner. Within ten (10) calendar days of the Notice of Award, the contractor shall provide the name and qualifications of the Superintendent to the Owner.

25. **DAILY CONSTRUCTION REPORTS:** The Contractor shall maintain a daily construction report recording the following information concerning events at the site; and submit a duplicate copy to the Owner at a weekly interval:

1. List of Subcontractors at the site
2. Approximate count of personnel at the site
3. Accident and unusual events
4. Meetings and significant decisions
5. Stoppages, delays, shortages or losses
6. Orders and requests of governing authorities
7. Change Orders received, implemented
8. Services connected, disconnected

26. PROGRESS SCHEDULE: Within ten (10) calendar days after receipt of Notice of Award, the Contractor shall submit to the Owner for approval, a progress schedule in reproducible form utilizing a critical path method or other similar schedule, showing the rate of progress he agrees to maintain and the order in which he proposes to carry out various phases of work in order to attain the completion date as required by the Contract. Particular attention shall be devoted to those elements to be performed in the early stages of the effort to preclude overstatement that would result in an imbalance in payments and exceed the value of work performed. Work elements shall be limited to those tasks, which will indicate the progress of the work and which, may be readily identified and measured by personnel monitoring the contractor's progress. Normally the percentage factors of each work element should be related to the total value of the contract. No work shall begin without the Owner's review/approval of the progress schedule.

27. MISUNDERSTANDINGS: No consideration will be granted for any alleged misunderstanding of the material to be furnished or work to be done, it being understood that the submission of a proposal and the entering into a contract is an agreement with all the items and conditions referred to herein.

28. ASSIGNED WORK AREAS: The Contractor shall be responsible to work in only the assigned work areas and only park at the designated areas.

29. SPECIFICATION AND PLAN VARIANCE: If the Contractor observes that the specifications and plans are at a variance therewith, he shall promptly notify the Owner in writing and any necessary changes shall be adjusted. If the Contractor performs any work contrary to such law, ordinance, rules and regulations, and does not comply with the aforesaid procedure, he shall bear all cost incidental to such violation.

30. COORDINATION AND PRECONSTRUCTION MEETING: Representatives of the Contractor shall attend a coordination meeting at a time and date decided by the Owner to discuss matters relative to the execution of this project. The Contractor's representative shall attend additional meetings thereafter as required by the Owner in order to expedite the work. These meetings shall be held at a place designated by the Owner.

INVITATION FOR BID
SPECIFICATIONS

SCOPE OF PROJECT: Contractor shall provide all labor, materials, equipment, supplies, taxes, insurance, fuels, permits, and any and all other items necessary to complete the work, the removal of materials, and disposal of materials and related work, as specified herein. Contractor shall complete all work.

1. **SCHEDULE:** The Contractor will be required to commence work under this contract within ten (10) calendar days after receipt of the Notice to Proceed. Work will be required to be completed by October 31, 2019.

   The Contractor is required to provide a sufficient work force and construction management so that no time extension will be granted for delay of contract award, weather conditions, utility conflicts, or Contractor scheduling of equipment or construction progress.

2. **SPECIFICATIONS:** All work shall be accomplished in accordance with this Scope of Work and the Specifications contained or referenced herein and in accordance with all local, state, and federal rules, laws, and regulations.

   As mentioned, the 2649 Pestalozzi St., St. Louis, Missouri property is enrolled the Missouri Department of Natural Resources Brownfields/Voluntary Cleanup Program (MDNR/BVCP). The MDNR/BVCP Project Manager is Mr. Mike Washburn. The site cleanup goal under the MDNR/BVCP is for unrestricted use; therefor, cleanup activities have been planned to accomplish that goal.

   Contractor must acquire and all permits and submit all notifications necessary to complete this project.

   Copies of all permits, notification documents, sampling and analysis results, and disposal documents must be provided to the Owner. All of these documents are required to be submitted as part of the Remedial Action Final Cleanup Report, which the contractor must prepare.

   A visual inspection of the remediated areas will be completed by the Owner's representative to approve completion.

3. **REMEDIAL ACTION PLAN**: The Remedial Action Plan (RAP) written for the site cleanup is included as Attachment B, and is considered part of the bid document. The RAP shall be used for the basis of the bid and the required clean up protocol. Specific to this bid, is the removal of contaminated soil at the site. The bid form with this bid document contains the estimated quantities of materials to be addressed during the cleanup activities. The quantities listed are estimates. The Owner will not guarantee any amount of work related to the contract. The contractor will be paid for quantities actually constructed or performed as determined by field measurement agreed upon by the Contractor and the Owner (or Owner's representative). Please note that the site's RAP further details the materials/items to be addressed during the cleanup activities. Additionally, the RAP details confirmation sampling associated with the cleanup. The remedial contractor will be responsible for all of the required confirmation sampling associated with the cleanup. Cost associated with the confirmation sampling should be incorporated into costs for the cleanup.

   Any changes to the RAP and cleanup protocol must be approved by the Owner, Environmental Improvement and Energy Resources Authority (EIERA), and MDNR/BVCP Project Manager, prior to commencing site work.

4. **HEALTH AND SAFETY PLAN**: The remedial contractor must prepare and submit a project-specific Health and Safety Plan to the Owner and MDNR/BVCP for approval prior to commencing any site work.

5. **QAPP**: The remedial contractor must prepare and submit a site specific Quality Assurance Project Plan (QAPP) to the Owner and to MDNR/BVCP for approval prior to commencing any site work.

6. **REMEDIAL ACTION FINAL REPORT**: The selected remedial contractor will be required to prepare and submit a Remedial Action Final Report to the MDNR/BVCP for approval. The Remedial Action Final Report will document all site cleanup activities, disposal quantities, and sample results. This task will not be considered complete until MDNR/BVCP has no further technical comments concerning the report. Upon completion, the contractor shall provide two copies of the report to MDNR and three copies to the Owner.

7. **DISCOVERY OF HAZARDOUS MATERIALS:** In the event previously unknown hazardous materials are discovered by the Contractor, the Contractor shall immediately suspend work in the specific location of the hazardous material and immediately notify the Owner.

NEAR SOUTHSIDE EMPLOYMENT COALITION SITE CLEANUP
BID FORM – PROPOSAL

SUBMITTED BY_____
(Company Name)

Pursuant to and in accordance with the above stated Invitation for Bid, the undersigned hereby declares that they have examined the bid documents and specifications for the item(s) listed below.
The undersigned proposes and agrees, if their Bid is accepted to furnish the item(s) submitted below, including delivery to the Owner in accordance with the delivery schedule indicated below and according to the prices products/services information submitted.

Item Number	Description	Unit	Estimated Quantity	Unit Price	Extended Amount (Total)
BASE BID ITEMS					
	SOIL EXCAVATION				
1	Excavation/Disposal of Petroleum Contaminated Soil	Cu/yd	1,300		
2	Site Restoration (backfilling activities)	Cu/yd	1,300		
REMEDIAL ACTION FINAL REPORT					
27	Project Health & Safety Plan, QAPP, and any other items necessary to finalize plan per MDNR/BVCP	Unit	1	$	$
28	Field Mobilization/Demobilization, Regulatory Notification and Permitting	Unit	1	$	$
29	Preparation of the Remedial Action Final Report	Unit	1	$	$
Base Bid Item Total		**$**			

Notes:

Please note that the site's Remedial Action Plan further details the materials/items to be addressed during the cleanup activities. Additionally, the Remedial Action Plan details confirmation sampling associated with the cleanup. Cost associated with the confirmation sampling should be incorporated into the rates/costs listed in the table above.

STATEMENT OF BIDDER'S QUALIFICATIONS

For the

Environmental Remediation at the
Near Southside Employment Coalition Site
2649 Pestalozzi St., St. Louis, Missouri

(This form shall be completed and submitted with the project bid)
All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The bidder may submit any additional information he so desires.

1. Name of bidder_____

2. Permanent main office address_____

3. When organized_____

4. If a corporation, where incorporated _____

5. How many years have you been engaged in construction under your present firm name or trade name? _____

6. Experience and Qualifications. Summarize experience with similar environmental remediation projects over the last year or four projects whichever is less. Include specific details regarding previous work performed under EPA Brownfields and the Missouri B/VCP Programs. Attach abbreviated resumes for the proposed Contract Manager and Superintendent on site.

_____

7. List the more important contracts recently completed by you, stating approximate gross cost for each, and the month and year completed. _____

_____

8. Contracts on hand: (Schedule these, showing gross amount of each contract and the respective anticipated dates of completion.) _____

_____

9. Have you ever failed to complete any work awarded to you? If so, where and why?

_____

_____

10. Have you in the last five years ever been required to pay liquidated damages on any contract awarded to you? If so, where and why? _____

_____

11. Have you ever defaulted on a contract? If so, where and why? _____

_____

12. Has your firm ever engaged in litigation for the settlement of claims or disputes arising out of a construction contract? If so, give particulars. _____

_____

13. To what extent would you expect to employ subcontractors? (Subcontractor Form Required) _____

14. Give bank reference._____

16. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Near Southside Employment Coalition, in verification of the recitals comprising this Statement of Bidder's Qualifications.

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

Name of Bidder _____
By _____
Title_____

State of _____

County of _____
_____, being duly sworn, deposes and says that he is
_____ of
(TITLE)
_____
and that the answers to the foregoing questions and all statements therein contained are true and correct. Subscribed and sworn before me this _____ day of _____, 20_____.

_____
Notary Public My commission expires: _____

SUBCONTRACTOR DISCLOSURE FORM

Environmental Remediation
at
2649 Pestalozzi St., St. Louis, Missouri

(This form shall be completed and submitted with the project bid)

IF NO SUBCONTRACTORS ARE TO BE USED, CHECK HERE. ____

Sign and date _____

Use additional forms for each Subcontractor

SUBCONTRACTOR:_____

ADDRESS:
_____

PHONE:
_____

CONTACT
PERSON:_____

BID ITEMS TO BE SUBCONTRACTED

(ITEM NO., DESCRIPTION, QUANTITY, PRICE, AMOUNT)

TOTAL_____

PRIME CONTRACTOR: _____

SIGNATURE: _____

DATE: _____

(Note: Subcontractor Qualifications may be required prior to Bid Award.)

Subcontractor Approval _____ Date _____

TETRA TECH

ATTACHMENT A

January 18, 2018

Mr. Todd Davis
Site Assessment Manager
U.S. Environmental Protection Agency, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

Subject: Analysis of Brownfields Cleanup Alternatives Report
Near Southside Employment Coalition, St. Louis, Missouri
EPA Region 7, START 4, Contract No. EP-S7-13-06, Task Order No. 0002.041
Task Monitor: Todd Davis, EPA Site Assessment Manager

Dear Mr. Davis:

Tetra Tech, Inc. (Tetra Tech) is submitting the attached Analysis of Brownfields Cleanup Alternatives report regarding the Near Southside Employment Coalition property in St. Louis, Missouri. If you have any questions or comments pertaining to this submittal, please call the Project Manager at (816) 412-1761.

Sincerely,

Nick Patch
START Project Manager

Ted Faile, PG, CHMM
START Program Manager

Enclosures

cc: Debra Dorsey, START Project Officer (cover letter only)

415 Oak Street, Kansas City, MO 64106
Tel 816.412.1741 Fax 816.410.1748 www.tetratech.com

ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES REPORT

NEAR SOUTHSIDE EMPLOYMENT COALITION
ST. LOUIS, MISSOURI

Superfund Technical Assessment and Response Team (START) 4 Contract

Contract No. EP-S7-13-06, Task Order No. 0002.041

Prepared For:

U.S. Environmental Protection Agency
Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

January 18, 2018

Prepared By:

Tetra Tech, Inc.
415 Oak Street
Kansas City, Missouri 64106
(816) 412-1741

CONTENTS

APPENDICES

TABLES

1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) was tasked by the U.S. Environmental Protection Agency (EPA) under the Superfund Technical Assessment and Response Team (START) contract (EP-S7-13-06) to conduct a Phase II Targeted Brownfields Assessment (TBA) and Analysis of Brownfields Cleanup Alternatives (ABCA) of the Near Southside Employment Coalition property (subject property), an approximately 0.21-acre lot at 2649 Pestalozzi Street, St. Louis, Missouri. The TBA was completed on November 15, 2017 and the following document is the associated ABCA. The Site is the current location of the Near Southside Employment Coalition (NSEC), founded in 1983. The nonprofit organization provides job readiness, computer training, general equivalency diploma (GED) classes, career planning, and job referrals to local community members from low-income housing developments. NSEC has owned the subject property since 1999.

The subject property has a long history of commercial use, including auto service, filling station, and machine shop activities from at least as early as 1936. Prior to NSEC, another employment assistance company, Human Energies, occupied the property.

A Phase I TBA of the subject property occurred in August 2016. The investigation identified recognized environmental conditions (REC) associated with a former gas station, machine shop, and auto repair shop at the subject property and adjacent properties (Terracon 2016). Tetra Tech completed a Phase II Environmental Site Assessment (ESA) in February 2017 (Tetra Tech 2017a) and detected contaminants in surface soil, subsurface soil, and groundwater typically associated with gas stations. Contaminants at highest concentrations were detected within the western portion of the property, near the area of a former gas station and pump island.

In August and September 2017, Tetra Tech START conducted a Phase II TBA to further investigate contamination identified in the Phase II ESA. Soil samples were collected near and downgradient of the former pump island at depths between 15 and 32 feet below ground surface (ft bgs). One soil sample contained total petroleum hydrocarbons-gasoline range organics (TPH-GRO) above the subsurface soil Tier 1 Risk-Based Target Levels (RBTL) for residential indoor inhalation of vapors from subsurface soils. Concentrations of 1,2,4-trimethylbenzene, benzene, and naphthalene in an indoor air sample collected from the on-site building exceeded residential Tier 1 RBTLs, and the concentration of naphthalene also exceeded the non-residential RBTL; however, these contaminants probably originated from an indoor source since cleaners and gasoline were stored in a nearby area. Trace levels of petroleum-related

compounds were also detected in soil gas samples collected near the site building, probably originating from the known source upgradient the subject property.

2.0 SITE BACKGROUND AND DESCRIPTION

The subject property is approximately 1 mile southwest of the intersection of Interstate 44 and Interstate 55, and is centered at 38.601757 degrees (°) north latitude and 90.225755° west longitude (Appendix A, Figure 1). The property lies within a mixed residential and commercial area. According to St. Louis's property database, the entire area—known as the Benton Park West neighborhood—is zoned for multiple family residential use (Zone C). A one-story building on the site encompasses approximately 50 by 75 feet. Residential properties are north, northeast, south, and west of the site.

The subject property is depicted on the U.S. Geological Survey (USGS) 7.5-minute series Cahokia, Illinois-Missouri (IL-MO), topographic quadrangle map. The site is approximately 520 feet above mean sea level (amsl), and the topographic gradient of the area is generally east (USGS 2015).

The 0.21-acre site is the current location of the NSEC, founded in 1983. The nonprofit organization provides job readiness, computer training, GED classes, career planning, and job referrals to local community members from low-income housing developments. NSEC has owned the subject property since 1999.

The site has a long history of commercial use. Historically, the site building was utilized for auto service activities (Terracon 2016). The site was identified in historical city directories as a filling station from at least as early as 1936 to 1946. It was also identified as a filling station, with one gasoline tank, on a 1950 Sanborn map. The station appeared to operate at the site until at least 1958 based on historical aerial photographs. A machine shop also reportedly operated at the site from at least as early as 1936 to 1978. This is consistent with 1950 and 1990 Sanborn maps, which identify the current on-site building as a machine shop (Terracon 2016). Prior to NSEC, another employment assistance company, Human Energies, occupied the site.

The subject property is bounded north by residential housing; east by an alley, with residential and commercial properties beyond; south by Pestalozzi Street, with residential properties beyond; and west by Ohio Avenue, with residential properties beyond. According to a review of historical documents, the area surrounding the subject property has been used for residential and commercial purposes. Several medium-sized trees grow on the west side of the property, and an approximately 3,500-square foot single-story building is on the east side.

3.0 FUTURE USE

Future use of the subject property is anticipated to continue as a non-profit employment services organization for the local community. Groundwater in the site vicinity is currently not used for drinking water, and no future groundwater use for this purpose is anticipated, because drinking water is a municipal utility. No remedial activities have occurred at the subject property to date.

4.0 PREVIOUS INVESTIGATIONS

A Phase I TBA of the site occurred in August 2016 (Terracon 2016). The investigation identified the following RECs associated with the subject property and adjacent properties (Terracon 2016):

- Potential impact from a historical gas station on the subject property
- Potential impact from a historical machine shop on the subject property
- Potential impact from a historical auto repair shop adjacent to (east of) the site.

Tetra Tech completed a Phase II ESA in February 2017 (Tetra Tech 2017a) for the Missouri Department of Natural Resources (MDNR) to assess presence or absence of contamination on the property in order to confirm or eliminate RECs identified during the Phase I TBA. Phase II ESA activities included collection of four surface soil and four subsurface soil samples at four boring locations. Groundwater samples were collected at two of the borings. The borings were advanced near potentially impacted areas based on findings from the Phase I TBA.

Numerous contaminants typically associated with gas stations were detected during the February 2017 Phase II ESA in surface soil, subsurface soil, and groundwater. Contaminants at highest concentrations were detected within the western portion of the property, near the area of the former gas station and pump island.

START conducted a Phase II TBA in August 2017 (Tetra Tech 2017b) that included indoor air, soil, and soil gas sampling at the subject property (Appendix A, Figure 2). Laboratory analysis of soil samples indicated that concentration of TPH-GRO exceeded the subsurface soil Tier 1 RBTL for residential indoor inhalation of vapors from subsurface soils in one sample. A representative concentration of TPH-GRO beneath a hypothetical future building was calculated per MRBCA guidelines using analytical results from the Phase II ESA and the Phase II TBA. Calculated representative calculation of TPH-GRO did not exceed the residential Tier 1 RBTL. Trace concentrations of petroleum-related compounds detected in the soil gas samples likely had resulted from a petroleum release associated with the former gas station. Concentrations of 1,2,4-trimethylbenzene, benzene, and naphthalene in the indoor air sample

exceeded residential Tier 1 RBTLs, and the concentration of naphthalene also exceeded the non-residential RBTL. Gasoline and cleaners were stored on the property during the sampling period, and materials were the likely source of detected 1,2,4-trimethylbenzene, benzene, and naphthalene.

5.0 POTENTIAL CLEANUP ALTERNATIVES

The overall goal of any Brownfields cleanup action is to address any environmental conditions preventing or impeding the preferred type of site redevelopment, and to do so in a manner protective of human health and the environment.

Brownfields cleanup alternatives were evaluated to address specific environmental impacts identified during the Phase I TBA (Terracon 2016), Phase II ESA (Tetra Tech 2017a), and Phase II TBA (Tetra Tech 2017b). The purpose of the ABCA is to present viable cleanup alternatives based on site-specific conditions, technical feasibility, and preliminary cost evaluations.

The following sections describe Brownfields cleanup alternatives for addressing the petroleum product release, including a "No Action" alternative. Cleanup alternatives for asbestos containing materials (ACM) and lead-based paint (LBP) are not discussed, because a full remodel of the interior occurred in the mid-1980s. Following the description, each alternative is evaluated in terms of its effectiveness, implementability, and cost.

The effectiveness of an alternative refers to its ability to meet the objectives of the Brownfields cleanup. Specific criteria used to assess the effectiveness of an alternative include the following:

- Overall protection of public health and the environment
- Compliance with applicable or relevant and appropriate requirements (ARAR) and other criteria, advisories, and guidance
- Long-term effectiveness
- Reduction of toxicity, mobility, or volume through treatment/removal
- Short-term effectiveness.

Implementability criteria address the technical and administrative feasibility of implementing an alternative, and the availability of various services and materials required during its implementation. Specific criteria used to assess implementability of an alternative are:

- Technical feasibility
- Administrative feasibility
- Availability of services and materials
- State acceptance
- Community acceptance.

Each alternative is evaluated to determine its estimated cost. The evaluations compare each alternative's direct capital costs, which include equipment, services, and contingency allowances. The purpose of evaluating each alternative is to determine its advantages and disadvantages relative to the other alternatives in order to identify key tradeoffs that would affect selection of the preferred alternative.

5.1 EVALUATED CONTAMINATION

Contaminants evaluated as part of this ABCA are associated with a petroleum product release at the subject property. An ACM and LBP survey was not conducted at the site because those materials were not present at the site. This section discusses contaminants identified during previous investigations at the site, and compares them to Missouri Risk-Based Corrective Action (MRBCA) Risk-Based Target Levels (RBTL) found in the MRBCA Technical Guidance (Missouri Department of Natural Resources [MDNR] 2006a).

During the Phase I TBA, Terracon identified a historical on-site gas station and machine shop, and an adjacent auto repair shop (Terracon 2016).

During the Phase II ESA conducted by Tetra Tech for MDNR in February 2017, benzo(a)pyrene, arsenic, and lead were detected in surface soil samples at concentrations exceeding MRBCA RBTLs for residential contact, ingestion, or inhalation (Tetra Tech 2017a). Benzo(a)pyrene and lead have been historically associated with petroleum-based fuels. The concentration of arsenic did not exceed the range of background concentrations typically found in Missouri (Tidball 1984). In subsurface soil, TPH-GRO was detected at concentrations exceeding MRBCA RBTLs for residential indoor inhalation of vapors. In groundwater samples, benzene concentrations exceeded the RBTL for residential indoor inhalation of vapors from for groundwater, while TPH-diesel range organics (DRO) concentrations exceeded RBTLs

for non-residential land use. Contaminants are not compared to RBTLs for residential domestic water use, because a memorandum of agreement between the City of St. Louis and MDNR, and City Ordnance 66777, prohibit installation of drinking water wells and use or attempted use of private wells for drinking water purposes within the corporate limits of the City of St. Louis (MDNR 2006b).

During the Phase II TBA conducted by Tetra Tech in August and September 2017, one subsurface soil sample contained 390 milligrams per kilogram (mg/kg) of TPH-GRO, above the Tier 1 RBTL for TPH-GRO of 385 mg/kg for residential land use (Tetra Tech 2017b). However, the representative concentration of TPH-GRO, calculated per the *MRBCA Process for Petroleum Storage Tanks Technical Guidance* (MDNR 2013), was below the residential land use RBTL. During the Phase II TBA, six direct-push technology (DPT) borings were driven to between 20 and 32 ft bgs; however, no groundwater was encountered at any location. Additionally, two of the four DPT borings from the February 2017 ESA were dry. Because of this, it is likely that the groundwater samples collected during the February Phase II ESA were not collected below the regional water table, but rather from perched, relatively isolated sources.

5.2 EVALUATION OF CLEANUP ALTERNATIVES

Evaluations of cleanup alternatives are based on the anticipated future use scenario for the site as a nonprofit education and employment organization. Evaluated cleanup alternatives address cleanup of petroleum-related contamination only; ACM and LBP are not likely present because a full remodel of the building occurred in the mid-1980s. Evaluations have been developed with specific consideration of MDNR's Brownfields/Voluntary Cleanup Program (B/VCP) procedural requirements and MRBCA technical guidance—because cleanup projects implemented with EPA Brownfields Cleanup funding require participation in the MDNR B/VCP. For reference, fees associated with enrollment in the MDNR B/VCP include a $200 application fee and refundable oversight deposit of $4,000. A comparison of total costs of each alternative is summarized in Table 1 below.

TABLE 1

COMPARISON OF ALTERNATIVE COSTS

No.	Alternative	Cost
1	No Action	$0
2	Closure with Institutional Controls	$31,700
3	Closure by Removal	$82,000

5.2.1 Alternative 1: No Action

Alternative 1 would leave in place petroleum-related contaminants.

Effectiveness

This alternative would be effective for the near term in protecting human health and environment in its current use, because representative concentration of soil and groundwater contamination does not exceed respective non-residential MRBCA RBTLs. The No Action alternative would not be effective in the long term if the property is utilized for future residential use and the contamination has not attenuated to below residential MRBCA RBTLs. This alternative would not allow future development at the site.

Implementation

Implementation of this alternative is straightforward—contaminated material would be left in place.

Cost

This alternative would not involve any direct costs, as reported in Table 1.

5.2.2 Alternative 2: Closure with Institutional Controls

Alternative 2 would leave in place the known contamination and enroll the site in the B/VCP and the Long Term Stewardship program (LTS), because contamination at the site would remain above MBRBCA RBTLs for residential use.

Effectiveness

This alternative would be effective for the near term as the site is currently planned for non-residential utilization, and representative concentrations of contaminants do not exceed respective non-residential MRBCA RBTLs. This alternative would also be effective in the long-term, because deed restrictions would only allow non-residential use of the site, and enrollment in the LTS program would require monitoring for future migration of contamination. This alternative would allow future development of the site for non-residential purposes only.

Implementation

The site would be enrolled in the B/VCP, a risk assessment conducted, and a request made for a No Further Action (NFA) letter from MDNR. Because representative concentrations of contaminants at the

site are below non-residential MRBCA RBTLs, but above residential MRBCA RBTLs, a restrictive NFA and enrollment into the LTS program would be necessary.

Cost

Costs for this alternative would include enrollment into the B/VCP ($4,000 with a $200 enrollment fee), completion of a risk assessment ($12,500), and enrollment in the LTS program ($15,000). The total cost of this alternative would be $31,700, as reported in Table 1.

5.2.3 Alternative 3: Closure by Removal

Alternative 3 includes application of conventional excavation and removal techniques regarding contaminated soil. Confirmatory soil sampling would occur to ensure removal of all subsurface contamination above residential MRBCA RBTLs.

Alternative 3 would remove contaminated soil using residential MRBCA RBTLs as cleanup goals. With ample cleanup, a non-restrictive NFA could be obtained, preventing need for enrollment in the LTS program. A risk assessment may be required, and has been included in the cost estimate for this alternative.

Effectiveness

Alternative 3 would be effective in removing the risk to human health posed by the contaminated soil, and would allow for unrestricted redevelopment of the site. This alternative would allow future development of the site for residential and non-residential purposes.

Implementation

Removal and disposal of contaminated soil would be arranged by a qualified environmental remediation company. Based on results of the Phase II ESA and the Phase II TBA, an area of approximately 200 square feet may contain contaminated soil to depths of up to 20 feet. Excavation of approximately 35,000 cubic feet (1,300 cubic yards) of soil may be necessary (Appendix A, Figure 3). Conventional soil sampling procedures would be followed during confirmatory sampling per MRBCA guidance (MDNR 2013). Following excavation, the site would be restored to pre-existing conditions.

Cost

A local vendor (Environmental Works) provided an estimated cost of $60,000 for cleanup at the site. This estimate includes excavation, clearing of several trees, transportation, disposal, and backfilling of approximately 1,300 cubic yards of impacted soil. The estimate does not include pumping, transportation, and disposal of any contaminated groundwater at the site—cost which has been estimated and included in the final cost of this alternative. A risk assessment is also included in the cost of this alternative. The total cost of this alternative would be $82,000, as reported in Table 1.

5.3 RECOMMENDED CLEANUP ALTERNATIVE

Alternatives 2 and 3 would be protective of human health and the environment. However, Alternative 2 would cost much less while still allowing for further development for non-residential use—the planned utilization at the site. Enrollment in the LTS program under Alternative 2 would ensure that status of contamination at the site is monitored. If residential utilization of the property is desired in the future, a removal option such as Alternative 3 can be carried out at that time. Alternative 2 is the recommended cleanup alternative for the Near Southside Employment Coalition site at 2649 Pestalozzi Street in St. Louis, Missouri.

6.0 REFERENCES

Missouri Department of Natural Resources (MDNR). 2006a. Missouri Risk-Based Corrective Action Technical Guidance, Appendix B, Default Target Levels and Tier 1 Risk-Based Target Levels. June.

MDNR. 2006b. Memorandum of Understanding between Missouri Department of Natural Resources and the City of St. Louis regarding Use of Local Groundwater Ordinance as Environmental Institutional Control When Using Missouri's Risk-Based Corrective Action Process on Contaminated Sites. October.

MDNR. 2013. Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks. October 17.

Terracon Consultants, Inc. (Terracon). 2016. Phase I Targeted Brownfields Assessment. Near Southside Employment Coalition, 2649 Pestalozzi, St. Louis, Missouri. August 29.

Tetra Tech, Inc. (Tetra Tech). 2017a. Final Phase II Environmental Site Assessment, 2649 Pestalozzi Street, St. Louis, Missouri. February.

