

INVITATION FOR BID #2017-01

DESCRIPTION

ASBESTOS CONTAINING MATERIALS REMEDIATION 701 3RD ST., BOONVILLE, MISSOURI (FORMER KEMPER MILITARY SCHOOL K-BARRACKS)

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

The Boonslick Community Development Corporation (BCDC) has received a grant funded by the Environmental Improvement and Energy Resources Authority (EI ERA) Missouri Brownfield Revolving Loan Fund through the U.S. Environmental Protection Agency to conduct remedial activities at the 701 3rd Street, Boonville, Missouri Site to address asbestos containing materials abatement.

Date Issued: October 27, 2017

Owner: Boonslick Community Development Corporation

Owners Representative: Ms. Kate Fjell

Owner's Representative Email: kate.fjell@boonville-mo.org

Telephone Number: 660-882-4003

Mandatory Pre-Bid Conference and Site Walk: 2:00 p.m., Wednesday, November 15, 2017

Submit Bids to:

Boonslick Community Development Corporation

Ms. Kate Fjell

c/o Boonville City Hall

401 Main Street

Boonville, Missouri 65233

SEALED BIDS MUST BE PHYSICALLY RECEIVED PRIOR TO **4:00 P.M. on Thursday, November 30, 2017**. Bids will be opened by the buyer 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 contract resulting from this solicitation.
 - **FAXED/EMAILED BIDS WILL NOT BE ACCEPTED.**
-

Table of Contents

INSTRUCTION TO BIDDERS.....	3
GENERAL TERMS AND CONDITIONS	7
SPECIFICATIONS	17
BID FORM-PROPOSAL	19

ATTACHMENTS

A	ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES FOR THE 701 3 RD STREET, BOONVILLE, MISSOURI SITE
B	REMEDIAL ACTION PLAN FOR THE 701 3 RD STREET, BOONVILLE, MISSOURI SITE
C	SAMPLE PERFORMANCE AND LABOR AND MATERIALS BONDS
D	FEDERAL WORK AUTHORIZATION PROGRAM AFFIDAVIT
E	AFFIDAVIT OF COMPLIANCE
F	DEBARRMENT AND SUSPENSION CERTIFICATION
G	WAGE RATES

INSTRUCTION TO BIDDERS

01. Opening Location

The Bids will be opened at Boonville City Hall, 401 Main Street, Boonville, MO 65233.

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:

Boonslick Community Development Corporation

Ms. Kate Fjell

c/o Boonville City Hall

401 Main Street

Boonville, Missouri 65233

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 Boonslick Community Development Corporation (Owner) in writing or through email. The Boonslick Community Development Corporation 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 660-882-2332, to determine if addenda were issued and to make such addenda a part of their Bid.

07. IFB Expenses

All expenses for 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 Statutes, 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 Boonslick Community Development Corporation, 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.

701 3rd STREET, BOONVILLE, MISSOURI CLEANUP
INVITATION FOR BID #2017-01
GENERAL TERMS AND CONDITIONS

1. **INTRODUCTION:** The Boonslick Community Development Corporation (Owner) plans to conduct remedial activities to address asbestos-containing material (ACM) at the 701 3rd Street site located in downtown Boonville, 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 building materials containing ACM. 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 May 30, 2018.

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 **November 15, 2017 at 2:00 p.m.** at 701 3rd Street, Boonville, Missouri. At that time a site walk will be conducted to view the site building.

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 prevailing wage law. 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 SBRA's are solicited whenever they are potential sources;
 - c. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by SBRA's;
 - d. Establishing delivery schedules, where the requirements of work will permit which would encourage participation by SBRA's;
 - 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(I)(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.

Abatement procedures will require specific safety and air monitoring provisions to maintain worker safety and ensure public exposure risks are not introduced. Abatement contractors should clearly demonstrate the ability to maintain a safe work environment prior to the selection process. These provisions will be detailed in the selected Contractor's site-specific Health and Safety Plan; however, submitted bid documents should clearly demonstrate the Contractor's ability to maintain all required safety controls.

Abatement activities shall be managed in the field by properly trained personnel, as required under governing federal NESHAP and State of Missouri licensing, training, and accreditation programs. These include specific requirements for project design, abatement, and verification inspections and sampling. Regulatory references and links to specific regulations and requirement are provided below:

[The National Emission Standard for Asbestos - 40 CFR Part 61, Subpart M \(61.140 - 61.157\)](#)

[Missouri Air Conservation Law Sections 643.225 - 643.250 of the Revised Statutes of Missouri](#)
[643.225](#) [643.228](#) [643.230](#) [643.232](#) [643.235](#) [643.237](#) [643.240](#) [643.242](#) [643.245](#) [643.250](#)

[Missouri State Regulations 10 CSR 10-6.241 Asbestos Projects-Registration, Notification and Performance Requirements, and 10 CSR 10-6.250 Asbestos Abatement Projects - Certification, Accreditation and Business Exemption Requirements](#)

Specific training and licensing requirements are outlined below. These requirements are not all inclusive. It is the responsibility of the bidding Contractor to fully understand and maintain compliance with all training and licensing requirements throughout the duration of the project.

- Missouri licensed asbestos abatement contractor (abatement/removal activities)
- Missouri-certified asbestos inspector (additional characterization & clearance sampling)
- Missouri-certified air sampling professionals
- Missouri-certified asbestos project designer (as required for planning, RAP & design)

Additional training and certifications will apply for LBP removals if performed. These include specific State of Missouri requirements for project design, abatement, and verification inspections and sampling [19 CSR 30-70]. This information is available for download at the following Missouri [Department of Health and Senior Services](#) link.

- 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 90 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 10 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 Contractor's 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 incident 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 May 30, 2018.

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 701 3rd Street, Boonville, Missouri property is enrolled the Missouri Department of Natural Resources Brownfields/Voluntary Cleanup Program (MDNR/BVCP). The MDNR/BVCP Project Manager is Ms. Christine O'Keefe. The site cleanup goal under the MDNR/BVCP is for unrestricted use; therefore, cleanup activities have been planned to accomplish that goal.

The selected contractor must be currently licensed in Missouri as an Asbestos Abatement Contractor. Additionally, on site workers must be currently licensed by the State of Missouri as Asbestos Workers. A copy of the company's Asbestos Contractor certification must be submitted with the bid. Additionally, prior to commencing any site work, the remedial contractor must submit copies of their Asbestos Contractor Certifications to the MDNR/BVCP Project Manager.

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

Contractor must submit Asbestos Project Notifications to the State of Missouri and must also complete and submit Asbestos Project Post-Abatement Reports.

Clearance air sampling activities for asbestos must be conducted by a third party contractor hired by the remediation contractor.

Following completion of cleanup activities, in areas of the building where cleanup activities have resulted in building openings, the contractor will be responsible for securing the building and sealing it to the outside environment. This should be accomplished by using hard/rigid materials (plywood or equivalent). The manner in which the building is secured must be approved by the Owner.

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 abatement/cleanup of asbestos containing materials 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.

KEMPER MILITARY SCHOOL K-BARRACKS BUILDING 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					
ASBESTOS-CONTAINING MATERIALS					
1	12" x 12" Vinyl Tile/Mastic – Brown (3 rd Floor Rooms)	Sq. ft.	9,350	\$	\$
2	12" x 12" Vinyl Tile/Mastic – Gray (3 rd Floor Hallway)	Sq. ft.	1,650	\$	\$
3	12" x 12" Vinyl Tile/Mastic – White (Room 339)	Sq. ft.	28,000	\$	\$
4	Ceiling Texture (1 st , 2 nd and 3 rd Floor Rooms)	Sq. ft.	11,000	\$	\$
5	12" x 12" Vinyl Tile – Brown (Throughout 2 nd Floor)	Sq. ft.	11,000	\$	\$
6	12" x 12" Vinyl Tile – Brown (Throughout 1 st Floor)	Sq. ft.	11,000	\$	\$
7	Vibration Dampener (Storage Room)	each	2		\$
8	Mudded Fitting (Boiler Room)	each	250	\$	\$
9	Magblock Duct Insulation (Boiler Room)	Sq. ft.	800	\$	\$
10	Boiler Opening Mud (Boiler Room)	Lin. Ft.	15	\$	\$

Item Number	Description	Unit	Estimated Quantity	Unit Price	Extended Amount (Total)
11	Large Horizontal Water Tank Insulation (Boiler Room)	Sq. ft.	175	\$	\$
12	Small Upright Water Tank Insulation (Boiler Room)	Sq. ft.	150	\$	\$
13	Boiler Tanks Insulation (Boiler Room)	Sq. ft.	500	\$	\$
14	Spray-on Fireproofing (Boiler Room Ceiling)	Sq. ft.	2,400	\$	\$
15	12" x 12" Vinyl Tile/Mastic – White (Basement)	Sq. ft.	150	\$	\$
16	12" x 12" Vinyl Tile/Mastic – Brown (Basement)	Sq. ft.	3,500	\$	\$
17	Drywall (Basement)	Sq. ft.	650	\$	\$
REMEDIAL ACTION FINAL REPORT					
18	Project Health & Safety Plan, QAPP, and any other items necessary to finalize plan per MDNR/BVCP	Unit	1	\$	\$
19	Field Mobilization/Demobilization, Regulatory Notification and Permitting	Unit	1	\$	\$
20	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
Former Kemper Military School Administration Building
701 3rd Street, Boonville, 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 petroleum and LBP abatement 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. List your major equipment available for this Public Works Project. _____

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

15. Give bank reference. _____

18. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Boonslick Community Development Corporation?

19. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Boonslick Community Development Corporation, 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: _____

ATTACHMENT A



Seagull Environmental Technologies, Inc.

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

March 13, 2017

Ms. Kristin Allan Tipton
Development Director
Environmental Improvement and Energy Resources Authority
425 Madison Street
Jefferson City, Missouri 65102

**Subject: Analysis of Brownfields Cleanup Alternatives
 Kemper Military School – K Barracks Site, Boonville, Missouri
 Missouri Brownfields Revolving Loan Fund Support Contract**

Dear Ms. Allan Tipton:

Seagull Environmental Technologies, Inc. (Seagull) is submitting the attached Analysis of Brownfields Cleanup Alternatives (ABCA) report for the Kemper Military School – K Barracks site in Boonville, Missouri. If you have any questions or comments, please contact the project manager at (720) 666-3803.

Sincerely,

A handwritten signature in black ink that reads "Ryan M. Lunt".

Ryan M. Lunt, CHMM
Environmental Scientist

Enclosures

ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES
KEMPER MILITARY SCHOOL – K BARRACKS SITE, BOONVILLE, MISSOURI

Missouri Brownfields Revolving Loan Fund Support Contract

Prepared For:

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

March 13, 2017

Prepared By:

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

CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION	1
2.0 SITE LOCATION AND DESCRIPTION	1
3.0 POTENTIAL CLEANUP ALTERNATIVES.....	1
3.1 EVALUATED CONTAMINATION.....	3
3.1.1 Asbestos-Containing Materials	3
3.1.2 Lead-Based Paint	5
3.2 EVALUATION OF CLEANUP ALTERNATIVES	5
3.2.1 Asbestos-Containing Materials	5
3.3 RECOMMENDED CLEANUP ALTERNATIVES	8
3.3.1 Total Cleanup Cost.....	8
4.0 REFERENCES	9

APPENDICES

Appendix

A	FIGURES
B	PHOTOGRAPHIC DOCUMENTATION

TABLES

<u>Table</u>	<u>Page</u>
1 ASBESTOS-CONTAINING MATERIALS.....	4
2 ACM ABATEMENT COSTS	7
3 SUMMARY OF COSTS	8

1.0 INTRODUCTION

Seagull Environmental Technologies, Inc. (Seagull) was tasked by the Environmental Improvement and Energy Resources Authority (EI ERA), under the Missouri Brownfields Revolving Loan Support Contract, to complete an Analysis of Brownfields Cleanup Alternatives (ABCA) report for the Kemper Military School – K BARRACKS site in Boonville, Missouri. This ABCA report examines alternatives for cleanup of asbestos-containing materials (ACM), including preliminary cost estimates.

2.0 SITE LOCATION AND DESCRIPTION

The site is a three-story, approximately 42,000-square-foot (ft²) building at the former Kemper Military School. The physical address for the property is 701 3rd Street, Boonville, Missouri (see Appendix A Figure 1). The Kemper Military School-K Barracks is located in Section 35, Township 49 North, and Range 17 West. The coordinates for the approximate center of the subject property are 38.971389 degrees north latitude and 92.747185 degrees west longitude (see Appendix A Figure 1). The K Barracks consists of a boiler room and storage rooms that housed paints, trash bins, benches, and various building materials for the City of Boonville.

Historical information obtained for the site indicates that the original K Barracks building has been on-site since at least 1947. Since development of the K Barracks, the boiler room in the basement supplied heat to half the Kemper Military campus. In 2003, the City of Boonville acquired the subject property through an auction. Future plans are to demolish the building.

3.0 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. Future plans are to demolish the building.

Brownfields cleanup alternatives were evaluated for the site to address ACM identified in past environmental assessments/inspections. SCI Engineering, Inc. (SCI) completed a Phase I Environmental Site Assessment (ESA) for the site in July 2016 (SCI 2016). As part of that Phase I ESA, SCI completed an asbestos inspection for the site, which involved visually confirming the presence/quantity of previously identified ACM, as well as sampling other materials suspected to contain asbestos.