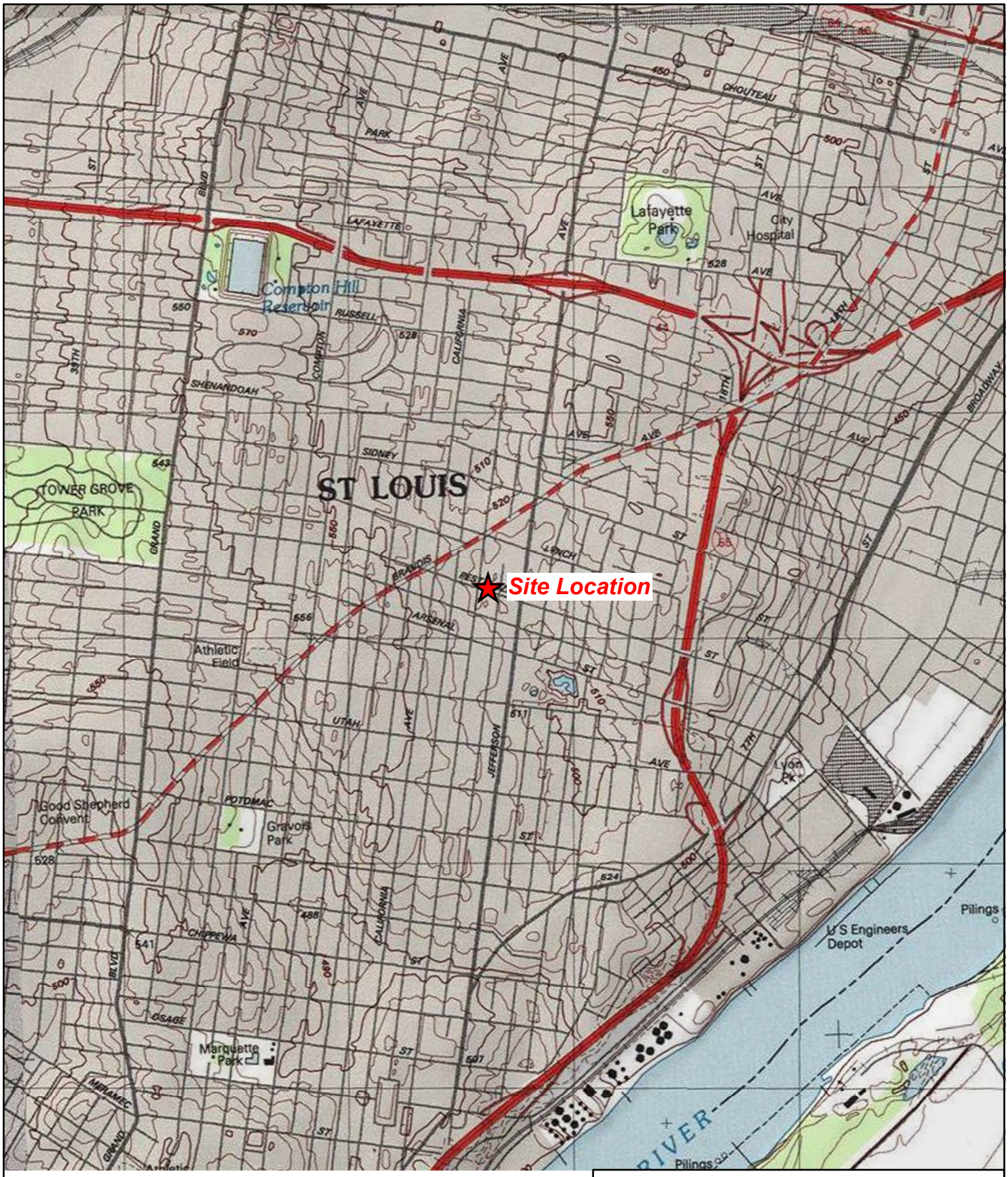
Tetra Tech. 2017b. Phase II Targeted Brownfields Assessment, Near Southside Employment Coalition, St. Louis, Missouri. November.

Tidball, R.R. 1984. Geochemical Survey of Missouri: Geography of Soil Geochemistry and Classification by Factor Analysis of Missouri Agricultural Soils. Geological Survey Professional Paper 954-H, I.

U.S. Geological Survey. 2015. Cahokia, Illinois – Missouri (IL-MO). USGS 7.5-Minute Topographic Series Map.

APPENDIX A

FIGURES



N

0 1,000 2,000

Feet

Source: USGS Cahokia, MO 7.5 Minute Topo Quad, 1976

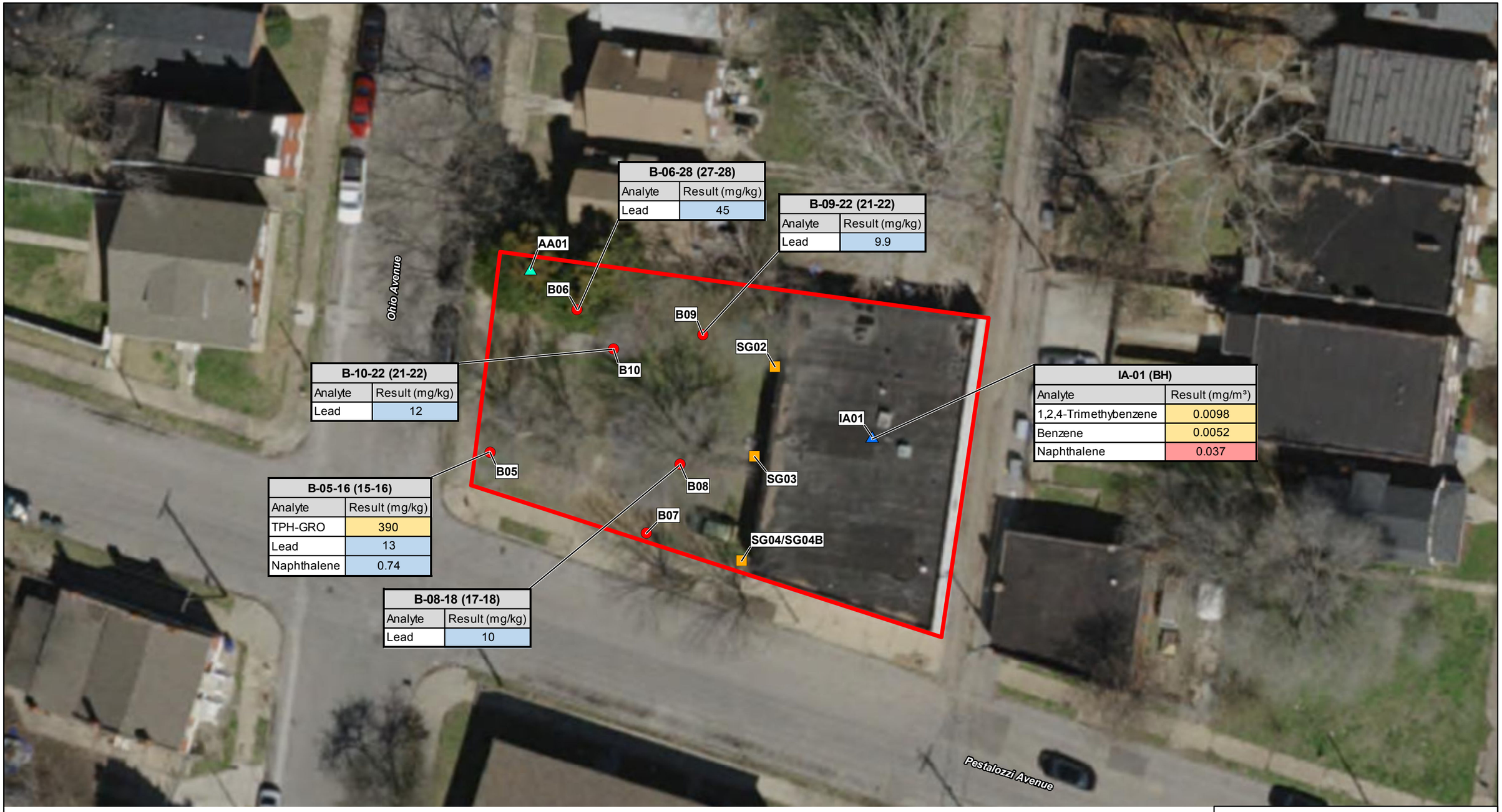
Near Southside Employment Coalition
St. Louis Missouri

Figure 1
Site Location Map

TETRA TECH

Date: 6/15/2017 Drawn By: Nick Wiederholt Project No: X9025.14.0002.041

X:\G\9025\00\02\041\Projects\mxd\Figure1.mxd



Legend

- Ambient air sample location
- Indoor air sample location
- Soil boring sample location
- Soil gas sample location
- Approximate site boundary
- 10 — Exceedance of DTL in soil samples
- 390 — Exceedance of residential RBTL
- 0.037 — Exceedance of non-residential RBTL

B-05-16 (15-16) Sample ID (Depth, ft bgs)
BH Breathing height
DTL Default target level
GRO Gasoline range organics
RBTL Risk-based target level
TPH Total petroleum hydrocarbons
ft bgs Feet below ground surface
mg/kg Milligrams per kilogram
mg/m³ Milligrams per cubic meter

N
0 12.5 25
Feet

Source: ESRI, ArcGIS Online, World Imagery, 2017

Near Southside Employment Coalition
St. Louis, Missouri

Figure 2
Analyte Concentrations in Exceedance of DTLs and RBTLs

TETRA TECH

Date: 11/8/2017 Drawn By: Nick Wiederholt Project No: X9025.14.0002.041

X:\G\9025\0002\041\Projectit\mxd\Figure2_1109.17.mxd

Legend

- Approximate site boundary
- Proposed excavation area

Source: ESRI, ArcGIS Online, World Imagery, 2017

N

0 10 20

Feet

Near Southside Employment Coalition
St. Louis, Missouri

Figure 3

Proposed Excavation Area

TETRA TECH

Date: 12/27/2017 Drawn By: Nick Wiederholt Project No: X9025.14.0002.041

X:\GIS\9025\00\02\041\Projects\mxd\Figure3_ProposExcavArea.mxd

ATTACHMENT B

Seagull Environmental Technologies, Inc.

121 NE 72nd Street
Gladstone, Missouri 64118
www.seagullenvirotech.com

August 21, 2018

Ms. Kristin Allan Tipton
Development Director
Environmental Improvement and Energy Resources Authority
P.O. Box 744
Jefferson City, Missouri 65102

Subject: **Remedial Action Plan**
Near Southside E.C. Site, Saint Louis, Missouri
Missouri Brownfields Revolving Loan Fund Support Contract

Dear Ms. Tipton:

Seagull Environmental Technologies, Inc. (Seagull) is submitting the attached Remedial Action Plan for the Near Southside E.C. site in Saint Louis, Missouri. If you have any questions or comments, please contact me at (816) 682-4089.

Sincerely,

Brandon Jones
Environmental Scientist

Enclosures

cc: Ohala Ward, Near Southside Employment Coalition

REMEDIAL ACTION PLAN

NEAR SOUTHSIDE E.C. SITE
SAINT LOUIS, MISSOURI

Prepared For:

Environmental Improvement and Energy Resources Authority
P.O. Box 744
Jefferson City, Missouri 65102

August 21, 2018

Prepared By:

Seagull Environmental Technologies, Inc.
121 NE 72nd Street
Gladstone, Missouri 64118

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APPENDICES

TABLES

1.0 INTRODUCTION

The Near Southside Employment Coalition (NSEC) has been awarded a Brownfields Cleanup Grant through the United States Environmental Protection Agency (EPA) and the Environmental Improvement and Energy Resources Authority (EIERA) to address contamination of the Near Southside Employment Coalition property at 2649 Pestalozzi Street, St. Louis, Missouri. Specifically, remedial activities will be conducted to address petroleum-related contaminants. The Near Southside Employment Coalition will use these grant funds to conduct remediation design and cleanup to remove contaminated soil as described in this Remedial Action Plan (RAP).

The Near Southside Employment Coalition site is enrolled in the Missouri Department of Natural Resources (MDNR) Brownfields/Voluntary Cleanup Program (BVCP). This RAP incorporates the MDNR BVCP Quality Assurance Project Plan (QAPP) to ensure compliance with all quality assurance/quality control (QA/QC) requirements.

In accordance with EPA Brownfields Grant requirements, this RAP implements a process of QA/QC protocols consistent with *EPA Requirements for Quality Assurance Project Plans – EPA QA/R-5* (EPA 2001).

1.1 SITE LOCATION AND DESCRIPTION

The site is a 0.21-acre property in Saint Louis, Saint Louis County, Missouri. According to the Geo St. Louis website, the physical address for the property is 2649 Pestalozzi Street. The subject property is between Texas Avenue and Ohio Avenue on Pestalozzi Street (see Appendix A, Figures 1 and 2). The subject property is bordered north by residential dwellings and residential dwellings beyond, east by an alley and residential dwellings and commercial properties beyond, south by Pestalozzi Street and residential dwellings and commercial properties beyond, and west by Ohio Avenue and residential dwellings and commercial properties beyond (see Appendix A, Figure 2).

The site is included on the St. Louis, Missouri, U.S. Geological Survey (USGS) 7.5-minute topographic series map in Section 30, Township 1 North, and Range 11 West (USGS 1985) (see Appendix A, Figure 1). The site is in the Benton Park West neighborhood. Coordinates for the approximate center of the subject property are 38.601757 degrees (°) north latitude and 90.225755° west longitude. The parcel identification number for the site is 14220000100 (Geo St. Louis 2018).

The site contains one approximately 3,500-square-foot (ft^2) single-story building on the east side of the property. The NSEC has owned the subject property since 1999. The subject property is the current location of the NSEC, a nonprofit organization which provides comprehensive employment services to the local population from low-income housing developments. Historical information obtained for the subject property indicates that the building was used as a filling station from at least as early as 1936 to 1958 and a machine shop from at least as early as 1936 to 1978 (Tetra Tech 2017a). The commercial building on the subject property underwent a full remodel of the interior in the mid-1980s (Tetra Tech 2017a).

1.2 PREVIOUS ASSESSMENTS

The reports listed below were submitted to MDNR with the BVCP application.

- Phase I Environmental Site Assessment (ESA) for the Near Southside Employment Coalition in Saint Louis, Missouri. Terracon Consultants, Inc. (Terracon). August 29, 2016 (Terracon 2016).
- Phase II ESA for the Near Southside Employment Coalition in Saint Louis, Missouri. Tetra Tech. February 23, 2017. (Tetra Tech 2017a).
- Phase II Targeted Brownfields Assessment (TBA) for the Near Southside Employment Coalition in Saint Louis, Missouri. Tetra Tech. November 15, 2017. (Tetra Tech 2017b).
- Analysis of Brownfields Cleanup Alternatives Report (ABCA) for the Near Southside Employment Coalition in Saint Louis, Missouri. Tetra Tech. January 18, 2018. (Tetra Tech 2018).

An asbestos and lead-based paint (LBP) inspection was not included in the Phase II ESA because the building on site underwent a full renovation in the mid-1980s. A summary of findings from previous investigations, comparing levels of contaminants to Missouri Risk-Based Corrective Action (MRBCA) Risk-Based Target Levels (RBTL) from the MRBCA Technical Guidance (MDNR 2006), follows.

During the August 2016 Phase I TBA, Terracon identified the following historical recognized environmental conditions (HREC) associated with the site: a historical gas station and machine shop, and an adjacent auto repair shop (Terracon 2016).

During the February 2017 Phase II ESA, Tetra Tech identified benzo(a)pyrene, arsenic, and lead in surface soil samples collected at depths ranging from 0 to 3 feet (ft) below ground surface (bgs). Concentrations of these analytes exceeded MRBCA DTLs for all soil types (Tetra Tech 2017a). Subsurface soil samples contained total petroleum hydrocarbons-gasoline range organics (TPH-GRO), benzene, naphthalene, arsenic, and lead at concentrations exceeding MRBCA Default Target Levels (DTL) at depths ranging from 13 to 19.5 ft bgs. TPH-GRO concentrations also exceeded the MRBCA RBTL for residential indoor

inhalation of vapors. Lead was detected in all surface soil samples above the MRBCA DTL, and the concentration in one sample exceeded the MRBCA Tier RBTL those lead concentrations are likely due to leaded gasoline emissions and surface spills during past site activities at the former gas station. Lead was detected in all subsurface soil samples within the expected range of concentrations for lead in eastern Missouri. Concentrations of arsenic in surface and subsurface soil samples that exceed the MRBCA DTL do not exceed the typical background concentration in Missouri of 3.0 to 25 milligrams per kilogram (mg/kg) (Tidball 1984). Grain size analysis performed determined the soil to be Soil Type 1 (sandy soil). A summary of surface and subsurface soil samples collected during the Phase II ESA is in Table 1 below. Concentrations of TPH-GRO, benzene, benzo(a)anthracene, benzo(b)fluoranthene, ethylbenzene, naphthalene, toluene, TPH–diesel range organics (DRO), and arsenic were detected in groundwater exceeding DTLs. Also, benzene concentrations exceeded the RBTL for residential indoor inhalation of vapors, and TPH-DRO concentrations exceeded RBTLs for non-residential land use. A summary of groundwater samples collected during the Phase II ESA is in Table 2 below. The highest concentrations of contaminants in soil and groundwater were detected in the western portion of the subject property, where a former gas station and pump island were located. For reference, Appendix B contains summary tables of samples collected during the Phase II ESA (Tetra Tech 2017a).

During the November 2017 Phase II TBA, Tetra Tech collected a subsurface soil sample with a concentration of 390 mg/kg of TPH-GRO, exceeding the Tier 1 RBTL value of 385 mg/kg for residential land use (Tetra Tech 2017b). After calculating the representative concentration of TPH-GRO using the MRBCA Process for Petroleum Storage Tanks Technical Guidance (MDNR 2013), Tetra Tech concluded it was below the residential land use RBTL (Tetra Tech 2017b). Concentrations of lead exceeded the respective MRBCA DTL in all subsurface soil samples but were within the expected range for lead in Missouri. Naphthalene was detected in one soil sample at a concentration above the MRBCA DTL. Soil samples were collected at depths ranging from 15 to 22 ft bgs. Groundwater samples were not collected during the Phase II TBA because groundwater was not encountered at any of the sampling locations. Tetra Tech concluded this was likely due to a "perched, relatively isolated source of groundwater" (Tetra Tech 2017b). Soil gas samples collected near the building in the eastern portion of the subject property contained petroleum-related compounds, but it was concluded those compounds were likely derived from a source upgradient of the subject property (Tetra Tech 2017b). Table 1 provides an analytical data summary of subsurface soil samples collected during the Phase II TBA. For reference, Appendix B contains summary tables of samples collected during the Phase II TBA (Tetra Tech 2017b).

TABLE 1

ANALYTICAL DATA SUMMARY FOR SOIL SAMPLES
NEAR SOUTHSIDE EMPLOYMENT COALITION SITE
ST. LOUIS, MISSOURI

Sample ID	Depth Interval (feet bgs)	TPH-GRO	TPH-DRO	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Naphthalene (mg/kg)	Xylenes (mg/kg)	Toluene (mg/kg)	Benzo(a)pyrene (mg/kg)	Arsenic (mg/kg)	Lead (mg/kg)
February 2017 Phase II Surface Soil Samples											
NSS-B01-3	0-3	<0.568	<71.2	<0.0011	<0.0057	<0.0114	<0.0057	<0.0057	0.917	8.75	185
NSS-B02-3	0-3	1.05	14.9	<0.001	<0.005	<0.010	<0.005	<0.005	0.373	10.1	186 S
NSS-B03-3	0-3	<0.501	<39.3	<0.001	<0.005	<0.010	<0.005	<0.005	0.718	10.7	369
NSS-B04-3	0-3	<0.544	<68.9	<0.0011	<0.0054	<0.0109	<0.0054	<0.0054	<0.198	6.54	39.4
February 2017 Phase II Subsurface Soil Samples											
NSS-B01-18	17-18	<0.498	<15.1	<0.001	<0.005	<0.010	<0.005	<0.005	<0.0427	8.71	14.2
NSS-B02-19.5	17.5-19.5	668	29.8	<0.196	<0.980	<1.960	<0.980	<0.980	<0.0836	6.35	12.2
NSS-B03-13	12-13	1,430	26.5	0.340	1.160	<2.300	<1.150	<1.150	<0.0424	6.55	11.8
NSS-B04-17	15-17	<0.515	<14.9	<0.001	<0.0052	<0.0103	<0.0054	<0.0054	<0.0423	4.97	21.7
DUP1	15-17	<0.536	<14.6	<0.0011	<0.0054	<0.0107	<0.0054	<0.0054	<0.0413	5.74	21.7
November 2017 Phase II Subsurface Soil Samples											
B-05-16	15-16	390	88	NA		0.74	7.3	NA	NA	NA	13
B-06-28	27-28	1.8 U	1.8 U	NA	0.0006 U	0.0051 U	0.0017 U	NA	NA	NA	45
B-07-32	17-18	1.9 U	NA	NA	0.00059 U	NA	0.0017 U	NA	NA	NA	NA
B-08-18	17-18	14	1.7 U	NA	0.009 U	0.0049 U	0.0037 U	NA	NA	NA	10
B-09-22	21-22	1.7 U	1.7 U	NA	0.0006 U	0.0049 U	0.0017 U	NA	NA	NA	9.9
B-10-22	21-22	2 U	29	NA	0.0099 U	0.0053 U	0.04 U	NA	NA	NA	12
MRBCA DTL *(All Soil Types)*		**385**	**4,150**	**0.0561**	**39.9**	**0.325**	**24.7**	**29.8**	**0.620**	**3.89**	**3.74**
MRBCA Tier 1 RBTL – Residential Indoor Inhalation of Vapors *(Soil Type 1)*		**385**	**4,150**	**0.378**	**193**	**25.9**	**24.7**	**499**	**225,000**	**NE**	**260**

Notes:
Values shaded in blue exceed MRBCA DTL for all soil types.
Values shaded in orange exceed MRBCA Tier 1 RBTL for Soil Type 1.

bgs	Below ground surface	DRO	Diesel range organics	DTL	Default target levels
ft	Feet	GRO	Gasoline range organics	ID	Identification
mg/kg	Milligram per kilogram	MRBCA	Missouri Risk-Based Corrective Action	NA	Not analyzed
NE	Not established	RBTL	Risk-Based Target Level	S	Spike recovery was outside recovery limits
TPH	Total petroleum hydrocarbons	U	Not detected above the method detection limit	>	Greater than
<	Less than				

TABLE 2

ANALYTICAL DATA SUMMARY FOR GROUNDWATER SAMPLES
NEAR SOUTHSIDE EMPLOYMENT COALITION, SAINT LOUIS, MISSOURI
JANUARY 2017
ST. LOUIS, MISSOURI

Sample ID	Screen Interval (ft bgs)	Water Level (ft bgs)	Analyte	Results (mg/L)
NSS-GW02	10-20	18	Benzene	0.0377
			Naphthalene	<0.005
			Benzo(a)anthracene	0.00124
			Benzo(b)fluoranthene	0.00107
NSS-GW03	10-20	12.2	TPH-GRO	<125
			Benzene	3.340
			Ethylbenzene	1.980
			Naphthalene	<1.250
			Toluene	1.43
			TPH – DRO (mg/kg)	1.080
			Arsenic	0.0438

Notes:

bgs	Below ground surface	ft	Feet
DRO	Diesel range organics	GRO	Gasoline range organics
ID	Identification	mg/L	Milligram per liter
TPH	Total petroleum hydrocarbons	<	Less than

2.0 PROJECT ORGANIZATION

This section summarizes the project organization for the remedial action.

2.1 RESPONSIBLE AGENCY

The NSEC is a sub-grantee to the EIERA. MDNR is providing the primary technical review of this RAP as the site is currently enrolled in the MDNR BVCP program.

2.2 PROJECT PERSONNEL AND SCHEDULE

Persons involved at this site and their roles and/or responsibilities are included in Table 3. Table 4 below outlines the tentative project schedule.

TABLE 3

PROJECT PERSONNEL
NEAR SOUTHSIDE EMPLOYMENT COALITION
SAINT LOUIS, MISSOURI

Title	Name	Responsibilities	Phone Number
EIERA Director of Development	Kristin Allan Tipton	Overall Brownfields project management	573-751-4919
EPA Project Officer	Brad Eaton	General project coordination and programmatic oversight	913-551-7265
MDNR BVCP Project Manager	Mike Washburn	General project coordination and programmatic oversight, technical reviews, and approvals	573-526-8918
Near Southside Employment Coalition	Ohala Ward	General project coordination and oversight	314-865-4453
Subcontractor Personnel			
Analytical Laboratory	To be determined	Laboratory analytical procedures and reporting; laboratory quality control	To be determined
Remediation Contractor	To be determined	Conduct remedial activities, arrange disposal, document site activities, review and validate laboratory data, and complete Remedial Action Completion Report	To be determined

TABLE 4

PROJECT SCHEDULE
NEAR SOUTHSIDE EMPLOYMENT COALITION SITE
SAINT LOUIS, MISSOURI

Task	Anticipated Completion Timeline
MDNR review, revision, and approval of Remedial Action Plan	Determined by MDNR
Field activities completed	To be determined
Laboratory analysis completed	Within 15 days of completion of field activities
Submission of draft report	Within 45 days of completion of field activities
Report review, revision, and submission of final report	Within 10 days of EIERA approval of draft report

Notes:

EIERA Environmental Improvement and Energy Resources Authority
MDNR Missouri Department of Natural Resources

Copies of the final RAP and Remedial Action Completion Report will be distributed as indicated below. Additionally, the remediation contractor will distribute the Remedial Action Completion Report to the same contacts.

Ohala Ward
c/o Near Southside Employment Coalition
2649 Pestalozzi Street
Saint Louis, MO 63118

Missouri Department of Natural Resources
Brownfields / Voluntary Cleanup Program
P.O. Box 176
1738 E. Elm Street
Jefferson City, Missouri 65102
Attn: Mike Washburn

Environmental Improvement and Energy Resources Authority
P.O. Box 744
Jefferson City, Missouri 65102
Attn: Ms. Kristin Allan Tipton

U.S. Environmental Protection Agency
Region 7 Brownfields Program
11201 Renner Boulevard
Lenexa, Kansas 66219
Attn: Mr. Brad Eaton

3.0 PROJECT OBJECTIVES AND CLEANUP RATIONALE

The purpose of this RAP is to outline the specific field, laboratory, and quality control procedures that will be applied to address remedial activities planned for the site and ensure generation of data usable for final determinations regarding post-remediation site conditions. Through these specific efforts, BVCP cleanup requirements will also be addressed in a manner that allows for No Further Action consideration by MDNR, as addressed principally in the MRBCA Technical Guidance (MDNR 2006).

Further, this RAP ensures quantitative and definitive-level data will be obtained through clearance sampling, following specific QA/QC procedures. Specific activities conducted during the remedial action to achieve the project objectives include:

- Comprehensive oversight and documentation of remedial activities.
- Collection of post-cleanup clearance samples for laboratory analysis to ensure attainment of cleanup goals.
- Preparation of a Remedial Action Completion Report summarizing field activities and laboratory results.

The tasks referenced above will be supported through application of relevant Standard Operating Procedures (SOP), EPA technical guidance documents, and industry-accredited analytical methods.

3.1 PROBLEM DEFINITION AND SAMPLING OBJECTIVE

Previous assessments have determined that contaminated soil is present at the site. For reference, Appendix C contains site photographs (Tetra Tech 2017b). Future plans for the site are anticipated to involve continued use of the site as a nonprofit employment services organization. The primary objective of the remedial action is to reduce the petroleum compound concentrations in soil to below MRBCA Tier 1 RBTLs established for residential land use. Achieving this project objective, while conducting the remedial action in accordance with BVCP cleanup requirements, should allow for unrestricted use of the property and No Further Action consideration by MDNR.

3.2 PROJECT DESCRIPTION

This remedial action will remove petroleum-contaminated soil to below MRBCA Tier 1 RBTLs established for residential land use. Confirmation sampling will be conducted by a licensed contractor to ensure site cleanup and regulatory clearance goals have been achieved.

4.0 PROJECT QUALITY OBJECTIVES

The following sections describe the project quality objectives for the remedial action.

4.1 REVIEW AND APPROVAL ASSISTANCE

Assistance for review and approval of quality assurance documents can be deferred to the State program, with mutual agreement between EPA, the State program, and the cleanup grant recipient. The remedial action for this site is designed to be implemented under the MDNR BVCP. The site is enrolled in the MDNR BVCP.

4.2 ADOPTION OF STATE QUALITY ASSURANCE PROJECT PLAN

This RAP adopts the *MDNR Quality Assurance Project Plan for Brownfields/Voluntary Cleanup Program Sites* (see Appendix D), and incorporates a Site-Specific Quality Assurance Project Plan Addendum (SSQA) to the QAPP (see Appendix E). This is allowed for environmental data collection for confirmatory sampling following remedial activities, as described in *Section A.6.3 Remedial Action Plans/Risk Management Plans* of the MDNR QAPP.

4.2.1 Equivalency of Program Terms

The MDNR QAPP was developed using EPA guidance for Quality Assurance Project Plans. The RAP includes the MDNR QAPP (Appendix D) and Site-Specific Quality Assurance Project Plan Addendum (Appendix E).

4.3 DATA QUALITY OBJECTIVES

The primary data quality objective (DQO) is to provide valid data of demonstrated and documented quality to accurately verify the effectiveness of remedial activities by the collection of clearance samples and laboratory verification analyses. Quality objectives will be realized through field and laboratory methods consistent with standard industry practice, applicable EPA analytical requirements, and the specific procedures outlined herein. Data quality will be further demonstrated through Seagull and laboratory quality control reviews with regard to specific data quality indicators as discussed in the following section. This approach will allow for defensible project decisions regarding the overall degree of environmental impact and associated risk. Standard industry QA/QC protocols will be followed to ensure generation of data usable for final determinations regarding post-abatement site conditions and subsequent response action, if necessary. The MDNR QAPP and SSQA discuss QA/QC procedures in more detail. Additional details regarding specific quality control procedures are presented in Section 7.0.

4.4 DATA QUALITY INDICATORS

Laboratory data quality will be measured in terms of precision, accuracy, representativeness, completeness, comparability, and sensitivity, as defined below. Various quality control samples will be collected by a licensed contractor and analyzed to quantitatively evaluate these parameters. Associated quality control procedures are discussed in Section 7.0. Specific measurement criteria are outlined in Section B.5 of the MDNR BVCP QAPP.

Precision:	A measure of reproducibility of analyses under a given set of conditions.
Accuracy:	A measure of the bias that exists in a measurement system.
Representativeness:	The degree to which sampling data accurately and precisely depict selected characteristics.

Completeness: The measure of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under "normal" conditions.

Comparability: The degree of confidence with which one data set can be compared to another.

Sensitivity: The concentrations at which the analytical technology is able to detect the presence of specific analytes (i.e., detection limits).

5.0 REMEDIAL ACTION TASKS

The sections below discuss remedial action activities planned for the site concerning soil.

5.1 SOIL REMOVAL ACTIVITIES

At the time this RAP was developed, a remediation contractor had not been chosen for the removal of petroleum-contaminated soil at the site. Once a remediation contractor is chosen, the NSEC will provide the name of that contractor to the MDNR BVCP Project Manager for this site. Specific plans for the petroleum-contaminated soil will involve excavation and proper disposal. Removal activities will follow all applicable federal, state, and local regulations. The remediation contractor will be responsible for obtaining any applicable permits.

Prior to excavation activities at the site, an underground utility location service will be contacted by the remediation contractor in order to obtain utility clearance, as described in Section 8.3. Excavation is planned to remove and properly dispose of all soil containing chemicals of concern (COCs – lead; benzo(a)pyrene; benzene, toluene, ethylbenzene, xylenes (BTEX); naphthalene; and TPH-GRO and TPH-DRO) above their respective Tier 1 RBTLs established for residential land use. Based on the results of previous site assessments, approximately 30,000 cubic feet (ft^3) (1,111 cubic yards [yd^3]) of petroleum-contaminated soil will be excavated and transported off site for disposal at an approved landfill facility. Figure 3 in Appendix A shows the proposed excavation area at the site, which encompasses approximately 1,500 ft^2. The excavation depth may be up to 20 ft bgs. During the Phase II TBA, direct push technology (DPT) borings were pushed to between 20 and 32 ft bgs and no groundwater was encountered. It is likely that groundwater samples collected during the Phase II ESA were not from below the regional water table, but rather from a "perched, relatively isolated source of groundwater" (Tetra Tech 2018). Removal of the petroleum-contaminated soil will be achieved through excavation by use of mechanical equipment. Excavated soil will be loaded directly into dump trucks for off-site transport and disposal at an appropriate

landfill. Installation of sheet piling or some other form of shoring may be required to prevent collapse of the excavation per Occupational Safety and Health Administration (OSHA) requirements. No pavement or structures are within the proposed excavation area that require demolition.

The remediation contractor will arrange for soil disposal prior to commencing excavation activities. Samples of excavated soil for disposal profile analyses (Toxicity Characteristic Leaching Procedure [TCLP] analysis, etc.) will be collected by the remediation contractor and conducted as requested by the landfill. It is anticipated that analysis for TCLP volatile organic compounds (VOC) and metals regulated under the Resource Conservation and Recovery Act (RCRA) would be required. If unexpected subsurface conditions are encountered during the cleanup, alternative sampling and disposal procedures will be discussed with NSEC and MDNR, and changes will be implemented accordingly.

To ensure that contaminated soil/dust is not allowed to migrate from the site by wind and rain, best management practices will be implemented.

Air Monitoring

During the removal activities, the remediation contractor will conduct real-time air monitoring for VOCs at the site and along the site perimeter to evaluate whether airborne concentrations may be at levels that pose a health threat to on-site workers and the surrounding population. Exact monitoring locations and time periods will be determined in the field, based on the judgment of the remediation contractor's Project Manager. Real-time air monitoring for VOCs will be conducted with a photoionization detector (PID). Real-time air monitoring concentrations for VOCs will be compared to the OSHA permissible exposure limit (PEL) for COCs. OSHA PELs are 8-hour exposure limits established for worker protection. If real-time air monitoring readings for COCs exceed their respective OSHA PELs, the remediation contractor Project Manager will make decisions/corrective actions to ensure the safety of site workers and nearby residents.

5.1.1 Post-Excavation Confirmation Sampling

Confirmation sampling will be conducted to verify that COC concentrations in the soil at the base and sides of the excavation are below applicable MRBCA Tier 1 RBTLs established for residential land use. After the final depth of excavation is reached, confirmation soil sampling will be conducted by the remediation contractor. The confirmation samples will consist of six grab soil samples: two soil samples from the base of the excavation and one soil sample from each wall (four samples). The soil samples will

be collected by use of a decontaminated stainless steel trowel from the excavator bucket. Samples from the excavation walls will be collected from approximately 1 foot above the base of the excavation. Figure 3 in Appendix A shows the proposed excavation area. Soil samples for analysis for BTEX, and TPH-GRO will be collected following EPA Method 5035, which involves placing approximately 5 grams of soil into two 40-milliliter (mL) volatile organic analysis (VOA) vials pre-preserved with trisodium phosphate and one 40-mL VOA vial pre-preserved with methanol. Samples for analysis for benzo(a)pyrene, naphthalene, TPH-DRO, and lead will be placed in unpreserved 8-ounce jars. The samples will be labeled and immediately stored in a cooler at or below 4 degrees Celsius (°C) until being received by the analytical laboratory. Previous detections of BTEX, naphthalene, and benzo(a)pyrene exceeded MRBCA DTLs but did not exceed MRBC Tier 1 RBTLs. These chemicals are included in the sampling regime due to previous detections. Previously detected arsenic in soils is assumed to be naturally occurring. Table 5 below summarizes the anticipated confirmation soil sampling.

TABLE 5

CONFIRMATION SOIL SAMPLING
NEAR SOUTHSIDE EMPLOYMENT COALITION SITE
ST. LOUIS, MISSOURI

Location	Description	Approximate Number of Samples	Analysis
Excavation Floor	Floor of Excavation	2	BTEX, benzo(a)pyrene, naphthalene, lead, TPH-GRO, and TPH-DRO
Excavation Walls	Excavation Walls	4 -1 from each wall	BTEX, benzo(a)pyrene, naphthalene, lead, TPH-GRO, and TPH-DRO
Excavated Soil	Contaminated Soil - Excavated for Disposal	1	TCLP VOCs and RCRA metals

Notes:

BTEX Benzene, toluene, ethylbenzene, AND xylenes
DRO Diesel range organics
GRO Gasoline range organics
RCRA Resource Conservation and Recovery Act
TCLP Toxicity Characteristic Leaching Procedure
TPH Total petroleum hydrocarbons
VOC Volatile organic compound

5.1.2 Cleanup Criteria

Confirmation sample results will be compared to MRBCA Tier 1 RBTLs for residential subsurface soil, specific for Soil Type 1 (sandy soil) (as determined by grain size analysis performed as part of previous assessments). As previously mentioned, unrestricted use (residential land use) is the cleanup goal. Cleanup target levels for site soils (both residential and non-residential) are listed in Table 6.

TABLE 6

SOIL CLEANUP TARGET LEVELS
NEAR SOUTHSIDE COALITION SITE
ST. LOUIS, MISSOURI

Contaminant of Concern	Cleanup Target Levels (mg/kg)	
	Tier 1 RBTL - Residential	Tier 1 RBTL – Non-Residential
	Subsurface Soil	Subsurface Soil
Benzo(a)pyrene	225,000	1,180,000
Benzene	0.378	1.98
Toluene	499	4,010
Ethylbenzene	193	1,550
Xylenes	24.7	199
Lead	260	660
Naphthalene	25.9	136
TPH-GRO	385	3,101
TPH-DRO	4,150	33,400

Notes:

All RBTLs are for Soil Type 1 (sandy soil) - indoor inhalation of vapor emissions.

DRO Diesel range organics
GRO Gasoline range organics
mg/kg Milligrams per kilogram
RBTL Risk-Based Target Level
TPH Total petroleum hydrocarbons

5.1.3 Site Restoration

Site restoration related to soil excavation will be accomplished after confirmation sampling verifies established cleanup goals have been met, as discussed in Section 5.1.2. The excavated area will be backfilled with clean soil. Clean backfill will consist of soils with hazardous substances, pollutants, or contaminants at concentrations below residential soil screening levels, as determined by MDNR. The backfilled soils will be compacted to prevent settling.

5.2 QUALITY ASSURANCE/QUALITY CONTROL SAMPLING

To evaluate sample QC, soil field duplicate samples and a trip blank sample will be submitted for laboratory analysis during the project. The trip blank will be for BTEX and TPH-GRO and analyzed for VOCs. Duplicates for BTEX, naphthalene, benzo(a)pyrene, lead, TPH-GRO and TPH-DRO will be analyzed for VOCs and RCRA metals. The collection soil duplicates will be representative of at least 10% of the total number of samples collected for those media, which is in accordance with MDNR BVCP requirements.

5.3 LABORATORY METHODS AND SAMPLE HANDLING

Soil samples collected during the cleanup activities will be submitted to an MDNR-approved laboratory. The COCs associated with the soil are benzo(a)pyrene, BTEX, lead, naphthalene, TPH- GRO, and TPH-DRO. Table 7 summarizes the analytical methods.

TABLE 7

LABORATORY METHODS AND SAMPLE CONTAINER SUMMARY
NEAR SOUTHSIDE COALITION SITE
ST. LOUIS, MISSOURI

Laboratory Analysis	Analytical Method	Container	Holding Time
BTEX and TPH-GRO	8260B	40-milliliter glass vials preserved with TSP (2) and 40-milliliter glass vial preserved with methanol (1); cool to 4 °C	14 days
Naphthalene, benzo(a)pyrene, and TPH-DRO	8270C	8-ounce jar; cool to 4 °C	14 days to extract; 40 days to analyze after extraction
Lead	6010B	8-ounce jar; cool to 4 °C	6 months
TCLP VOCs	1311 (for extraction); 8260B (for analysis)	8-ounce glass jar with zero headspace; cool to 4 °C	14 days to extract; 40 days to analyze after extraction
TCLP Metals	1311 (for extraction); 6020 (for analysis)	8-ounce jar; cool to 4 °C	14 days to extract; 40 days to analyze after extraction

Notes:

°	Degrees	BTEX	Benzene, toluene, ethylbenzene, xylenes
C	Celsius	DRO	Diesel range organics
GRO	Gasoline range organics	RCRA	Resource Conservation and Recovery Act
TCLP	Toxicity Characteristic Leaching Procedure	TPH	Total petroleum hydrocarbons
TSP	Trisodium phosphate	VOC	Volatile organic compounds

Standard detection limits will be adequate for this project. Appropriate containers and physical/chemical preservation techniques will be employed during the field activities to help verify that representative analytical results are obtained. During the cleanup activities, a 24-hour turnaround time (TAT) for analysis may be requested to ensure project progress is not impeded while awaiting laboratory results.

5.4 WASTE CHARACTERIZATION AND DISPOSAL

The remediation contractor will be responsible for properly disposing of wastes generated during remedial activities. Excavated soil will be disposed of as Special Waste at the nearest available landfill that is approved to accept the removed materials.

During transport, removed waste will be covered. Total volume of waste disposed of at the landfill/disposal facility will be documented on weight tickets or on waste manifests. If different site conditions are encountered during the cleanup, work will stop and alternative sampling and disposal procedures will be discussed with NSEC and MDNR and changes will be implemented accordingly.

5.5 DECONTAMINATION AND INVESTIGATIVE WASTES

Sampling equipment will be cleaned and decontaminated consistently to maintain sample quality. Specifically, non-dedicated equipment that comes in contact with potentially contaminated media will not be reused prior to decontamination, which will consist of a wash with Alconox solution using a stainless steel or nylon brush, followed by a tap water rinse. Field personnel will wear disposable gloves during the decontamination process for personal protection and to prevent cross contamination.

In general, field activities will be conducted to minimize investigation-derived wastes (IDW) to the extent possible without compromising project objectives. Based on the proposed scope of work, most IDW is expected to consist of disposable sampling supplies (gloves, paper towels, etc.) that will be disposed of off site as uncontaminated solid waste. The remediation contractor will be responsible for properly disposing of IDW generated during cleanup activities.

6.0 FIELD DOCUMENTATION

This section discusses field documentation that will be maintained and recorded during project activities.

6.1 PROJECT REMEDIAL ACTION PLAN

A copy of the RAP will be maintained by Seagull and the remediation contractor at all times. Prior to field mobilization, the remediation contractor will hold a meeting to review field procedures with the project staff.

6.2 FIELD LOGBOOK

The Field Supervisor and other field personnel will document field activities in a field logbook. Field logbooks will be documented in ink, with any corrections crossed out and initialed. The logbook will document daily field activities in chronological order with regard to the following general procedures:

- Observed site conditions
- Sample collection information

- Problems encountered and sampling plan deviations (if any)
- Photographic descriptions
- Other information related to field procedures.

6.3 PHOTO-DOCUMENTATION

Photographs of the site activities and general field procedures will be taken to further document the remedial efforts. These records will serve to support information entered in the field logbook and visually document the remedial activities. The following information will be recorded in the field log in regard to each photograph:

- Time, date, and direction
- Subject description
- Photographer

7.0 QUALITY CONTROL

Cleanup activities will be performed consistent with the QA/QC requirements outlined in this RAP, SSQA and MDNR BVCP QAPP. EPA Region 7 and Environmental Response Team (ERT) SOPs will serve as additional guidance documents for certain field and laboratory procedures. Specific quality control measures will include the collection of blank/duplicate samples, standard chain-of-custody protocols, and standardized field and laboratory methods per this RAP and the SSQA/QAPP.

Sample data will be systematically reviewed and validated consistent with the SSQA and MDNR BVCP QAPP to further document data quality and usability. Data validation will consist of a complete review of field and laboratory methods and associated documentation relative to the approved RAP and MRBCA Technical Guidance. This process will be initiated immediately upon completion of field activities and will be completed prior to development of the final report. At a minimum, the data validation process will address the following:

- Quality objectives and data measurement criteria
- Sampling process design
- Sampling methods
- Sample handling and custody requirements
- Quality control requirements

8.0 PROJECT SAFETY AND TRAINING

This section discusses project safety and training requirements.

8.1 SPECIAL TRAINING REQUIREMENTS/CERTIFICATION

Field personnel and others directly involved in this project will be required to read and remain familiar with this RAP. It will be the responsibility of the remediation contractor to ensure that all necessary personnel have reviewed and understand the RAP and proposed field activities.

Field staff and the selected remediation contractor will possess the appropriate OSHA training certificates.

8.2 HEALTH AND SAFETY PLAN

A site-specific Health and Safety Plan (HASP) will be prepared by the remediation contractor. The HASP will be submitted to the MDNR BVCP Project Manager for review prior to commencing any site activities. Field procedures will be performed consistent with the HASP to promote field safety throughout the duration of the project. Field personnel will be required to read and sign the HASP prior to performing any activities at the site. In addition, daily safety meetings will be performed every morning prior to the start of activities by the remediation contractor.

8.3 UTILITY CLEARANCE

The remediation contractor will request marking of underground utility lines by contacting the Missouri One-Call system no less than 72 business hours prior to initiating field activities. Utility clearance documentation will be kept on site throughout the duration of field activities.

Additional safety precautions will address the presence of overhead utilities. Proper management and safety in and around overhead utilities is the responsibility of the remediation contractor and all parties involved.

8.4 EXCAVATION AREAS

The soil excavation areas will be clearly marked, taped off, or temporarily fenced following completion of each day's field activities. The specific security measures applied will be based, in part, on the depth of the soil excavation. In addition, excavation sidewalls will be sloped to prevent generation of confined spaces and to limit potential falls for those entering the excavation areas. If necessary, dust generation will be minimized through water application to excavated soils and/or the excavation areas.

9.0 PROJECT REPORTING

The remediation contractor will complete a draft Remedial Action Completion Report for review by EIERA and the NSEC upon completion of the field, laboratory, and data validation activities. Copies of the Final Remedial Action Completion Report will be distributed in accordance with Section 2.2. The Final Remedial Action Completion Report will include the following:

- General site description and photographic documentation.
- Discussion of field and laboratory methods.
- General excavation documentation.
- Final clearance sampling results, along with maps or drawings of sample locations.
- Cleanup target level comparison with sample results.
- Complete laboratory data report, including field sheets and chain-of-custody records.
- Waste disposal documentation, such as landfill tickets.
- Appropriate field sketches or notes that document sampling and clearance testing.
- Documentation of deviations from the RAP. Significant deviations from the RAP must have Brownfields/VCP approval prior to implementation.
- Remedial action conclusions and recommendations.

10.0 ASSUMPTIONS AND WORK PLAN DEVIATIONS

This RAP assumes that site conditions will allow the proposed site activities to occur in a timely and safe manner. If site conditions will not allow activities to occur safely and as planned, or if site conditions, field observations, or field data suggest that modified strategies are warranted to achieve project goals, minor modifications may be applied at the direction of the NSEC/EIERA or the remediation contractor. If modified strategies are applied, these efforts will remain consistent with the QC portions of this document and the approved SSQA/QAPP. Field notes and report discussions will document any modifications to this plan. Alternative methods beyond the specified scope and intent of this RAP will not be applied prior to approval by EIERA and MDNR.

11.0 REFERENCES

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APPENDIX A

FIGURES

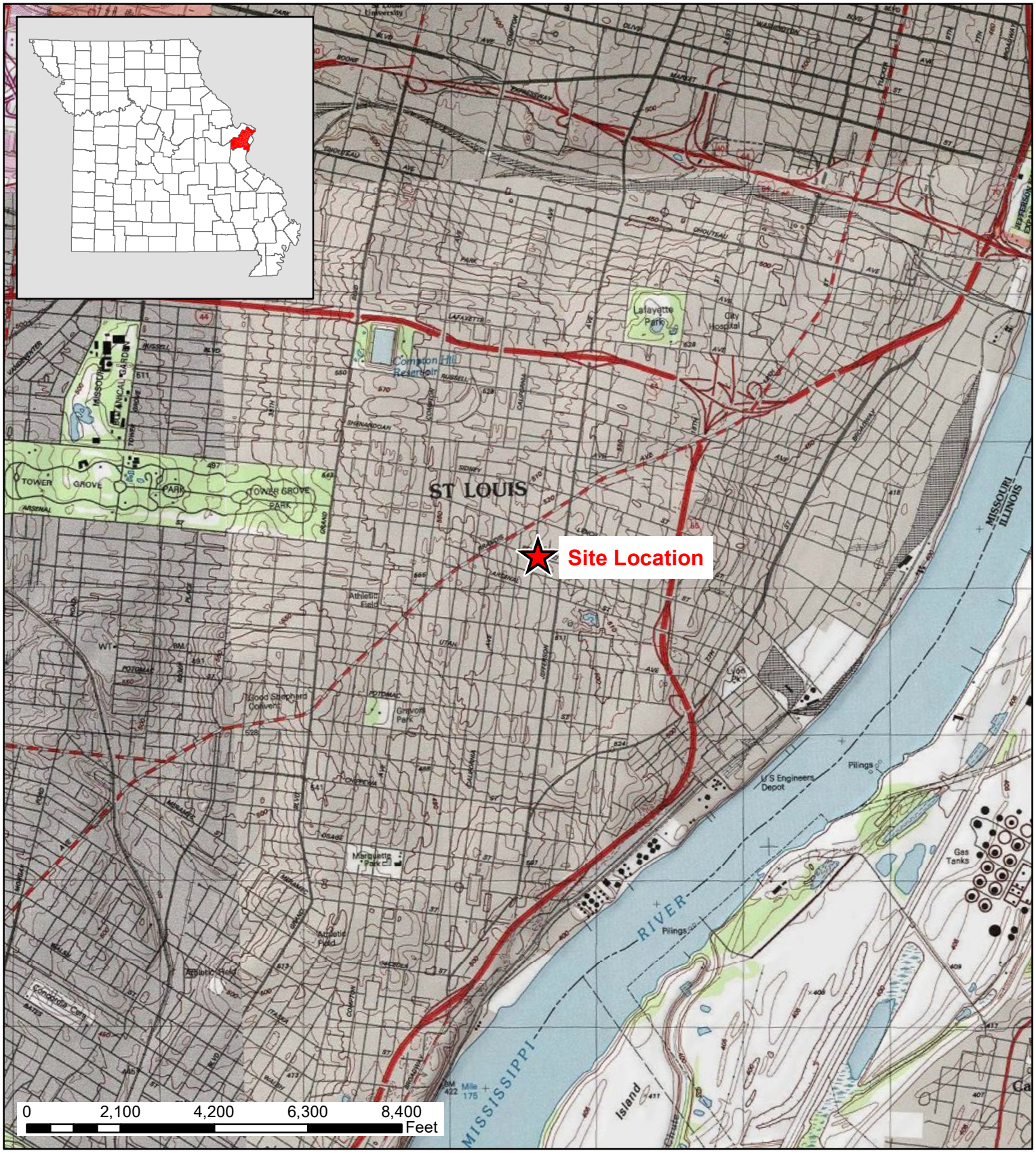

Figure 1
Site Location Map
Near Southside Employment Coalition Site
Saint Louis, Missouri

N
W E
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Seagull Environmental Technologies, Inc. Source: USGS St. Louis, MO 7.5 Minute: Topo Quad,1985

Date: August, 2018 Project No: EIERA0019RAP

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Figure 2
Site Aerial Map
Near Southside Employment Coalition Site
Saint Louis, Missouri

N
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Seagull Environmental Technologies, Inc.

Source: ArcGIS Online Aerial Imagery, 2012

Date: August, 2018

Project No: EIERA0019RAP

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Figure 3
Proposed Excavation Area Map
Near Southside Employment Coalition Site
Saint Louis, Missouri

Seagull Environmental Technologies, Inc.

Source: ArcGIS Online Aerial Imagery, 2012

Date: August, 2018

Project No: EIERA0019RAP

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APPENDIX B

SUMMARY TABLES

Table 1
Near Southside Employment Coalition
Sample Designations, Analysis Parameters, and Rationale for Collection

Boring No.	Sample ID	Boring/Well Depth (ft)	Sampling interval (ft bgs)	Analyte(s)	Rationale/Location
Soil Samples					
B01	NSS-B01-3	20	0-3	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	Slightly to the north of the center of the site to evaluate the presence or absence of impact
B01	NSS-B01-18		17-18	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	Slightly to the north of the center of the site to evaluate the presence or absence of impact
B02	NSS-B02-3	20	0-3	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	Near USTs to evaluate the presence or absence of impact near the former USTs
B02	NSS-B02-19.5		17.9-19.5	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	Near USTs to evaluate the presence or absence of impact near the former USTs
B03	NSS-B03-3	20	0-3	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	South of B01 or B02 (based on OVM readings) to evaluate migration of COCs downgradient of the USTs
B03	NSS-B03-13		13-12	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	South of B01 or B02 (based on OVM readings) to evaluate migration of COCs downgradient of the USTs
B04	NSS-B04-3	20	0-3	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	Southeast corner of the site to evaluate migration of COCs from adjacent property
B04	NSS-B04-17		15-17	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	Southeast corner of the site to evaluate migration of COCs from adjacent property
B04	DUP1	20	15-17	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals	Quality control sample
Groundwater Samples					
B01	NSS-GW01	NW	NA	Not collected - no water present in the borehole.	Not collected - no water present in the borehole.
B02	NSS-GW02	20	NA	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals[1]	Near USTs to evaluate the presence or absence of impact near the former USTs
B03	NSS-GW03	20	NA	BTEXN, TPH-GRO/DRO/ORO, PAH, RCRA Metals[1]	South of B01 or B02 (based on OVM readings) to evaluate migration of COCs downgradient of the USTs
B04	NSS-GW04	NW	NA	Not collected - no water present in the borehole.	Not collected - no water present in the borehole.
TBD	DUP02	NC	NA	NC	NC

[1] Samples were field filtered for metals.

bgs = below ground surface

BTEXN = Benzene, toluene, ethylbenzene and xylenes

COCs = Chemicals of Concern

DRO = Diesel-Range Organics

GRO = Gasoline-Range Organics

NA = Not applicable

NC = Not collected. B04 did not contain water and the duplicate groundwater sample was inadvertantly overlooked.

NW - No water present in the borehole.

ORO = Oil-Range Organics

PID = Photoionization Detector

PAHs = Polynuclear Aromatic Hydrocarbons

RCRA = Resource Conservation and Recovery Act

TBD = To Be Determined

TPH = Total Petroleum Hydrocarbons

USTs = Underground Storage Tanks

Table 2
Surficial Soil Analytical Results - Detected Parameters
Near Southside Employment Coalition
2649 Pestalozzi St., St. Louis, Missouri 63118

Sample ID:		**NSS-B01-3**	**NSS-B02-3**	**NSS-B03-3**	**NSS-B04-3**	Default	**Residential - Ingestion,**	*Non-Residential*	Construction Worker	Groundwater
Sampling Date:		**1/11/17**	**1/11/17**	**1/11/17**	**1/11/17**	Target	**Inhalation and Dermal**	*Ingestion, Inhalation*	Ingestion,	Pathway*
Sampling Depth:		**0-3**	**0-3**	**0-3**	**0-3**	Levels		*and Dermal*	Inhalation, and Dermal	
PID Readings (ppm):		**0**	**0**	**0**	**0**	All Soil Types	**Soil Type 1**	*Soil Type 1*	Soil Type 1	Soil Type I
Method	**BETXN AND DETECTED VOLATILE ORGANICS (mg/Kg)**									
8260B	TPH-GRO	<0.568	1.05	<0.501	<0.544	385	**354,000**	*4,650,000*	1,290,000	18,100.0
8260B	Benzene	<0.0011	<0.001	<0.001	<0.0011	0.0561	**177**	*763*	1,820	0.0561
8260B	Ethylbenzene	<0.0057	<0.005	<0.005	<0.0054	39.9	**7,450**	*97,500*	58,100	39.9
8260B	Naphthalene	<0.0114	<0.010	<0.010	<0.0109	0.325	**36.3**	*119*	215	0.325
8260B	Toluene	<0.0057	<0.005	<0.005	<0.0054	29.8	**6,210**	*81,100*	138,000	29.8
8260B	Xylenes, Total	<0.0057	<0.005	<0.005	<0.0054	24.7	**7,830**	*104,000*	7,210	634
8270C	**DETECTED SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)**									
8270C	TPH - DRO (mg/Kg)	<71.2	14.9	<39.3	<68.9	4,150	**140,000**	*1,410,000*	3,010,000	2,940,000,000
8270C	TPH - ORO (mg/Kg)	<71.2	16.9	43.7	<68.9	124,000	**124,000**	*1,250,000*	2,890,000	2,940,000,000
8270C	Acenaphthene	<0.202	0.0778	<0.111	<0.195	174	**3,130**	*30,700*	25,700	174
8270C	Anthracene	0.279	0.138	<0.111	<0.195	3,060	**15,700**	*154,000*	135,000	3,060
8270C	Benzo(a)anthracene	1.03	0.412	0.657	<0.195	6.12	**6.2**	*21.1*	1,190	6.12
8270C	Benzo(a)pyrene	**0.917**	0.373	**0.718**	<0.195	0.62	**0.62**	*2.11*	119	30.4
8270C	Benzo(b)fluoranthene	1.08	0.435	0.933	<0.195	6.19	**6.19**	*21*	1,140	11.5
8270C	Benzo(k)fluoranthene	0.4	0.19	0.36	<0.195	62	**62**	*211*	11,900	118
8270C	Chrysene	1.01	0.403	0.681	<0.195	599	**599**	*1,990*	65,700	612
8270C	Dibenz(a,h)anthracene	<0.202	0.0557	<0.111	<0.195	0.62	**0.62**	*2.11*	119	2.38
8270C	Fluoranthene	2.23	0.926	1.22	0.267	2,280	**78.1**	*21,800*	43,800	2,610
8270C	Fluorene	<0.202	0.0584	<0.111	<0.195	211	**2,200**	*20,700*	27,500	211
8270C	Pyrene	1.95	0.81	1.13	0.229	1,500	**1,710**	*16,400*	33,700	1,500
6010/7471	**METALS (mg/kg)**									
7471	Mercury	0.506	0.171	0.261	0.092	2.19	**46.3**	*630*	21.6	NA
6010B	Arsenic	**8.75**	**10.1**	**10.7**	**6.54**	3.89	**3.89**	*15.9*	654	7.21
6010B	Barium	362	191	221	147	2,040	**15,000**	*181,000*	439,000	2,040
6010B	Cadmium	0.68	0.91	0.94	0.23	9.31	**16.8**	*74.8*	2,810	9.31
6010B	Chromium	19.6	18	52	15.3	7,460	**74,600**	*472,000*	521,000	4,470,000
6010B	Lead	185	186 S	**369**	39.4	3.74	**260**	*660*	--	3.740
6010B	Selenium	< 3.85	< 3.92	< 3.70	< 3.70	6.27	**380**	*4,780*	12,800	6
6010B	Silver	< 0.48	< 0.49	< 0.46	< 0.46	16.2	**374**	*4,480*	10,600	16.2

Notes:

Blue Text = The concentration exceeds the Default Target Level.