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 ACM, including a “No Action” alternative. 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 (includes resilience to impacts associated with natural disasters, climate change, etc.); specific effects of climate change evaluated for the site were for increased/decreased temperatures and precipitation, as well as extreme weather events (e.g., storms of unusual intensity, increased frequency and intensity of localized flooding events);
- Reduction of toxicity, mobility, or volume through treatment/removal;
- Short-term effectiveness.

The 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 include:

- 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.

3.1 EVALUATED CONTAMINATION

Contaminants and environmental issues evaluated as part of this ABCA include ACM. The sections below discuss contaminants/materials identified in the 2016 Phase I ESA and asbestos inspection completed for the site. Site photographs are included as Appendix B.

3.1.1 Asbestos-Containing Materials

During the 2016 asbestos inspection, 85 bulk samples of building materials were collected for laboratory analysis of asbestos. In addition, Seagull conducted a site visit on January 31, 2017, to confirm quantities of ACM. Based on that site visit, some of the quantities of ACM were revised from totals listed in previous site reports. In all, 17 materials associated with the site have been determined to contain asbestos. Those materials are ceiling texture, mudded fittings, vibration dampener, insulation around the water tanks, mud around the boiler openings, magblock duct insulation, boiler tanks insulation, spray-on fireproofing, 12" x 12" brown floor tile and associated mastic (basement, 1st, 2nd, and 3rd floors), 12" x 12" white with tan streaks floor tile and associated mastic (basement), 12" x 12" white floor tile (Room 339), 12" x 12" gray floor tile (3rd Floor), and drywall joint compound (basement only). Those materials contained asbestos (chrysotile) at concentrations ranging from 2 to 60 percent (%). The U.S. Environmental Protection Agency (EPA) defines ACM as any material containing asbestos at a concentration above 1%. It should be noted the drywall as a composite material (drywall and joint compound) was less than 1 %; however, since the K Barracks are being demolished, the Occupational Safety and Health Administration (OSHA) would consider the material to be ACM (due to the 2% chrysotile in the joint compound) and therefore abatement would be required. Table 1 summarizes the materials determined to contain asbestos during the inspection, as well as materials identified as ACM during previous assessments. Figures 3A through 3D in Appendix A show the locations of ACM.

TABLE 1
ASBESTOS-CONTAINING MATERIALS
KEMPER MILITARY SCHOOL – K BARRACKS BUILDING SITE
BOONVILLE, MISSOURI

Material	Location*	Estimated Quantity	Asbestos Result (%)
12"x 12" Floor Tile (on concrete) – Brown	3rd Floor- All Rooms -	9,350 ft ²	Tile – 2% Chrysotile Mastic – 3% Chrysotile
12"x 12" Floor Tile (on concrete) – Brown	1 st Floor	11,000 ft ²	Tile – 3% Chrysotile Mastic – 5% Chrysotile
12"x 12" Floor Tile (on concrete) – Brown	2 nd Floor-	11,000 ft ²	Tile – 3% Chrysotile Mastic – 5% Chrysotile
12"x 12" Floor Tile (on concrete) – Brown	Basement	3,500 ft ²	Tile – 3% Chrysotile Mastic – 4% Chrysotile
12"x 12" Floor Tile (on concrete) – White with Tan Streaks	Basement	3,500 ft ²	Tile – 3% Chrysotile Mastic – 4% Chrysotile
12"x 12" Floor Tile (on concrete) – Gray	3rd Floor - Hallway	1,650 ft ²	Tile – No Asbestos Present Mastic – 4% Chrysotile
12"x 12" Floor Tile (on concrete) – White	Room 339	35 ft ²	Tile – No Asbestos Present Mastic – 3% Chrysotile
Ceiling Texture	1 st , 2 nd , and 3 rd Floor Rooms	28,000 ft ²	3% Chrysotile
Vibration Dampener**	Storage Room	2 Each	60% Chrysotile
Mudded Fittings	Boiler Room	250 Fittings	20% Chrysotile
Magblock Duct Insulation	Boiler Room	800 ft ²	60% Chrysotile
Boiler Opening Mud	Boiler Room	15 lf	10% Chrysotile
Large Sideways Water Tank Insulation	Boiler Room	175 ft ²	20% Chrysotile
Small Upright Water Tank Insulation	Boiler Room	150 ft ²	20% Chrysotile
Boiler Tanks Insulation	Boiler Room	500 ft ²	20% Chrysotile
Spray-On Fireproofing	Boiler Room-Ceiling	2,400 ft ²	20% Chrysotile
Drywall with Joint Compound	Basement	650 ft ²	Drywall – No Asbestos Present Joint Compound – 2% Chrysotile

Notes:

* Locations of ACM are depicted on Figures 3A through 3D in Appendix A of this report.

**During the site reconnaissance to verify the quantity of asbestos-containing material, Seagull did not locate the vibration dampeners.

" Inch
% Percent
ACM Asbestos-containing material
ft² Square feet
lf Linear feet

3.1.2 Lead-Based Paint

A Lead-Based Paint (LBP) inspection was not conducted as part of the 2016 Phase I ESA; however, since future plans for the K Barracks involve its demolition, no LBP inspection, remediation or special handling is required.

3.2 EVALUATION OF CLEANUP ALTERNATIVES

Evaluation of cleanup alternatives includes two options for ACM. Evaluations have been developed with specific consideration to the Missouri Department of Natural Resources (MDNR) Brownfields/Voluntary Cleanup Program (BVCP) procedural requirements and Missouri Risk-Based Corrective Action (MRBCA) technical guidance. This consideration was made because cleanup projects implemented with EPA Brownfields Cleanup funding generally require participation in a state voluntary cleanup program (or equivalent). For reference, fees associated with enrollment into the MDNR BVCP include a \$200 application fee and refundable oversight deposit of \$5,000.

3.2.1 Asbestos-Containing Materials

For ACM, two options were evaluated: (1) no action, and (2) proper abatement.

Alternative 1: No Action

Alternative 1 (no action) would consist of leaving ACM in place at the site.

Effectiveness

This alternative would not be effective regarding demolition of the site building that contains ACM. In accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations, demolition of the K Barracks building cannot be conducted prior to proper abatement; therefore, site redevelopment could not occur. This alternative would also be ineffective in achieving the goal of reduction of health risks.

Implementation

Implementation of this alternative is straightforward — the ACM is left in place. Demolition of the K Barracks Building could not be conducted prior to abatement.

Cost

This alternative would not involve any direct costs.

Alternative 2: Abatement of Asbestos-Containing Material

Alternative 2 would involve proper abatement of the ACM identified at the site, which includes ceiling texture, mudded fittings, vibration dampener, insulation around the water tanks, mud around the boiler openings, magblock duct insulation, boiler tanks insulation, spray-on fireproofing, 12" x 12" brown floor tile and associated mastic (basement, 1st, 2nd, and 3rd floors), 12" x 12" white with tan streaks floor tile and associated mastic (basement), 12" x 12" white floor tile (Room 339), 12" x 12" gray floor tile (3rd Floor), and drywall joint compound. Abatement would be conducted in accordance with applicable local, state, and federal regulations by a registered asbestos abatement contractor. Regulatory clearance would be obtained through successful implementation of a pre-approved Remedial Action Plan (RAP) and pre/post-abatement inspections. The collection of indoor air samples for clearance purposes will not be required, because the building will not be reoccupied.

Effectiveness

If all of the identified ACM was removed, then Alternative 2 would be most effective in removing the risk to human health posed by the ACM. In addition, full abatement would allow for the demolishing of the K Barracks building without restrictions concerning disturbance of ACM.

Implementation

Abatement would be conducted in accordance with applicable local, state, and federal regulations by a registered asbestos abatement contractor. ACM identified at the site includes approximately 38,350 ft² of 12" X 12" floor tile/mastic, 1,650 ft² of tile mastic, 28,000 ft² of ceiling texture, 2 vibration dampeners, 250 thermal system insulation (TSI) mudded joints, 800 ft² of duct insulation, 15 linear feet of mudding, 825 ft² of tank insulation, 2,400 ft² of spray-on fire proofing, and 650 ft² of drywall compound. Full abatement would include complete removal of those materials.

Cost

Estimated abatement costs were gathered from local vendors. Costs per linear foot and ft² are provided and include removal and disposal costs. Table 2 below summarizes the abatement costs.

TABLE 2

**ACM ABATEMENT COSTS
KEMPER MILITARY SCHOOL – K BARRACKS BUILDING SITE
BOONVILLE, MISSOURI**

Material	Location	Estimated Quantity	Cost/Unit	Total Cost
12" X 12" Floor Tile/Mastic	Throughout Building	38,350 ft ²	\$2.00/ft ²	\$76,700.00
12" X 12" Floor Tile Mastic	3 rd Floor	1,650 ft ²	\$2.00/ft ²	\$3,300.00
Ceiling Texture	1 st , 2 nd , and 3 rd Floor Rooms	28,000 ft ²	\$6.00/ft ²	\$168,000.00
*Vibration Dampeners	Storage Room	2 Each	\$375.00/each	\$750.00
TSI Mudded Joints	Boiler Room	250	\$20.00/each	\$5,000.00
Magblock Duct Insulations	Boiler Room	800 ft ²	\$20.00/ft ²	\$16,000.00
Boiler Opening Mud	Boiler Room	15 lf	\$20.00 /lf	\$300.00
Tank Insulations	Boiler Room	825 ft ²	\$20.00/ft ²	\$16,500.00
Spray-on Fireproofing	Boiler Room-Ceiling	2,400 ft ²	\$20.00/ft ²	\$48,000.00
Drywall with Joint Compound	Basement	650 ft ²	\$7.50/ft ²	\$4,875.00
Total ACM Abatement Cost				**\$339,425

Notes:

*During the site reconnaissance to verify the quantity of asbestos-containing material, Seagull did not locate the vibration dampeners.

**If Davis Beacon Prevailing Wages are used for the abatement of ACM, a 25 percent (%) increase could potentially occur to the total cost.

ACM Asbestos-containing material
ft² Square feet
lf Linear feet
TSI Thermal system insulation

Total abatement cost for all of the ACM is estimated at \$339,425.00. Additional costs to be considered include preparation of a Final Cleanup Report. Estimated cost for the Final Cleanup Report is \$3,500.

3.3 RECOMMENDED CLEANUP ALTERNATIVES

Asbestos-Containing Material

Alternative 2 – abatement of ACM – is the recommended cleanup alternative for ACM identified at the site. Future plans at the site include demolition of the site building. Therefore, removal of all of the identified ACM would be required prior to demolition.

3.3.1 Total Cleanup Cost

Based on the recommended cleanup alternatives for ACM, the estimated total cleanup cost is \$348,125.00, which includes costs for site enrollment in the MDNR BVCP and preparation of a Final Cleanup Report. Specifically, full abatement of the ACM is estimated at \$339,425.00. Site enrollment fees into the MDNR BVCP program are \$5,200, while cost for preparation of a Final Cleanup Report is \$3,500. Table 3 summarizes the discussed costs.

TABLE 3
SUMMARY OF COSTS
KEMPER MILITARY SCHOOL – K BARRACKS BUILDING SITE
BOONVILLE, MISSOURI

Contaminant/Material	Recommended Alternative	Action – Cost	Total Cost
ACM	Alternative 2 – Abatement	Abatement – \$339,425.00	\$339,425.00
MDNR Brownfields/Voluntary Cleanup Program Fees			\$5,200.00
Final Cleanup Report			\$3,500.00
TOTAL CLEANUP COST - \$348,125.00			

Notes:

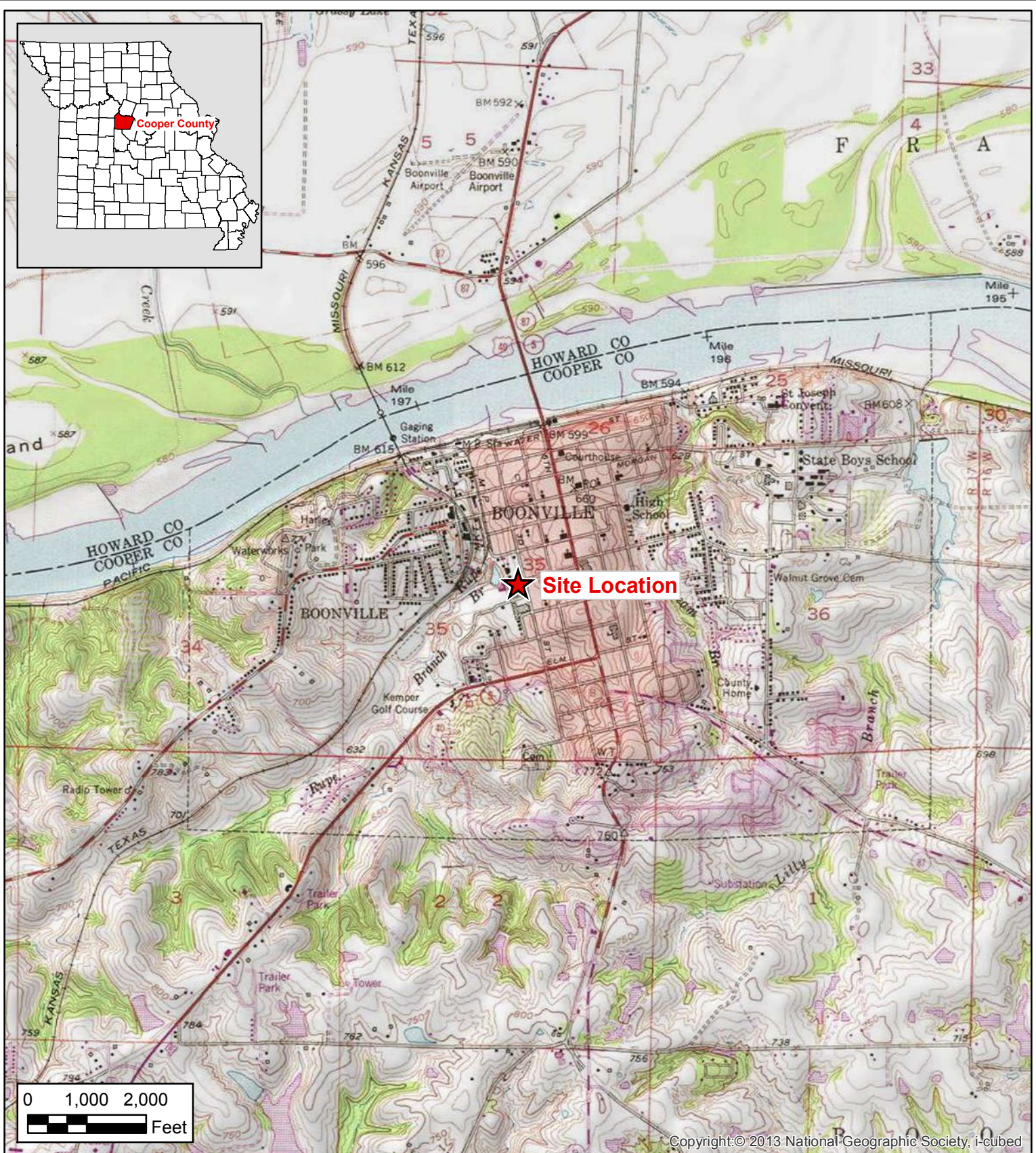
ACM Asbestos-containing materials
MDNR Missouri Department of Natural Resources

4.0 REFERENCES

SCI Engineering, Inc (SCI). 2016. Phase I Environmental Site Assessment and Asbestos Inspection Report of the Kemper Military School K Barracks Building Site. July.

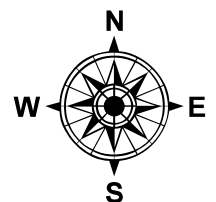
APPENDIX A

FIGURES



Seagull Environmental Technologies, Inc.

Source: USGS Boonville, MO 7.5 Minute Topo Quad, 1979



Date: February 2017

Project No: EI ERA0012TA

Legend


 Approximate Subject Site Boundary

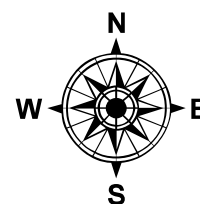


Figure 2
Site Layout Map

**Kemper Military School- K Barracks
Boonville, Missouri**



Seagull Environmental Technologies, Inc.



Source: ArcGIS Online Aerial Imagery, 2012

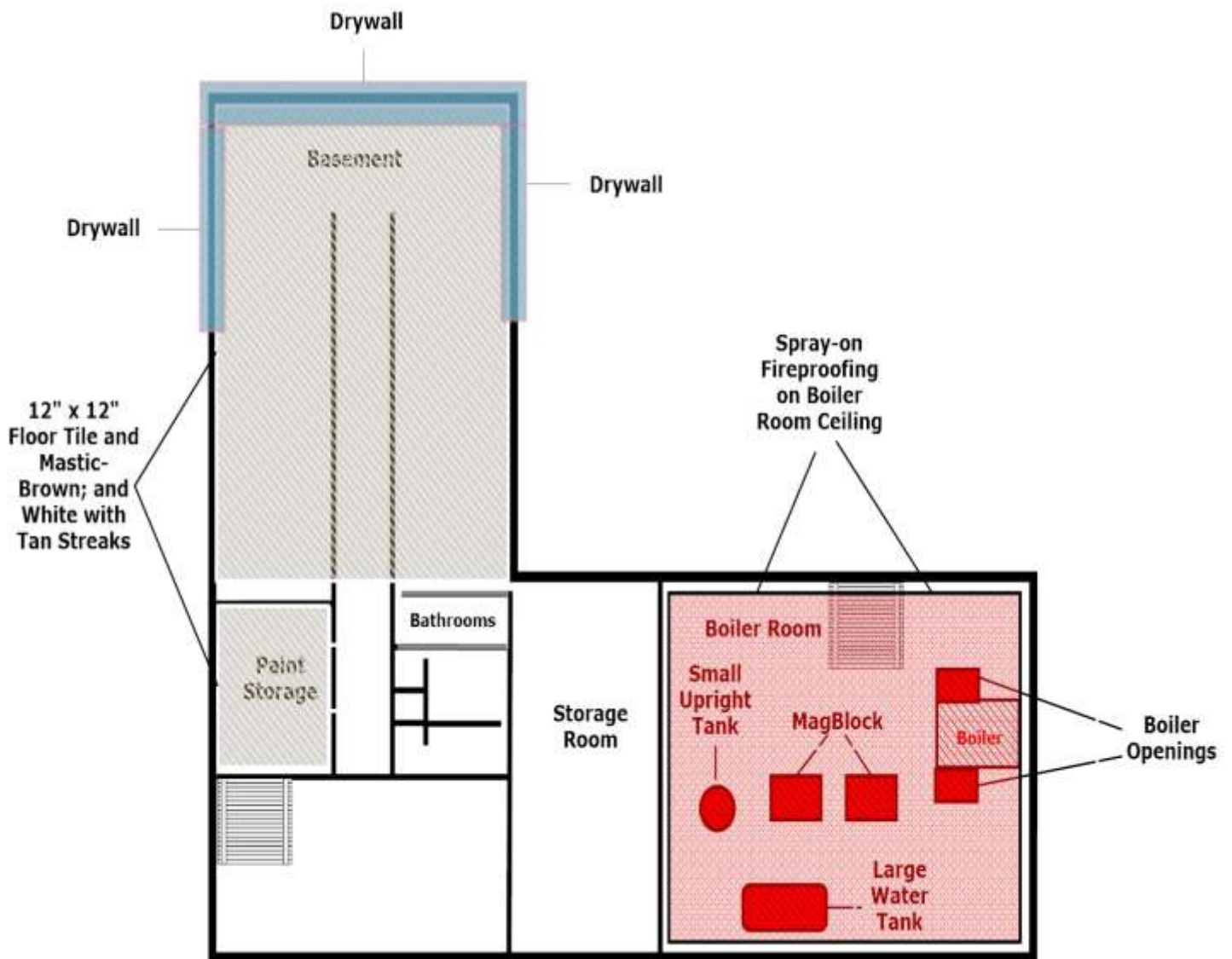


Figure 3A – Basement

Asbestos Containing Materials Location Map
Kemper Military K Barracks ABCA/RAP
701 3rd Street
Booneville, Missouri



Seagull Environmental Technologies, Inc.

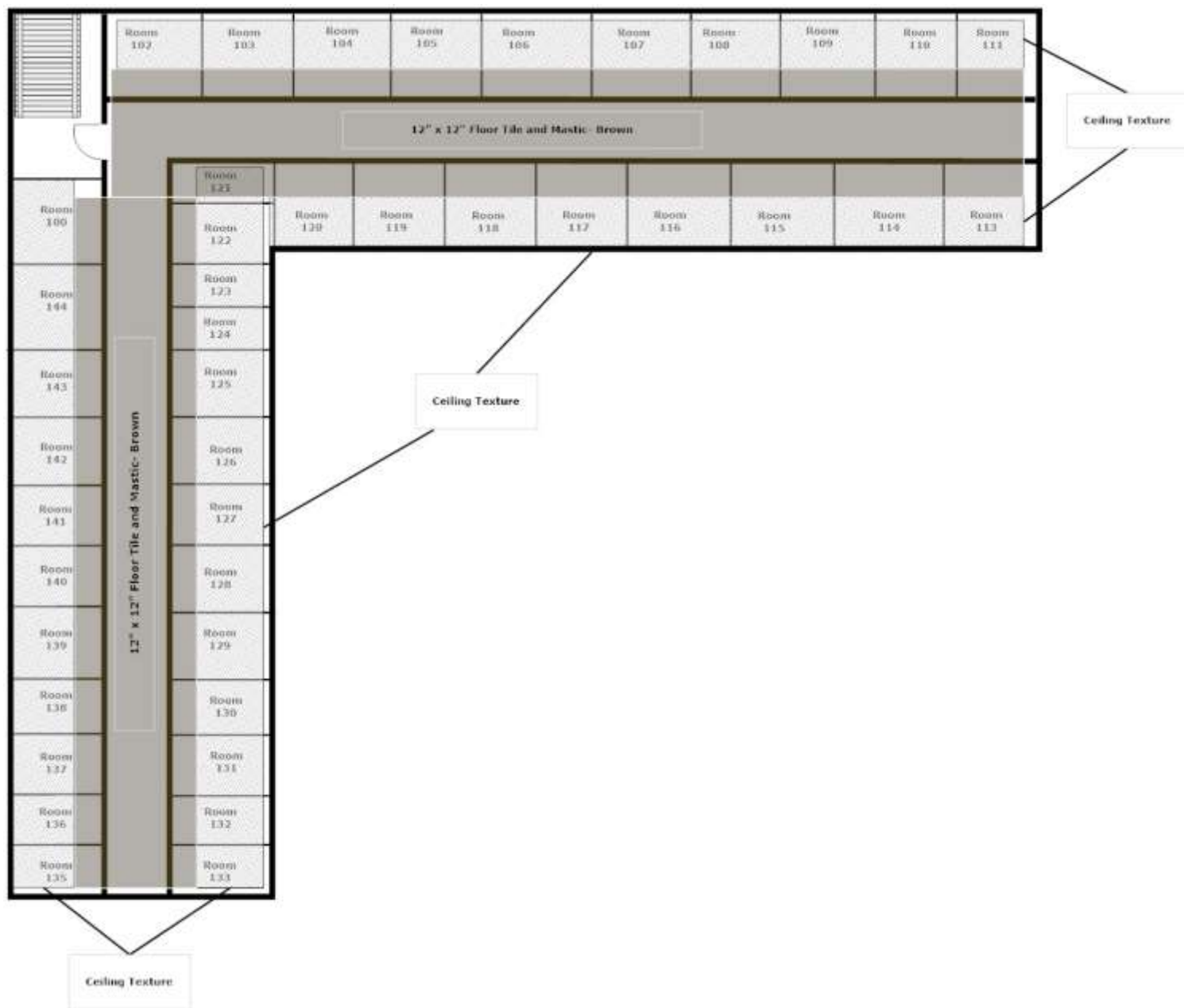


Figure 3B – 1st Floor

Asbestos Containing Materials Location Map
Kemper Military K Barracks ABCA/RAP
701 3rd Street
Booneville, Missouri



Seagull Environmental Technologies, Inc.

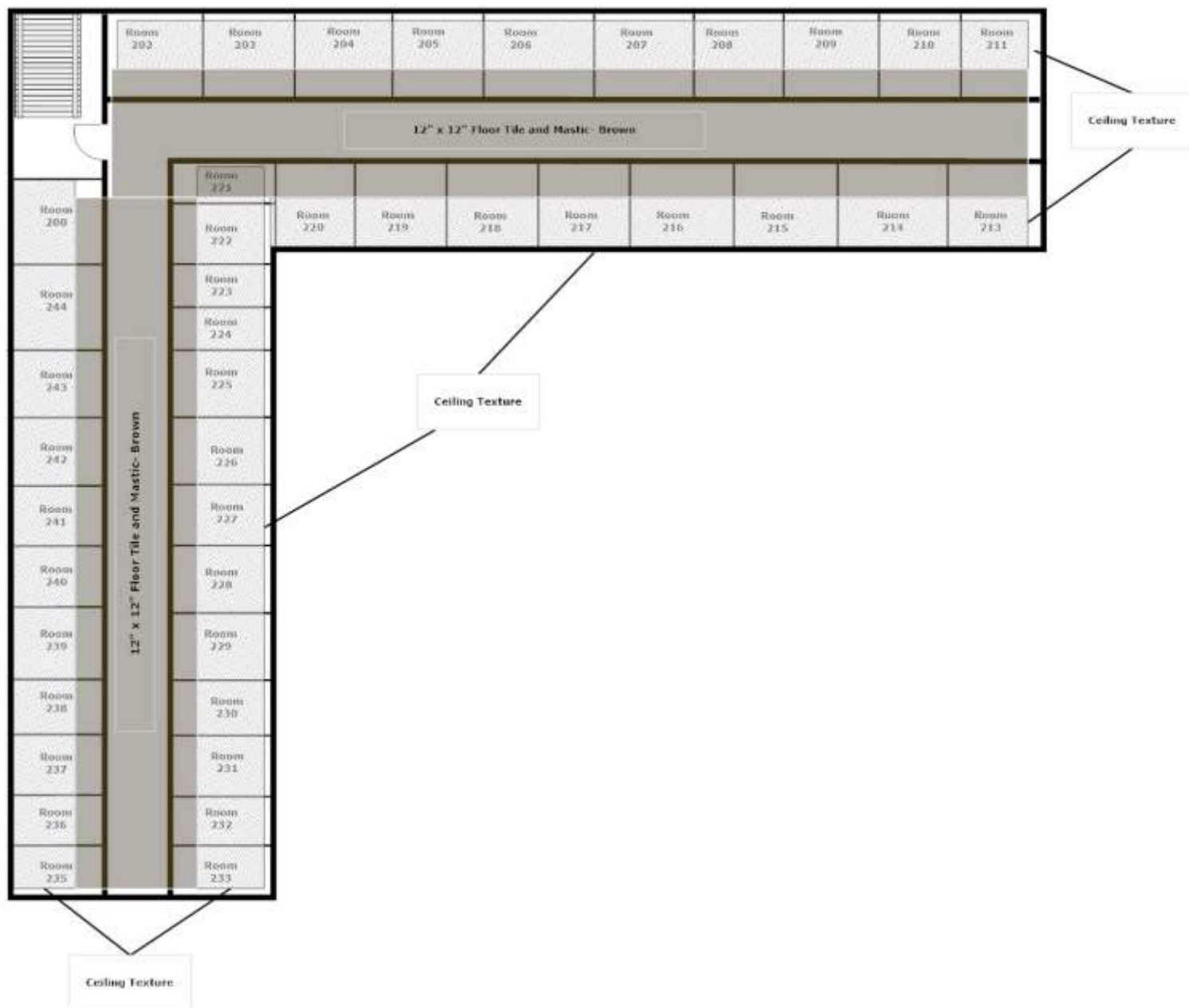


Figure 3C – 2nd Floor

Asbestos Containing Materials Location Map
Kemper Military K Barracks ABCA/RAP
701 3rd Street
Booneville, Missouri