Bolded = The concentration exceeds the Residential Ingestion, Inhalation, and Dermal Contact Target Level for Soil Type 1.

Italicized = The concentration exceeds the Non-Residential Indoor Inhalation Target Level for Soil Type 1.

Highlighted = The concentration exceeds the Construction Worker Ingestion, Inhalation, and Dermal Contact Target Level for Soil Type 1.

* = The concentration excceds the Groundwater Pathway for Soil Type 1.

BTEXN = Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

ORO = Oil Range Organics

S = spike recovery was outside recovery limits

TPH = Total Petroleum Hydrocabtons

Table 3
Subsurficial Soil Analytical Results - Detected Parameters
Near Southside Employment Coalition
2649 Pestalozzi St., St. Louis, Missouri 63118

Sample ID:		NSS-B01-18	NSS-B02-19.5	NSS-B03-13	NSS-B04-17	DUP1	Default	Residential	*Non-Residential*	Construction Worker	Groundwater
Sampling Date:		1/11/17	1/11/17	1/11/17	1/11/17	1/11/17	Target	Indoor	*Indoor*	Ingestion, Inhalation,	Pathway*
Sampling Depth:		17-18	17.5-19.5	12-13	15-17	15-17	Levels	Inhalation	*Inhalation*	and Dermal	
PID Readings (ppm):		0	1749	897	0	DUP of B04-17	All Soil Types	Soil Type 1	*Soil Type 1*	Soil Type 1	Soil Type I
Method	**BETXN AND DETECTED VOLATILE ORGANICS (mg/Kg)**										
8260B	TPH-GRO	<0.498	**668***	**1,430***	<0.515	<0.536	385	**385**	*3,100*	1,290,000	18,100
8260B	Benzene	<0.001	<0.196*	0.340*	<0.001	<0.0011	0.0561	**0.378**	*1.98*	1,820	0.0561
8260B	Ethylbenzene	<0.005	<0.980*	1.160*	<0.0052	<0.0054	39.9	**193**	*1,550*	58,100	39.9
8260B	Naphthalene	<0.010	<1.960*	<2.300*	<0.0103	<0.0107	0.325	**25.9**	*136*	215	0.325
8260B	Toluene	<0.005	<0.980*	<1.150*	<0.0054	<0.0054	29.8	**499**	*4,010*	138,000	29.8
8260B	Xylenes, Total	<0.005	<0.980*	<1.150*	<0.0054	<0.0054	24.7	**24.7**	*199*	7,210	634
8270C	**DETECTED SEMIVOLATILE ORGANIC COMPOUNDS**										
8270C	TPH - DRO (mg/Kg)	<15.1	29.8	26.5	<14.9	<14.6	4,150	**4,150**	*33,400*	3,010,000	2,940,000,000
8270C	TPH - ORO (mg/Kg)	<15.1	<29.5	<15	<14.9	<14.6	12,400	**--**	--	2,890,000	2,940,000,000
8270C	Acenaphthene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	174	**66,900**	*538,000*	25,700	174
8270C	Anthracene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	3,060	**390,000**	*3,140,000*	135,000	3,060
8270C	Benzo(a)anthracene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	6.12	**260,000**	*1,360,000*	1,190	6.12
8270C	Benzo(a)pyrene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	0.62	**225,000**	*1,180,000*	119	30.4
8270C	Benzo(b)fluoranthene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	6.19	**55,500**	*291,000*	1,140	11.5
8270C	Benzo(k)fluoranthene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	62	**6,830,000**	*35,800,000*	11,900	118
8270C	Chrysene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	599	**192,000**	*1,010,000*	65,700	612
8270C	Dibenz(a,h)anthracen	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	0.62	**22,200,000**	*116,000,000*	119	2.38
8270C	Fluoranthene	<0.0427	<0.0836	<0.0424	<0.0423	0.0597	2,280	**9,010,000**	*72,500,000*	43,800	2,610
8270C	Fluorene	<0.0427	<0.0836	<0.0424	<0.0423	<0.0413	211	**246,000**	*1,980,000*	27,500	211
8270C	Pyrene	<0.0427	<0.0836	<0.0424	<0.0423	0.0504	1,500	**10,700,000**	*86,400,000*	33,700	1,500
6010/7471	**METALS (MG/KG)**										
7471	Mercury	0.068	0.024	0.027	0.14	0.058	2.19	**2.19**	*17.7*	21.6	NA
6010B	Arsenic	8.71*	6.35	6.55	4.97	5.74	3.89	**--**	**--**	654	7.21
6010B	Barium	222	137	134	205	200	2,040	**--**	**--**	439,000	2,040
6010B	Cadmium	0.28	0.19	0.25	0.36	0.33	9.31	**--**	**--**	2,810	9.31
6010B	Chromium	21.2	25.6	21.5	18.1	18.2	7,460	**--**	**--**	521,000	4,470,000
6010B	Lead	14.2*	12.2*	11.8*	21.7*	21.7*	3.74	**260**	*660*	--	3.740
6010B	Selenium	< 3.92	< 3.64	< 3.64	< 3.85	< 3.77	6.27	**--**	**--**	12,800	6
6010B	Silver	< 0.49	< 0.45	< 0.45	< 0.48	< 0.47	16.2	**--**	**--**	10,600	16.2

Notes:

Blue Text = The concentration exceeds the Default Target Level.

Bolded = The concentration exceeds the Residential Ingestion, Inhalation, and Dermal Contact Target Level for Soil Type 1.

Ilicized = The concentration exceeds the Non-Residential Indoor Inhalation Target Level for Soil Type 1.

Highlighted = The concentration exceeds the Construction Worker Ingestion, Inhalation, and Dermal Contact Target Level for Soil Type 1.

* = The concentration excceds the Groundwater Pathway for Soil Type 1.

BTEXN = Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

ORO = Oil Range Organics

TPH = Total Petroleum Hydrocarbons

Table 4
Groundwater Analytical Results - Detected Parameters
Near Southside Employment Coalition
2649 Pestalozzi St., St. Louis, Missouri 63118

Sample ID:		**NSS-GW02**	**NSS-GW03**	**Trip Blank**	Default	**Residential**	Residential	*Non-Residential*	Construction
Sampling Date:		**1/11/17**	**1/11/17**	**1/11/17**	Target	**Domestic**	Indoor	*Indoor*	Worker
Screen Interval (ft.)		**10-20**	**10-20**	**NA**	Levels	**Water Use**	Inhalation	*Inhalation*	Dermal
Water Level (ft. below ground surface)		**18**	**12.2**	**NA**	All Soil Types	**Soil Type 1**	Soil Type 1	*Soil Type 1*	Soil Type 1
Method	**BETXN AND DETECTED VOLATILE ORGANICS (mg/L)**								
8260B	TPH-GRO	4.380	**<125**	<0.500	18.1	**18.1**	20.8	*167*	90,600 **
8260B	Benzene	**0.0377**	**3.340**	<0.002	0.005	**0.005**	1.0	*5.25*	14.8
8260B	Ethylbenzene	0.0039	**1.980**	<0.002	0.7	**0.7**	103	*832*	97.6
8260B	Naphthalene	<0.005	**<1.250**	<0.005	0.00109	**0.00109**	2.25	*11.8*	5.21
8260B	Toluene	<0.002	**1.43**	<0.002	1	**1**	508	*4,080*	132
8260B	Xylenes, Total	<0.005	6.210	<0.005	10	**10**	11.8	*94.9*	328
8270C	**DETECTED SEMIVOLATILE ORGANIC COMPOUNDS (mg/L)**								
8270C	TPH - DRO (mg/Kg)	22.1	***1,080***	--	34.3	**34.3**	117	*938*	242,000
8270C	TPH - ORO (mg/Kg)	0.593	<75.0	--	31.8	**31.8**	--	--	--
8270C	Acenaphthene	0.00114	<0.250	--	0.165	**0.165**	1,610	*12,900*	20.8
8270C	Anthracene	0.00115	<0.250	--	0.696	**0.696**	2,290	*18,400*	48.9
8270C	Benzo(a)anthracene	**0.00124**	<0.250	--	0.000103	**0.000103**	110	*579*	0.0442
8270C	Benzo(a)pyrene	<0.00100	<0.250	--	0.0000102	**0.0002**	37.3	*195*	0.00259
8270C	Benzo(b)fluoranthene	**0.00107**	<0.250	--	0.0000627	**0.0000627**	7.65	*40.1*	0.0255
8270C	Benzo(k)fluoranthene	<0.00100	<0.250	--	0.000646	**0.000646**	937	*4,910*	0.246
8270C	Chrysene	<0.00100	<0.250	--	0.0103	**0.0103**	81.7	*428*	4.42
8270	Dibenz(a,h)anthracene	<0.00100	<0.250		0.00000421	**0.00000421**	985.000	*5,160*	0.00167
8270C	Fluoranthene	0.00369	<0.250	--	0.164	**0.164**	14,200	*114,000*	4.62
8270C	Fluorene	<0.00100	<0.250	--	0.103	**0.103**	3,010	*24,200*	9.66
8270C	Pyrene	0.00334	<0.250	--	0.0961	**0.0961**	17,300	*139,000*	2.52
6010/7471	**DISSOLVED METALS (MG/L)**								
7471	Mercury	<0.00020	<0.00020	--	0.0507	**NA**	0.0507	*0.407*	168**
6010B	Arsenic	< 0.0250	**0.0438**	--	0.01	**0.01**	--	--	25.8
6010B	Barium	0.349	0.336	--	2	**2.00**	--	--	17,200
6010B	Cadmium	< 0.0020	<0.0020	--	0.005	**0.005**	--	--	86
6010B	Chromium	< 0.0050	<0.0050	--	0.1	**0.100**	--	--	129,000
6010B	Lead	< 0.0150	<0.0150	--	0.015	**0.015**	--	--	--
6010B	Selenium	< 0.0400	<0.0400	--	0.05	**0.005**	--	--	430
6010B	Silver	< 0.0050	<0.0050	--	0.0781	**0.0781**	--	--	717

Notes:

Blue Text = The concentration exceeds the Default Target Level.

Bolded = The concentration exceeds the Residential Ingestion, Inhalation, and Dermal Contact Target Level for Soil Type 1.

Italicized = The concentration exceeds the Non-Residential Indoor Inhalation Target Level for Soil Type 1.

Highlighted = The concentration exceeds the Construction Worker Ingestion, Inhalation, and Dermal Contact Target Level for Soil Type 1.

Underlined = Concentration exceeds the residential indoor inhalation of groundwater vapor pathway.

** = The concentration represents the outdoor construction worker inhalation of vapor pathway.

BTEXN = Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

ORO = Oil Range Organics

TPH = Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF ANALYTICAL RESULTS FROM SUBSURFACE SOIL SAMPLES
NEAR SOUTHSIDE EMPLOYMENT COALITION, ST. LOUIS, MISSOURI

Analyte	Sample Number (Depth, ft bgs)						Default Target Level	RBTL Residential[1]	RBTL Non-Residential[2]
	B-05-16 (15-16)	B-06-28 (27-28)	B-07-32 (31-32)	B-08-18 (17-18)	B-09-22 (21-22)	B-10-22 (21-22)			
DETECTED VOLOTILE ORGANIC COMPOUNDS (mg/kg) by Method 8260									
4-Bromofluorobenzene	**16**	0.015	**0.014**	**1.5**	**0**	**1.5**	**NE**	**NE**	**NE**
Acetone	0.097 U	**0.041**	**0.031**	0.044 U	0.053	0.049 U	**4.2**	**183**	**14,700**
Cyclohexane	**15**	0.0031	<0.003 U	0.014 U	0.0031 U	0.015 U	**NE**	**NE**	**NE**
Dibromofluoromethane	**15**	**0.0079**	**0.0077**	**1.3**	**0**	**1.5**	**NE**	**NE**	**NE**
Ethylbenzene	**4**	0.0006 U	0.00059 U	0.009 U	0.0006 U	0.0099 U	**39.9**	**193**	**1,550**
Isopropylbenzene	**0.96**	0.00064 U	0.00063 U	0.013 U	0.00064 U	0.014 U	**10.5**	**10.5**	**84.2**
Naphthalene	**0.74**	0.0051 U	NA	0.0049 U	0.0049 U	0.0053 U	**0.325**	**25.9**	**136**
m,p-Xylene	**7.1**	0.0012 U	0.0012 U	0.02 U	0.0012 U	0.022 U	**NE**	**NE**	**NE**
o-Xylene	**0.19**	0.00047 U	0.00047 U	0.016 U	0.00047 U	0.018 U	**NE**	**NE**	**NE**
Xylenes, Total	**7.3**	0.0017 U	0.0017 U	0.037 U	0.0017 U	0.04 U	**24.7**	**24.7**	**199**
TPH-GRO	**390**	1.8 U	1.9 U	**14**	1.7 U	2 U	**385**	**385**	**3,100**
DETECTED SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg) by Method 8270									
2,4,6-Tribromophenol	**3**	**2.2**	NA	**2.4**	**2.3**	**2.7**	**NE**	**NE**	**NE**
2-Fluorobiphenyl	**2.3**	**2.4**	NA	**2.3**	**2.1**	**2**	**NE**	**NE**	**NE**
2-Fluorophenol	**1.9**	**2.5**	NA	**1.8**	**1.7**	**1.8**	**NE**	**NE**	**NE**
2-Methylnaphthalene	**0.76**	0.004 U	NA	0.0039 U	0.0039 U	0.0042 U	**7.55**	**627**	**5,040**
Fluoranthene	**0.019**	0.0038 U	NA	0.0037 U	**0.014**	0.004 U	**2,280**	**9,010,000**	**72,500,000**
Methylcyclohexane	**23**	0.0015 U	0.0015	0.016 U	0.0015 U	0.018 U	**NE**	**NE**	**NE**
Phenanthrene	**0.012**	0.0037 U	NA	0.0036 U	0.0036 U	0.0038 U	**158**	**99,300**	**799,000**
Pyrene	**0.013**	0.0014 U	NA	0.0014 U	**0.013**	0.0015 U	**1,500**	**10,700,000**	**86,400,000**
TPH-DRO	**88**	1.8 U	NA	1.7 U	1.7 U	**29**	**4,150**	**4150**	**33,400**
DETECTED METALS (mg/kg) by Method 6010									
Lead	**13**	**45**	NA	**10**	**9.9**	**12**	**3.74**	**260**	**660**

Notes:

Bold font indicates concentration above detection limit.
Blue fill indicates concentration above Default Target Level
Yellow Fill indicates concentration above Residential RBTL

[1] MBRCA Tier 1 RBTL for residential land use, soil type 1, subsurface soil indoor inhalation of vapor emissions
[2] MBRCA Tier 1 RBTL for non-residential land use, soil type 1, subsurface soil indoor inhalation of vapor emissions

ft bgs	Feet below ground surface	RBTL	Risk-Based Target Level
mg/kg	Milligrams per kilogram	TPH-DRO	Total petroleum hydrocarbons – diesel range organics
MRBCA	Missouri Risk-Based Corrective Action	TPH-GRO	Total petroleum hydrocarbons – gasoline range organics
NA	Not analyzed	U	Not detected above the method detection limit
NE	Not established		

TABLE 2

SUMMARY OF ANALYTICAL RESULTS FROM SOIL GAS SAMPLES
NEAR SOUTHSIDE EMPLOYMENT COALITION, ST. LOUIS, MISSOURI

Analyte	Sample Number (Depth, ft bgs)				RBTL Residential[1]	RBTL Non-Residential[2]
	SG-02-6 (6)	SG-03-6 (6)	SG-04-3 (3)	SG-4B-7 (7)		
DETECTED VOLATILE ORGANIC COMPOUNDS (mg/m^3) BY METHOD TO-15						
1,1,1-Trichloroethane	**0.0022**	**0.027**	0.00024 U	**0.024**	**56,600**	**455,000**
1,2,4-Trimethylbenzene	**0.0054**	**0.011**	**0.014**	**0.017**	**161**	**1290**
1,3,5-Trimethylbenzene	**0.0013**	**0.0026**	**0.0031**	**0.0037**	**161**	**1290**
1,4-Dichlorobenzene	**0.00074**	0.00018 U	0.0002 U	0.00018 U	**199**	**1,040**
1,4-Dioxane	0.00021 U	0.00021 U	0.00023 U	**0.0007**	**48.5**	**254**
2-Hexanone	**0.0018**	**0.0044**	0.00023 U	0.00021 U	**NE**	**NE**
2-Propanol (Isopropyl Alcohol)	0.00055 U	0.00055 U	0.0006 U	0.00055 U	**NE**	**NE**
4-Ethyltoluene	**0.0015**	**0.0029**	**0.0039**	**0.0072**	**NE**	**NE**
4-Methyl-2-pentanone	**0.0015**	**0.0063**	0.00023 U	0.00021 U	**NE**	**NE**
Acetone	**0.017**	**0.018**	**0.036**	**0.055**	**50,900**	**410,000**
Acetonitrile	0.00024 U	0.00023 U	0.00026 U	**0.00073**	**925**	**7,440**
Acrolein	0.00022 U	0.00022 U	0.00024 U	0.00022 U	**NE**	**NE**
alpha-Pinene	**0.0016**	0.00018 U	0.0002 U	**0.00093**	**NE**	**NE**
Benzene	**0.0016**	**0.002**	**0.0038**	**0.0043**	**190**	**998**
Carbon disulfide	**0.021**	0.0002 U	0.00021 U	0.0002 U	**13,500**	**109,000**
Chloroform	0.00022 U	**0.0014**	0.00024 U	0.00022 U	**36**	**189**
Cyclohexane	0.00038 U	0.00038 U	0.00041 U	0.00038 U	**NE**	**NE**
Dichlorodifluoromethane (CFC 12)	**0.0024**	**0.0026**	**0.0024**	**0.0026**	**5,000**	**40,200**
d-Limonene	**0.0027**	**0.00086**	**0.0013**	**0.0038**	**NE**	**NE**
Ethanol	**0.012**	**0.16**	**0.062**	**0.12**	**32,800**	**264,000**
Ethyl Acetate	0.00046 U	0.00046 U	0.0005 U	0.00046 U	**NE**	**NE**
Ethylbenzene	**0.0027**	**0.0041**	**0.0071**	**0.012**	**27,200**	**218,000**
m,p-Xylenes	**0.013**	**0.02**	**0.034**	**0.061**	**NE**	**NE**
Naphthalene	**0.0032**	**0.0034**	**0.0048**	**0.0014**	**42.6**	**223**
n-Butyl Acetate	0.00021 U	0.00021 U	0.00023 U	0.00021 U	**NE**	**NE**
n-Heptane	**0.0016**	**0.0017**	**0.0034**	**0.01**	**NE**	**NE**
n-Hexane	**0.0036**	**0.0018**	**0.0038**	**0.025**	**7,020**	**56,500**
n-Nonane	**0.001**	**0.0011**	**0.0013**	**0.0021**	**NE**	**NE**
n-Octane	**0.00081**	**0.00085**	**0.0015**	**0.0038**	**NE**	**NE**
n-Propylbenzene	**0.00081**	**0.0015**	**0.0019**	**0.0033**	**3,750**	**30,100**
o-Xylene	**0.0031**	**0.0054**	**0.0086**	**0.013**	**NE**	**NE**
Propene	**0.0032**	**0.0017**	**0.0014**	**0.0036**	**NE**	**NE**
Tetrachloroethene	**0.0046**	**0.012**	0.0002 U	**0.0058**	**200**	**1,050**
Toluene	**0.014**	**0.021**	**0.039**	**0.059**	**113,000**	**909,000**
Trichlorofluoromethane	**0.0014**	**0.0013**	**0.0013**	**0.0013**	**16,100**	**130,000**
Vinyl Acetate	**0.0081**	**0.014**	**0.0087**	**0.0072**	**NE**	**NE**

Notes:

Bold font indicates presence of analyte above detection limit.

[1] MBRCA Tier 1 RBTL for residential land use, soil type 1, soil vapor indoor inhalation of vapor emissions

[2] MBRCA Tier 1 RBTL for non-residential land use, soil type 1, soil vapor indoor inhalation of vapor emissions

ft bgs Feet below ground surface
mg/m^3 Milligrams per cubic meter
MRBCA Missouri Risk-Based Corrective Action
NE Not established
RBTL Risk-Based Target Level
U Not detected above the method detection limit

TABLE 3

SUMMARY OF ANALYTICAL RESULTS FROM INDOOR AND AMBIENT AIR SAMPLES NEAR SOUTHSIDE EMPLOYMENT COALITION, ST. LOUIS, MISSOURI

Analyte	Sample Number		RBTL Residential[1]	RBTL Non-Residential[2]
	AA-01	IA-01		
DETECTED VOLATILE ORGANIC COMPOUNDS (mg/m^3) BY METHOD TO-15				
1,1,1-Trichloroethane	**0.00052**	0.00035 U	**1.31**	**4.28**
1,2,4-Trimethylbenzene	**0.0034**	**0.0098**	**0.00358**	**0.0117**
1,3,5-Trimethylbenzene	0.00049 U	**0.0029**	**0.00358**	**0.0117**
1,4-Dichlorobenzene	0.00043 U	**0.0017**	**0.00408**	**0.00867**
1,4-Dioxane	0.00049 U	0.00032 U	**0.00333**	**0.00708**
2-Hexanone	0.00049 U	0.00032 U	**NE**	**NE**
2-Propanol (Isopropyl Alcohol)	0.0013 U	**0.055**	**NE**	**NE**
4-Ethyltoluene	0.00049 U	**0.0029**	**NE**	**NE**
4-Methyl-2-pentanone	0.00049 U	0.00032 U	**NE**	**NE**
Acetone	**0.016**	**0.072**	**1.88**	**6.13**
Acetonitrile	0.00055 U	0.00037 U	**0.0358**	**0.017**
Acrolein	0.00052 U	**0.0043**	**NE**	**NE**
alpha-Pinene	0.00043 U	**0.01**	**NE**	**NE**
Benzene	**0.002**	**0.0052**	**0.00498**	**0.0106**
Carbon disulfide	0.00046 U	0.0003 U	**0.418**	**1.36**
Chloroform	0.00052 U	0.00035 U	**0.0011**	**0.00237**
Cyclohexane	0.00088 U	**0.0074**	**NE**	**NE**
Dichlorodifluoromethane (CFC 12)	**0.0023**	**0.0024**	**0.119**	**0.389**
d-Limonene	0.00043 U	**0.016**	**NE**	**NE**
Ethanol	**0.063**	**0.6**	**1.13**	**3.68**
Ethyl Acetate	0.0011 U	**0.0021**	**NE**	**NE**
Ethylbenzene	**0.0029**	**0.0068**	**0.606**	**1.98**
m,p-Xylenes	**0.012**	**0.024**	**NE**	**NE**
Naphthalene	0.00055 U	**0.037**	**0.000784**	**0.00159**
n-Butyl Acetate	0.00049 U	**0.0014**	**NE**	**NE**
n-Heptane	**0.0024**	**0.036**	**NE**	**NE**
n-Hexane	**0.0031**	**0.024**	**0.418**	**1.36**
n-Nonane	0.00046 U	**0.0036**	**NE**	**NE**
n-Octane	0.00055 U	**0.0044**	**NE**	**NE**
n-Propylbenzene	0.00049 U	**0.0019**	**0.0836**	**0.273**
o-Xylene	**0.0038**	**0.009**	**NE**	**NE**
Propene	0.00043 U	**0.014**	**NE**	**NE**
Tetrachloroethene	0.00043 U	0.00028 U	**0.00427**	**0.00909**
Toluene	**0.016**	**0.034**	**2.92**	**9.54**
Trichlorofluoromethane	0.00052 U	**0.0028**	**0.418**	**1.36**
Vinyl Acetate	0.002 U	0.0013 U	**NE**	**NE**

Notes:

Bold font indicates presence of analyte above detection limit.
Yellow fill indicates concentration above Residential RBTL
Red fill indicates concentration above Non-Residential RBTL

[1] MBRCA Tier 1 RBTL for residential land use, indoor air

[2] MBRCA Tier 1 RBTL for non-residential land use, indoor air

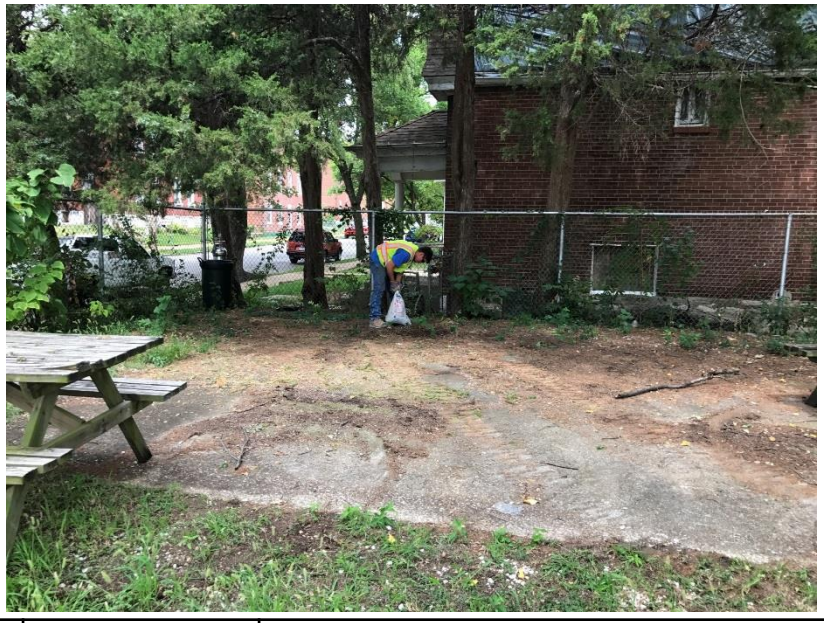
mg/m^3 Milligrams per cubic meter
MRBCA Missouri Risk-Based Corrective Action
NE Not established
RBTL Risk-Based Target Level
U Not detected above the method detection limit

APPENDIX C

SITE PHOTOGRAPHS

Near Southside Employment Coalition Site
St. Louis, Missouri

TETRA TECH PROJECT NO. X9025.14.0002.041 DIRECTION: SOUTHEAST	DESCRIPTION	This photograph shows Tetra Tech, Inc. (Tetra Tech) personnel recording data during soil gas collection at SG-3.	1
	CLIENT	Environmental Protection Agency	DATE 8/31/2017
	PHOTOGRAPHER	Kirk Mammoliti	



TETRA TECH PROJECT NO. X9025.14.0002.041 DIRECTION: NORTHWEST	DESCRIPTION	This photograph shows Roberts Environmental Drilling personnel plugging a soil boring at B-06.	2
	CLIENT	Environmental Protection Agency	DATE 8/31/2017
	PHOTOGRAPHER	Kirk Mammoliti	

Near Southside Employment Coalition Site
St. Louis, Missouri

TETRA TECH PROJECT NO. X9025.14.0002.041 DIRECTION: SOUTHEAST	DESCRIPTION	This photograph shows a bag of bentonite at soil boring location B-09.	3
	CLIENT	Environmental Protection Agency	DATE 8/31/2017
	PHOTOGRAPHER	Kirk Mammoliti	

TETRA TECH PROJECT NO. X9025.14.0002.041 DIRECTION: SOUTHEAST	DESCRIPTION	This photograph shows the location of boring B-10, indicated by concrete dust.	4
	CLIENT	Environmental Protection Agency	DATE 8/31/2017
	PHOTOGRAPHER	Kirk Mammoliti	

Near Southside Employment Coalition Site
St. Louis, Missouri

TETRA TECH PROJECT NO. X9025.14.0002.041 DIRECTION: EAST	DESCRIPTION	This photograph shows Roberts Environmental Drilling personnel at soil boring B-08.	5
	CLIENT	Environmental Protection Agency	DATE 8/31/2017
	PHOTOGRAPHER	Kirk Mammoliti	

TETRA TECH PROJECT NO. X9025.14.0002.041 DIRECTION: NORTHEAST	DESCRIPTION	This photograph shows the Summa canister at sample location IA-01.	6
	CLIENT	Environmental Protection Agency	DATE 8/31/2017
	PHOTOGRAPHER	Nick Patch	

APPENDIX D

MDNR QAPP FOR BROWNFIELDS/VOLUNTARY CLEANUP PROGRAM SITES

QUALITY ASSURANCE PROJECT PLAN FOR BROWNFIELDS/VOLUNTARY CLEANUP PROGRAM SITES

Prepared by the
Missouri Department of Natural Resources
Division of Environmental Quality
Hazardous Waste Program
Brownfields/Voluntary Cleanup Section

Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

A. PROJECT MANAGEMENT ELEMENTS

A.1 TITLE AND APPROVAL SHEET

Brownfields/Voluntary Cleanup Program
Quality Assurance Project Plan
Missouri Department of Natural Resources
Division of Environmental Quality

Site Name:_____

DEPARTMENT APPROVALS

Division Quality Assurance Manager — Date: November 13, 2014

Director, Hazardous Waste Program — Date: 11-7-14

BVCP Quality Assurance Project Officer, HWP — Date: 10/30/14

CONTRACTOR APPROVALS

Director, Contractor — Date

Project Manager, Contractor — Date

Project Field Superintendent, Contractor — Date

QA/QC Manager, Contractor — Date

A.2 TABLE OF CONTENTS

A.3 DISTRIBUTION LIST

Missouri Department of Natural Resources (MDNR)
Keith Bertels – Quality Assurance Manager, Division of Environmental Quality (DEQ)

Hazardous Waste Program (HWP)
David Lamb– HWP Director
Scott Huckstep –Brownfields/Voluntary Cleanup Program (BVCP) Section Chief and BVCP Unit Chief
Brian McCurren – BVCP Quality Assurance Project Officer
Project Managers – BVCP

Contractor/Consultant (contractor)
Director - Contractor
Project Manager–Contractor
Project Field Superintendent –Contractor
Contractor/Consultant/Laboratory – Quality Assurance Project Plan Coordinator

A.4 PROJECT/TASK ORGANIZATION

The following list identifies key individuals and organizations participating in this project, and discusses their specific roles and responsibilities as they pertain to this Quality Assurance Project Plan (QAPP).

BVCP Quality Assurance Project Officer
Responsibilities: Overall management and coordination of site-specific activities as they relate to this QAPP, including correspondence, communication and scheduling. Review plans, reports, and data to ensure that site-specific activities conducted pursuant to this QAPP meet project specific Data Quality Objectives (DQO).

Project Manager - BVCP
Responsibilities: Management and coordination of site-specific activities as they relate to this QAPP, including correspondence, communication and scheduling. Review plans, reports, and data to ensure that site-specific activities conducted pursuant to this QAPP meet project-specific DQOs.

Keith Bertels – Quality Assurance Manager, DEQ
Responsibilities: Monitors the overall Quality Assurance (QA) operations for the division. Develops and maintains the Quality Management Plan (QMP). Reviews and approves all internal QAPPs for the division.

Project Manager –Contractor
Responsibilities: Supervise and schedule field staff conducting sample collection and site assessment activities. Assures that staff are qualified and trained to perform the work, familiar with the required Standard Operating Procedures (SOP), including those related to Quality Assurance/Quality Control (QA/QC), and have the equipment necessary to perform the work. Reviews reports generated by staff for completeness, clarity and accuracy. Prepare formal reports for BVCP staff review and approval.

Project Field Superintendent - Contractor
Responsibilities: Prepare and/or implement site-specific sampling plans to collect environmental samples according to contractor SOPs at potential and/or confirmed hazardous substance sites. Conduct sample collection by appropriate methods to provide data of sufficient quality and quantity to meet project's DQOs. Prepare and/or implement health and safety plans for investigations conducted by the contractor at potential and/or confirmed hazardous substance sites. May prepare formal reports of sampling investigations for BVCP staff to evaluate.

QA/QC Manager - Contractor
Responsibilities: Reviews site-specific QAPPs and other documents as needed to ensure quality data. Performs field audits of contractor staff who conduct sampling activities in order to verify that staff are following the contractor SOPs for environmental data collection. Prepares audit reports summarizing procedures used and makes recommendations for improvement, if necessary.

Contractor/Consultant/Laboratory – QAPP Coordinator
Responsibilities: Ensures that appropriate analytical methods, Laboratory SOPs, QA/QC procedures, documentation, and training are implemented and routinely followed by all supervisory and technical staff of the contractor. Utilizes data review checklists and QC charts for both precision and accuracy data in the data quality review process. Conducts reviews of data files following review and approval by Laboratory supervisory staff.

Director - Contractor
Responsibilities: Ensures overall validation and final approval of data generated by the contractor. Assists as appropriate in the performance auditing of all activities performed by contractor personnel.

A.5 PROBLEM DEFINITION/BACKGROUND

The Brownfields/Voluntary Cleanup Program, administered by the Missouri Department of Natural Resources, Hazardous Waste Program's BVCP, provides voluntary parties with technical assistance and oversight for the investigation and cleanup of properties contaminated with hazardous substances. The goal of the BVCP is to clean up contaminated properties and bring them back into productive use.

Environmental assessments of commercial and industrial property are part of many real estate transactions and often are required by lenders and buyers as a result of the liability provisions of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or Superfund law. If contamination is found, property owners or other interested parties often want not only to clean up the property, but also to obtain a certificate of completion or "clean letter" from the state, which provides a measure of environmental liability protection. Hazardous substance contamination is not always regulated under state and federal laws such as Superfund, the Resource Conservation and Recovery Act (RCRA), or state petroleum storage tank regulations. The contamination may be of a type or concentration that does not warrant enforcement action and may not require cleanup under existing regulations. The BVCP may be

the only program with the authority to provide oversight of the cleanup and a certification of completion.

The BVCP can provide guidance so that the cleanup satisfies any applicable state and federal regulations and also provides written assurance when the project is complete. Missouri's Hazardous Substance Environmental Remediation (Voluntary Cleanup Program) Regulations (10 CSR 25-15.010) in accordance with sections 260.565 – 260.575, RSMo, provide the HWP's BVCP with the resources and the authority to provide project oversight and completion letters. Oversight costs are paid to the Department by the participant. By a memorandum of agreement with the U.S. Environmental Protection Agency (EPA), Region 7, the EPA will not pursue federal action with regard to the contamination addressed at the site once the BVCP issues a certificate of completion.

The Missouri Department of Natural Resources operates under its QMP when collecting or overseeing the collection of environmental sampling data. This plan requires that any subgrantees, contractors, or, in some cases, the regulated community, who generate environmental data develop QAPPs or other appropriate quality management tools. The QMP covers all intramural and extramural monitoring and measurement activities that generate and process environmental data for use by the department, including activities at sites participating in the BVCP.

This QAPP is generic in that it applies to several site-specific projects under the oversight of the BVCP. It is ongoing in that the projects are conducted continuously. A site-specific work plan detailing site activities will be submitted to the BVCP Project Manager for approval prior to any work conducted under the oversight of the BVCP. Any deviations from or supplemental activity to the generic QAPP will be documented in a Site-Specific Quality Assurance Project Plan Addendum (SSQA).

A.6 PROJECT/TASK DESCRIPTION

When a site enters the program, the BVCP reviews existing site assessment reports and determines whether or not additional investigation or cleanup is required to meet state standards. The site investigation and any necessary cleanup are conducted by the applicant or their consultants and contractors. Site assessment reports, remedial action plans and a final report are submitted to the BVCP for review and approval. When the BVCP is satisfied that the cleanup has met the objectives, the department provides the applicant with a Certification of Completion or "No Further Action Letter" signed by the Section Chief of BVCP. Applicants pay for the BVCP's oversight costs, which are calculated on an hourly basis. Participation in the program is voluntary and applicants may withdraw at any time.

Activities that may be conducted under this QAPP and with the oversight of the BVCP include site characterization, remedial action, and risk management. These activities will be documented through work plans for site characterization, characterization reports, risk assessment reports, remedial action plans (RAP), risk management plans (RMP), and final reports, all submitted to the BVCP for review and approval. The following include the necessary components for work plans to conduct environmental data collection submitted for BVCP approval and the necessary QA/QC documentation to be submitted after data collection.

A.6.1 Work Plans For Site Characterization

The contractor will submit the written site-specific work plan to BVCP for review and approval prior to implementation. These work plans should include a sampling and analysis plan, a field sampling plan, a health and safety plan, signature page and reference to this generic QAPP and a SSQA if applicable. The work plan will provide general site information, describe the number, type, method, and location of samples to be collected (included on a site sketch) as well as analytical parameters and methods requested for each sample.

A.6.2 Characterization Reports

The contractor will submit the written site-specific characterization report, including risk assessment reports, to the BVCP upon completion of site characterization activities. These reports should include field QA/QC documentation requirements and laboratory QA/QC documentation requirements as described in Section A.9, Documents and Records.

A.6.3 Remedial Action Plans/Risk Management Plans

If the RAP or RMP involves environmental data collection such as further site characterization, confirmatory samples following remedial activities, or monitoring, then the RAP/RMP shall be subject to this QAPP. The contractor will submit the written site-specific RAP/RMP to BVCP for review and approval prior to implementation. These plans should include a sampling and analysis plan, a field sampling plan, documentation of the health and safety plan, signature page and reference to this generic QAPP and a SSQA if applicable. The plan will provide general site information, describe the number, type, method, and location of samples to be collected (included on a site sketch) as well as analytical parameters requested for each sample.

If the RAP/RMP does not involve environmental sampling, then data QA/QC would not be a component.

A.6.4 Remedial Action/Risk Management Reports

If the RAP/RMP involves environmental sampling, then the contractor will submit to the BVCP a written site-specific report that includes field QA/QC documentation requirements and laboratory QA/QC documentation requirements as described in Section A.9, Documents and Records.

A.6.5 Modifications to the Work Plans

BVCP will have the final approval of all individual components of the written work plans revised as specified herein and reserves the right to require modifications, deletions, and or additional elaboration to the written work plans and reports as BVCP deems necessary.

A.6.5.1 BVCP requested changes

If BVCP determines that modifications to the written work plan are necessary or desired, the agency will document the requested changes to the contractor in writing. Such changes may include the need for additional sampling at the site.

Based on the written instructions provided by BVCP, the contractor will revise the written work plan.

A.6.5.2 Contractor requested changes

If the contractor determines that modifications to the written work plan are necessary, the contractor will submit a written request to BVCP for changes. The written request will include the reason for the modification and will detail the contractor's proposed changes to the written work plan. BVCP will review the written request of the contractor and send written notice of approval or disapproval of the request to the contractor.

A.6.5.3 Field Deviations from the Work Plan

Changes in site conditions between the time of the site reconnaissance and the on-site sampling visit and the visual appearance of the substance at the time of sampling may determine the actual number and locations of samples collected. The contractor should contact the BVCP Project Manager to discuss deviations or changes. The deviations or changes will be documented in the final report prepared by the contractor and submitted to the BVCP.

A.7 DATA QUALITY OBJECTIVES AND CRITERIA

DQOs are qualitative and quantitative statements derived from the Systematic Planning and DQO processes developed by EPA and further described in *Guidance on Systematic Planning Using the Data Quality Objectives Process* and *Systematic Planning: A Case Study for Hazardous Waste Site Investigations*. Data quality indicators as discussed in Section B.5 will be used to ensure quality data for sampling conducted pursuant to this QAPP.

A.7.1 Problem Statement

Properties are enrolled in BVCP for the investigation, remediation, and risk management of hazardous substances. To accomplish that, data is collected during investigation, remediation, and verification sampling activities.

The data collected will contribute to the conceptual site model (CSM), which is a functional description of the contamination problem. The CSM should be maintained and updated throughout the life of the project as information is collected. Key elements of the conceptual site model include:

- The chemical release scenario, source(s), and chemicals of concern (COCs)
- Spatial and temporal distribution of COCs in the various affected media
- Current and future land and groundwater use
- Description of any known existing or proposed land or water use restrictions
- Description of site stratigraphy, determination of the predominant vadose zone soil type, hydrogeology, meteorology, and surface water bodies that may potentially be affected by site COCs
- Remedial activities conducted to date
- An exposure model that identifies the receptors and exposure pathways under current and future land use conditions

A.7.2 Decision Statements

A.7.2.1
Do maximum concentrations of COCS exceed the Missouri-Risk Based Corrective Action (MRBCA) Default Target Levels (DTLs) or appropriate Water Quality Criteria (WQC)?

A.7.2.2
Does risk at the site exceed the allowable risk levels of a MRBCA tiered risk assessment?

A.7.2.3
Has remediation been sufficient to reduce risk to allowable levels and issue a certificate of completion?

A.7.2.4
Is risk management and long-term stewardship (LTS) necessary to issue a certificate of completion?

A.7.3 Inputs into the Decision
The inputs into the decision are any data collected as part of the activities listed in Section A.6. This data will be compared to action levels listed in the MRBCA guidance document and will be used as part of a risk assessment in accordance with the MRBCA guidance.

A.7.4 Study Boundaries
The study boundary is the legal property boundary of the site that has been enrolled in BVCP, unless hazardous substances originating on the enrolled property have migrated to adjacent properties, in which the case the study boundary is extended to include the maximum extent of that hazardous substance migration.

A.7.5 Decision Rules

A.7.5.1 Initial Characterization
- Do maximum concentrations of COCS exceed the MRBCA DTLs or appropriate WQC? If no, a certificate of completion may be issued. If yes, a Tier 1 risk assessment must be conducted.

A.7.5.2 Tier 1 Risk Assessment
- Do Tier 1 risks exceed acceptable risk levels? If no, a certificate of completion may be issued. If yes, remediate to acceptable risk levels or manage risks.
- Will risks be managed at the Tier 1 level? If no, a Tier 2 risk assessment must be conducted. If yes, develop and implement a RMP.
- If an RMP is completed and LTS is in place, a certificate of completion may be issued.

A.7.5.3 Tier 2 Risk Assessment

- Do Tier 2 risks exceed acceptable risk levels? If no, a certificate of completion may be issued. If yes, remediate to acceptable risk levels or manage risks.
- Will risks be managed at the Tier 2 level? If no, a Tier 3 risk assessment must be conducted. If yes, develop and implement an RMP.
- If an RMP is completed and LTS is in place, a certificate of completion may be issued.

A.7.5.3 Tier 3 Risk Assessment

- Do Tier 3 risks exceed acceptable risk levels? If no, a certificate of completion may be issued. If yes, remediate to acceptable risk levels or develop and implement an RMP.
- If an RMP is completed and LTS is in place, a certificate of completion may be issued.

A.7.6 Limits on Decision Error

For most projects conducted under this QAPP, the null hypothesis will be that a site is contaminated at levels that require additional investigation and remedial actions. There are two general types of decision errors:

- Type 1 Decision Error (sometimes called a false rejection error): Concluding that a site does not pose a potential threat to human health and the environment), when the site truly does pose a threat.

- Type 2 Decision Error (sometimes called a false acceptance error): Concluding that a site poses a potential threat to human health and the environment, when the site truly does not pose a threat.

The consequences of a Type 1 Decision Error, mischaracterizing a site that truly poses a threat, could have future health implications. This decision error could result in populations being exposed to unsafe levels of contaminants.

The consequences of Type 2 Decision Error, incorrectly identifying a site for further investigation and remediation, would cause the needless expenditure of resources (e.g. funding, time, sampling crew labor, and analytical costs).

When a sufficient number of samples are planned, it may be possible to assign numerical limits on tolerable decision error rates and use a statistical data analysis approach. In such cases, an error tolerance of 95% will be used unless project-specific DQOs specify otherwise. However, numerical values are typically not set when a judgmental sampling approach is used or when limited numbers of sample prevent statistical analysis. In these instances, decision errors are limited in a variety of more general ways.

The probability of making a false rejection decision error, thereby mischaracterizing a site that truly poses an unacceptable risk to human health and the environment, is limited

by several factors. Recognized Environmental Conditions (RECs) will be identified in the Phase I Environmental Site Assessment (ESA), and decision error will be limited by using judgmental sampling to target the worst-case contaminant locations by sampling RECs where the largest contaminant release would have occurred. When contaminants are detected, decision error will also be limited by comparing contaminant concentrations to the conservatively-derived target levels in the MRBCA guidance.

A.7.7 Design Optimization

For each project, contractors and BVCP will review the DQO output from Sections A.7.1 through A.7.6 together with existing environmental data for the site, and develop a sample collection design based on this review. The sample collection design will specify the type, location, frequency, analyses per sample, analytical methods, and QC samples. Rationale for the location of samples and types of analyses will be thoroughly developed and supported.

A.8 SPECIAL TRAINING/CERTIFICATION

Sample collectors are required to successfully complete a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) site safety course in accordance with 40 CFR Part 311, which references 29 CFR 1910.120. Staff are also expected to be trained on sampling for hazardous materials as well as read and be familiar with applicable SOPs, the generic QAPP, the site-specific work plan(s) and the SSQA prior to performing actual sample collection. Some sample collectors may need to be licensed inspectors for asbestos-containing material (ACM) and lead-based paint (LBP).

Specific training requirements may be necessary for personnel operating field analytical or sampling equipment or specialized equipment, such as an X-ray Fluorescence (XRF) analyzer or geophysical instruments. Manufacturer's requirements and recommendations should be followed.

The contractor will ensure and provide for the protection of the personal safety and health of all its workers on site, including the selection, provision, testing, decontamination, and disposal of all Personal Protective Equipment (PPE) and any required medical monitoring. The contractor will comply with all applicable worker safety and health laws and regulations. At all times during performance of services, the contractor will exercise reasonable professional judgment regarding safety and will use professional judgment as a criterion for cessation of services for safety reasons.

A.9 DOCUMENTS AND RECORDS

Work plans and final reports will be generated and submitted to BVCP for review and approval.

Field QA/QC documentation for site characterization reports and/or remedial action/risk management reports must consider the following details:

- Calibration and maintenance records for field instrumentation,
- Documentation of sample collection procedures,
- Reporting of any variances made in the field to sampling plans, SOPs or other applicable

guidance documents,
- Reporting of all field analysis results,
- Documentation of sample custody (provide copies of chain-of-custody documents),
- Documentation of sample preservation, handling and transportation procedures,
- Documentation of field decontamination procedures (and if applicable, collection and analysis of equipment rinsate blanks),
- Collection and analysis of all required duplicate, replicate, background and trip blank samples, and
- Documentation of disposal of investigation-derived wastes.

Laboratory QA/QC documentation for site characterization reports and/or remedial action/risk management reports must consider the following details:
- If the published analytical method used specifies QA/QC requirements within the method, those requirements must be met and the QA/QC data reported with the sample results;
- At a minimum, QA/QC samples must consist of the following items (where applicable): method/instrument blank, extraction/digestion blank, initial calibration information, initial calibration verification, continuing calibration verification, laboratory fortified blanks/laboratory control samples, duplicate, and matrix spikes/matrix spike duplicates. The site characterization and/or remedial action/risk management reports must include a discussion of data quality.
- Documentation of appropriate instrument performance data such as internal standard and surrogate recovery.

B: DATA GENERATION AND ACQUISITION

B.1 SAMPLING PROCESS DESIGN

This QAPP is generic, covering many different projects and a large number of analytes in various complex sample matrices. The sampling design will vary depending on the goal of the sampling activity, such as site characterization or confirmatory sampling. Therefore, the sampling process design will be described in detail in the site-specific work plan and/or SSQA. Some considerations when developing a plan for a sampling design, particularly a judgmental sampling design, include potential contaminant(s) and locations based on past property uses, soil properties that affect contaminant migration, physical and chemical nature of potential contaminant(s), the manner in which contaminant(s) may have been released, and timing, duration and amount of potential release(s). Since this QAPP is generic in the sense that it is intended to apply broadly to a number different specific sites, it is not possible to provide specific sampling design details. However, the following sampling design elements will be considered and discussed in the site-specific sampling plans or SSQA as describe in A.6 written for each investigation.

- Description of the design strategy, including size/volume of area to be sampled
- Type and total number of samples to be collected
- Locations of samples to be collected and rationale for selection.
- Identify anticipated sources of variability in the data and how it will be controlled.

All QC samples will be collected in accordance with EPA guidance and described in the site-specific work plan and/or SSQA. All QC samples will be documented in the sampling report. See Section B.5 for more information on QC samples.

B.2 SAMPLING METHODS

The field investigations and sample collection activities under the project will adhere to applicable SOPs and available EPA guidance and will be described in the site-specific work plan and/or SSQA. The site-specific work plan will indicate the location, type, number and media of the samples.

Manufacturer's specifications and operational instructions, other agency SOPs, other methods, instructions, including professional or scientific technical standards, may also be used for specific field analytical equipment, geophysical equipment, surveying instruments, etc. with no existing SOPs or EPA guidance upon approval of the BVCP Project Manager. The site-specific work plan will specify sampling methodologies and procedures used.

B.3 SAMPLE HANDLING AND CUSTODY

Sample handling and custody will be accomplished according to SOPs and using standard forms developed by contractor's laboratories. Sample container selection will be according to appropriate method guidance and/or SOPs. The site-specific work plan will specify sample handling procedures, sample containers, preservation, holding times, chain-of-custody and field documentation, handling of samples in the field, and transport of samples to the laboratory. All analyses will be conducted within the method-specified maximum sample holding time limits. Any data obtained from analyses conducted on samples after the specified holding time limit will be qualified by the laboratory in sample result documentation and discussed in the sampling report.

B.4 ANALYTICAL METHODS

Field analytical measurements will be according to SOPs and manufacturer's operational instructions, such as immunoassay kit instructions, photoionization detector (PID) instructions, XRF manual, etc. Calibration and other QA/QC actions will be accomplished according to SOPs, manufacturer's minimum recommendations/requirements and other appropriate scientific or technical standards. Appropriate EPA guidance, SOPs, best professional judgment and accepted industry and scientific practices will be used when correlating field analytical data to laboratory data.

Laboratory measurements will be performed by the selected laboratory according to the method requested, generally according to container, preparation, and analytical methods specified by EPA SW-846 Solid Waste Test Methods. The QC procedures specified in these methods must be followed. The detection limits of the selected analytical methods generally will be able to achieve the concentrations of interest needed. Analytical parameters will vary by project; therefore, the analytical methods used for the parameters of concern should be specified in the site-specific work plan and/or SSQA. Analytical results obtained for projects conducted under this QAPP will be compared to the Department's MRBCA Guidance. Ideally, the laboratory reporting limits would be at or below the MRBCA target levels in each environmental media. However, these risk-based levels do not take into account analytical feasibility. Even using the

best available measurement technology, laboratory-reporting limits will exceed benchmarks for some analytes in some environmental media. There may be special circumstances where a higher level of sensitivity for some analytes will be required. Data that do not meet the laboratory reporting limits will be qualified as described in the applicable verification/validation procedure, and documented in the project report.

Any non-standard analytical methods, along with associated validation procedures, should be specified in the site-specific work plan and/or SSQA, and will need prior approval by the BVCP. An explanation as to why non-standard methods are being proposed should also be included in the site-specific work plan and/or SSQA.

All QC documentation must be provided with each analytical deliverable package. The contractor will be responsible for ensuring all analytical data provided by the contractor's laboratory for the project meets the contract requirements and the requirements of this QAPP.

B.5 QUALITY CONTROL

A number of field and laboratory QC checks will be required to ensure data meet the project DQOs. The principal quality attributes important to site assessment projects are precision, accuracy, comparability, representativeness, and completeness. Criteria for these attributes are discussed below.

B.5.1 Principal Quality Attributes

1. Data Precision

Data Precision is a measure of the reproducibility of analytical results and is typically expressed in terms of the standard deviation among a set of data or as the relative percent difference between two measurements. Overall precision will be measured using the Relative Percent Difference (RPD) between duplicate or replicate split samples.

$$RPD = 100\left[\frac{x_1 - x_2}{\bar{x}}\right]$$

- The criterion for RPD between primary and duplicate aqueous samples for each contaminant measured above the laboratory reporting level is $\leq 30\%$.
- The criterion for RPD between primary and replicate split non-aqueous samples and for duplicate non-aqueous volatile organic compounds (VOC) samples will be $\leq 50\%$.
- The criterion for RPD between primary and duplicate air samples will be 25%.

If data fall within these limits, then the overall precision of the sampling and analytical process is adequate to meet the project DQOs. Data that do not meet these precision criteria will be qualified as described in the applicable validation procedure (Section D), and discussed in the project report.

2. Laboratory Precision

Precision of laboratory analyses is assessed by the analysis of Matrix Spike/Spike Duplicates (MS/MSD), laboratory duplicate samples, and blind performance evaluation samples. The frequency with which laboratory precision is assessed, and the performance criteria vary by

analyte, analytical method, and environmental media. The criteria and methods for assessment of laboratory precision are specified in the analytical methods.

3. Accuracy

Accuracy is a measure of the bias that exists in a measurement system. The accuracy of laboratory analyses will be assessed by analysis of preparation/method blanks, laboratory control samples, surrogates, internal standards, matrix spikes, and blind performance samples. The frequency with which laboratory accuracy is assessed, and the performance criteria vary by analyte, analytical method, and environmental media. Criteria for laboratory accuracy are specified in the analytical methods.

Field accuracy will be assessed through the analysis of trip blanks and field equipment rinse blanks. Contaminants should not be detected above the laboratory reporting level in trip blanks and equipment rinse blanks. Any data that do not meet these accuracy criteria will be qualified as described in the applicable validation procedure. The BVCP Project Manager and applicant's contractor will evaluate all qualified data on a project-specific basis, and determine how/whether to use the data.

4. Data Comparability

Comparability is the degree of confidence with which one data set can be compared to another. The objective of comparability for this QAPP is to ensure that sampling data developed during the project investigation may be readily compared to each other and to the appropriate screening benchmarks. All data will be reported as degrees Celsius (flash point); pH units; µg/l or mg/l for water, liquids or Toxicity Characteristic Leachate Procedure (TCLP); µg/kg or mg/kg for soil, sediment or other solids; and µg/m3 for air. Comparability is further addressed by using appropriate field and laboratory methods that are consistent with current standards of practice as approved by EPA.

5. Data Representativeness

Representativeness is the degree to which sampling data accurately and precisely depicts selected characteristics such as parameter variations at a sampling point or an environmental condition and is ensured for projects under this QAPP in several specific ways:

- Use of correct sampling procedures and equipment
- Adherence to QA and QC requirements for ensuring sampling integrity
- Collection of an adequate amount of sampled material
- Selection and implementation of appropriate analytical measurement method, including sample preparation

6. Data Completeness

Completeness is the measure of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under "normal" conditions and is expressed as a percentage of the amount of valid data obtained compared to the amount that was planned. One hundred percent of data completeness is desired for the collection of field samples for all project investigations. If less than 100 percent is received, the BVCP Project Manager will decide if the valid data obtained from a measurement system

compared to the amount that was expected to be obtained under normal conditions is sufficient to meet the project DQOs. If not, additional sampling may be required.