Seagull Environmental Technologies, Inc.

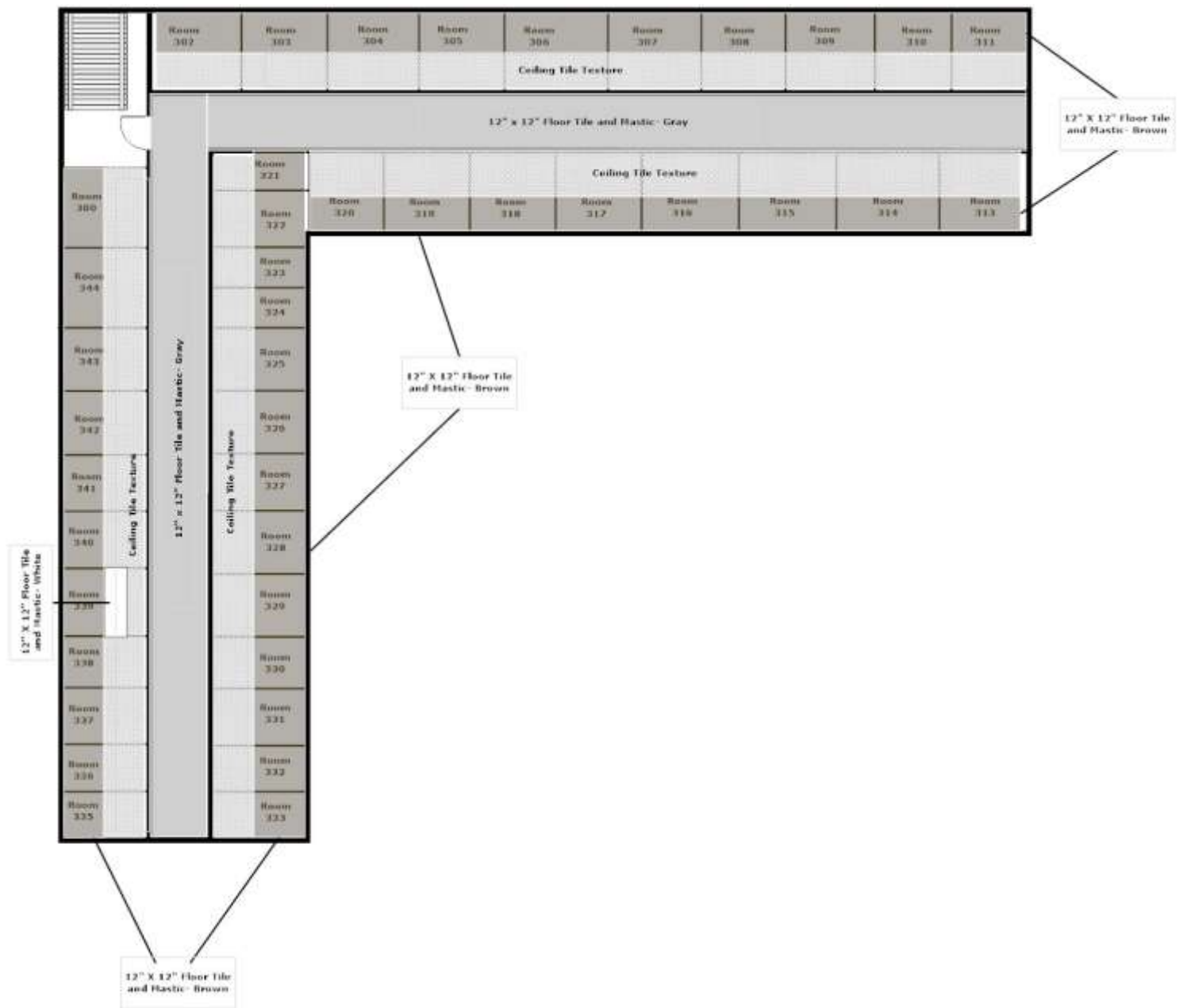


Figure 3D – 3rd Floor

Asbestos Containing Materials Location Map
Kemper Military K Barracks ABCA/RAP
701 3rd Street
Booneville, Missouri



Seagull Environmental Technologies, Inc.

APPENDIX B

PHOTOGRAPHIC DOCUMENTATION



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of the front of the Kemper Military School – K Barracks Building Site.

Photograph
Number: 1

Direction: West

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of 12" x 12" Brown floor tile and associated mastic containing asbestos-containing (ACM) materials are present in the 1st, 2nd, 3rd, and basement.

Photograph
Number: 2

Direction: N/A

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EI ERA0012TA



Client: EIERA

Description: Photograph of 12" x 12" White with Tan streaks floor tile and associated mastic containing ACM materials are present in the basement. Additionally, the 12" x 12" Brown floor tile and associated mastic containing ACM materials are present.

Photograph
Number: 3

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of 12" x 12" Gray floor tile on the 3rd floor hallway. The associated mastic contains asbestos.

Photograph
Number: 4

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EI ERA0012TA



Client: EIERA

Description: Photograph of 12" x 12" white floor tile in Room 339 on the 3rd floor hallway. The associated mastic contains ACM materials.

Photograph
Number: 5

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing ceiling texture on the 1st, 2nd, 3rd floor rooms.

Photograph
Number: 6

Direction: East

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of mudded joint ACM in the boiler room.

Photograph
Number: 7

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing pipe magblock duct insulation.

Photograph
Number: 8

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of asbestos-containing mud on the boiler opening.

Photograph Number: 9

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing insulation on the large sideways water tank.

Photograph Number: 10

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. MOESA023EA2



Client: EIERA

Description: Photograph of asbestos-containing insulation on the small upright water tank.

Photograph Number: 11

Direction: North

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing insulation on the boiler tanks.

Photograph Number: 12

Direction: West

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EI ERA0012TA



Client: EIERA

Description: Photograph of asbestos-containing spray-on fireproofing on the ceiling in the boiler room.

Photograph
Number: 13

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of drywall in the basement The joint compound in the drywall contains asbestos

Photograph
Number: 14

Direction: North

Photographer: Brandon Jones

Date: 1/31/2017

ATTACHMENT B



Seagull Environmental Technologies, Inc.

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

May 26, 2017

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

**Subject: Remedial Action Plan
Kemper Military School – K Barracks Site, Boonville, 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 Kemper Military School – K Barracks site in Boonville, Missouri. If you have any questions or comments, please contact the project manager at (816) 682-4089.

Sincerely,



Brandon Jones
Environmental Scientist

Enclosures

REMEDIAL ACTION PLAN
KEMPER MILITARY SCHOOL – K BARRACKS SITE
BOONVILLE, MISSOURI

Prepared For:

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

May 26, 2017

Prepared By:

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

CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION	1
1.1 SITE LOCATION AND DESCRIPTION	1
1.2 PREVIOUS ASSESSMENTS	2
2.0 PROJECT ORGANIZATION	4
2.1 RESPONSIBLE AGENCY	4
2.2 PROJECT PERSONNEL AND SCHEDULE.....	4
3.0 PROJECT OBJECTIVES AND CLEANUP RATIONALE.....	5
3.1 PROBLEM DEFINITION AND SAMPLING OBJECTIVE	6
3.2 PROJECT DESCRIPTION	6
4.0 PROJECT QUALITY OBJECTIVES.....	6
4.1 REVIEW AND APPROVAL ASSISTANCE	6
4.2 ADOPTION OF STATE QUALITY ASSURANCE PROJECT PLAN	6
4.2.1 Equivalency of Program Terms.....	7
4.3 DATA QUALITY OBJECTIVES	7
5.0 REMEDIAL ACTION TASKS	7
5.1 ACM ABATEMENT ACTIVITIES	7
5.1.1 ACM Abatement Techniques.....	7
5.1.2 ACM Clearance Sampling	8
5.1.3 ACM Abatement Clearance Criteria	9
5.2 WASTE CHARACTERIZATION AND DISPOSAL	9
5.3 DECONTAMINATION AND INVESTIGATIVE WASTES.....	9
6.0 FIELD DOCUMENTATION	10
6.1 PROJECT REMEDIAL ACTION PLAN.....	10
6.2 FIELD LOGBOOK.....	10
6.3 PHOTO-DOCUMENTATION	10
7.0 PROJECT SAFETY AND TRAINING.....	10
7.1 SPECIAL TRAINING REQUIREMENTS/CERTIFICATION.....	11
7.2 HEALTH AND SAFETY PLAN	11
8.0 PROJECT REPORTING	11

CONTENTS (continued)

<u>Section</u>	<u>Page</u>
9.0 ASSUMPTIONS AND WORK PLAN DEVIATIONS	11
10.0 REFERENCES	13

APPENDICES

Appendix

- A FIGURES
- B ASBESTOS SUMMARY TABLE
- C SITE PHOTOGRAPHS
- D MDNR QAPP FOR BROWNFIELDS/VOLUNTARY CLEANUP PROGRAM SITES
- E SITE-SPECIFIC QUALITY ASSURANCE ADDENDUM TO MDNR QAPP

TABLES

<u>Table</u>	<u>Page</u>
1 ASBESTOS-CONTAINING MATERIALS.....	2
2 PROJECT PERSONNEL.....	4
3 PROJECT SCHEDULE.....	4

1.0 INTRODUCTION

The City of Boonville has been awarded a Brownfields Cleanup Grant through the United States Environmental Protection Agency (EPA) and the Environmental Improvement and Energy Resources Authority (EI ERA) to address contamination at the Kemper Military School – K Barracks site in Boonville, Missouri. Specifically, remedial activities will be conducted to address asbestos-containing materials (ACM) associated with a former barracks building. The City of Boonville will use these grant funds to conduct remediation design and cleanup to allow for demolition of the building and restore the property for community use, as described in this Remedial Action Plan (RAP).

The Kemper Military School – K Barracks 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).

The following sections outline proposed field, laboratory, and associated quality control procedures in detail.

1.1 SITE LOCATION AND DESCRIPTION

The site is a three-story, approximately 42,000-square-foot (ft²) building at the former Kemper Military School. The physical address for the property is 701 3rd Street, Boonville, Missouri (see Appendix A Figure 1). The Kemper Military School-K Barracks site is located in Section 35, Township 49 North, and Range 17 West. Coordinates for the approximate center of the subject property are 38.971389 degrees north latitude and 92.747185 degrees west longitude. The K Barracks consists of a boiler room and storage rooms that housed paints, trash bins, benches, and various building materials for the City of Boonville.

Historical information obtained for the site indicates that the original K Barracks building has been on site since at least 1947. Since development of the K Barracks, the boiler room in the basement supplied heat to half the Kemper Military campus. In 2003, the City of Boonville acquired the subject property through an auction.

1.2 PREVIOUS ASSESSMENTS

The information below discusses contaminants/materials identified during past environmental assessments conducted for the site. The most recent assessment was a Phase I Environmental Site Assessment (ESA) and asbestos inspection completed for the site in July 2016 by SCI Engineering, Inc. (SCI). Inspections for lead-based paint (LBP) and household hazardous waste (HHW) were not included within the scope of these assessments; therefore, those materials will not be addressed in this RAP.

Asbestos-Containing Materials

During the 2016 asbestos inspection, 85 bulk samples of building materials were collected for laboratory analysis of asbestos. The 2016 asbestos inspection also included visual confirmation of building materials determined to be ACM during previous environmental assessments at the site. The volumes of those materials were recorded. Of note, Seagull conducted a site visit on January 31, 2017, to confirm quantities of ACM and collected additional ceiling samples to confirm the presence of asbestos. In all, 17 materials associated with the site have been determined to contain asbestos. Those materials include 12-inch by 12-inch vinyl floor tiles of various color, vinyl floor tile mastic, ceiling texture, vibration dampeners, mudded fittings, magblock duct insulation, boiler opening mud, tank insulation, spray-on fireproofing, and drywall and associated joint compound. Those materials contained asbestos (chrysotile) at concentrations ranging from 2 to 60 percent (%). EPA defines ACM as any material containing asbestos at a concentration above 1%. Table 1 summarizes the materials determined to contain asbestos at the site. Table B-1 in Appendix B contains a summary of all bulk materials collected for laboratory analysis of asbestos. Appendix C contains site photographs showing the areas/materials that contain asbestos. Figures 3A through 3D in Appendix A show the locations of ACM.

TABLE 1
ASBESTOS-CONTAINING MATERIALS
KEMPER MILITARY SCHOOL – K BARRACKS SITE
BOONVILLE, MISSOURI

Material	Location	Estimated Quantity	Asbestos Result (%)
12" x 12" Vinyl Tile/Mastic – Brown	3 rd Floor Rooms	9,350 ft ²	Tile – 2% Chrysotile Mastic – 3% Chrysotile
12"x 12" Vinyl Tile/Mastic – Gray	3 rd Floor Hallway	1,650 ft ²	Tile – No Asbestos Present Mastic – 4% Chrysotile

Material	Location	Estimated Quantity	Asbestos Result (%)
12"x 12" Vinyl Tile/Mastic – White	Room 339	35 ft ²	Tile – No Asbestos Present Mastic – 3% Chrysotile
Ceiling Texture	1 st , 2 nd , and 3 rd Floor Rooms	28,000 ft ²	3% Chrysotile
12"x 12" Vinyl Tile – Brown	Throughout 2 nd Floor	11,000 ft ²	Tile – 3% Chrysotile Mastic – 5% Chrysotile
12" x 12" Vinyl Tile – Brown	Throughout 1 st Floor	11,000 ft ²	Tile – 3% Chrysotile Mastic – 4% Chrysotile
Vibration Dampener	Storage Room	2 Each	60% Chrysotile
Mudded Fitting	Boiler Room	250 Fittings	20% Chrysotile
Magblock Duct Insulation	Boiler Room	800 ft ²	60% Chrysotile
Boiler Opening Mud	Boiler Room	15 lf	10% Chrysotile
Large Horizontal Water Tank Insulation	Boiler Room	175 ft ²	20% Chrysotile
Small Upright Water Tank Insulation	Boiler Room	150 ft ²	20% Chrysotile
Boiler Tanks Insulation	Boiler Room	500 ft ²	20% Chrysotile
Spray-On Fireproofing (on Ceiling)	Boiler Room	2,400 ft ²	20% Chrysotile
12" x 12" Vinyl Tile/Mastic – White	Basement	150 ft ²	Tile – No Asbestos Present Mastic – 5% Chrysotile
12" x 12" Vinyl Tile/Mastic – Brown	Basement	3,500 ft ²	Tile – 3% Chrysotile Mastic – 4% Chrysotile
Drywall	Basement	650 ft ²	Drywall – No Asbestos Present Joint Compound – 2% Chrysotile, <1% by Composite

Notes:

* Locations of ACM are depicted on Figures 3A through 3D in Appendix A of this report.

" Inch

% Percent

ACM Asbestos-containing material

ft² Square feet

lf Linear feet

2.0 PROJECT ORGANIZATION

This section summarizes the project organization for the remedial action.

2.1 RESPONSIBLE AGENCY

The City of Boonville is a sub-grantee to EIERA for this project. 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 2 below. Table 3 below outlines the tentative project schedule.

TABLE 2
PROJECT PERSONNEL
KEMPER MILITARY SCHOOL – K BARRACKS SITE
BOONVILLE, MISSOURI

Title	Name	Responsibilities	Phone Number
EIERA Director of Development	Kristin Allan Tipton	Overall Brownfields project management	573-751-4919
EPA Project Officer	Devin Pollock	General project coordination and programmatic oversight	913-551-7275
MDNR BVCP Project Manager	Christine O’Keefe	General project coordination and programmatic oversight, technical reviews, and approvals	573-751-7538
City of Boonville	Kate Fjell	General project coordination and oversight	660-346-5692
Remediation Contractor	To be determined	Conduct remedial activities, arrange disposal, and complete site restoration activities	To be determined

TABLE 3
PROJECT SCHEDULE
KEMPER MILITARY SCHOOL – K BARRACKS SITE
BOONVILLE, 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 will be distributed as indicated below. Additionally, the remediation contractor will distribute the Remedial Action Completion Report to the same contacts.

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

Ms. Kate Fjell
c/o Lake of the Ozarks Council of Local Governments
P.O. Box 3553
Camdenton, Missouri 65020

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. Devin Pollock

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.

- Preparation of a Remedial Action Completion Report summarizing field and disposal activities.

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 ACM is present at the site. For reference, Appendix C contains photographs that show the site, as well the areas/building components that contain ACM. Future plans for the site involve demolition of the site building. The primary objective of the remedial action is to remove and properly dispose of ACM that could impede demolition/redevelopment. Obtaining 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 ACM. A post-abatement visual clearance inspection will be conducted to ensure site cleanup 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

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) (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 SSQA (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. This remedial action involves abatement of ACM at the site and does not include collection of any sample data.

5.0 REMEDIAL ACTION TASKS

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

5.1 ACM ABATEMENT ACTIVITIES

At the time this RAP was developed, a contractor had not been chosen for abatement of ACM at the site. Seagull will ensure the abatement contractor is licensed in the State of Missouri, and possesses all the required certifications. Prior to commencing any site activities, the remediation contractor will provide copies of all applicable licenses, certifications, and notifications to MDNR.

General descriptions of abatement techniques to be used on ACM identified at the site are listed below. Abatement activities will follow all applicable federal, state, and local regulations. It should be noted that if additional ACM (or other unknown contaminants) are discovered during the abatement, work will stop, and actions to address the newly identified contaminants/materials will be discussed with MDNR.

5.1.1 ACM Abatement Techniques

As previously discussed, 17 materials associated with the site have been determined to contain asbestos. Those materials include 12-inch by 12-inch vinyl floor tiles of various color, vinyl floor tile mastic, ceiling texture, vibration dampeners, mudded fittings, magblock duct insulation, boiler opening mud, tank insulation, spray-on fireproofing, and drywall and associated joint compound (see Appendix A, Figures 3A through 3D).

For this remedial action, all of the ACM will be removed and properly disposed of. Abatement of the ceiling texture, vibration dampener, mudded fittings, magblock duct insulation, boiler opening mud, tank insulation, spray-on fireproofing, and drywall and associated joint compound is considered Class I

removal. The general industry standard abatement techniques for removal of those materials are described below.

- A regulated area will be established.
- Containment (if required) will be set up in the work area and will comply with all industry standards (i.e., negative air pressure, high-efficiency particulate air [HEPA] filters, critical barriers covered, three-stage decontamination, etc.). Glove bag procedures in lieu of full containment are acceptable and may be used for mudded joints.
- The ACM will be sprayed with a mist of amended water or removal encapsulate so as to saturate the material to the substrate. The mudded joints will be removed in sections. For glove bag use, bands holding preformed pipe insulation will be cut, and then hand-placed into a disposal bag.
- After completion of the removal work, the nearby surfaces will be cleaned with a HEPA filter vacuum or a wet rag.
- The removed material will be placed in a 6-mil poly bag for disposal, and properly labeled as contaminated waste.
- All other industry standards (wet methods, etc.) and Occupational Safety and Health Administration (OSHA), National Emission Standards for Hazardous Air Pollutants (NESHAP), state, and local regulations will be followed during the abatement.

Abatement of the vinyl floor tile/mastic is considered Class II removal. The general industry standard abatement techniques for removal of those materials are described below.

- A regulated area will be established. Without a negative exposure assessment in place, critical barriers will be established.
- Removal of floor tiles will proceed with attempts to remove individual tiles as complete units, thus limiting fiber release from broken tiles. Misting of the work area with water will help prevent exposure to asbestos fibers released during removal.
- The removed materials will be placed (without additional breakage) in a 6-mil poly bag for disposal, and properly labeled as contaminated waste.
- All other industry standards (wet methods, HEPA vacuums, etc.) and OSHA, NESHAP, state, and local regulations will be followed during the abatement.

5.1.2 ACM Clearance Sampling

Following the completion of abatement activities, the remediation contractor will conduct a visual survey to ensure no ACM remains. Because the building will be demolished following completion of the abatement (the building will not be reoccupied), no clearance samples will be collected. The remediation contractor will conduct personal air monitoring of abatement workers, as required by OSHA.

Abatement work will involve removal of 12-inch by 12-inch vinyl floor tiles of various color, vinyl floor tile mastic, ceiling texture, vibration dampeners, mudded fittings, magblock duct insulation, boiler opening mud, tank insulation, spray-on fireproofing, and drywall and associated joint compound – as described in Section 5.1.1. The ACM will be removed from the site and disposed of as both friable and non-friable asbestos-containing waste. Representative daily personal air monitoring for asbestos will be conducted during abatement, as required by OSHA's Asbestos Standard (29 CFR 1926.1101). Moreover, every worker shall have the right to know the asbestos concentrations in materials at the site and what measures are in place to protect the abatement worker. Data from personal air monitoring will be used to verify effectiveness of removal engineering techniques for achieving minimal employee exposure. Area sampling may be conducted, if determined to be warranted by Seagull or the remediation contractor, to verify the effectiveness of established containments specifically at critical barriers. Air samples will be analyzed by Phase Contrast Microscopy (PCM), by National Institute for Occupational Safety and Health (NIOSH) Method 7400.

5.1.3 ACM Abatement Clearance Criteria

The ACM abatement will not be deemed complete until the visual survey has been completed. Photographs of the abated areas will be collected for documentation purposes.

5.2 WASTE CHARACTERIZATION AND DISPOSAL

The remediation contractor will be responsible for properly disposing of wastes generated during cleanup activities. The removed ACM will be disposed of as both friable and non-friable asbestos-containing waste.

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

5.3 DECONTAMINATION AND INVESTIGATIVE WASTES

In general, field activities will be conducted to minimize investigation-derived wastes (IDW) to the extent possible without compromising project objectives. The abatement contractor will be responsible for properly disposing of IDW generated during abatement 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 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 logs 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
- Problems encountered and cleanup-related 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 PROJECT SAFETY AND TRAINING

This section discusses project safety and training requirements.

7.1 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 abatement contractor will possess the appropriate state-required asbestos certifications.

7.2 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.

8.0 PROJECT REPORTING

The remediation contractor will complete a draft Remedial Action Completion Report for review by EI ERA upon completion of the field, laboratory (if needed), and data validation (if needed) 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
- Final clearance inspection results along with maps or drawings of abatement areas
- Waste disposal documentation, such as landfill tickets
- Documentation of deviations from the RAP. Significant deviations from the RAP must have BVCP approval prior to implementation.

9.0 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 EIERA and/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.

10.0 REFERENCES

Missouri Department of Natural Resources (MDNR). 2006. Missouri-Risk Based Corrective Action Guidance. June.

SCI Engineering, Inc.

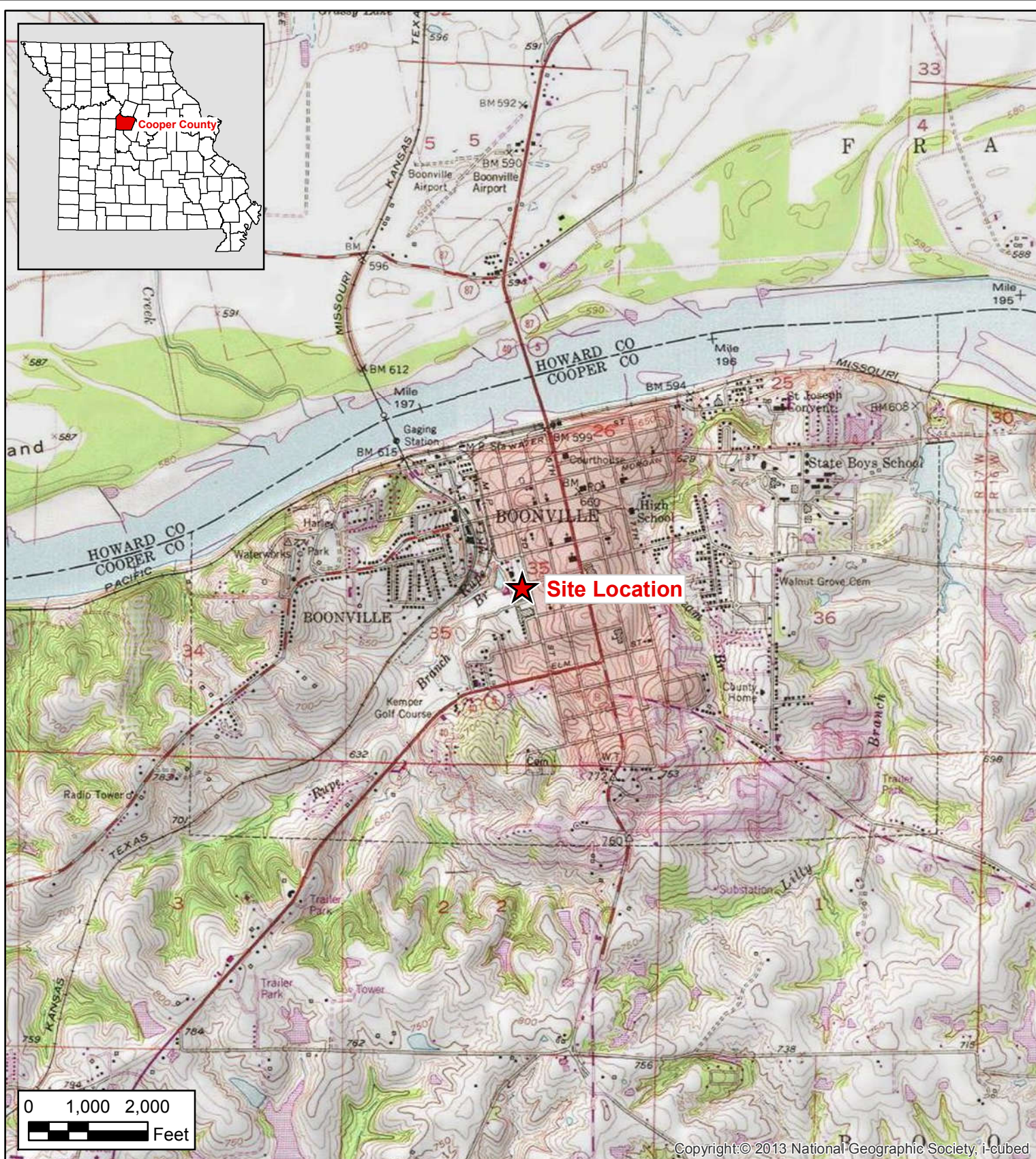
2016a. Phase I Environmental Site Assessment of the Kemper Military School – K Barracks Site. July.

2016b. Asbestos Inspection Report for the Kemper Military School – K Barracks Site. July.

U.S. Environmental Protection Agency (EPA). 2001. EPA Requirements for Quality Assurance Project Plans. EPA QA/R-5. May.

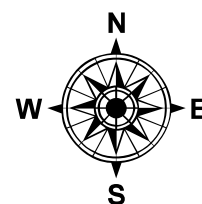
APPENDIX A

FIGURES



Seagull Environmental Technologies, Inc.

Source: USGS Boonville, MO 7.5 Minute Topo Quad, 1979



Legend


 Approximate Subject Site Boundary

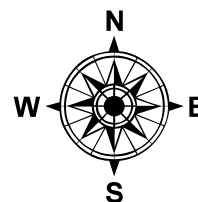


Figure 2
Site Layout Map

**Kemper Military School- K Barracks
Boonville, Missouri**



Seagull Environmental Technologies, Inc.



Source: ArcGIS Online Aerial Imagery, 2012

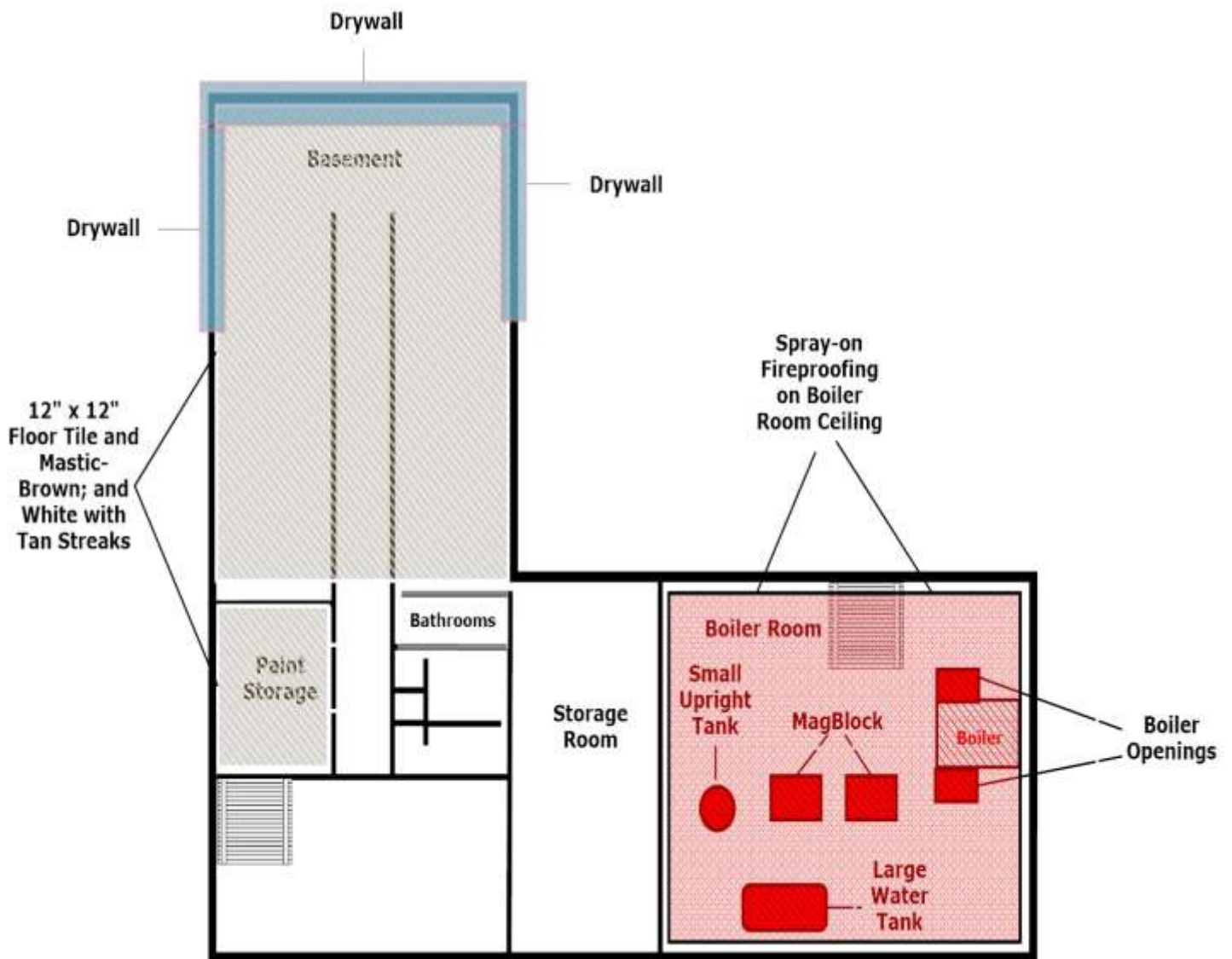


Figure 3A – Basement

Asbestos Containing Materials Location Map
Kemper Military K Barracks ABCA/RAP
701 3rd Street
Booneville, Missouri



Seagull Environmental Technologies, Inc.

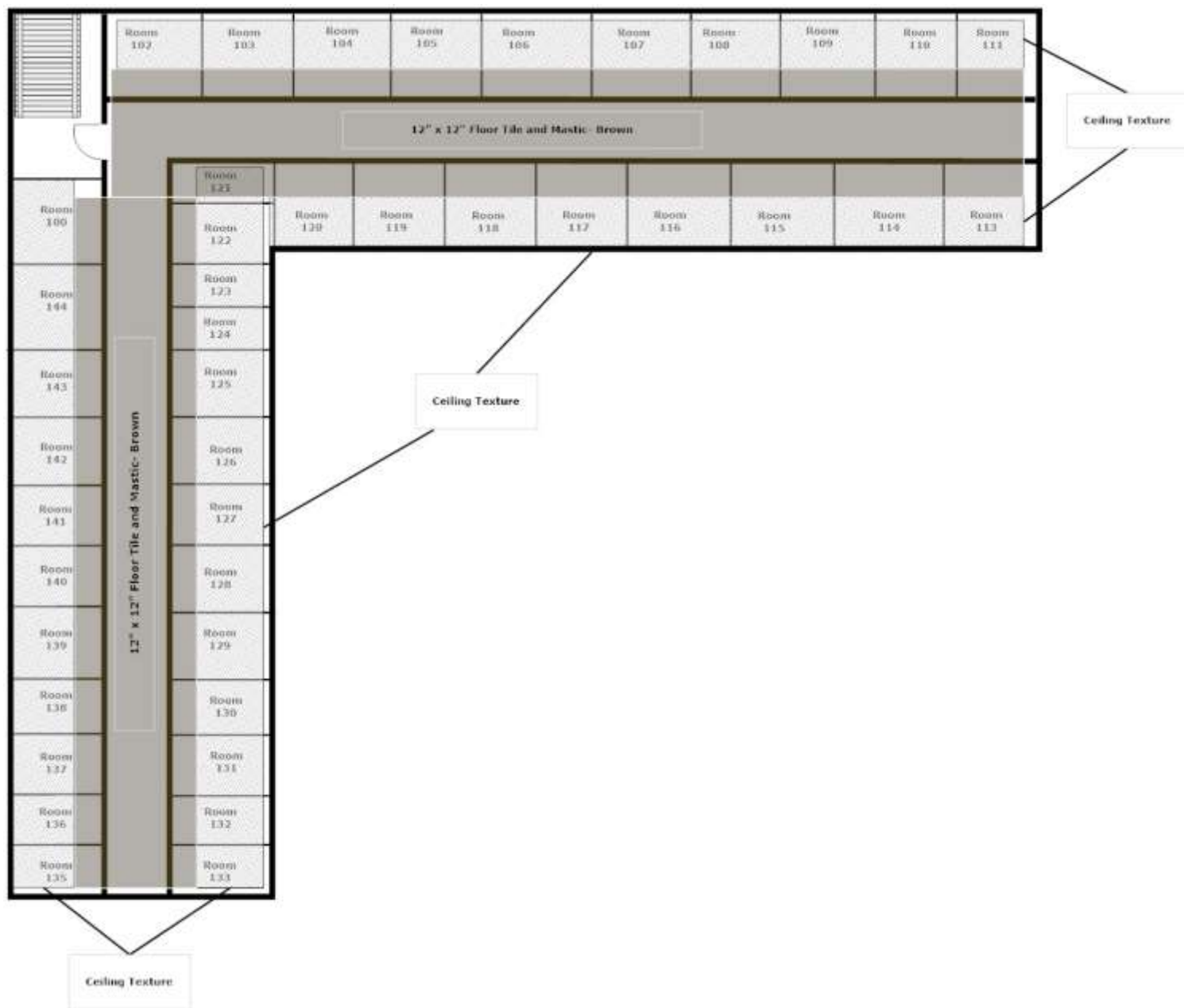


Figure 3B – 1st Floor

Asbestos Containing Materials Location Map
Kemper Military K Barracks ABCA/RAP
701 3rd Street
Booneville, Missouri



Seagull Environmental Technologies, Inc.

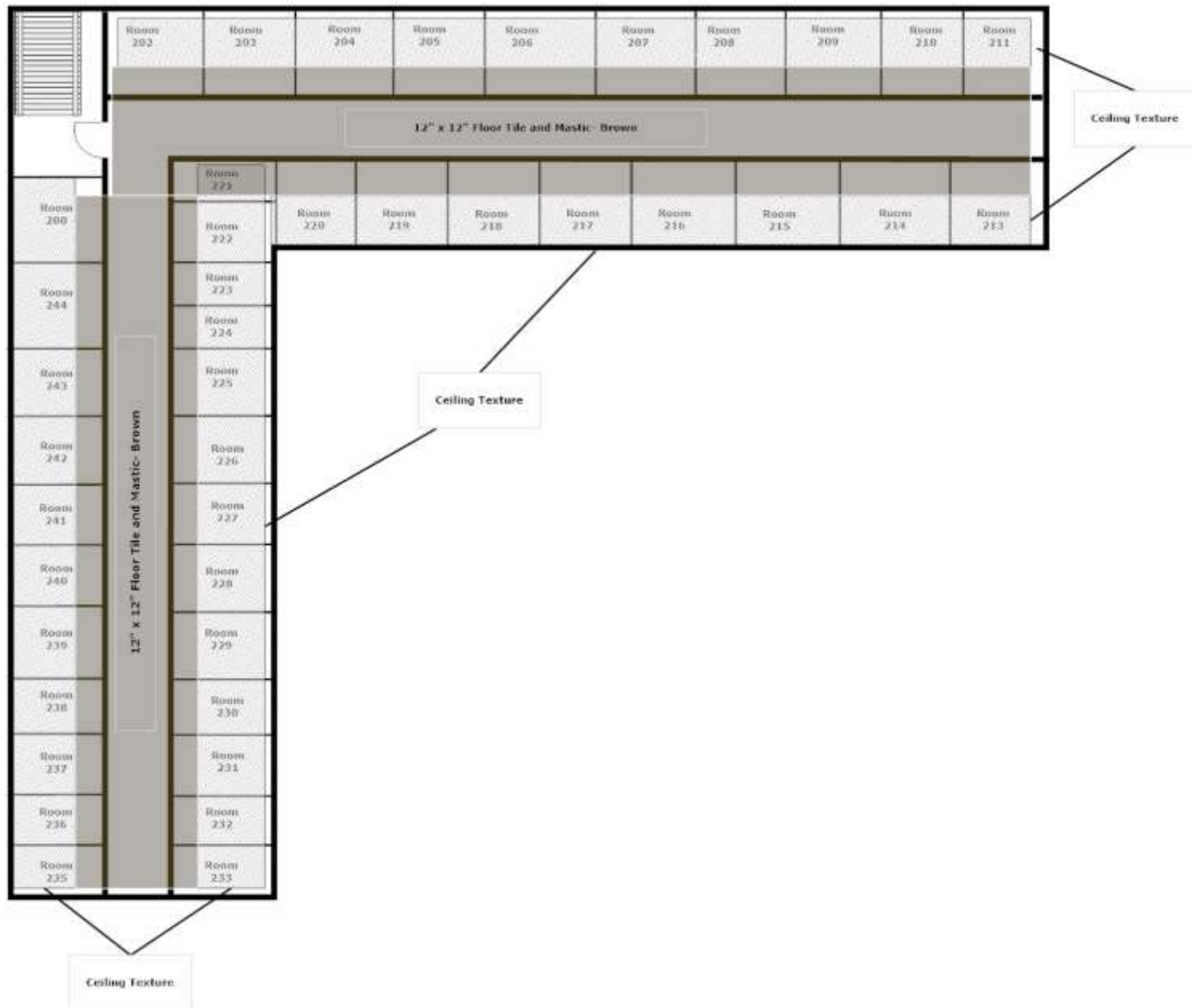
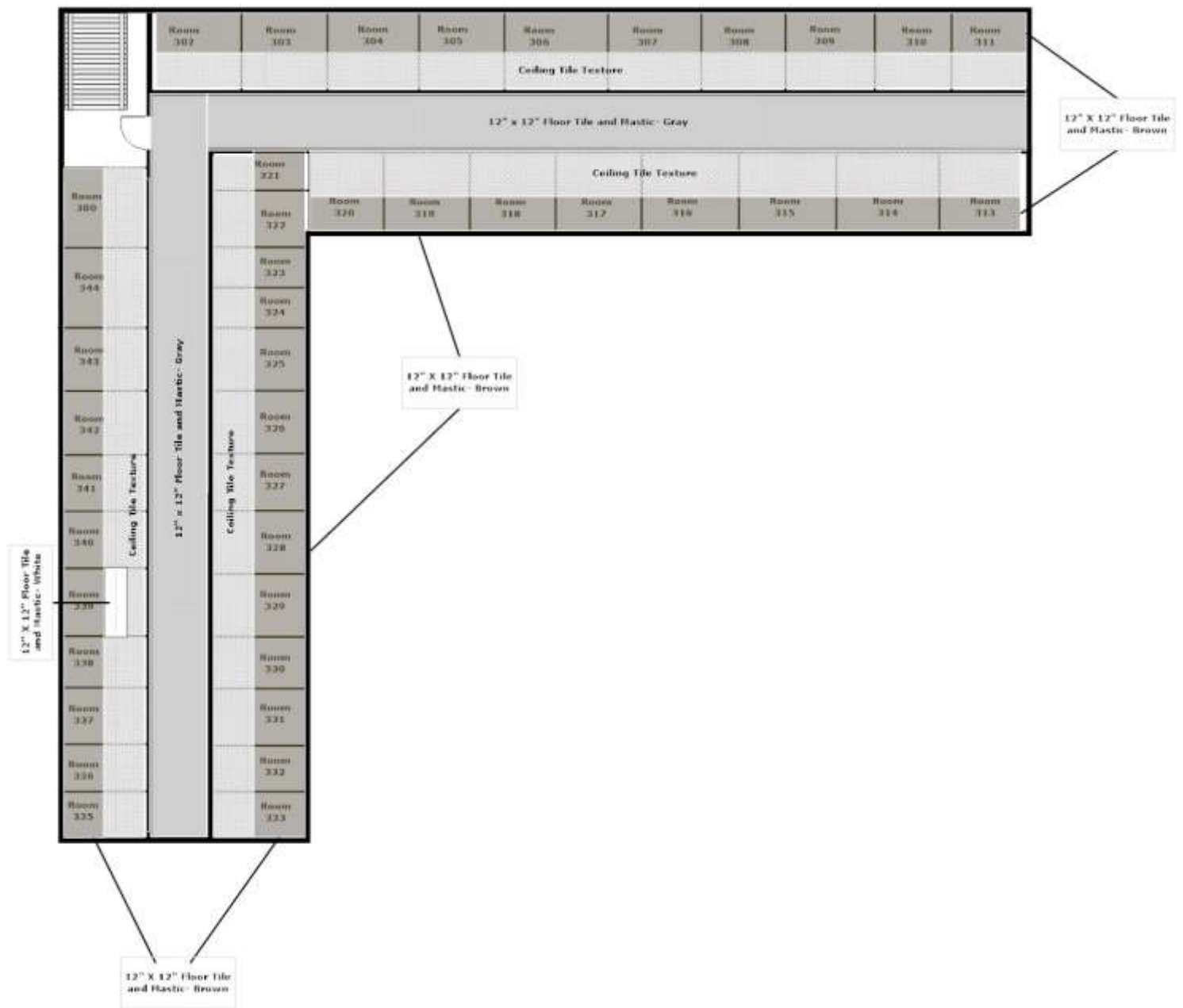


Figure 3C – 2nd Floor

Asbestos Containing Materials Location Map
Kemper Military K Barracks ABCA/RAP
701 3rd Street
Booneville, Missouri



Seagull Environmental Technologies, Inc.



Seagull Environmental Technologies, Inc.

APPENDIX B
ASBESTOS SUMMARY TABLE

TABLE B-1
ASBESTOS SAMPLE RESULTS
KEMPER MILITARY SCHOOL - K BARRACKS SITE, BOONVILLE, MISSOURI

Sample ID	Material	Color	Sample Results	Location	Estimated Quantity
S-1a	12" x 12" Vinyl Tile/Mastic	Brown	Tile – 2% Chrysotile Mastic – 3% Chrysotile	3 rd Floor Rooms	9,350 ft ²
S-2a	12" x 12" Vinyl Tile/Mastic	Gray	Tile – No Asbestos Present Mastic – 4% Chrysotile	3 rd Floor Hallway	1,650 ft ²
S-2b					
S-2c					
S-3a	Cove Base	Brown	No Asbestos Present	All Dorm Rooms	6,264 LF
S-3b					
S-3c					
S-4a	12" x 12" Vinyl Tile/Mastic	White	Tile – No Asbestos Present Mastic – 3% Chrysotile	Room 339	35 ft ²
S-4b					
S-4c					
S-5a	1' x 1' Ceiling Tile	White	No Asbestos Present	1 st , 2 nd , and 3 rd Floor Hallway	5,000 ft ²
S-5b					
S-5c					
S-6a	Ceiling Mastic Pucks	N/A	No Asbestos Present	1 st , 2 nd , and 3 rd Floor Hallway	5,000 ft ²
S-6b					
S-6c					
S-7a	Ceiling Texture	N/A	3% Chrysotile	1 st , 2 nd , and 3 rd Floor Rooms	28,000 ft ²
S-8a	Tack Board	N/A	No Asbestos Present	1st, 2nd, and 3rd Floor Rooms on Windows	1,300 ft ²
S-8b					
S-8c					
S-9	Terrazzo	Dark Gray	No Asbestos Present	Stairwell	800 ft ²
S-10	Terrazzo	Gray	No Asbestos Present	Stairwell	800 ft ²
S-11a	12" x 12" Vinyl Tile	Black with White Specks	No Asbestos Present	2 nd Floor Hallway	1,650 ft ²
S-11b					
S-11c					
S-12a	12" x 12" Vinyl Tile	Brown	Tile – 3% Chrysotile Mastic – 5% Chrysotile	Throughout 2 nd Floor	11,000 ft ²
S-13a	Carpet Tile Mastic	N/A	No Asbestos Present	Room 245	150 ft ²
S-13b					
S-13c					
S-14a	Drywall	N/A	No Asbestos Present	1 st , 2 nd , and 3 rd Floor	2,000 ft ²
S-14b					
S-14c					
S-15a	12" x 12" Vinyl Tile	Brown	Tile – 3% Chrysotile Mastic – 4% Chrysotile	Throughout 1 st Floor	11,000 ft ²
S-16a	12" x 12" Vinyl Tile	Black with Specks	No Asbestos Present	1 st Floor Hallway	1,650 ft ²
S-16b					
S-16c					
S-17a	Plaster	N/A	No Asbestos Present	1 st , 2 nd , and 3 rd Floor Bathroom	1,200 ft ²
S-17b					
S-17c					
S-18a	12" x 12" Vinyl Tile	White with Flowers	No Asbestos Present	Room 144	35 ft ²
S-18b					
S-18c					
S-19a	Roof Membrane Foam Tar	N/A	No Asbestos Present	Roof	11,000 ft ²
S-19b					
S-19c					
S-20a	Flashing/Penetration Tar	Roof	No Asbestos Present	Roof	90 LF
S-20b					
S-20c					
S-21a	Window Glaze	N/A	No Asbestos Present	Basement	N/A
S-21b					
S-21c					
S-22	Door Caulk	N/A	No Asbestos Present	Exterior	12 Doors
S-23	Vibration Dampener	N/A	60% Chrysotile	Storage Room	2 Each
S-24	Pipe Wrap	N/A	No Asbestos Present	Boiler Room	1,500 LF
S-25a	Mudded Fitting	N/A	20% Chrysotile	Boiler Room	250 Fittings

TABLE B-1
ASBESTOS SAMPLE RESULTS
KEMPER MILITARY SCHOOL - K BARRACKS SITE, BOONVILLE, MISSOURI

Sample ID	Material	Color	Sample Results	Location	Estimated Quantity
S-26	Small Boiler Jacket Insulation	N/A	No Asbestos Present	Boiler Room	65 ft ²
S-27	Magblock Duct Insulation	N/A	60% Chrysotile	Boiler Room	800 ft ²
S-28	Fire Brick	N/A	No Asbestos Present	Boiler Room	N/A
S-29	Boiler Opening Mud	N/A	10% Chrysotile	Boiler Room	15 lf
S-30	Large Horizontal Water Tank Insulation	N/A	20% Chrysotile	Boiler Room	175 ft ²
S-31	Small Upright Water Tank Insulation	N/A	20% Chrysotile	Boiler Room	150 ft ²
S-32	Boiler Tanks Insulation	N/A	20% Chrysotile	Boiler Room	500 ft ²
S-33	Spray-On Fireproofing (on Ceiling)	N/A	20% Chrysotile	Boiler Room	2,400 ft ²
S-34a	12" x 12" Vinyl Tile/Mastic	White with Tan Streaks	Tile – No Asbestos Present Mastic – 5% Chrysotile	Basement	150 ft ²
S-35a	12" x 12" Vinyl Tile/Mastic	Brown	Tile – 3% Chrysotile Mastic – 4% Chrysotile	Basement	3,500 ft ²
S-36a	2' x 4' Ceiling Tile	N/A	No Asbestos Present	Basement	N/A
S-36b					
S-36c					
S-37a	Drywall	N/A	Drywall – No Asbestos Present Joint Compound – 2% Chrysotile, <1% by Composite	Basement	650 ft ²

Notes:

" Inch
 ' Foot
 % Percent
 LF Linear feet
 ft² Square feet
 N/A Not Applicable

APPENDIX C
SITE PHOTOGRAPHS



Kemper Military School – K Barracks Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of the front of the Kemper Military School – K Barracks building.

Photograph
Number: 1

Direction: West

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of 12" x 12" brown floor tile and associated mastic containing ACM on the 1st, 2nd, 3rd floors, and in the basement.

Photograph
Number: 2

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of 12" x 12" white floor tile with tan streaks and associated mastic containing asbestos in the basement. Additionally, 12" x 12" brown floor tile and associated mastic containing asbestos are present.

Photograph
Number: 3

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of 12" x 12" gray floor tile on the 3rd floor hallway. The associated mastic contains asbestos.

Photograph
Number: 4

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of 12" x 12" white floor tile in Room 339 on the 3rd floor hallway. The associated mastic contains asbestos.

Photograph Number: 5

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing ceiling texture on 1st, 2nd, 3rd floor rooms.

Photograph Number: 6

Direction: East

Photographer: Brandon Jones

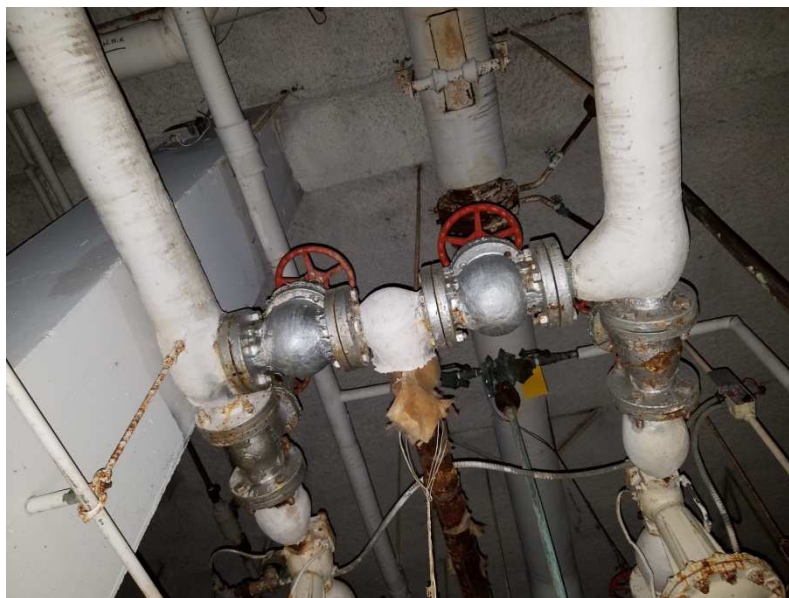
Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EI ERA0012TA



Client: EIERA

Description: Photograph of mudded joint asbestos-containing material (ACM) in the boiler room.

Photograph Number: 7

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing pipe magblock duct insulation.

Photograph Number: 8

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of asbestos-containing mud on the boiler opening.

Photograph Number: 9

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing insulation on the large horizontal water tank.

Photograph Number: 10

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EIERA0012TA



Client: EIERA

Description: Photograph of asbestos-containing insulation on the small upright water tank.

Photograph Number: 11

Direction: North

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of asbestos-containing insulation on the boiler tanks.

Photograph Number: 12

Direction: West

Photographer: Brandon Jones

Date: 1/31/2017



Kemper Military School – K Barracks Building Site

Boonville , Missouri

Seagull Project No. EI ERA0012TA



Client: EIERA

Description: Photograph of asbestos-containing spray-on fireproofing on the ceiling in the boiler room.

Photograph Number: 13

Direction: NA

Photographer: Brandon Jones

Date: 1/31/2017



Client: EIERA

Description: Photograph of drywall in the basement. The joint compound in the drywall contains asbestos.

Photograph Number: 14

Direction: North

Photographer: Brandon Jones

Date: 1/31/2017

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

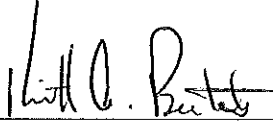
A. PROJECT MANAGEMENT ELEMENTS

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

November 13, 2014

Date



Director, Hazardous Waste Program

11-7-14

Date



BVCP Quality Assurance Project Officer, HWP

10/30/14

Date

CONTRACTOR APPROVALS

Director, Contractor

Date

Project Manager, Contractor

Date

Project Field Superintendent, Contractor

Date

QA/QC Manager, Contractor

Date

A.2 TABLE OF CONTENTS

PROJECT MANAGEMENT ELEMENTS	1
A.1 TITLE AND APPROVAL SHEET	1
A.2 TABLE OF CONTENTS	2
A.3 DISTRIBUTION LIST	3
A.4 PROJECT/TASK ORGANIZATION.....	3
A.5 PROBLEM DEFINITION/BACKGROUND.....	4
A.6 PROJECT/TASK DESCRIPTION.....	5
A.7 DATA QUALITY OBJECTIVES AND CRITERIA	7
A.8 SPECIAL TRAINING/CERTIFICATION.....	10
A.9 DOCUMENTS AND RECORDS	10
DATA GENERATION AND ACQUISITION.....	11
B.1 SAMPLING PROCESS DESIGN	11
B.2 SAMPLING METHODS.....	12
B.3 SAMPLE HANDLING AND CUSTODY	12
B.4 ANALYTICAL METHODS	12
B.5 QUALITY CONTROL.....	13
B.6 INSTRUMENT/EQUIPMENT TESTING, INSPECTION AND MAINTENANCE	16
B.7 INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY	16
B.8 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES.....	16
B.9 NON-DIRECT MEASUREMENTS.....	16
B.10 DATA MANAGEMENT	17
ASSESSMENT AND OVERSIGHT	17
C.1 ASSESSMENTS AND RESPONSE ACTIONS	17
C.2 REPORTS TO MANAGEMENT.....	18
DATA VALIDATION AND USABILITY	18
D.1 DATA REVIEW, VERIFICATION AND VALIDATION	18
D.2 VERIFICATION AND VALIDATION METHODS.....	19
D.3 RECONCILIATION WITH USER REQUIREMENTS	19
REFERENCES	21
APPENDIX A: LISTING OF ACRONYMS & TERMS	22
APPENDIX B: ANALYTICAL REQUIREMENTS	24

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 of 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 described 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.

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

- 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; $\mu\text{g/l}$ or mg/l for water, liquids or Toxicity Characteristic Leachate Procedure (TCLP); $\mu\text{g/kg}$ or mg/kg for soil, sediment or other solids; and $\mu\text{g/m}^3$ 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 minimum 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

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

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: Kemper Military School – K Barracks

ADDRESS OR OTHER LOCATION IDENTIFIER: 701 3rd Street

CITY: Boonville **COUNTY:** Missouri **STATE:** Missouri **ZIP:** 65233

II. PROJECT MANAGEMENT INFORMATION:

Consultant: Seagull Environmental Technologies, Inc. **E-MAIL:** bjones@seagullenvirotech.com

ADDRESS: 121 NE 72nd Street, Gladstone, MO 64118

PHONE: 816-682-4089

FAX:

It should be noted that Seagull is completing the RAP and SSQA; however, Seagull will not be conducting or overseeing the cleanup activities. A remediation contractor will be selected through a procurement process conducted by EIERA.

DISTRIBUTION LIST (Check as appropriate):

- ☒ BVCP Project Manager:
☐ Consultant/Contractor Director:
☒ Consultant/Contractor Project Manager:
☒ Consultant/Contractor Project Field Superintendent:
☐ Consultant/Contractor Laboratory Personnel:
☐ Technicians (Specify all):
☒ Other (Specify): EPA Region 7 and Property Owner

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.)

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

DATA QUALITY OBJECTIVES AND CRITERIA:

Detection Limits:	<input checked="" type="checkbox"/> According to Generic Site Assessment QAPP	<input type="checkbox"/> Identified in attached table
Accuracy:	<input checked="" type="checkbox"/> According to Generic Site Assessment QAPP	<input type="checkbox"/> Identified in attached table
Representativeness:	<input checked="" type="checkbox"/> According to Generic Site Assessment QAPP	<input type="checkbox"/> Identified in attached table
Comparability:	<input checked="" type="checkbox"/> According to Generic Site Assessment QAPP	<input type="checkbox"/> Identified in attached table
Completeness:	<input checked="" type="checkbox"/> According to Generic Site Assessment QAPP	<input type="checkbox"/> Identified in attached table

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

SPECIAL TRAINING/CERTIFICATION REQUIREMENTS:

- ☐ OSHA 40-hour (HAZWOPER) ☐ Geoprobe Operator ☐ Drill Rig Operator ☐ Mobile GC Field Analyst
☐ In-Field XRF Operator ☒ Other (specify): Certified Missouri Asbestos Abatement Workers

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:

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

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:

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

SAMPLE HANDLING AND CUSTODY (Check appropriate box):

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

ANALYTICAL METHODS (Check appropriate box):

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

QUALITY CONTROL (Check appropriate box):

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

Describe Field QC Samples to be collected:

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

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:

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

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

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

NON-DIRECT MEASUREMENTS (Check appropriate box):

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

DATA MANAGEMENT (Check appropriate box):

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

ASSESSMENT AND RESPONSE ACTIONS (Check appropriate box):

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

REPORTS TO MANAGEMENT (Check appropriate box):

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

DATA VALIDATION AND USABILITY (Check appropriate box):

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

- ☐ 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):

RECONCILIATION WITH USER REQUIREMENTS (Check appropriate box):

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

* In general, site activities will be conducted in accordance with the Generic Site Assessment QAPP; however, the project will not involve the collection of any environmental samples.

B/VCP SITE-SPECIFIC QAPP ADDENDUM FORM

APPROVALS:

BVCP Project Manager Name

Brandon Jones

Contractor Director Name

Signature

[Signature]

Signature

Date

05/25/17

Date

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 Boonslick Community Development Corporation, in the sum of **FULL Contract amount in words and numbers**

_____ Dollars (\$) to be paid to the Boonslick Community Development Corporation, 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 _____, 2017, enter into a contract with the Boonslick Community Development Corporation for:

Asbestos Containing Materials Remediation In Accordance with INVITATION FOR BID #2017-01

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 Boonslick Community Development Corporation (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 Boonslick Community Development Corporation, 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 Cooper County, 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 _____, 2017, or have caused these presents to be executed by our authorized agent on the same day and year.

Company: _____

Approved as to Form:

By: _____

Boonslick Community Development Corporation
Representative

Surety: _____

By: _____

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 Boonslick Community Development Corporation, in the sum of **FULL Contract amount in words and numbers**

_____ Dollars (\$ _____) to be paid to the Boonslick Community Development Corporation, 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 _____, 2017, enter into a contract with the Boonslick Community Development Corporation for:

Asbestos Containing Materials Remediation In Accordance with INVITATION FOR BID #2017-01

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 Boonslick Community Development Corporation, 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 Cooper County, 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 _____, 2017, or have caused these presents to be executed by our authorized agent on the same day and year.

Company: _____

Approved as to Form:

By: _____

Boonslick Community Development Corporation
Representative

Surety: _____

By: _____

ATTACHMENT D

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] [member] of _____,
a _____ [corporation] [limited liability company] (the “*Company*”) and am authorized by the
Company to attest to the matters set forth herein.

The Authority 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 [Cleanup] [Services] (as such term is defined
in the Agreement) [_____ services to be performed under 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 [Cleanup]
Services] [_____ services to be performed under the Agreement].

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	
<input type="text"/>	
* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE	
Prefix: <input type="text"/>	* First Name: <input type="text"/> Middle Name: <input type="text"/>
* Last Name: <input type="text"/>	Suffix: <input type="text"/>
* Title: <input type="text"/>	
SIGNATURE <input type="text"/>	DATE <input type="text"/>

Optional - You may attach 1 file to this page.

Add Attachment

Delete Attachment

View Attachment

ATTACHMENT G

General Decision Number: MO170010 08/25/2017 MO10

Superseded General Decision Number: MO20160010

State: Missouri

Construction Type: Building

County: Cooper 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 \$10.20 for calendar year 2017 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 \$10.20 (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 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	02/10/2017
2	03/03/2017
3	03/17/2017
4	04/14/2017
5	04/21/2017
6	04/28/2017
7	05/26/2017
8	06/30/2017
9	08/11/2017
10	08/25/2017

ASBE0027-004 10/01/2016

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 34.50	25.45

BRMO0011-009 03/01/2017

	Rates	Fringes
TILE SETTER.....	\$ 29.76	17.39

CARP0010-008 05/01/2017

	Rates	Fringes
CARPENTER (Including Drywall Hanging, Form Work &		

Resilient/Vinyl Floor
Installation).....\$ 25.22 16.85

ELEC0124-014 08/31/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 36.69	20.62

ENGI0101-015 04/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Backhoe/Excavator/Trackhoe..	\$ 35.63	15.97
Bulldozer.....	\$ 35.63	15.97
Grader/Blade.....	\$ 35.63	15.97
Loader.....	\$ 35.63	15.97
Paver.....	\$ 35.63	15.97
Roller.....	\$ 35.63	15.97

* IRON0010-024 04/01/2017

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 29.65	28.85

LABO0955-001 03/01/2017

	Rates	Fringes
LABORER		
Brick Mason Tender.....	\$ 25.01	13.49
Common or General & Landscape.....	\$ 23.01	13.49

PAIN0003-015 04/01/2017

	Rates	Fringes
PAINTER		
Brush & Roller Only.....	\$ 29.34	16.96
Drywall Finishing/Taping Only.....	\$ 30.34	16.96

PLAS0518-020 03/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 27.82	12.87

PLUM0562-011 07/01/2017

	Rates	Fringes
PIPEFITTER, Includes HVAC Pipe Installation Mechanical Contracts including all piping and temperature control work		

\$7.0 million & under.....\$ 37.91	21.69
Mechanical Contracts including all piping and temperature control work over \$7.0 million.....\$ 39.25	27.18
PLUMBER, Excludes HVAC Pipe Installation	
Mechanical Contracts including all piping and temperature control work \$7.0 million & under.....\$ 37.91	21.69
Mechanical Contracts including all piping and temperature control work over \$7.0 million.....\$ 39.25	27.18

ROOF0020-012 09/19/2016

	Rates	Fringes
ROOFER.....\$ 29.30	15.19	

SFMO0669-003 04/01/2017

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....\$ 34.79	15.85	

* SHEE0036-021 07/01/2017

	Rates	Fringes
SHEET METAL WORKER, Includes HVAC Duct and Unit Installation.....\$ 49.62	16.41	

SUMO2010-009 03/08/2010

	Rates	Fringes
BRICKLAYER.....\$ 27.66	5.88	
GLAZIER.....\$ 29.87	1.47	
IRONWORKER, REINFORCING.....\$ 21.02	9.49	
LABORER: Asbestos Abatement (Removal from Floors, Walls, & Ceilings).....\$ 24.90	0.00	
PAINTER: Spray.....\$ 18.79	8.12	
TRUCK DRIVER: Dump Truck.....\$ 25.57	0.00	

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

=====

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.

=====

END OF GENERAL DECISION