B.5.2 QC Samples

QC samples will be required to verify the validity of analytical results and to assess whether the samples were contaminated from sources not directly attributable to releases at the site (such as improper decontamination, cross-contamination, laboratory contamination, etc.). The field QC samples proposed for collection will be included in the site-specific work plan. Field QC samples include the following as appropriate:

- Trip blanks indicate if any activities after obtaining the trip blank may have contaminated samples during transport.
- Field blanks are samples obtained in the field to determine if contaminants were introduced by sample containers, preservatives, sampling procedures, etc.
- Rinsate samples are obtained to verify adequate decontamination of sampling equipment.
- Replicate samples (split samples) are obtained by dividing or splitting one sample that has been mixed or homogenized into two samples for separate analysis. Replicate samples primarily assess precision associated with analytical procedures, and to a lesser extent, sample handling procedures. Replicate split samples of soils or other non-aqueous materials are not recommended if volatile organics analyses are requested due to the potential loss of the volatiles during the mixing process. If soil samples will be analyzed for VOCs, duplicate samples should be collected prior to mixing. However, please note that there may be a greater potential for inconsistency due to the heterogeneous nature of soils or other non-aqueous media
- Duplicate water samples are used primarily to assess precision associated with sampling methodology, and to a lesser extent sample heterogeneity and analytical procedures. Duplicate soil samples are used primarily to determine the variability or heterogeneity of the sampled media.

For all projects involving the collection of aqueous samples, a trip blank will be included at a frequency of one per cooler if the proposed analysis includes VOCs or semi-volatile organic compounds (SVOCs). An equipment rinsate blank will be collected for projects where the sampling equipment is decontaminated in the field for reuse. The equipment rinsate blank will be collected at a frequency of one per separate sampling event (mobilization) for each different combination of sampling equipment; decontamination method, and analytical parameter. Duplicate or replicate samples for each media (groundwater, surface water, soil/sediment, air) should be collected at a frequency of 10% of the total number of samples, with a medium of one duplicate or replicate per medium per sampling event.

BVCP will collect duplicate or replicate samples from the site, including, but not necessarily limited to, post-remediation verification samples at BVCP sites. The goal is to enhance the credibility of BVCP cleanups by documenting MDNR's direct oversight of verification

sampling, as well as confirming the analytical results. BVCP will collect a limited number of samples (approximately 10% of the total number of samples), and pass the analytical costs back to the sites as oversight costs, as allowed by our regulations.

Contaminants should not be detected above the laboratory reporting level in trip blanks, field blanks, and equipment rinse blanks. Any data that do not meet these accuracy criteria will be qualified on sample results. The BVCP Project Manager and contractor personnel will evaluate all qualified data on a project-specific basis, and determine how/whether to use the data.

All QC samples will be documented in the sampling report.

Laboratory QC samples include duplicates, spikes, laboratory blanks, and performance evaluation samples, and are performed by the fixed laboratory according to the approved laboratory QA/QC plans.

B.6 INSTRUMENT/EQUIPMENT TESTING, INSPECTION AND MAINTENANCE

Field analytical instruments used during this project will be maintained and calibrated according to instructions provided by the instrument manufacturer, and other appropriate scientific and technical guidance and standards pertinent to the specific instrument in use. The contractor will be responsible for performing operational checks on all field equipment prior to use in the field. An operational problem with any field instrumentation will be noted by the contractor in the field notebook. Daily or regular calibration of field instrumentation will be according to applicable SOPs and manufacturer's instructions and indicated or referenced in the site-specific work plan.

Fixed laboratory equipment for contract laboratories used for quantitative sample analysis will be tested, inspected, calibrated and maintained according to the specific analytical equipment requirements as stated in the SOPs of the laboratory, in accordance with manufacturer-specified procedures or method-specified procedures, as appropriate.

B.7 INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY

Maintenance and calibration procedures will be conducted in accordance with manufacturers' instrument manuals, method-specified procedures and the laboratory SOPs, as appropriate.

B.8 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

Inspection and acceptance of supplies and consumables will be conducted according to applicable SOPs. Any supplies and consumables used in the sample collection process or instrument calibration such as sample bottles, bailers, dedicated tubing, deionized water, calibration gases, etc., will be inspected upon receipt and prior to use.

B.9 NON-DIRECT MEASUREMENTS

Several types of data and information may be obtained from non-measurement sources for use in projects conducted under this QAPP. The primary types of non-measurement data are Phase I ESAs, site reconnaissance, interviews of site owners or operators, published reference books and resources, databases, and internet resources. These data may be used to design sampling plans and may be used with the directly measured data collected during each project to evaluate the potential need for further site characterization, remediation and/or suitability for development.

Non-direct measurement data will be documented and referenced in any document for which they are used.

B.10 DATA MANAGEMENT

Data management, including chain-of-custody review and correction, data review, reduction and transfer to data management systems, quality control charts, quality control procedures, and sample receipt, storage and disposal, will be in accordance with applicable SOPs and accepted industry practices.

Documentation will be in accordance with applicable SOPs and accepted industry practices, and will include the sampling reports, copy of the chain-of-custody, and field notes or other supporting documentation with the analytical results. Data reduction will occur in accordance with contractor analytical SOPs for each parameter. If difficulties are encountered during sample collection or sample analyses, a brief description of the problem will be provided in the sampling report prepared by contractor. Data reporting will be in accordance with applicable SOPs and will include, at a minimum:

- Sample documentation (location, date and time of collection and analysis, etc.)
- Chain-of-custody forms
- Initial and continuing calibration
- Determination and documentation of detection limits
- Analyte(s) identification
- Analyte(s) quantitation
- Quality Control sample results

Adequate precautions will be taken during the reduction, manipulation, and storage of data in order to prevent the introduction of errors or the loss or misinterpretation of data.

C: ASSESSMENT AND OVERSIGHT

C.1 ASSESSMENTS AND RESPONSE ACTIONS

This section describes the internal and external checks necessary to ensure that all elements of the QAPP are implemented correctly as prescribed, that the quality of the data generated by implementation of the QAPP is adequate, and that any necessary corrective actions are implemented in a timely manner.

C.1.1 Laboratory Performance Assessment

Laboratories will comply with all of the EPA and the National Environmental Laboratory Accreditation Conference (NELAC) requirements for laboratory QA programs. Data resulting from the participation in the NELAC program shall be reviewed by the laboratory Quality Assurance Manager and any problems shall be addressed.

C.1.2 Field Performance Assessment

The auditor in charge of field QA will conduct audits of field activities according to contractor QA field auditing procedures. The process of choosing when field audits are conducted is not based on a particular project or site-sampling event, but rather on

assuring that each person involved in sample collection is audited at least once per year. The contractor's field QA auditor will have the responsibility for initiating and implementing response actions associated with findings identified during the field audit. The field personnel shall properly address any response actions needed.

C.1.3 Overall Project Performance Assessment

EPA VII conducts periodic QA audits of the state's environmental programs. These evaluations normally include some type of review of the program's quality system, and may include review of QAPPs.

C.1.4 Data Validation

All field and laboratory data will be subject to validation to review for accuracy, precision, completeness, representativeness and comparability. Data validation is discussed in more detail in Section D. The acceptance criteria for measurement data are discussed in Section B.5.

C.2 REPORTS TO MANAGEMENT

Data from the contractor's laboratory will be submitted to the BVCP Project Manager as an appendix to the final report using the laboratory analytical report sheets. The report sheets will include documentation of the sampling location, sample description, date of collection, collector, analysis performed and results, date of analysis, and analytical method used. A copy of the chain-of-custody and the lab results should also be attached to the final report. In addition, a discussion of data quality should be provided with the sampling report.

Field performance assessment audits will be documented by the contractor's field QA auditor in a written report that will be kept on file at the contractor's office. Results from the laboratory's audit studies will be kept on file at the contractor's office.

Comments and recommendations from the EPA Region VII periodic QA audits of state environmental programs are provided to the Department QA manager and used by Department management and staff to take any corrective actions which may be needed.

D: DATA VALIDATION AND USABILITY

D.1 DATA REVIEW, VERIFICATION AND VALIDATION

To ensure that measurement data generated when performing environmental sampling activities are of an appropriate quality, all data will be validated. Data validation is a systematic procedure for reviewing a body of data against a set of established criteria to provide a specified level of assurance of its validity prior to its intended use. The techniques used must be applied to the body of the data in a systematic and uniform manner. The process of data validation must be objective and independent of the data production process. All data, as applicable, will be validated in accordance with EPA *Guidance on Environmental Data Verification and Data Validation, Data Quality Assessment: A Reviewers Guide*, and *Data Quality Assessment: Statistical Tool for Practitioners*. Any deviations will be documented and provided with the analytical data report.

D.2 VERIFICATION AND VALIDATION METHODS

D.2.1 Documentation, Data Reduction and Reporting

Documentation will include the sampling reports, copy of the chain-of-custody, and field notes or other supporting documentation with the analytical results. Data reduction will occur in accordance with the laboratory's analytical SOPs for each parameter. If difficulties are encountered during sample analyses, a brief description of the problem will be provided.

Data derived from sampling events undertaken for projects under the oversight of the BVCP will be reported to the BVCP Project Manager as discussed in Section C.2, Reports to Management.

D.2.2 Data Validation

Data validation will occur as described in the analytical SOPs for each parameter and the laboratory SOPs for data review. Data validation is accomplished using control charts and data review checklists. Discrepancies are noted in the analytical file and appropriate data flags are used. If data is determined to be outside of control limits, the data is flagged on the report of analysis.

The laboratory personnel and contractor will look at matrix spikes/matrix spike duplicates, lab blanks, and lab duplicates to ensure they are acceptable. The sample collector will compare the sample descriptions with the field sheets for consistency and ensure that any anomalies in the data are documented. The contractor will perform a final review and approval to ensure that the data meets the quality objectives of this QAPP as discussed in Section B.5. and, if applicable, the SSQA. The contractor's review and approval is a check on the reviews conducted by the laboratory to ensure consistency of all field and analytical data that is generated by the contractor.

D.3 RECONCILIATION WITH USER REQUIREMENTS

Once the final report is submitted, the BVCP Project Manager will review the field QA samples to determine if they appear to indicate a problem with meeting quality objectives. If problems are indicated, the BVCP Project Manager will contact the contractor to discuss and attempt to reconcile the issue. Completeness will also be evaluated to determine if the completeness goal for this project has been met. If data quality indicators do not meet the project's requirements as outlined in this QAPP and applicable SSQA, the data may be discarded and re-sampling may occur. The BVCP Project Manager will determine the cause of the failure (if possible) and make the decision to discard the data and re-sample. If the failure is tied to the analyses, calibration and maintenance techniques will be reassessed as identified by the appropriate lab personnel. If the failure is associated with the sample collection and re-sampling is needed, the sampling methods and procedures will be reassessed as identified by the field audit process.

Corrective action will be undertaken by all parties to address specific problems as they arise. Corrective actions required will be identified through the use of control charts for chemical

analyses, precision and accuracy data, through performance auditing, and through systems audits.

REFERENCES

- EPA Guidance on Environmental Data Verification and Data Validation (G-8), EPA/240/R-02/004, November 2002
- EPA Guidance Data Quality Assessment: A Reviewer's Guide (G-9R), EPA/240/B-06/002, February 2006
- EPA Guidance Data Quality Assessment: Statistical Tools for Practitioners (G-9S), EPA/240/B-06/003, February 2006
- EPA Guidance on Systematic Planning Using the Data Quality Objective Process (G-4), EPA/240/B-06/001, February 2006
- EPA Guidance for Quality Assurance Project Plans (G-5), EPA/240/R-02/009, December 2002.
- EPA Requirements for Quality Assurance Project Plans (R-5), EPA/240/B-01/003, March 2001
- EPA Systematic Planning: A Case Study for Hazardous Waste Site Investigations (CS-1), EPA/240/B-06/004, February 2006
- MDNR-ESP-210-Quality Assurance/Quality Control for Environmental Data Collection

APPENDIX A: LISTING OF ACRONYMS & TERMS

ACM	Asbestos-Containing Material
BVCP	Brownfields/Voluntary Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COCs	Contaminants of Concern
CSM	Conceptual Site Model
DEQ	Division of Environmental Quality
DTL	Default Target Level
DQO	Data Quality Objectives
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
HAZWOPER	Hazardous Waste Operations and Emergency Response
HWP	Hazardous Waste Program
LBP	Lead-Based Paint
LTS	Long-term Stewardship
MCL	Maximum Contaminant Level
MDNR	Missouri Department of Natural Resources
MRBCA	Missouri Risk-based Corrective Action Process
MS/MSD	Matrix Spike/Spike Duplicates
NELAC	National Environmental Laboratory Accreditation Conference
PID	Photoionization Detector
PPE	Personal Protection Equipment
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QMP	Quality Management Plan
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
RMP	Risk Management Plan
RPD	Relative Percent Difference
SOP	Standard Operating Procedure
SSQA	Site-Specific Quality Assurance Project Plan Addendum
SVOC	Semi-Volatile Organic Compound
TCLP	Toxic Characteristic Leaching Procedure
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compound
WQC	Water Quality Criteria
XRF	X-ray Fluorescence

Duplicate or co-located sample is a sample obtained from the same location, at the same time, and of the same material as the original sample. Duplicate water samples are used primarily to assess precision associated with sampling methodology, and to a lesser extent sample heterogeneity and analytical procedures. Duplicate soil samples are used primarily to determine

the variability or heterogeneity of the sampled media. Due to the heterogeneity of soils, caution must be used if attempting to assess precision associated with sampling methodology or analytical procedures.

Hazardous Substance means a substance defined as hazardous pursuant to federal rule 40 CFR 302.4, which includes asbestos and Polychlorinated Biphenyls (PCBs); any substance designated pursuant to Section 311(b)(2)(A) of the federal Water Pollution Control Act; any toxic pollutant listed under Section 307(a) of the federal Water Pollution Control Act; any hazardous air pollutant listed under Section 112 of the Clean Air Act; any imminently hazardous chemical substance or mixture with respect to which the Administration of EPA has taken action pursuant to Section 7 of the Toxic Substances Control Act; any hazardous waste; any hazardous material designated by the Secretary of the U.S. Department of Transportation under the Hazardous Materials Transportation Act; any radioactive materials; or any petroleum product.

Hazardous waste means waste defined to be hazardous pursuant to the Missouri Hazardous Waste Management Law Section 260.350 to Section 260.430 or pursuant to federal rule 40 CFR 261.

Replicate split sample is obtained by dividing or splitting one sample that has been mixed or homogenized into two samples for separate analysis. A replicate split is collected primarily to assess precision associated with analytical procedures and to a lesser extent sample handling procedures. Replicate split samples of soils or other non-aqueous materials are not recommended if volatile organics analyses are requested due to the potential loss of the volatiles during the mixing process. Duplicate samples for volatile organics analyses are sometimes collected prior to mixing, however, there may be a greater potential for inconsistency due to the heterogeneous nature of soils or other non-aqueous media.

APPENDIX B: ANALYTICAL REQUIREMENTS

The detection limits, as specified in 40 CFR 136 Appendix A and the EPA SW-846 Methods, are sufficient for most project under the oversight of the BVCP. The accuracy and precision of each analytical method are determined by using spikes and spike duplicate analyses, as specified in the EPA SW-846 methods.

APPENDIX E

SITE-SPECIFIC QUALITY ASSURANCE ADDENDUM TO MDNR QAPP

MISSOURI DEPARTMENT OF NATURAL RESOURCES
AIR AND LAND PROTECTION DIVISION
HAZARDOUS WASTE PROGRAM
BROWNFIELDS/VOLUNTARY CLEANUP PROGRAM (BVCP)
SITE-SPECIFIC QUALITY ASSURANCE PROJECT PLAN ADDENDUM (SSQA)

I. SITE NAME AND LOCATION:

SITE NAME: Near Southside Employment Coalition Site

ADDRESS OR OTHER LOCATION IDENTIFIER: 2649 Pestalozzi Street

CITY: St. Louis	**COUNTY:** St. Louis	**STATE:** Missouri	**ZIP:** 63118

II. PROJECT MANAGEMENT INFORMATION:

CONTRACTOR: Seagull Environmental Technologies, Inc	**CONTRACTOR E-MAIL:** bjones@seagullenvirotech.com
ADDRESS: 121 NE 72nd Street, Gladstone, Missouri, 64118	
PHONE: 816-682-4089	**FAX:**

DISTRIBUTION LIST (Check as appropriate):
- X BVCP Project Manager:
- ☐ Consultant/Contractor Director:
- X Consultant/Contractor Project Manager:
- X Consultant/Contractor Project Field Superintendent:
- ☐ Consultant/Contractor Laboratory Personnel:
- ☐ Technicians (Specify all):
- X Other (Specify): EPA Region 7, EIERA, Ohala Ward

PROJECT TYPE (Check as appropriate):
☐ Site Investigation/Characterization ✠ Remedial Action ☐ Risk Management ☐ Other (specify):

PROJECT DESCRIPTION: (Note: This SSQA supplements the Generic QAPP for Brownfields/Voluntary Cleanup Program Sites, and includes documentation only for the specific site as indicated above.)
Remedial action planned for the site is to remove petroleum-contaminated soil associated with the site. Remediation will be conducted in accordance with federal, state, and local regulations. Clearance sampling will be completed to confirm attainment of site cleanup goals.

DATA QUALITY OBJECTIVES AND CRITERIA:

Detection Limits:	✠ According to Generic Site Assessment QAPP	☐ Identified in attached table
Accuracy:	✠ According to Generic Site Assessment QAPP	☐ Identified in attached table
Representativeness:	✠ According to Generic Site Assessment QAPP	☐ Identified in attached table
Comparability:	✠ According to Generic Site Assessment QAPP	☐ Identified in attached table
Completeness:	✠ According to Generic Site Assessment QAPP	☐ Identified in attached table

SPECIAL TRAINING/CERTIFICATION REQUIREMENTS:
✠ OSHA 40-hour (HAZWOPER) ☐ Geoprobe Operator ☐ Drill Rig Operator ☐ Mobile GC Field Analyst
☐ In-Field XRF Operator ✠ Other (specify): Licensed remedial contractor with associated worker certifications

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

DOCUMENTATION AND RECORDS (Check appropriate boxes):

☐ Field Analytical Sheets	☒ Log Book	☒ Photos
☒ Site Maps/Figures	☒ Chain-of-Custody	☐ Property Ownership Records
☐ Environmental Records Report	☒ Utility Clearance Forms	☒ Health and Safety Plan

Other Documentation (Specify):

SAMPLING PROCESS DESIGN:

A. General Sampling Approach (Check appropriate boxes):

☒ Judgmental Sampling	☐ Transect Sampling	☐ Search Sampling	☐ Systematic Grid
☐ Random Sampling	☐ Stratified Random Sampling	☐ Systematic Random Sampling	

B. Screening/Definitive Sampling (Check appropriate boxes):

☐ Screening without Definitive Confirmation
☐ Screening With Definitive Confirmation
NOTE: Minimum Confirmation Rate of ___ % for All Field Analytical Screening Samples Collected
☒ Definitive Sampling

SAMPLING METHODS (Specify all to be utilized):

Matrix:	Methods:	SOPs/Guidance:	Sampling Equipment Proposed:

See Remedial Action Plan Section 5.0, Remedial Action Tasks.

SAMPLE HANDLING AND CUSTODY (Check appropriate box):

☐ In accordance with Generic QAPP and SOPs ☐ Other (specify):

See Remedial Action Plan Section 5.0 (Remedial Action Tasks).

ANALYTICAL METHODS (Check appropriate box):

☐ Identified in Attached Table ☐ Identified Below (Describe):

See Remedial Action Plan Section 5.0 and Remedial Action Tasks and Tables 5 and 6.

QUALITY CONTROL (Check appropriate box):

☐ Not Applicable ☐ In accordance with Generic QAPP ☐ Specific requirements (state):

Describe Field QC Samples to be collected:

See Remedial Action Plan Section 5.4 (Quality Assurance Sampling) and 7.0 Quality Control Procedures.

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

INSTRUMENT/EQUIPMENT TESTING, INSPECTION, CALIBRATION/FREQUENCY AND MAINTENANCE (Check appropriate box):

☐ Not Applicable ☒ In accordance with Generic QAPP ☐ Specific requirements (state):

Describe instrument/equipment, etc. proposed for use in this project subject to the above requirements:

Testing, inspection, and maintenance of laboratory equipment will be performed in accordance with the previously referenced SOPs and/or manufacturers' recommendations.

INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES (Check appropriate box):

☐ Not Applicable ☒ In accordance with Generic QAPP ☐ Specific requirements (state):

NON-DIRECT MEASUREMENTS (Check appropriate box):

☐ Not Applicable ☒ In accordance with Generic QAPP ☐ Specific requirements (state):

DATA MANAGEMENT (Check appropriate box):

☒ In accordance with Generic QAPP ☐ Specific requirements (state):

ASSESSMENT AND RESPONSE ACTIONS (Check appropriate box):

☒ In accordance with Generic QAPP ☐ Specific requirements (state):

REPORTS TO MANAGEMENT (Check appropriate box):

☒ In accordance with Generic QAPP ☐ Specific requirements (state):
See Remedial Action Plan, Section 2.2

DATA VALIDATION AND USABILITY (Check appropriate box):

☒ Data review and verification will be performed by the contractor or delegate in accordance with Generic QAPP, with data validation conducted according to USEPA guidance and Generic QAPP

☐ Data review, validation and verification will be performed as follows, with data validation conducted according to alternate methods (describe):

Field analysis utilized? Yes ____ No __X__ (If yes, memorandum, field analytical sheets, etc. from field analyst should be reviewed by the contractor after completion of field analysis).

RECONCILIATION WITH USER REQUIREMENTS (Check appropriate box):

☒ In accordance with Generic QAPP ☐ Specific requirements (state):

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

APPROVALS:

BVCP Project Manager Name	**Signature**	**Date**
Contractor Director Name	**Signature**	**Date**
Brandon Jones		**8-17-2018**
Contractor Project Manager Name	**Signature**	**Date**
Contractor Field Superintendent Name	**Signature**	**Date**

ATTACHMENT C

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that_____ as principal and _____, as surety are held and firmly bound to the Near Southside Employment Coalition, in the sum of **FULL Contract amount in words and numbers**

_____

Dollars ($_____) to be paid to the Near Southside Employment Coalition, and for the lawful payment of said sum we, and each of us, hereby bind ourselves, our heirs, our executors, administrators, successors and assigns firmly by these presents,

The condition of this bond is such that:

WHEREAS the above-named principal did on the ____ day of _____, 2018, enter into a contract with the Near Southside Employment Coalition for:

Enviornmental Remediation In Accordance with INVITATION FOR BID #2018-01

NOW, THEREFORE, if the above-named principal shall well and truly:

Keep and perform all of the contract on his, its' or their part to be kept and performed, and faithfully comply with all of the laws of the State of Missouri applicable to the aforesaid contract and this bond and the conditions of said contract, and at the time stipulated in said contract or within a reasonable time if not time as stipulated;

Then this obligation shall be void, otherwise it shall remain in full force and effect.

It is understood and agreed that this bond shall not be avoided because of changes in the plans or specifications for the work, or because of extensions of time for the performance of work, and the surety above-named does hereby waive notice of and does hereby consent to any such changes or extensions of time.

In addition to any other remedies which may be had by the Near Southside Employment Coalition (Owner), under this bond, the Owner may in case of default or abandonment of the contract hereinbefore referred to notify the surety hereto by registered or certified mail directed to the surety or to its attorney-in-fact for it authorized at the time of the execution of this bond that such default or abandonment has occurred, which such notice need not be detailed but may be in generalities, and the surety shall have the obligation to inquire into the nature of such default or abandonment and to thereafter within sixty (60) days from the date of such notice proceed toward completion without undue delay of the improvement in accordance with the contract aforesaid; and in the event of default on the part of the surety to proceed to complete as aforesaid the Near Southside Employment Coalition, shall have the right to itself complete the work, and upon completion to be reimbursed by the principal, the surety or both of them for the cost of said completion including cost of re-advertisements, preparation of new plans, contracts, and all other ordinary and reasonable expenses in connection with completion of the work.

This bond shall be governed by the laws of the State of Missouri. The parties hereto agree that should any litigation arise out of this bond, the venue for such litigation shall be in the Circuit Court of St. Louis, Missouri, and the parties hereto expressly waive all rights to venue inconsistent therewith.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 2018, or have caused these presents to be executed by our authorized agent on the same day and year.

Company: _____

By: _____

Surety: _____

By: _____

Approved as to Form:

_____
Near Southside EmploymentCoalition representative

PAYMENT BOND FOR LABOR AND MATERIALS

KNOW ALL MEN BY THESE PRESENTS that _____ as principal and _____, as surety are held and firmly bound to the Near Southside Employment Coalition, in the sum of **FULL Contract amount in words and numbers**

_____

Dollars ($_____) to be paid to the Near Southside Employment Coalition, and for the lawful payment of said sum we, and each of us, hereby bind ourselves, our heirs, our executors, administrators, successors and assigns firmly by these presents,

The condition of this bond is such that:

WHEREAS the above-named principal did on the _____ day of _____, 2018, enter into a contract with the Near Southside Employment Coalition for:

Environmental Remediation In Accordance with INVITATION FOR BID #2018-01

NOW, THEREFORE, if the above-named principal shall well and truly:

Pay for any and all materials, lubricants, oil, gasoline, grain, hay, feed, coal and coke, repairs on machinery, groceries and foodstuffs, equipment and tools consumed or used in connection with the construction of the work afore-described, and all insurance premiums both for compensation and for all other kinds of insurance on said work above described, and for all labor performed in the work whether by the principal or by subcontractor or otherwise and at the prevailing hourly rate of wages made applicable to the work as specified by the contract (if a prevailing hourly rate of wages shall have been so specified).

Then this obligation shall be void, otherwise it shall remain in full force and effect.

It is understood and agreed that this bond shall not be avoided because of changes in the plans or specifications for the work, or because of extensions of time for the performance of work, and the surety above-named does hereby waive notice of and does hereby consent to any such changes or extensions of time.

It is understood and agreed that any person entitled to payment for any of the matters upon which this bond is conditioned shall have the right in his name or in the name of the Near Southside Employment Coaltion, to bring suit upon this bond for the recovery of such payment. It is further agreed that no such suit shall be instituted after the expiration of ninety (90) days from the completion of the contract hereinbefore referred to.

This bond shall be governed by the laws of the State of Missouri. The parties hereto agree that should any litigation arise out of this bond, the venue for such litigation shall be in the Circuit Court of St. Louis, Missouri, and the parties hereto expressly waive all rights to venue inconsistent therewith.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 2018, or have caused these presents to be executed by our authorized agent on the same day and year.

Company: _____

By: _____

Surety: _____

By:_____

Approved as to Form:

_____
Near Southside Emp.Co. Representative

ATTACHMENT D

EXAMPLE

AFFIDAVIT

STATE OF MISSOURI)
) SS
_____ OF _____)

I, the undersigned, am over the age of 18 years and have personal knowledge of the matters stated herein.

I am a duly authorized officer of _____, a _____ [corporation] [limited liability company] (the *"Company"*) and am authorized by the Company to attest to the matters set forth herein.

The Near Southside Employment Coalitoin and the Company are parties to the [INSERT NAME OF AGREEMENT], dated _____, ____ (the "Agreement").

I hereby affirm that the Company is enrolled and participates in a "federal work authorization program" as defined in Section 285.525 of the Revised Statutes of Missouri, as amended, with respect to the employees of Company working in connection with the Environmental Cleanup (as such term is defined in the Agreement).

The Company does not knowingly employ any person who is an "unauthorized alien" as defined in Section 285.525 of the Revised Statutes of Missouri, as amended, in connection with the Environmental Cleanup.

Further Affiant Sayeth Not.

_____

By: _____
Title: _____

Subscribed and sworn to before me this _____ day of _____.

_____
Notary Public

My commission expires on:_____

ATTACHMENT E

AFFIDAVIT OF COMPLIANCE

To be submitted with Vendor's Bid

_____We DO NOT take exception to the IFB Documents/Requirements.
_____We TAKE exception to the IFB Documents/Requirements as follows:

Specific exceptions are as follows: _____

Company Name _____

By_____
Authorized Person's Signature

_____
Print or type name and title of signer

Company Address_____
_____
_____
Telephone Number_____
Fax Number_____

Date_____

ADDENDA

Bidder acknowledges receipt of the following addendum:

Addendum No. ___

Addendum No. ___

Addendum No. ___

Addendum No. ___

Addendum No. ___

Email_____

Federal Tax ID No._____

ATTACHMENT F

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

This certification is required by the Department of Education regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, for all lower tier transactions meeting the threshold and tier requirements stated at Section 85.110.

Instructions for Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled A Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion-Lower Tier Covered Transactions, and without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may but is not required to check the Nonprocurement List.

8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification

(1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* NAME OF APPLICANT
* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE Prefix: * First Name: Middle Name: * Last Name: Suffix: * Title:
SIGNATURE Completed on submission to Grants.gov DATE Completed on submission to Grants.gov

Optional - You may attach 1 file to this page.

Add Attachment | Delete Attachment | View Attachment

General Decision Number: MO180001 12/07/2018 MO1

Superseded General Decision Number: MO20170001

State: Missouri

Construction Types: Heavy and Highway

Counties: Missouri Statewide.

HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018
1	02/02/2018
2	02/23/2018
3	03/16/2018
4	04/06/2018
5	05/04/2018
6	05/18/2018
7	05/25/2018
8	06/15/2018
9	07/20/2018
10	08/31/2018
11	09/28/2018
12	10/26/2018
13	11/02/2018
14	11/30/2018
15	12/07/2018

CARP0002-002 05/01/2018

ST. LOUIS COUNTY AND CITY

	Rates	Fringes
Carpenters	$ 37.33	17.10

CARP0005-006 05/03/2015

CASS (Richards-Gebauer AFB ONLY), CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Carpenters:		
CARPENTERS & LATHERS	$ 36.34	15.55
MILLWRIGHTS & PILEDRIVERS	$ 36.34	15.55

CARP0011-001 05/01/2018

	Rates	Fringes
Carpenter and Piledriver		
ADAIR, AUDRAIN (West of Hwy 19), BOONE, CALLAWAY, CHARITON, COLE, COOPER, HOWARD, KNOX,LINN, MACON, MILLER, MONITEAU,MONROE, OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SHELBY AND SULLIVAN COUNTIES	$ 31.73	17.10
ATCHISON, ANDREW, BATES, CALDWELL, CARROLL,DAVIESS, DEKALB,GENTRY, GRUNDY, HARRISON, HENRY, HOLT, LIVINGSTON, MERCER, NODAWAY,ST. CLAIR, SALINE AND WORTH COUNTIES	$ 30.24	17.10
AUDRAIN (East of Hwy.19), RALLS, MARION, LEWIS, CLARK AND SCOTLAND COUNTIES.	$ 31.74	17.10
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY,JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES.	$ 29.85	17.10
BENTON, MORGAN AND PETTIS	$ 30.29	17.10
BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY, STE. GENEVIEVE, SCOTT, STODDARD AND WAYNE COUNTIES	$ 31.59	17.10
BUCHANAN, CLINTON, JOHNSON AND LAFAYETTE COUNTIES	$ 30.96	17.10
CARTER, HOWELL, OREGON AND RIPLEY COUNTIES	$ 30.57	17.10
CRAWFORD, DENT, GASCONADE, IRON, MADISON, MARIES, MONTGOMERY, PHELPS, PULASKI, REYNOLDS, SHANNON AND TEXAS COUNTIES	$ 31.58	17.10
FRANKLIN COUNTY	$ 34.93	17.10
JEFFERSON AND ST. CHARLES COUNTIES	$ 37.33	17.10

LINCOLN COUNTY	$ 33.40	17.10
PIKE, ST. FRANCOIS AND WASHINGTON COUNTIES	$ 32.35	17.10
WARREN COUNTY	$ 33.83	17.10

ELEC0001-002 06/04/2017

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, FRANKLIN, IRON, JEFFERSON, LINCOLN, MADISON, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY,REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS, ST. LOUIS (City and County), STE. GENEVIEVE, SCOTT, STODDARD, WARREN, WASHINGTON AND WAYNE COUNTIES

	Rates	Fringes
Electricians	$ 36.92	25.22

ELEC0002-001 01/01/2017

ADAIR, AUDRAIN, BOONE, CALLAWAY, CAMDEN, CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD, DENT, FRANKLIN, GASCONADE, HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCON, LINN, MACON, MARIES, MARION, MILLER, MONITEAU, MONROE, MONTGOMERY, MORGAN, OREGON, OSAGE, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS, ST. LOUIS (City and County), STE. GENEVIEVE, SCHUYLER, SCOTLAND, SHANNON, SHELBY, SULLIVAN, TEXAS, WARREN AND WASHINGTON COUNTIES

	Rates	Fringes
Line Construction:		
Equipment Operator	$ 37.48	18.98
Groundman & Truck Driver	$ 28.86	15.87
Lineman & Cable Splicer	$ 43.50	21.14

ELEC0053-004 09/02/2018

	Rates	Fringes
Line Construction: (ANDREW, ATCHINSON, BARRY, BARTON, BUCHANAN, CALDWELL, CEDAR, CHRISTIAN, CLINTON, DADE, DALLAS, DAVIES,, DEKALB, DOUGLAS, GENTRY, GREENE, GRUNDY, HARRISON, HICKORY, HOLT, JASPER, LACLEDE, LAWRENCE, LIVINGSTON, MCDONALD, MERCER, NEWTON, NODAWAY, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, WORTH AND WRIGHT COUNTIES)		
Groundman Powderman	$ 31.56	14.90
Groundman	$ 29.46	14.29
Lineman Operator	$ 42.24	18.00
Lineman	$ 45.70	19.00

Line Construction; (BATES, BENTON, CARROLL, CASS, CLAY, HENRY, JACKSON, JOHNSON, LAFAYETTE, PETTIS, PLATTE, RAY AND SALINE COUNTIES)

Groundman Powderman	$ 31.56	14.90
Groundman	$ 29.46	14.29
Lineman Operator	$ 42.24	18.00
Lineman	$ 45.70	19.00

ELEC0095-001 06/01/2017

BARRY, BARTON, CEDAR, DADE, JASPER, LAWRENCE, MCDONALD, NEWTON, ST CLAIR, AND VERNON COUNTIES

	Rates	Fringes
Electricians:		
Cable Splicers	$ 25.40	12.19
Electricians	$ 26.79	13.86

ELEC0124-007 08/28/2017

BATES, BENTON, CARROLL, CASS, CLAY, COOPER, HENRY, JACKSON, JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY AND SALINE COUNTIES:

	Rates	Fringes
Electricians	$ 38.35	22.01

ELEC0257-003 03/01/2018

AUDRAIN (Except Cuivre Township), BOONE, CALLAWAY, CAMDEN, CHARITON, COLE, CRAWFORD, DENT, GASCONADE, HOWARD, MARIES, MILLER, MONITEAU, OSAGE, PHELPS AND RANDOLPH COUNTIES

	Rates	Fringes
Electricians:		
Cable Splicers	$ 30.42	16.085
Electricians	$ 32.50	17.53

ELEC0350-002 12/01/2016

ADAIR, AUDRAIN (East of Highway 19), CLARK, KNOX, LEWIS, LINN, MACON, MARION, MONROE, MONTGOMERY, PIKE, PUTNAM, RALLS, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES

	Rates	Fringes
Electricians	$ 30.57	5.93+35%

ELEC0453-001 09/01/2017

	Rates	Fringes

Electricians:
CHRISITAN, DALLAS,
DOUGLAS, GREENE, HICKORY,
HOWELL, LACLEDE, OREGON,
OZARK, POLK, SHANNON,
WEBSTER and WRIGHT COUNTIES.$ 26.15 14.56
PULASKI and TEXAS COUNTIES..$ 30.80 15.03
STONE and TANEY COUNTIES....$ 21.94 13.75

ELEC0545-003 06/01/2017

ANDREW, BUCHANAN, CLINTON, DEKALB, ATCHISON, HOLT, MERCER, GENTRY, HARRISON, DAVIESS, GRUNDY, WORTH, LIVINGSTON, NODAWAY, AND CALDWELL COUNTIES

	Rates	Fringes
Electricians:	$ 31.00	15.60

ELEC0702-004 07/02/2018

BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MADISON, MISSISSIPPI, NEW MADRID, PEMISCOT, SCOTT, STODDARD AND WAYNE COUNTIES

	Rates	Fringes
Line Construction:		
Groundman - Class A	$ 28.97	14.15
Groundman-Equipment Operator Class II (all other equipment)	$ 36.71	16.39
Heavy-Equipment Operator Class I (all crawler type equipment D-4 and larger)	$ 41.86	17.88
Lineman	$ 50.99	20.535

ENGI0101-001 05/01/2016

ANDREW, ATCHISON, BATES, BENTON, BUCHANAN, CALDWELL, CARROLL, CHARITON, CLINTON, COOPER, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, HOWARD, JOHNSON, LAFAYETTE, LINN, LIVINGSTON, MERCER, NODAWAY, PETTIS, SALINE, SULLIVAN AND WORTH COUNITES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 33.38	15.92
GROUP 2	$ 32.98	15.92
GROUP 3	$ 30.98	15.92

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or

sub-grader; backhoe; blade operator (all types); boilers - 2; booster pump on dredge; bulldozer operator; boring machine (truck or crane mounted); clamshell operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drill cat with compressor mounted (self-contained) or similar type self- propelled rotary drill (not air tract); drilling or boring machine (rotary-self-propelled); finishing machine operator; greaser; high loader-fork lift-skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); mechanics and welders (field and plants); mucking machine operator; pile drive operator; pitman crane or boom truck (all types); push cat; quad track; scraper operators (all types); shovel operator; sideboom cats; side discharge spreader; skimmer scoop operators; slip form paver operator (CMI, Rex, Gomeco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; wood and log chippers (all types).

GROUP 2: A-frame truck operator; articulated dump truck; back filler operator; boilers (1); chip spreader; churn drill operator; compressor; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grade operator; hoisting engine (one drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); paymill operator; power shield; pumps; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; siphons and jets; straw blower; stump cutting machine; siphons and jets; tank car heater operator (combination boiler and booster); welding machine; vibrating machine operator (not hand held); welding machine.

GROUP 3: (a) Oiler;
(b) Oiiler driver
(c) Mechanic.

HOURLY PREMIUMS:
THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($ .25) ABOVE GROUP 1 RATE: Dragline operator - 3 yds. & over; shovel 3 yds. & over; clamshell 3 yds. & over; Crane, rigs or piledrivers, 100' of boom or over (incl. jib.), hoist - each additional active drum over 2 drums

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($ .50) ABOVE GROUP 1 RATE: Tandem scoop operator; crane, rigs or piledrivers 150' to 200' of boom (incl. jib.)

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($ .75) ABOVE GROUP 1 RATE: Crane rigs, or piledrivers 200 ft. of boom or over (including jib.)

ENGI0101-005 04/01/2018

CASS, CLAY, JACKSON,PLATTE AND RAY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 36.22	17.99
GROUP 2	$ 35.18	17.99
GROUP 3	$ 30.71	17.99
GROUP 4	$ 34.06	17.99

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers-2; booster pump on dredge; boring machine (truck or crane mounted); bulldozer operator; clamshell operator; concrete cleaning decontamination machine operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drillcat with compressor mounted (self-contained) or similar type self propelled rotary drill (not air tract); drilling or boring machine (rotary - self-propelled); finishing machine operator; greaser; heavy equipment robotics operator/mechanic; horizontal directional drill operator; horizontal directional drill locator; loader-forklift - skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); master environmental maintenance mechanic; mechanics and welders (field and plants); mucking machine operator; piledrive operator; pitman crane or boom truck (all types); push cat; quad-track; scraper operators (all types); shovel operator; side discharge spreader; sideboom cats; skimmer scoop operator; slip-form paver (CMI, REX, Gomaco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; ultra high perssure waterjet cutting tool system operator/mechanic; vacuum blasting machine operator/mechanic; wood and log chippers (all types)

GROUP 2: "A" Frame truck operator; back filler operator; boilers (1); chip spreader;churn drill operator; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grader operator; hoisting engine (1 drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra- hammer (or similar type); power shield; paymill operator; pumps; siphons and jets; stump cutting machine; tank car heater operator (combination boiler and booster); compressor; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; straw blower; tank car heater operator (combination boiler and booster); vibrating machine operator (not hand held)

GROUP 3: Oilers

GROUP 4: Oiler Driver (All Types)

FOOTNOTE:
HOURLY PREMIUMS FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($1.00) ABOVE GROUP 1 RATE:
Clamshells - 3 yd. capacity or over; Cranes or rigs, 80 ft. of boom or over (including jib); Draglines, 3 yd. capacity or over;
Piledrivers 80 ft. of boom or over (including jib);
Shovels & backhoes, 3 yd. capacity or over.

ENGI0101-022 05/01/2016

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES and CITY OF SPRINGFIELD

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 30.82	13.30
GROUP 2	$ 29.88	13.30
GROUP 3	$ 30.27	13.30
GROUP 4	$ 28.22	13.30

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader; asphalt plant console operator; autograder; automatic slipform paver; backhoe; blade operator - all types; boat operator - tow; boilers-2; central mix concrete plant operator; clamshell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine - 2 active drums; launch hammer wheel; locomotive operator; - standard guage; mechanic and welders; mucking machine; off-road trucks; piledriver operator; pitman crane operator; push cat operator; quad trac; scoop operator - all types; shovel operator; sideboom cats; skimmer scoop operators; trenching machine operator; truck crane.

GROUP 2: A-frame; asphalt hot-mix silo; asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant man; asphalt plant mixer operator; asphalt roller operator; backfiller operator; barber-greene loader; boat operator (bridges and dams); chip spreader; concrete mixer operator - skip loader; concrete plant operator; concrete pump operator; crusher operator; dredge oiler; elevating grader operator; fork lift; greaser-fleet; hoisting engine - 1; locomotive operator - narrow gauge; multiple compactor; pavement breaker; powerbroom - self-propelled; power shield; rooter; side discharge concrete spreader; slip form finishing machine; stumpcutter machine; throttle man; tractor operator (over 50 h.p.); winch truck.

GROUP 3: Boilers - 1; chip spreader (front man); churn drill operator; clef plane operator; concrete saw operator (self-propelled); curb finishing machine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; roller operator, other than high type asphalt; screening & washing plant operator; siphons & jets; sub-grading machine operator; spreader box operator, self-propelled (not asphalt); tank car heater operator (combination boiler & booster); tractor operator (50 h.p. or less); Ulmac, Ulric or similar spreader; vibrating machine operator, not hand;

GROUP 4: Grade checker; Oiler; Oiler-Driver

HOURLY PREMIUMS:

The following classifications shall receive $ .25 above GROUP 1 rate:
Clamshells - 3 yds. or over; Cranes - Rigs or Piledrivers, 100 ft. of boom or over (including jib);
Draglines - 3 yds. or over; Hoists - each additional active drum over 2 drums; Shovels - 3 yds. or over;

The following classifications shall receive $ .50 above GROUP 1 rate:
Tandem scoop operator; Cranes - Rigs or Piledrivers, 150 ft. to 200 ft. of boom (including jib); Tandem scoop.

The following classifications shall receive $ .75 above GROUP 1 rate:
Cranes - Rigs or Piledrivers, 200 ft. of boom or over (including jib.).

ENGI0513-004 05/01/2018

FRANKLIN, JEFFERSON, LINCOLN, ST CHARLES, AND WARREN COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 32.96	27.24
GROUP 2	$ 32.96	27.24
GROUP 3	$ 31.66	27.24
GROUP 4	$ 31.21	27.24

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, Cable; Backhoe, Hydraulic (2 cu yds bucket and under regardless of attachment, one oiler for 2 or 3, two oilers for 4 through 6); Backhoe, Hydraulic over 2 cu yds; Cableway; Crane, Crawler or Truck; Crane, Hydraulic - Truck or Cruiser mounted, 16 tons and over; Crane, Locomotive; crane with boom including jib over 100 ft from pin to pin; Crane using rock socket tool; Derrick, Steam; Derrick Car and Derrick Boat; Dragline, 7 cu yds and over; Dredge; Gradall, Crawler or tire mounted; Locomotive, Gas, Steam & other powers; Pile Driver, Land or Floating; Scoop, Skimmer; Shovel, Power (Electric, Gas, Steam or other

powers); Shovel, Power (7 cu yds and over); Switch Boat; Whirley; Air Tugger with air compressor; Anchor Placing Barge; Asphalt Spreaker; Athey Force Feeder Loader, self-propelled; Backfilling Machine; Boat Operator - Push Boat or Tow Boat (job site); Boiler, High Pressure Breaking in Period; Boom Truck, Placing or Erecting; Boring Machine, Footing Foundation; Bullfloat; Cherry Picker; Combination Concrete Hoist and Mixer (such as Mixermobile); Compressor, Two 125 CFM and under; Compressor, Two through Four over 125 CFM; Compressor when operator runs throttle; Concrete Breaker (Truck or Tractor mounted); Concrete Pump (such as Pumpcrete machine); Concrete Saw (self-propelled); Concrete Spreader; Conveyor, Large (not selfpropelled) hoisting or moving brick and concrete into, or into and on floor level, one or both; Crane, Cimbing (such as Linden); Crane, Hydraulic - Rough Terrain, self-propelled; Crane, Hydraulic - Truck or Cruiser mounted - under 16 tons; Drilling machine - Self-powered, used for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other souces including concrete breakers, jackhammers and Barco equipmnet no engineer required); Elevating Grader; Engine Man, Dredge; Excavator or Powerbelt Machine; Finishing Machine, self- propelled oscillating screed; Forklift; Generators, Two through Six 30 KW or over; Grader, Road with power blade; Greaser; Highlift; Hoist, Concrete and Brick (Brick cages or concrete skips operating or on tower, Towermobile, or similar equipment); Hoist, Three or more drums in use; Hoist, Stack; Hydro-Hammer; Lad-A-Vator, hoisting brick or concrete; Loading Machine such as Barber-Greene; Mechanic on job site

GROUP 2: Air Tugger with plant air; Boiler (for power or heating shell of building or temporary enclosures in connection with construction work); Boiler, Temporary; Compressor, One over 125 CFM; Compressor, truck mounted; Conveyor, Large (not self- propelled); Conveyor, Large (not self- propelled) moving brick and concrete (distributing) on floor level; Curb Finishing Machine; Ditch Paving Machine; Elevator (outside); Endless Chain Hoist; Fireman (as required); Form Grader; Hoist, One Drum regardless of size (except brick or concrete); Lad-A-Vator, other hoisting; Manlift; Mixer, Asphalt, over 8 cu ft capacity; Mixer, one bag capacity or less; Mixer, without side loader, two bag capacity or more; Mixer, with side loader, regardless of size, not Paver; Mud Jack (where mud jack is used in conjenction with an air compressor, operator shall be paid $ .55 per hour in addition to his basic hourly rate for covering both operations); Pug Mill operator; Pump, Sump - self powered, automatic controlled over 2"; Scissor Lift (used for hoisting); Skid Steer Loader; Sweeper, Street; Tractor, small wheel type 50 HP and under with grader blade and similar equipment; Welding Machine, One over 400 amp; Winch, operating from truck

GROUP 3: Boat operator - outboard motor, job site; Conveyors (such as Con-Vay-It) regardless of how used; Elevator (inside); Heater operator, 2 through 6; Sweeper, Floor

GROUP 4: Crane type

HOURLY PREMIUMS:

Backhoe, Hydraulic 2 cu yds or less without oiler - $2.00;
Crane,climbing (such as Linden) - $.50;
Crane, Pile Driving and Extracting - $ .50
Crane with boom (including job) over
100 ft from pin to pin - add $.01 per foot
to maximum of $4.00);
Crane, using rock socket tool - $ .50;
Derrick, diesel, gas or electric hoisting material
and erecting steel (150 ft or more above ground) - $ .50;
Dragline, 7 cu yds and over - $ .50;
Hoist, Three or more drums in use - $ .50;
Scoop, Tandem - $.50;
Shovel, Power - 7 cu yds and over - $ .50;
Tractor, Tandem Crawler - $ .50;
Tunnel, man assigned to work in tunnel or
tunnel shaft - $ .50;
Wrecking, when machines are working on
second floor or higher - $ .50

ENGI0513-006 05/01/2018

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY, CAPE GIRARDEAU, CARTER, CLARK, COLE, CRAWFORD, DENT, DUNKLIN, GASCONADE, HOWELL, IRON, KNOX, LEWIS, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, MORGAN, NEW MADRID, OREGON, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. FRANCOIS, STE. GENEVIEVE, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON, AND WAYNE COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 28.34	27.06
GROUP 2	$ 27.99	27.06
GROUP 3	$ 27.79	27.06
GROUP 4	$ 24.14	27.06

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader, asphalt plant console operator; autograder; automatic slipform paver; back hoe; blade operator - all types; boat operator tow; boiler two; central mix concrete plant operator; clam shell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine 2 active drums; launchhammer wheel; locomotive operator standrad guage; mechanics and welders; mucking machine; piledriver operator; pitman crane operator; push cat operator; guad-trac; scoop operator; sideboom cats; skimmer scoop operator; trenching machine operator; truck crane, shovel operator.

GROUP 2: A-Frame; asphalt hot-mix silo; asphalt roller operator asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant mixer operator; backfiller operator; barber-greene loader; boat operator (bridge & dams); chip spreader; concrete mixer operator skip loader; concrete plant operator; concrete pump operator; dredge oiler; elevating graded operator; fork lift; grease fleet; hoisting engine one; locomotive operator narrow guage; multiple compactor; pavement breaker; powerbroom self-propelled; power shield; rooter; slip-form finishing machine; stumpcutter machine; side discharge concrete spreader; throttleman; tractor operator (over 50 hp); winch truck; asphalt roller operator; crusher operator.

GROUP 3: Spreader box operator, self-propelled not asphalt; tractor operator (50 h.p. or less); boilers one; chip spreader (front man); churn drill operator; compressor over 105 CFM 2-3 pumps 4" & over; 2-3 light plant 7.5 KWA or any combination thereof; clef plane operator; compressor maintenance operator 2 or 3; concrete saw operator (self-propelled); curb finishing mancine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; riller operator other than high type asphalt; screening & washing plant operator; siphons & jets; subgrading machine operator; tank car heater (combination boiler & booster); ulmac, ulric or similar spreader; vibrating machine operator; hydrobroom.

GROUP 4: Oiler; grout machine; oiler driver; compressor over 105 CFM one; conveyor operator one; maintenance operator; pump 4" & over one.

FOOTNOTE: HOURLY PREMIUMS

Backhoe hydraulic, 2 cu. yds. or under Without oiler - $2.00
Certified Crane Operator - $1.50;
Certified Hazardous Material Operator $1.50;
Crane, climbing (such as Linden) - $0.50;
Crane, pile driving and extracting - $0.50;
Crane, with boom (including jib) over 100' from pin to pin add $0.01 per foot to maximum of $4.00;
Crane, using rock socket tool - $0.50;
Derrick, diesel, gas or electric, hoisting material and erecting steel (150' or more above the ground) - $0.50;
Dragline, 7 cu. yds, and over - $0.50;
Hoist, three or more drums in use - $0.50; Scoop, Tandem - $0.50;
Shovel, power - 7 cu. yds. or more - $0.50;
Tractor, tandem crawler - $0.50;
Tunnel, man assigned to work in tunnel or tunnel shaft - $0.50;
Wrecking, when machine is working on second floor or higher - $0.50;

ENGI0513-007 05/02/2018

ST. LOUIS CITY AND COUNTY

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 32.96	27.24
GROUP 2	$ 32.96	27.24
GROUP 3	$ 31.66	27.24
GROUP 4	$ 31.21	27.24

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, cable or hydraulic; cableway; crane crawler or truck; crane, hydraulic-truck or cruiser mounted 16 tons & over; crane locomotive; derrick, steam; derrick car & derrick boat; dragline; dredge; gradall, crawler or tire mounted; locomotive, gas, steam & other powers; pile driver, land or floating; scoop, skimmer; shovel, power (steam, gas, electric or other powers); switch boat; whirley.

GROUP 2: Air tugger w/air compressor; anchor-placing barge; asphalt spreader; athey force feeder loader (self-propelled); backfilling machine; backhoe-loader; boat operator-push boat or tow boat (job site); boiler, high pressure breaking in period; boom truck, placing or erecting; boring machine, footing foundation; bull- float; cherry picker; combination concrete hoist & mixer (such as mixer mobile); compressor (when operator runs throttle); concrete breaker (truck or tractor mounted); concrete pump, such as pump-crete machine; concrete saw (self-propelled), concrete spreader; conveyor, large (not self-propelled), hoisting or moving brick and concrete into, or into and on floor level, one or both; crane, hydraulic-rough terrain, self-propelled; crane hydraulic-truck or cruiser mounted-under 16 tons; drilling machines, self-powered use for earth or rock drilling or boring (wagon drills nd any hand drills obtaining power from other sources including concrete breakers, jackhammers and barco equipment-no engineer required); elevating grader; engineman, dredge; excavator or powerbelt machine; finishing machine, self-propelled oscillating screed; forklift; grader, road with power blade; highlift. greaser; hoist, stack, hydro-hammer; loading machine (such as barber-greene); machanic, on job site; mixer, pipe wrapping machines; plant asphalt; plant, concrete producing or ready-mix job site; plant heating-job site; plant mixing-job site; plant power, generating-job site; pumps, two through six self-powered over 2"; pumps, electric submersible, two through six, over 4"; quad-track; roller, asphalt, top or sub-grade; scoop, tractor drawn; spreader box; sub-grader; tie tamper; tractor-crawler, or wheel type with or without power unit, power take-offs and attachments regardless of size; trenching machine; tunnel boring machine; vibrating machine automatic, automatic propelled; welding machines (gasoline or diesel) two through six; well drilling machine

GROUP 3: Conveyor, large (not self-propelled); conveyor, large (not self-propelled) moving brick and concrete distributing) on floor level; mixer two or more mixers of one bag capacity or less; air tugger w/plant air; boiler,

for power or heating on construction projects; boiler, temporary; compressor (mounted on truck; curb finishing machine; ditch paving machine; elevator; endless chain hoist; form grader; hoist, one drum regardless of size; lad-a-vator; manlift; mixer, asphalt, over 8 cu. ft. capacity, without side loader, 2 bag capacity or more; mixer, with side loader, regardless of size; pug mill operator; pump, sump-self-powered, automatic controlled over 2" during use in connection with construction work; sweeper, street; welding machine, one over 400 amp.; winch operating from truck; scissor lift (used for hoisting); tractor, small wheel type 50 h.p. & under with grader blade & similar equipment; Oiler on dredge and on truck crane.

GROUP 4: Boat operator-outboard motor (job site); conveyor (such as con-vay-it) regardless of how used; sweeper, floor

HOURLY PREMIUMS:

Backhoe, hydraulic 2 cu. yds. or under without oiler	$2.00
Certified Crane Operator	1.50
Certified Hazardous Material Operator	1.50
Crane, climbing (such as Linden)	.50
Crane, pile driving and extracting	.50
Crane, with boom (including jib) over 100' (from pin to pin) add $.01 per foot to maximum of	4.00
Crane, using rock socket tool	.50
Derrick, diesel, gas or electric, hoisting material and erecting steel (150' or more above ground)	.50
Dragline, 7 cu. yds. and over	.50
Hoist, three (3) or more drums in use	.50
Scoop, Tandem	.50
Shovel, power - 7 cu. yds. or more	.50
Tractor, tandem crawler	.50
Tunnel, man assigned to work in tunnel or tunnel shaft	.50
Wrecking, when machine is working on second floor or higher	.50

IRON0010-012 04/01/2018

	Rates	Fringes
Ironworkers:		

ANDREW, BARTON, BENTON, CAMDEN, CEDAR, CHARITON, CHRISTIAN, COOPER, DADE, DALLAS, DAVIESS, DE KALB, GENTRY, GREENE, GRUNDY, HARRISON, HICKORY, HOLT, HOWARD, LACLEDE, LINN, LIVINGSTON, MERCER, MONITEAU, MORGAN, NODAWAY, PETTIS, POLK, PUTNAM, RANDLOPH, ST. CLAIR, SULLIVAN, TANEY, VERNON, WEBSTER, WRIGHT and WORTH

Counties and portions of
ADAIR, BOONE, MACON,
MILLER and RANDOLPH
Counties.....$ 30.30 29.44
ATCHISON, BATES, BUCHANAN,
CALDWELL, CARROLL, CASS,
CLAY, CLINTON, HENRY,
JACKSON, JOHNSON,
LAFAYETTE, PETTIS, PLATTE,
SALINE, AND RAY COUNTIES....$ 33.30 29.44

IRON0321-002 09/01/2018

DOUGLAS, HOWELL and OZARK COUNTIES

	Rates	Fringes
Ironworker	$ 19.95	18.36

IRON0396-004 08/02/2017

ST. LOUIS (City and County), ST. CHARLES, JEFFERSON, IRON, FRANKLIN, LINCOLN, WARREN, WASHINGTON, ST. FRANCOIS, STE. GENEVIEVE, and REYNOLDS Counties; and portions of MADISON, PERRY, BOLLINGER, WAYNE, and CARTER Counties

	Rates	Fringes
Ironworker	$ 33.96	25.11

IRON0396-009 08/02/2017

AUDRAIN, CALLAWAY, COLE, CRAWFORD, DENT, GASCONADE, MARIES, MONTGOMERY, OSAGE, PHELPS, PIKE, PULASKI, TEXAS and WRIGHT Counties; and portions of BOONE, CAMDEN, DOUGLAS, HOWELL, LACLEDE, MILLER, MONROE, OREGON, SHANNON and RALLS Counties

	Rates	Fringes
Ironworker	$ 29.49	25.11

IRON0577-005 08/01/2018

ADAIR, CLARK, KNOX, LEWIS, MACON, MARION, MONROE, RALLS, SCHUYLER, SCOTLAND, AND SHELBY COUNTIES

	Rates	Fringes
Ironworker	$ 26.25	23.10

IRON0584-004 06/01/2017

BARRY, JASPER, LAWRENCE, MCDONALD, NEWTON AND STONE Counties

	Rates	Fringes
Ironworkers:	$ 24.00	14.81

IRON0782-003 05/01/2016

CAPE GIRARDEAU, MISSISSIPPI, NEW MADRID, SCOTT, & STODDARD Counties; and portions of BOLLINGER, BUTLER, CARTER, DUNKLIN, MADISON, PEMISCOT, PERRY, RIPLEY, and WAYNE Counties

	Rates	Fringes
Ironworkers:		
Locks, Dams, Bridges and other major work on the Mississippi and Ohio River only	$ 31.63	24.27
All Other Work	$ 25.12	19.90

LABO0042-003 03/07/2018

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Plumber Laborer	$ 32.32	15.50

LABO0042-005 03/07/2018

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Dynamiter, Powderman	$ 32.32	15.32
Laborers, Flaggers	$ 32.32	15.32
Wrecking	$ 32.32	15.32

LABO0424-002 05/01/2016

	Rates	Fringes
LABORER		
ADAIR, AUDRAIN, BOONE, CALLAWAY, CHARITON, CLARK, COLE, COOPER, HOWARD, IRON, KNOX, LEWIS, LINN, MACON, MADISON, MARION, MILLER, MONITEAU, MONROE, PERRY, PIKE, PUTNAM, RALLS, RANDOLPH, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES		
GROUP 1	$ 27.96	13.17
GROUP 2	$ 27.96	13.17
BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, CRAWFORD, DENT, DUNKLIN, GASCONADE, HOWELL, MARIES,		

MISSISSIPPI, NEW MADRID, OREGON, OSAGE, PEMISCOT, PHELPS, PULASKI, RIPLEY, SCOTT, SHANNON, STODDARD, TEXAS, WASHINGTON AND WAYNE COUNTIES		
GROUP 1	$ 27.96	13.17
GROUP 2	$ 27.96	13.17
FRANKLIN COUNTY		
GROUP 1	$ 29.71	13.17
GROUP 2	$ 30.31	13.17
JEFFERSON COUNTY		
GROUP 1	$ 29.76	13.17
GROUP 2	$ 30.36	13.17
LINCOLN, MONTGOMERY AND WARREN COUNTIES		
GROUP 1	$ 31.18	13.32
GROUP 2	$ 31.18	13.32
ST.CHARLES COUNTY		
GROUP 1	$ 3.18	13.32
GROUP 2	$ 31.18	13.32

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggie man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzleman; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutement and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft.

high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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LABO0579-005 05/01/2018

	Rates	Fringes
LABORER (ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HOLT, LIVINGSTON, MERCER, NODAWAY and WORTH COUNTIES.)		
GROUP 1	$ 26.16	14.47
GROUP 2	$ 26.51	14.47
LABORER (BARRY, BARTON, BATES, BENTON, CAMDEN, CARROLL, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HENRY. HICKORY, JASPER, JOHNSON, LACLEDE, LAWRENCE, MCDONALD, MORGAN, NEWTON, OZARK, PETTIS, POLK, ST.CLAIR, SALINE, STONE, TANEY, VERNON, WEBSTER and WRIGHT COUNTIES)		
GROUP 1	$ 25.16	13.67
GROUP 2	$ 25.71	13.67
LABORER (LAFAYETTE COUNTY)		
GROUP 1	$ 26.71	13.92
GROUP 2	$ 27.06	13.92

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers - Carpenter tenders; salamander tenders; loading trucks under bins; hoppers & conveyors; track men & all other general laborers; air tool operator; cement handler-bulk or sack; dump man on earth fill; georgie buggie man; material batch hopper man; material mixer man (except on manholes); coffer dams; riprap pavers - rock, block or brick; signal man; scaffolds over ten feet not self-supported from ground up; skipman on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoline, oil drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator, all work in connection with hydraulic or general dredging operations; puddlers (paving only); straw blower nozzleman; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material or materials (where special protection is required); rubbing concrete; topper of standing trees;

batter board man on pipe and ditch work; feeder man on wood pulverizers; board and willow mat weavers and cable tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 feet where compressed air is not used; abutment and pier hole men working six (6) feet or more below ground; men working in coffer dams for bridge piers and footings in the river; ditchliners; pressure groutmen; caulker; chain or concrete saw; cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground; mortarmen on brick or block manholes; toxic and hazardous waste work.

GROUP 2: Skilled Laborers - Head pipe layer on sewer work; laser beam man; Jackson or any other similar tamp; cutting torch man; form setters; liners and stringline men on concrete paving, curb, gutters; hot mastic kettleman; hot tar applicator; sandblasting and gunite nozzlemen; air tool operator in tunnels; screed man on asphalt machine; asphalt raker; barco tamper; churn drills; air track drills and all similar drills; vibrator man; stringline man for electronic grade control; manhole builders-brick or block; dynamite and powder men; grade checker.

LABO0663-002 04/01/2018

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
LABORER		
GROUP 1	$ 30.18	15.63
GROUP 2	$ 31.39	15.63

LABORERS CLASSIFICATIONS

GROUP 1: General laborers, Carpenter tenders, salamander tenders, loading trucks under bins, hoppers and conveyors, track men and all other general laborers, air tool operator, cement handler (bulk or sack), chain or concrete saw, deck hands, dump man on earth fill, Georgie Buggies man, material batch hopper man, scale man, material mixer man (except on manholes), coffer dams, abutments and pier hole men working below ground, riprap pavers rock, black or brick, signal man, scaffolds over ten feet not self-supported from ground up, skipman on concrete paving, wire mesh setters on concrete paving, all work in connection with sewer,water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipelines, power tool operator, all work in connection with hydraulic or general dredging operations, straw blower nozzleman,asphalt plant platform man, chuck tender, crusher feeder, men handling creosote ties on creosote materials, men working with and handling epoxy material or materials (where special protection is required), topper of standing trees, batter board man on pipe and ditch work, feeder man on wood pulverizers, board and willow mat weavers and cable tiers on river work, deck hands, pile dike and revetment work, all laborers working on underground tunnels less than

25 feet where compressed air is not used, abutment and pier hole men working six (6) feet or more below ground, men working in coffer dams for bridge piers and footings in the river, ditchliners, pressure groutmen, caulker and chain or concrete saw, cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground, mortarmen on brick or block manholes, signal man.

GROUP 2: Skilled Laborer - spreader or screed man on asphalt machine, asphalt raker, grade checker, vibrator man, concrete saw over 5 hp., laser beam man, barco tamper, jackson or any other similar tamp, wagon driller, churn drills, air track drills and other similar drills, cutting torch man, form setters, liners and stringline men on concrete paving, curb, gutters and etc., hot mastic kettleman, hot tar applicator, hand blade operators, mortar men on brick or block manholes, sand blasting and gunnite nozzle men, rubbing concrete, air tool operator in tunnels, head pipe layer on sewer work, manhole builder (brick or block), dynamite and powder men.

PAIN0002-002 09/01/2007

CLARK, FRANKLIN, JEFFERSON, LEWIS, LINCOLN, MARION, PIKE, RALLS, ST. CHARLES, ST. LOUIS (CITY & COUNTY), AND WARREN COUNTIES

	Rates	Fringes
Painters:		
Brush and Roller; Taper	$ 28.61	10.24
High work over 60 feet	$ 29.11	10.24
Lead Abatement	$ 29.36	10.24
Pressure Roller; High work under 60 ft	$ 28.86	10.24
Spray & Abrasive Blasting; Water Blasting (Over 5000 PSI)	$ 30.61	10.24
Taper (Ames Tools & Bazooka)	$ 30.21	10.24

PAIN0002-006 04/01/2018

ADAIR, AUDRAIN, BOONE, CALLAWAY, CHARITON, COLE, GASCONADE, HOWARD, KNOX, LINN, MACON, MONROE, MONTGOMERY, OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES and the City of Booneville.

	Rates	Fringes
Painters:		
Bridges, Dams, Locks or Powerhouses	$ 25.93	12.79
Brush and Roll; Taping, Paperhanging	$ 23.93	12.79
Epoxy or Any Two Part		

Coating; Sandblasting; Stage or other Aerial Work - Platforms over 50 feet high; Lead Abatement	$ 24.93	12.79
Spray; Structural Steel (over 50 feet)	$ 24.93	12.79
Tapers using Ames or Comparable Tools	$ 24.68	12.79

PAIN0003-004 04/01/2017

CASS, CLAY, CLINTON, JACKSON, JOHNSON, LAFAYETTE, PLATTE & RAY COUNTIES

	Rates	Fringes
Painters:		
Bridgeman; Lead Abatement; Sandblast; Storage Bin & Tanks	$ 31.96	16.96
Brush & Roller	$ 29.34	16.96
Drywall	$ 30.34	16.96
Paper Hanger	$ 29.84	16.96
Stageman; Beltman; Steelman; Elevator Shaft; Bazooka, Boxes and Power Sander; Sprayman; Dipping	$ 30.96	16.96
Steeplejack	$ 35.53	16.96

PAIN0003-011 04/01/2011

BATES, BENTON, CALDWELL, CARROLL, COOPER, DAVIESS, GRUNDY, HARRISON, HENRY, LIVINGSTON, MERCER, MONITEAU, MORGAN, PETTIS & SALINE COUNTIES

	Rates	Fringes
Painters:		
Bridgeman; Lead Abatement; Sandblast; Storage Bin & Tanks	$ 24.06	14.04
Brush & Roller	$ 22.67	14.04
Drywall	$ 22.84	14.04
Paper Hanger	$ 23.07	14.04
Stageman; Beltman; Steelman; Elevator Shaft; Bazooka, Boxes and Power Sander; Sprayman; Dipping	$ 23.56	14.04
Steeplejack	$ 26.82	14.04

PAIN0203-001 04/01/2012

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, and WRIGHT COUNTIES

	Rates	Fringes
Painters:		
Finisher	$ 20.18	11.33
Painter	$ 19.75	11.76
Sandblaster, High Man, Spray Man, Vinyl Hanger, Tool Operator	$ 21.18	11.33

PAIN1265-003 07/01/2013

CAMDEN, CRAWFORD, DENT, LACLEDE, MARIES, MILLER, PHELPS, PULASKI AND TEXAS COUNTIES

	Rates	Fringes
Painters:		
Brush and Roller	$ 25.64	13.27
Floor Work	$ 26.14	13.27
Lead Abatement	$ 27.89	13.27
Spray	$ 27.14	13.27
Structural Steel, Sandblasting and All Tank Work	$ 26.89	13.27
Taping, Paperhanging	$ 26.64	13.27

PAIN1292-002 09/01/2016

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, REYNOLDS, RIPLEY, SCOTT, SHANNON, STODDARD and WAYNE COUNTIES

	Rates	Fringes
Painters:		
Bridges, Stacks & Tanks	$ 30.85	11.64
Brush & Roller	$ 25.35	11.64
Spray & Abrasive Blasting; Waterblasting (over 5000 PSI)	$ 28.95	11.64

Height Rates (All Areas):
Over 60 ft. $0.50 per hour.
Under 60 ft. $0.25 per hour.

PAIN1292-003 09/01/2017

IRON, MADISON, ST. FRANCOIS, STE. GENEVIEVE and WASHINGTON COUNTIES

	Rates	Fringes
Painters:		
Bridges, Stacks & Tanks	$ 31.05	12.74
Brush & Roller	$ 25.70	12.74
Spray & Abrasive Blasting;		

Waterblasting (Over 5000 PSI)	$ 28.70	12.74

Height Rates (All Areas):
Over 60 ft. $0.50 per hour
Under 60 ft. $0.25 per hour.

PAIN2012-001 04/01/2017

ANDREW, ATCHISON, BUCHANAN, DE KALB, GENTRY, HOLT, NODAWAY & WORTH COUNTIES

	Rates	Fringes
Painters:		
Brush & Roller	$ 30.46	16.96
Sandblaster	$ 31.96	16.96
Steeplejack	$ 35.53	16.96

PLAS0518-006 03/01/2018

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, AND WRIGHT COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 24.24	11.05

PLAS0518-007 04/01/2018

CASS (Richards-Gebaur AFB only), CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Cement Masons:	$ 31.83	17.39

PLAS0518-011 04/01/2018

ANDREW, ATCHISON, BATES, BUCHANNAN, CLINTON, DEKALB, GENTRY, HENRY, HOLT, JOHNSON, LAFAYETTE, NODAWAY & WORTH COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 31.71	19.62

PLAS0527-001 04/01/2018

	Rates	Fringes
CEMENT MASON		
FRANKLIN, LINCOLN AND WARREN COUNTIES	$ 30.74	18.07

JEFFERSON, ST. CHARLES
COUNTIES AND ST.LOUIS
(City and County).....$ 32.66 18.62

PLAS0527-004 06/01/2017

CRAWFORD, DENT, IRON, MADISON, MARION, PHELPS, PIKE, PULASKI, RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SHANNON, TEXAS, WASHINGTON COUNTIES

	Rates	Fringes
CEMENT MASON	$ 28.10	18.07

PLAS0908-001 05/01/2017

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, HOWELL, MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, RIPLEY, SCOTT, STODDARD, AND WAYNE COUNTIES

	Rates	Fringes
CEMENT MASON	$ 27.60	15.73

PLAS0908-005 05/01/2017

BENTON, CALDWELL, CALLAWAY, CAMDEN, CARROLL, COLE, DAVIESS, GASCONADE, GRUNDY, HARRISON, LIVINGSTON, MACON, MARIES, MERCER, MILLER, MONTGOMERY, MORGAN, OSAGE, PETTIS & SALINE COUNTIES

	Rates	Fringes
CEMENT MASON	$ 27.60	15.73

PLUM0008-003 06/01/2018

CASS, CLAY, JACKSON, JOHNSON, AND PLATTE COUNTIES

	Rates	Fringes
Plumbers	$ 45.34	21.39

PLUM0008-017 06/01/2018

BATES, BENTON, CARROLL, HENRY, LAFAYETTE, MORGAN, PETTIS, RAY, ST. CLAIR, SALINE AND VERNON COUNTIES

	Rates	Fringes
Plumbers	$ 45.34	21.39

PLUM0045-003 09/01/2018

ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB, GENTRY, HARRISON, HOLT, NODAWAY AND WORTH COUNTIES

	Rates	Fringes
Plumbers and Pipefitters.....$	36.40	23.00

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* PLUM0178-003 11/01/2018

BARRY, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, LACLEDE, LAWRENCE, POLK, STONE, TANEY, WEBSTER AND WRIGHT COUNTIES

	Rates	Fringes
Plumbers and Pipefitters.....$	30.90	15.35

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* PLUM0178-006 11/01/2018

BARTON, JASPER, MCDONALD AND NEWTON COUNTIES

	Rates	Fringes
Plumbers and Pipefitters		
Projects $750,000 & under...$	27.93	15.35
Projects over $750,000.....$	30.90	15.35

PLUM0533-004 06/01/2018

BATES, BENTON, CARROLL, CASS, CLAY, HENRY, HICKORY, JACKSON, JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY, SALINE, ST. CLAIR AND VERNON COUNTIES

	Rates	Fringes
Pipefitters.....$	46.28	21.15

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* PLUM0562-004 07/01/2018

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY,CAMDEN, CAPE GIRARDEAU,CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD, DENT, DUNKLIN, FRANKLIN, GASCONADE, GRUNDY, HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCOLN, LINN, LIVINGSTON, MACON, MADISON, MARIES, MARION, MERCER, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, NEW MADRID, OREGON, OSAGE, PEMISCOTT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST.FRANCOIS, STE. GENEVIEVE, ST. LOUIS, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, SULLIVAN, TEXAS, WARREN, WASHINGTON,AND WAYNE COUNTIES.

	Rates	Fringes
Plumbers and Pipefitters		
Mechanical Contracts including all piping and temperature control work $7.0 million & under.....$	38.91	22.09
Mechanical Contracts including all piping and		

temperature control work over $7.0 million	$ 40.25	27.68

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* PLUM0562-016 07/01/2018

CAMDEN, COLE, CRAWFORD, FRANKLIN, JEFFERSON, MARIES, MILLER, MONITEAU, OSAGE, PHELPS, PULASKI, ST. CHARLES, ST. LOUIS (City and County), WARREN and WASHINGTON COUNTIES

	Rates	Fringes
Plumbers		
Mechanical Contracts including all piping and temperature control work $7.0 million & under	$ 38.91	22.09
Mechanical Contracts including all piping and temperature control work over $7.0 million	$ 40.25	27.68

TEAM0013-001 05/01/2017

	Rates	Fringes
Truck drivers (ADAIR, BUTLER, CLARK, DUNKIN, HOWELL, KNOX, LEWIS, OREGON, PUTNAM, RIPLEY, SCHUYLER AND SCOTLAND COUNTIES)		
GROUP 1	$ 28.54	12.00
GROUP 2	$ 28.44	12.00
GROUP 3	$ 28.69	12.00
GROUP 4	$ 28.81	12.00
Truck drivers (AUDRAIN, BOLLINGER, BOONE, CALLAWAY, CAPE GIRARDEAU, CARTER, COLE, CRAWFORD, DENT, GASCONADE, IRON, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONROE, MONTGOMERY, NEW MADRID, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON AND WAYNE COUNTIES)		
GROUP 1	$ 29.14	12.85
GROUP 2	$ 29.04	12.85
GROUP 3	$ 29.29	12.85
GROUP 4	$ 29.41	12.85
Truck drivers (FRANKLIN, JEFFERSON and ST. CHARLES COUNTIES)		
GROUP 1	$ 31.63	12.00
GROUP 2	$ 31.74	12.00
GROUP 3	$ 31.74	12.00
GROUP 4	$ 31.85	12.00

Truck drivers (LINCOLN and
WARREN COUNTIES)

GROUP 1	$ 30.28	12.00
GROUP 2	$ 30.39	12.00
GROUP 3	$ 31.43	12.00
GROUP 4	$ 30.50	12.00

TRUCK DRIVERS CLASSIFICATIONS:

GROUP 1: Flat Bed Trucks, Single Axle; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon, Single Axle

GROUP 2: Agitator and Transit Mix Trucks

GROUP 3: Flat Bed Trucks, Tandem Axle; Articulated Dump Trucks; Material Trucks, Tandem Axle; Tank Wagon, Tandem Axle

GROUP 4: Semi and/or Pole Trailers; Winch, Fork & Steel Trucks; Distributor Drivers and Operators; Tank Wagon, Semi-Trailer; Insley Wagons, Dumpsters, Half-Tracks, Speedace, Euclids and other similar equipment; A-Frame and Derrick Trucks; Float or Low Boy

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TEAM0056-001 05/01/2017

	Rates	Fringes
Truck drivers (ANDREW, BARTON, BATES, BENTON, CALDWELL, CAMDEN, CARROLL, CEDAR, CHARITON, CHRISTIAN, CLINTON, COOPER, DADE, DALLAS, DAVIESS, DEKALB, DOUGLAS, GREENE, HENRY, HICHKORY, HOWARD, JASPER, LACLEDE, LAWRENCE, LINN, LIVINGSTON, MONITEAU, MORGAN, NEWTON, PETTIS, POLK, RANDOLPH, ST. CLAIR, SALINE, VERNON, WEBSTER AND WRIGHT COUNTIES)		
GROUP 1	$ 29.57	12.85
GROUP 2	$ 29.73	12.85
GROUP 3	$ 29.72	12.85
GROUP 4	$ 29.84	12.85
Truck drivers: (ATCHISON, BARRY, GENTRY, GRUNDY, HARRISON, HOLT, MCDONALD, MERCER, NODAWAY, OZARK, STONE, SULLIVAN, TANEY AND WORTH COUNTIES)		
GROUP 1	$ 28.84	12.85
GROUP 2	$ 29.00	12.85
GROUP 3	$ 28.99	12.85
GROUP 4	$ 29.11	12.85
Truck drivers; (BUCHANAN, JOHNSON AND LAFAYETTE		

COUNTIES)

GROUP 1	$ 30.78	12.85
GROUP 2	$ 30.89	12.85
GROUP 3	$ 30.93	12.85
GROUP 4	$ 31.00	12.85

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Flat bed trucks single axle; station wagons; pickup trucks; material trucks single axle; tank wagons single axle.

GROUP 2: Agitator and transit mix-trucks.

GROUP 3: Flat bed trucks tandem axle; articulated dump trucks; material trucks tandem axle; tank wagons tandem axle.

GROUP 4: Semi and/or pole trailers; winch, fork & steel trucks; distributor drivers & operators; tank wagons semi-trailer; insley wagons, dumpsters, half-tracks, speedace, euclids & other similar equipment; A-frames and derrick trucks; float or low boy.

TEAM0245-001 03/26/2012

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DALLAS, DENT, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LACLEDE, LAWRENCE, MCDONALD, MILLER, NEWTON, OZARK, PHELPS, POLK, PULASKI, SHANNON, STONE, TANEY, TEXAS, VERNON, WEBSTER AND WRIGHT COUNTIES

	Rates	Fringes
Truck drivers:		
Traffic Control Service Driver	$ 20.45	0.00

PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, employee's birthday and 2 personal days.

TEAM0541-001 04/01/2018

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 32.66	15.25
GROUP 2	$ 32.09	15.25
GROUP 3	$ 31.57	15.25

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Mechanics and Welders, Field; A-Frame Low Boy-Boom ruck Driver.

GROUP 2: Articulated Dump Truck; Insley Wagons: Dump Trucks, Excavating, 5 cu yds and over; Dumpsters; Half-Tracks: Speedace: Euclids & similar excavating equipment Material trucks, Tandem Two teams; Semi-Trailers; Winch trucks-Fork trucks; Distributor Drivers and Operators; Agitator and Transit Mix; Tank Wagon Drivers, Tandem or Semi; One Team; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon Drivers, Single Axle

GROUP 3: Oilers and Greasers - Field

TEAM0682-002 05/01/2017

ST LOUIS CITY AND COUNTY

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 33.30	13.79+a+b+c+d
GROUP 2	$ 33.50	13.79+a+b+c+d
GROUP 3	$ 33.60	13.79+a+b+c+d

a. PENSION: 5/1/2012 - $182.20 per week.

b. HAZMAT PREMIUM: If Hazmat certification on a job site is required by a state or federal agency or requested by project owner or by the employer, employees on that job site shall receive $1.50 premium pay.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Pick-up trucks; forklift, single axle; flatbed trucks; job site ambulance, and trucks or trailers of a water level capacity of 11.99 cu. yds. or less

GROUP 2 - Trucks or trailers of a water level capacity of 12.0 cu yds. up to 22.0 cu yds. including euclids, speedace and similar equipment of same capacity and compressors

GROUP 3 - Trucks or trailers of a water level capacity of 22.0 cu. yds & over including euclids, speedace & all floats, flatbed trailers, boom trucks, winch trucks, including small trailers, farm wagons tilt-top trailers, field offices, tool trailers, concrete pumps, concrete conveyors & gasoline tank trailers and truck mounted mobile concrete mixers

FOOTNOTE FOR TRUCK DRIVERS:

c. PAID HOLIDAYS: Christmas Day, Independence Day, Labor Day, Memorial Day, Veterans Day, New Years Day, Thanksgiving Day

d. PAID VACATION: 3 days paid vacation for 600 hours of service in any one contract year; 4 days paid vacation for 800 hours of service in any one contract year; 5 days paid vacation for 1,000 hours of service in any one contract year. When such an employee has completed 3 years of continuous employment with the same employer and then works

the above required number of hours, he shall receive double the number of days of vacation specified above. When such an employee has completed 10 years of continuous employment with the same employer and then works the above required number of hours, he shall receive triple the number of days of vacation specified above. When such an employee has completed 15 years of continuous employment with the same employer and then works the above required number of hours, he shall receive 4 times the number of days of vacation specified above.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example:

PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

General Decision Number: MO180051 12/07/2018 MO51

Superseded General Decision Number: MO20170051

State: Missouri

Construction Type: Building

County: St Louis City County in Missouri.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018
1	02/02/2018
2	03/16/2018
3	04/06/2018
4	05/04/2018
5	06/15/2018
6	06/22/2018
7	08/31/2018
8	10/12/2018
9	11/02/2018
10	12/07/2018

ASBE0001-005 10/02/2017

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR	$ 38.70	23.17

BOIL0027-001 01/01/2017

	Rates	Fringes
BOILERMAKER	$ 35.41	30.04

BRMO0001-007 06/06/2018

	Rates	Fringes
BRICKLAYER	$ 36.25	20.87

BRMO0018-006 07/01/2018

	Rates	Fringes
TILE FINISHER	$ 28.29	15.12
TILE SETTER	$ 32.41	16.02

CARP0002-007 05/07/2018

	Rates	Fringes
CARPENTER (Including Drywall Hanging & Form Work)	$ 38.85	17.10

CARP1310-001 05/01/2018

	Rates	Fringes
CARPENTER (Floor Laying-Carpet and Vinyl Only)	$ 33.43	17.00

ELEC0001-001 06/04/2017

	Rates	Fringes
ELECTRICIAN (Including Low Voltage Wiring Installer; Alarm, Computer & Telephone Installation)	$ 36.92	25.22

ELEV0003-001 01/01/2018

	Rates	Fringes
ELEVATOR MECHANIC	$ 48.54	32.645+a+b

a. VACATION: Employer contributes 8% of basic hourly rate as vacation pay credit for more than 5 years of service; and 6% for 6 months to 5 years of service.

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day,the Friday after Thanksgiving Day and Christmas Day.

ENGI0513-003 05/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Backhoe/Excavator	$ 32.96	27.24
Bobcat/Skid Loader	$ 31.31	23.66
Crane	$ 32.96	27.24
Forklift	$ 32.96	27.24
Grader/Blade	$ 32.96	27.24

Loader	$ 32.96	27.24
Paver	$ 32.96	27.24
Roller	$ 32.96	27.24

IRON0396-001 08/02/2017

	Rates	Fringes
IRONWORKER, ORNAMENTAL, REINFORCING, AND STRUCTURAL	$ 33.96	25.11

LABO0042-001 03/07/2018

	Rates	Fringes
LABORER		
Brick & Cement/Concrete Mason Tender	$ 31.91	15.32
Common or General; Asphalt Shoveler;Pipelayer	$ 32.32	15.32

PAIN0002-001 09/01/2017

	Rates	Fringes
PAINTER		
Brush & Roller	$ 32.34	15.32
Drywall Finishing/Taping	$ 32.34	15.32

PAIN0513-006 01/01/2016

	Rates	Fringes
GLAZIER	$ 33.40	23.55

PLAS0527-002 04/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 32.66	18.62

* PLUM0562-005 07/01/2018

	Rates	Fringes
PIPEFITTER, Includes HVAC Pipe Installation	$ 40.25	27.68
PLUMBER, Excludes HVAC Pipe Installation	$ 40.25	27.68

ROOF0002-001 03/01/2018

	Rates	Fringes
ROOFER	$ 32.70	17.97

* SFM00268-002 09/01/2018

	Rates	Fringes

SPRINKLER FITTER (Fire Sprinklers).....$ 44.26 23.82 22.02

SHEE0036-001 08/01/2018

	Rates	Fringes
SHEET METAL WORKER, Includes HVAC Duct and Unit Installation.....	$ 42.65	22.72

TEAM0682-003 04/01/2018

	Rates	Fringes
TRUCK DRIVER, Includes Dump Truck.....	$ 21.00	a+b

a.PAID HOLIDAYS: Christmas, Fourth of July, Labor Day, Memorial Day, New Years Day and Thanksgiving Day.

b.PAID VACATION: 1 week paid vacation after 2 years continuous service; 2 weeks paid vacation after 5 years continuous service; 3 weeks paid vacation after 10 years continuous service.

SUMO2010-050 06/14/2010

	Rates	Fringes
OPERATOR: Hoist.....	$ 26.02	13.01
PAINTER: Spray.....	$ 17.78	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage

payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION