BID DOCUMENTS AND PROJECT SPECIFICATIONS

FOR THE

CITY OF BUCHANAN DEMOLITION PROJECT
FEED MILL & TIRE SHOP
111 RAILROAD STREET AND 708 SOUTH RED BUD TRAIL
BUCHANAN, BERRIEN COUNTY, MICHIGAN

PREPARED FOR:
PROJECT OWNER (OWNER)

City of Buchanan
302 North Red Bud Trail
Buchanan, Michigan 49107

PREPARED BY:
OWNER'S REPRESENTATIVE

Point Blue, LLC
2600 South Cleveland Avenue
St. Joseph, Michigan 49085

April 2023

SECTION 00020

INVITATION TO BID

PART 1 - GENERAL

PROJECT OWNER'S NAME:	City of Buchanan 302 North Red Bud Trail Buchanan, Michigan 49107
PROJECT NAME:	City of Buchanan Demolition Project – Feed Mill and Tire Shop 111 Railroad Street and 708 South Red Bud Trail Buchanan, Berrien County, Michigan
OWNER'S REPRESENTATIVE:	Point Blue, LLC 2600 South Cleveland Avenue St. Joseph, Michigan 49085 Telephone: 269-934-3737

The PROJECT OWNER (OWNER) will receive sealed proposals for the City of Buchanan Demolition Project – Feed Mill and Tire Shop until 11:00 a.m. local time on Wednesday, 10 May 2023 at the City of Buchanan City Hall, 302 North Red Bud Trail, Buchanan, Michigan 49107 and will be publicly opened and read aloud at that time. Your proposal must be received on or before the bid opening date and time stated herein. Timely receipt of the bid is the sole responsibility of the bidder. On the outside of the envelope identify: 1) the project name and location, 2) bidder's name and address, and 3) the words City of Buchanan Demolition Project – Feed Mill and Tire Shop: Bid Enclosed - Do Not Open.

The Work is summarized in Section 01100 and described in full detail in these specifications. Questions will be accepted in writing to Shea H. Muller, P.E., OWNER's REPRESENTATIVE, Point Blue, LLC (telephone 269-934-3737, e-mail shea@pointblu.com) until Wednesday, 3 May 2023 at 10:00 a.m. local time. A written response will be included in an addendum to be prepared by the OWNER's REPRESENTATIVE and sent to all Bidders via e-mail.

A MANDATORY prebid meeting and inspection will be held with all concerned parties on Friday, 28 April 2023 at 10:00 a.m. local time at the project site located at 111 Railroad Street in Buchanan, Michigan. The purpose of the meeting is to answer questions and provide a one-time only tour of the project site. The OWNER and OWNER's REPRESENTATIVE will be available to assist the Bidders. Bidders needing special services to fully participate in the meeting shall contact the OWNER at the above location.

The Contract Documents including plans and specifications must be obtained (downloaded electronically) prior to the mandatory prebid meeting by downloading the specifications (plans are contained within the specifications) from the OWNER's social media (Facebook) page or the OWNER's website, cityofbuchanan.com. Neither the OWNER nor the OWNER's REPRESENTATIVE will be responsible for partial sets of documents obtained from any other source. In order to be considered an eligible bidder, prospective bidders must be currently compliant with the requirements of 29 CFR 1910.120 (HAZWOPER standard) per requirements of Part 201, NREPA, PA 451 of 1994, as amended.

The work under this contract shall commence immediately after receiving Notice of Award of Contract from the OWNER and must be completed within 100 calendar days after the Notice of Award and Notice to Proceed.

The OWNER reserves the right to accept or reject any or all Bids and award the contract to other than the lowest bidder, to waive any irregularities or informalities or both, and in general to make the award of the Contract in any manner deemed by the OWNER in its sole discretion, to be in the best interest of the OWNER.

The OWNER hereby notifies all Bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, all prospective bidders will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of sex, race, color, or national origin in consideration for an award.

A certified check or bank draft drawn on a solvent bank in the State of Michigan payable without condition to City of Buchanan or a satisfactory bid bond executed by the bidder and a surety company, in an amount equal to 5 percent (5%) of the bid shall be submitted with each bid.

No bids may be withdrawn after the scheduled closing time for receipt of bids for at least ninety (90) calendar days.

The successful bidder will be required to furnish a satisfactory performance and labor and material bond in the amount of 100 percent (100%) of the contract price.

Before sealing the envelope, check to be sure that:

1. The proposal form is signed.
2. The base bid and unit prices are filled in.
3. Bid security is attached.
4. All addenda received are included and acknowledged.
5. Proof of the types of insurance and limits of liability outlined in Section 14 of the General Conditions is included.
6. Qualifications Statement is included.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 00120

INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1. Preparation of Proposal

Each proposal shall be firmly sealed in an envelope which is clearly labeled City of Buchanan Demolition Project – Feed Mill and Tire Shop and delivered to the office designated in the Invitation to Bid. All bids are to be made only on forms of proposal furnished by the OWNER and included in this volume and must contain Bid Security, a signed Bid Proposal Form, acknowledgment of any addenda, and a Qualifications Statement form. Only proposals which are made out on the included proposal forms will be considered. The OWNER may consider as irregular any proposal on which there is an alteration of or departure from the prescribed form. Any unauthorized riders or qualifications to the bid as submitted may be rejected as irregular.

The proposal must be legibly written in ink with all prices given in figures as required by the Bid Proposal Form. In case of unit price proposals, the bidder shall fill in the unit price bid for each item and in addition thereto, make an extension based on the estimated quantities. In case of incorrect totaling of amounts or where the unit bid price and the extension do not agree, the unit bid price shall in all cases govern in arriving at the correct extension and/or total for the purpose of comparing bids.

The OWNER retains the unrestricted right to reject any and all bids and to waive any informality or irregularity in any bid received. In addition, the bidder recognizes the right of the OWNER to reject an individual bid:

A. If the bidder fails to furnish any required bid security or to submit the information required by the bid documents;
B. If the bid is in any way incomplete or irregular;
C. If the bidder's past performance as a contractor for similar such Work was unsatisfactory, has known to have been, or is discovered to be unsatisfactory under a prior project involving either the OWNER's REPRESENTATIVE or City of Buchanan, or the bidder's performance was considered, in the sole opinion of the OWNER or OWNER's REPRESENTATIVE, substandard on any previous project(s) where a working relationship existed between the bidder and OWNER or OWNER's REPRESENTATIVE, regardless of contractual relationship;
D. If the bidder fails to attend a mandatory pre-bid conference and Site walk-through.
E. If the bidder fails to demonstrate its certification under the HAZWOPER standard.

2. Progress Clause

The progress schedule is as follows:

Bid Opening:	10 May 2023
Issue Notice of Award:	15 May 2023
CONTRACTOR to obtain Amtrak Permit to Enter	TBD
Issue Notice to Proceed:	Upon receiving Amtrak Permit to Enter
Pre-construction meeting:	3 calendar days after NTP
Begin Construction:	7 calendar days after NTP after NTP
Substantial Completion:	90 calendar days after NTP after NTP
Final Completion:	100 calendar days after Notice to Proceed.

The Contractor shall comply with the above process schedule. The Contractor shall complete construction no later than 100 calendar days after the Notice to Proceed.

The Contractor will be required to participate in a pre-construction meeting with the OWNER to work out a detailed progress schedule. The named subcontractor(s), if applicable, is recommended to be at the scheduled pre-construction meeting.

Failure on the part of the CONTRACTOR to carry out the provisions of the Progress Schedule, as established, may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

3. Bid Security

No proposal will be accepted unless accompanied by a certified check or bank draft, or a satisfactory bid bond executed by the bidder and a Surety Company in an amount not less than five percent (5%) of the total bid payable to the OWNER as a guarantee that if the bid is accepted, the bidder will execute and file the proposed Contract and bond within five (5) calendar days from the date of the Notice of Award of the Contract. On failure of the successful bidder to execute the Contract and file the required bonds and insurance within the required time, he/she shall forfeit his/her bid security as agreed as liquidated damages. By submitting a proposal, all bidders agree to accept these provisions.

The bid securities of the three lowest responsive bidders will be held until the contract is executed and approved. Following execution and approval of the contract, these three bid securities will be returned to the respective bidders. The bid securities of all but the three lowest responsive bidders as described above will be returned within three (3) business days after opening of the bids.

4. Liquidated Damages

Failure to completely finish the whole of the specified Work within the number of calendar days specified for completing all Work of the Contract including extensions or mutually agreed upon alternate schedule granted subject to any and all applicable provision of the General Conditions, shall entitle the OWNER to deduct from the monies due the CONTRACTOR as “Liquidated Damages” and not as a penalty, the sum of $1,000.00 per day for each and every calendar day of delay in completion of the Work.

5. Examination of Site and Specifications

At the time of bid opening, each bidder will have attended the mandatory prebid meeting at the Site, have made a personal investigation of the Site of the Work and of the existing structure, and have read and be thoroughly familiar with the plans, specifications and Contract Documents (including all addenda). Each bidder shall determine to its own satisfaction the conditions to be encountered, the nature of the Work, difficulties involved in completing the Contract and all factors affecting the Work proposed under this Contract.

The bidder to whom this Contract is awarded will not be entitled to any additional compensation by reason of failure to fully acquaint itself with the conditions at the Site or by failure to fully examine the plans, specifications and Contract Documents.

6. Interpretation of Proposed Contract Documents

If any person contemplating submitting a Bid for this project is in doubt as to the true meaning of any part of the Drawings, Specifications, or other Contract Documents, he/she may submit a written request to Shea H. Muller, P.E., Point Blue, LLC for an interpretation thereof not later than Friday, 21 April 2023 at 10:00 a.m. local time. The person submitting the request will be responsible for its prompt delivery.

7. Qualification of Bidder

The OWNER shall have the right to take such steps as is deemed necessary to determine the ability of the bidder to perform the Work and the bidder shall furnish the OWNER all such information and data for this purpose as the OWNER may request. The right is reserved, without detailed explanation from the OWNER, to reject any bid where an investigation of the evidence or information submitted by such bidder or sufficient information obtained by the OWNER of poor past performance by the bidder of similar general project requirements does not satisfy the OWNER that the bidder is qualified to carry out properly the terms of the Contract Documents.

8. Approximate Quantities

In cases where any part or all of the bidding is to be received on a unit price basis, the quantities stated are intended to govern. Quantities as listed have been carefully estimated but are not guaranteed. The OWNER reserves the right to increase or decrease the quantity of Work to be performed at the Site.

9. Standard Manufacturer

Wherever the terms "standard", "recognized", or "reputable" manufacturer are used, they shall be construed as meaning, manufacturers who have been engaged in the business of fabricating materials, equipment of supplies of the nature called for by the specifications for a reasonable period of time prior to the date set for opening of bids and who can demonstrate to the satisfaction of the OWNER that said manufacturer has successfully installed in at least three instances and that the performance of such materials, equipment or supplies has been satisfactory. Manufacturers who have been engaged in the business of manufacturing said materials, equipment or supplies for a period of over twelve months prior to the dated fixed for opening bids shall, prima facie, be deemed to have been engaged in such business for a reasonable length of time.

10. Signing of Bids

Bids which are not signed by the individual making them, shall have attached thereto a power of attorney evidencing authority to sign the bid in the name of the person for whom it is signed.

Bids which are signed by a partnership shall be signed by all the partners or by an attorney-in-fact. If signed by an attorney-in-fact, there shall be attached to the bid a power of attorney evidencing authority to sign the bid executed by the partners.

Bids which are signed for a corporation shall have the correct corporate name thereof and the signature of the president or other authorized officers of the corporation manually written below the corporate name following the Work Aby@. If such a bid is manually signed by an officer other than the president of the corporation, a certified copy of a resolution of the board of directors evidencing the authority of such official to sign the bid shall be attached to it. Such a bid shall also bear the attested signature of the secretary of the corporation and the impression of the corporate seal.

11. Award of Contract

An award of Contract will be made in accordance with the applicable stipulations in the proposal to the most responsible bidder whose proposal complies with all the requirements prescribed, provided his/her bid is reasonable and it is to the interest of the OWNER to accept it. The bidder to whom the award is made will be notified at the earliest possible date. The OWNER reserves the right to reject any and all bids and to waive any informality in bids and qualifications received whenever such rejection or waiver is in the interest of the OWNER.

12. Execution of Agreement

The bidder to whom an award is made will be required to enter into a written Agreement in the form hereto annexed within five (5) days (Sundays and legal holidays excepted) after being notified of the acceptance of his/her bid and receipt by him/her of the copies of the documents to be executed. In case of failure to comply with this requirement, he/she may be considered to have abandoned all his/her rights and interests in the award and his/her certified check or amount of bidder's bond may be declared to be forfeited to the OWNER and the Contract may be awarded to another. Each Contract must be executed in three (3) original counterparts and no more and there shall be executed original counterparts of the CONTRACTOR's performance bond in equal number to the executed original counterparts of the Contract. Two (2) copies of such executed documents will be retained by the OWNER, the third will be delivered to the CONTRACTOR.

13. Effective Date of Contract Award

Subject to the applicable provisions of law, this Contract shall be full force and effect as a Contract from and after the date when formal notice of such award signed by the authorized representative of the OWNER has been delivered to the intended awardee or mailed to him/her at the main business shown in his/her proposal by some officer or agent of the OWNER duly authorized to give such notice.

14. Disqualification of Bidders

More than one proposal for the Work described in this document, to be included under a Contract, from an individual, firm or partnership, a corporation, or an association under the same of different names, will not be considered. Reasonable grounds for believing that any bidder is interested in more than one proposal for the Work contemplated will cause the rejection of all proposals in which such bidder is interested. If there is reasonable grounds for believing that any member, representative or agent of any bidder entered into any combination, collusion or agreement to induce anyone to refrain from bidding any way or manner whatever, the proposal of the participants in such activities will not be considered.

15. Penalty for Collusion

If at any time it shall be found that any member, representative or agent of the person, firm or corporation to whom the Contract has been awarded has in presenting any bid or bids entered into any combination, collusion or Agreement with any person relative to the price to be bid by anyone, or attempted to prevent any person from bidding or attempted to induce anyone to refrain from bidding or if the bid was made with reference to any other bid or with an Agreement, understanding, or combination with anyone in reference to the letting of such Contract in any way or manner whatever, then the Contract so awarded shall be null and void and the CONTRACTOR and his/her sureties shall be liable to the OWNER for loss or damage which the OWNER may suffer thereby and the OWNER may advertise anew for bids for said Work.

16. Performance, Maintenance, Labor, and Material Bonds

The successful bidder shall furnish a Performance Bond and a Labor and Material Bond in a penal sum of at least 100 percent (100%) of the total amount payable by the terms of the Contract. Such Performance Bond and Labor and Material Bond shall be furnished and executed and delivered by the successful bidder to the OWNER within ten (10) business days after the receipt by the successful bidder of the Contract forms and notification that the OWNER is in a position to enter into a signed Contract. Bonds shall be furnished through a Surety Company licensed in the State of Michigan.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 00125

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

A. Bidders are cautioned to familiarize themselves with the conditions of bidding as set forth in the Instructions to Bidders. See Instructions to Bidders, Section 00120. Supplementary Instructions to Bidders are as follows:

B. Equal Employment Opportunity Prequalifications: The CONTRACTOR must not discriminate on the basis of religion, race, color, national origin, age, sex, marital status, height, weight, arrest record, or disability.

C. Modifications of Bids: Telegraphic modifications to a bid previously submitted will be accepted only if received by the bid opening official prior to bid opening time, properly identified with the proposal name. Indicate only amount of change in bid. Do not reveal original bid price. Written confirmation of telegraphic modification must be received within two days after opening of bids to receive consideration. No oral, telegraphic, or telephone proposals will be considered.

D. Substitution of Materials: Any bidder wishing to use manufacturers or materials other than those specified shall submit a written request to Point Blue, LLC not later than five days prior to due date for Bids. Request shall be accompanied by product data to permit evaluation and comparison with specified products or materials. The person submitting the request will be responsible for its prompt delivery. An examination and evaluation of product data will be made Point Blue, LLC. If found acceptable, an addendum will be issued to each person who has received a set of Drawings and Specifications. All addenda issued shall be made a part of the Contract requirements.

E. Substantial Completion: Upon issuance of the Notice of Award, the CONTRACTOR agrees to complete all Work required to achieve substantial completion within 100 calendar days after the Notice to Proceed unless an alternate schedule has been previously accepted by the OWNER. Substantial completion is defined as all Work, as described and as shown herein, except site restoration in the form of placement of seed, mulch, and fertilizer.

F. Final Completion: Upon issuance of the Notice of Award, the CONTRACTOR agrees to complete all Work not delivered by the time of substantial completion (i.e., site restoration) no later than 90 days after the Notice to Proceed.

G. Michigan Products and Recycled Products: All CONTRACTORS and suppliers are encouraged to provide Michigan-made products and/or recycled products whenever possible where price, quality, and performance are equal to, or superior to, non-Michigan products and the requirements of the Contract Documents.

END OF SECTION

SECTION 00220

GENERAL CONDITIONS

1. Definitions

Wherever used in any of the Contract Documents, the following meaning shall be given to the term herein defined:

A. CONTRACTOR - The person, firm or corporation to whom the within Contract is awarded by the OWNER and who is subject to the term thereof.

B. Subcontractor - A person, firm or corporation other than the CONTRACTOR supplying labor and materials or labor for Work at the Site of the project.

C. Project - The entire improvement proposed by the OWNER to be constructed in part or in whole pursuant to the within Contract.

D. Work - The Work to be done including all labor, materials, tools and all appliances and appurtenances necessary to perform and complete everything specified or implied in the plans or in this Contract in full compliance with all the terms and conditions thereof.

E. OWNER - The municipality, person, firm or corporation as specified in the Invitation to Bid for whom the Work is to be done, and any person, board, commission, or department which is authorized to act as agent or primary contact by the OWNER.

F. OWNER's REPRESENTATIVE - The OWNER's REPRESENTATIVE, environmental or engineering firm or corporation as specified in the Invitation to Bid who are designated by the OWNER for the Work or their duly authorized agents, such agents acting severally within the scope of the particular duties entrusted to them. This term may also be used interchangeably with the term SITE ENGINEER.

G. Contract Documents or Contract - All of the component parts of the Contract including the Invitation to Bid, Instruction to Bidders, Supplementary Instructions to Bidders, General Conditions, General Specifications, Detailed Specifications, Proposal, Contract Bonds, all of which are attached hereto; and including any Addenda, which may be issued and made a part of the Contract; and the plans and drawings therein referred to and other drawings, specifications and engineering data which may be furnished by the CONTRACTOR and approved by the OWNER and such additional specifications and drawings which may be furnished by the OWNER's REPRESENTATIVE from time to time as are necessary to make clear and to define in greater detail the intent of the specifications and plans.

H. Site – City of Buchanan Demolition Project – Feed Mill and Tire Shop, 111 Railroad Street and 708 South Red Bud Trail, Buchanan, Michigan.

2. Intent of the Contract Documents

The Contract Documents are complementary and what is called for by anyone shall be as binding as if called for by all. The intention of the Contract Documents is to include in the Contract price the cost of all labor and materials, water, fuel, tools, plant, equipment, light, transportation and all other expenses as may be necessary for the proper execution of the Work.

In interpreting the Contract Documents, words describing Work or materials which have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with such well-known meaning recognized by architects, engineers and the trade.

3. Plans and Specifications

The location of the Work together with the details is shown upon the set of plans included in the specifications package.

These plans together with the Specifications form a part of the Contract. Where dimensions are shown on the drawings, they shall take precedence over scaled distances and dimensions.

In the event of any discrepancy between the plans and the Specifications, the decision of the OWNER's REPRESENTATIVE shall be decisive thereon. Any figured dimensions on the plans are to be taken as correct, but the CONTRACTOR is required to carefully check all dimensions of structures before beginning Work thereon. Should any errors be discovered, the OWNER's REPRESENTATIVE attention shall be notified of the same and the proper corrections made. All notes on the plans shall be carefully observed by the CONTRACTOR and are to be made a part of the Contract.

Before ordering any materials or equipment, but in ample time to permit the satisfactory progress of the Work, the CONTRACTOR shall submit to the OWNER's REPRESENTATIVE for approval, additional drawings or prints in triplicate of the equipment included under his/her Contract together with the information in such detail as may be necessary to permit the OWNER's REPRESENTATIVE, to inform himself of the design of the equipment and the character of the various materials. Since some of the materials or equipment are dependent one upon the other for determination of measurements or fit of parts, the drawings of such items shall be submitted at approximately the same time to permit proper checking by the OWNER's REPRESENTATIVE.

The CONTRACTOR shall at his/her own expense make such changes to the above drawings as may be found necessary upon inspection by the OWNER's REPRESENTATIVE to make them conform to the specifications or to the layout. Prior to the approval of any such drawings, any Work which the CONTRACTOR may do in the equipment covered by the drawings, shall be at his/her own risk as the OWNER will not be responsible for any expense incurred by the CONTRACTOR in changing equipment to make it conform to the drawings as finally approved.

Of the minor equipment for which drawings may not be required, the CONTRACTOR shall furnish to the OWNER's REPRESENTATIVE tabulated lists from time to time showing the name of the manufacturer and the catalog number of the type of equipment proposed together with such prints, dimensions, specifications, samples or other data as may be required to permit intelligent judgment of the acceptability of the equipment and materials proposed.

Upon approval of the above drawings, lists, prints, samples and other data, the same shall become a part of this Contract and the equipment furnished shall be in conformance with the same provided that the approval of the above drawings, lists, prints, specifications, samples or other data shall in no way release the CONTRACTOR from the responsibility for which said equipment is installed nor from his/her liability to replace the same should it prove defective or fail to meet the specified requirements.

The CONTRACTOR shall check all dimensions and quantities of the drawings furnished by the OWNER or by himself/herself and shall notify the OWNER's REPRESENTATIVE of all errors or omissions which may be discovered by examining and checking the drawings. He/she will not be allowed to take advantage of any error or omission in the drawings as full instructions will be furnished by the OWNER's REPRESENTATIVE, should such error omission be discovered, and the CONTRACTOR shall carry out such instructions as if originally specified.

4. Materials and Workmanship

Unless otherwise stipulated in the specifications, all workmanship, equipment, materials and articles incorporated in the Work covered by this Contract are to be new and of the best grade of their respective kinds for this purpose. The CONTRACTOR shall, if required, furnish such evidence as to kind and quality of materials. The CONTRACTOR shall furnish to the OWNER, for his/her approval, the name of the manufacturer of machinery, mechanical and other equipment which he contemplates installing together with their performance capacities and other pertinent information.

If not provided, material or Work called for in this Contract shall be furnished and performed in accordance with the well-known established practice and standards recognized by architect, engineers and the trade.

When required by the specifications, or when called for by the OWNER, the CONTRACTOR shall furnish the OWNER for approval full information concerning the materials or articles which he contemplates incorporating in the Work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment, materials and articles installed or used without such approval shall be at the risk of subsequent rejection.

5. Royalties and Patents

The CONTRACTOR shall pay for all royalties and patents and shall defend all suits or claims for infringement on any patent right and shall save the OWNER harmless from loss on account thereof.

6. Compliance with Laws

The CONTRACTOR shall have all licenses necessary for the prosecution of the Work unless otherwise specifically provided.

The CONTRACTOR shall give all notices, pay all fees, and comply with all the federal, state, and local laws, ordinances, rules and regulations bearing on the conduct of the Work.

7. Inspection

The OWNER and its representative shall at all times have access to the Work wherever it is in preparation or progress and the CONTRACTOR shall provide proper facilities for such access for inspection.

The OWNER's REPRESENTATIVE shall have the right to reject materials and workmanship which are defective or require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the OWNER. If the CONTRACTOR does not correct such condemned Work and remove rejected materials within a reasonable time, corrected by written notice, the OWNER may remove them and charge the expense to the CONTRACTOR.

If any defects or omissions in said Work are hidden or concealed so that a reasonable careful inspection at the time of acceptance of said Work would not have disclosed them and such defects or omissions appear or are disclosed within one year following the date of the approval by the OWNER of the final estimate, then said CONTRACTOR agrees on notice given him/her in writing by the OWNER's REPRESENTATIVE, that such defects or omissions exist, to correct immediately and make good the same; and in the event that he fails, refuses or neglects to do so, then said OWNER may correct and make good the same and said CONTRACTOR hereby agrees to pay on demand the cost and expense of doing such Work.

8. Cooperation

The CONTRACTOR shall cooperate with the property Work/operator and with all other CONTRACTORS who may be performing Work on behalf of the OWNER and workpeople who may be employed by the OWNER on any Work in the vicinity of the Work to be done under this Contract and he shall so conduct his/her operations as to interfere to the least possible extent with the Work of such CONTRACTORS or workpeople. He/she shall promptly make good at his/her own expense any injury or damage that may be sustained by other CONTRACTORS or employees of the OWNER at his/her hands. Any difference or conflict which may arise between the CONTRACTOR and other CONTRACTORS or between the CONTRACTOR and the workpeople of the OWNER in regard to their Work shall be adjusted and determined by the OWNER's REPRESENTATIVE. If the Work of the CONTRACTOR is delayed because of any acts or omissions of any other CONTRACTOR or the OWNER, the CONTRACTOR shall have no claim against the OWNER on that account other than for an extension of time.

When two or more Contracts are being executed at one time in such manner that Work on one Contract may interfere with that on another, the OWNER's REPRESENTATIVE shall decide which CONTRACTOR shall cease Work and which shall continue or whether the Work on both Contracts shall progress at the same time and in what manner.

9. Responsibility of Contractor

The CONTRACTOR shall build, construct, finish and fully complete the whole of the Work in the manner described and shown in the Contract drawings and specifications and in accordance with such further details and instructions as the OWNER's REPRESENTATIVE may from time to time furnish or issue for the purpose of insuring the thorough completion of the Work in the most efficient manner.

The CONTRACTOR shall be responsible for the entire Work until completed and accepted by the OWNER.

The OWNER is not to be held responsible for the estimates of the quantities of materials to be furnished or Work to be done. The CONTRACTOR must judge for himself as to such estimates, as well as to conditions to be met which will affect both the cost and time required for the execution of the Work and he assumes all responsibility therefore.

The CONTRACTOR shall be required to give his/her personal attention to the fulfillments of this Contract and the execution of the Work. He/she shall keep the same under his/her control and shall not sublet any part of it except as hereinafter specified. The OWNER will not recognize any parties engaged in the Work embraced by this Contract other than the CONTRACTOR and his/her employees.

The CONTRACTOR shall not assign by power of attorney or otherwise, any portion of the money that may become due through the performance of this Contract or any part thereof without the written permission of the OWNER.

10. Subcontracts

The CONTRACTOR shall notify the OWNER in writing of the names of the subcontractors proposed for the principal parts of the Work and shall not employ any subcontractors that the OWNER objects to as incompetent or unfit.

The CONTRACTOR agrees to be fully responsible to the OWNER for the acts or omissions of his/her subcontractors and of anyone employed directly or indirectly by him/her or them and this Contract obligation shall be in addition to the liability imposed by law upon the CONTRACTOR.

Nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and the OWNER.

The CONTRACTOR agrees to bind every subcontractor (and every subcontractor of a subcontractor) and every

subcontractor agrees to be bound by the terms of this Contract, Plans and specifications as far as applicable to his/her Work unless specifically notes to the contrary in a subcontract approved in writing as adequate by the OWNER.

11. Chattel Mortgages

No materials or supplies for the Work shall be purchased by the CONTRACTOR or by any subcontractor subject to any chattel mortgage or under a conditional sale or any other agreement by which an interest is retained by the seller. The CONTRACTOR warrants that he/she will have good title to all materials supplied and used by him/her in the Work.

12. Damages

To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the OWNER, OWNER's REPRESENTATIVE, and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to, attorney fees arising out of or resulting from the performance of the Work provided that any such claim, damage, loss, injury or expense is attributable to bodily injury, sickness, disease, death or injury or destruction of tangible property other than the Work itself (including the loss of use resulting there from), and is caused in whole or in part by any negligent act or omission of the CONTRACTOR, any subcontractor, anyone directly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in party by a party indemnified hereunder. The said CONTRACTOR further agrees that so much of the money due to him/her under and by virtue of this contract, as shall be considered necessary by the OWNER, may be retained by the OWNER to protect itself against loss until such suit or claims for damages shall have been settled and evidence to that effect shall have been furnished to the satisfaction of the said OWNER.

13. Workers Compensation

The CONTRACTOR shall procure and shall maintain during the life of the Contract Workers Compensation Insurance for all his/her employees to be engaged in Work on the project under this Contract and in case any such Work is sublet the CONTRACTOR shall require the subcontractor similarly to provide workers compensation insurance. In case any class of employees engaged in hazardous Work under this Contract, is not protected under the Worker's compensation statute, the CONTRACTOR shall provide and shall cause each subcontractor to provide adequate insurance coverage for the protection of such of his/her employees not otherwise protected.

14. Public Liability and Property Damage Insurance

The CONTRACTOR shall take out and maintain during the life of this Contract such Public Liability and Property Damage Insurance as shall protect him/her from claims for personal injury including accidental death as well as from claims for property damages which may arise from operations under this Contract, whether such operations be by himself or by anyone directly or indirectly employed by him/her. The CONTRACTOR shall require all subcontractors similarly to provide Public Liability and Property Damage Insurance including the same conditions. All policies shall be on an occurrence basis and not on the claims made basis. The minimum amounts of such insurance shall be as follows:

Contractor's Liability Insurance

Bodily Injury - Each Occurrence	$500,000.00
Aggregate Limit	$1,000,000.00
Property Damage - Each Occurrence	$1,000,000.00
Aggregate Limit	$1,000,000.00
Pollution Liability - Each Occurrence	$1,000,000.00
Aggregate Limit	$2,000,000.00

Automobile Insurance

Bodily Injury - Each Person	$500,000.00
Each Accident	$1,000,000.00
Property Damage - Each Accident	$500,000.00

15. Railroad Insurance Requirements

The CONTRACTOR shall meet all insurance requirements established by the operator of the nearby railroad (Amtrak) which are included in Appendix A. For any insurance requirement which conflicts with those requirements included in Item 14, Public Liability and Property Damage Insurance, the CONTRACTOR shall default to the requirement with the higher minimum limit of coverage.

16. Estimated Quantities

The CONTRACTOR agrees that the quantities of the various classes of Work as stated in the proposal or indicated on the plans are only approximate and are to be used solely for the purpose of comparing bids offered for the Work. During the progress of the Work, the OWNER may find it advisable and shall have the right to omit portions of the Work and to increase or decrease the quantities, and that the OWNER reserves the right to add or take from any items as may be deemed necessary or desirable. Under no circumstances or conditions will the CONTRACTOR be paid anything on account of anticipated profits upon the Work, or any portion thereof covered by this Contract which is not actually performed or entered into the construction of said improvements.

17. Changes in Work

The OWNER reserves the right to make any changes in the specifications and plans which may be deemed necessary either before or after beginning any Work under this Contract without invalidating it, provided that if alterations are made, the general character of the Work as a whole is not changed thereby.

If such alterations increase the quantity of Work to be done where unit prices are specified, such increase shall be paid for according to the quantity of Work actually performed at the unit price specified under this Contract for each designated class of Work. If such alterations diminish the quantity of Work to be performed where unit prices are specified, they shall not constitute a claim for damages or for loss or profits on the Work that may be dispensed with and the OWNER shall not be required to pay for Work or materials omitted.

If such alteration increase or decrease the amount of Work to be done where lump sum prices are specified, such increase or decrease shall be determined by one or more of the following methods as determined by the OWNER's REPRESENTATIVE.

A. By an acceptable lump sum proposal from the CONTRACTOR for all or such part of the Work or materials as not specified in the Contract by applicable unit prices.

B. By an acceptable unit price proposal from the CONTRACTOR for such items of Work or materials as not already specified in the Contract by applicable unit prices.

C. On a cost-plus limited basis not to exceed a specified limit. A cost-plus limit basis is defined as the cost of labor plus fifteen (15%) percent of the said cost to cover superintendence, general expense and profit.

If such alteration or omissions diminish the amount of Work to be done where lump sum prices are specified, such alteration or omission shall not constitute a claim for damages or for loss of profits on the Work or material omitted. The CONTRACTOR shall allow a credit for all Work or materials omitted.

Changes shall be made only upon the order of the OWNER's REPRESENTATIVE and such order shall be of no effect until the price or prices for the Work or materials not covered by bid prices has been agreed upon in writing and signed by the CONTRACTOR and said OWNER, and said CONTRACTOR shall not be allowed to recover anything for Work performed or materials used by reason of any changes to this Contract unless an order is made and agreement signed as aforesaid; nor shall the CONTRACTOR in any case be allowed to recover more for such Work and materials than said agreed price.

If the OWNER and CONTRACTOR cannot agree upon the prices to be paid for additional Work not provided in this Contract, then it is agreed that the OWNER shall have the right to contract with any person or persons for its performance.

18. Progress Schedule

The CONTRACTOR immediately after being awarded the Contract, shall prepare and submit one copy each to the OWNER and OWNER's REPRESENTATIVE, of a proposed schedule of progress, preferably in graphic form indicating the separate portions of the Work to be performed under this Contract and the date of beginning and completing each. On the 15th day of each calendar month, two (2) copies of the schedule shall be submitted to the OWNER's REPRESENTATIVE with notes thereon indicating the percentage of completion of each separate portion of the Work on that date. The form of the schedule shall be approved by the OWNER's REPRESENTATIVE.

19. Notice to Suspend Work

The CONTRACTOR shall delay or suspend the progress of the Work or any part thereof whenever he shall be so required by written order of the OWNER's REPRESENTATIVE and for such periods of time as the OWNER's REPRESENTATIVE may order providing that, in the event of such delay or delays or of such suspensions of the progress of the Work or any part thereof, the time for the completion of the Work so suspended or of Work delayed by such suspension or suspensions shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions, except when the CONTRACTOR is notified to suspend Work on account of faulty construction or construction methods that endanger the Work by such order of the OWNER's REPRESENTATIVE shall not otherwise modify of invalidate in any way any of the provisions of this Contract and said CONTRACTOR shall not be entitled to any damage or compensation from the OWNER on account of such delay or delays, suspension or suspensions except as provided herein under the heading, UNAVOIDABLE DELAYS AND EXTENSION OF TIME.

20. Unavoidable Delays and Extension of Time

In the event that any material alterations or additions are made herein specified, which in the opinion of the OWNER's REPRESENTATIVE will require additional time for the execution of any Work under this Contract, then, in that case, the time of completion of Work shall be extended by such period of time as may be fixed by said OWNER's REPRESENTATIVE and his/her decision shall be final and binding upon both parties hereto provided that, in such case, the CONTRACTOR, within four (4) days after being notified in writing of such alteration or additions, shall request in writing an extension of time but no such extension of time shall be given for any minor alterations or additions and the provisions herein shall not otherwise alter, change or invalidate the provisions of this Contract with reference to Liquidated Damages and the said CONTRACTOR shall not be entitled to any damage or compensation from the said OWNER on account of such additional time required for the execution of the Work.

Should the CONTRACTOR be obstructed or delayed in the commencement, prosecution or completion of any part of said Work by any act or delay of the OWNER or by any act or delay of a commercial carrier in transporting equipment, material or appurtenances for said Work, or by riot, insurrection, war, pestilence, fire, lightning, earthquakes, cyclones, floods or through any default or delay of other parties under Contract with said OWNER or through strikes or other

causes, which causes of delay mentioned in this article, in the opinion of the OWNER's REPRESENTATIVE are entirely beyond the control of the CONTRACTOR, then the time herein fixed for the completion of the Work so delayed will be extended for a period equivalent to the time lost by reason of any of the causes aforesaid, but no such allowance will be made unless a claim for extension of time is made by the CONTRACTOR to the OWNER in writing within one week from the time when any such alleged cause for delay shall occur.

It is further expressly agreed that said CONTRACTOR shall not be entitled to any damages or compensation from said OWNER on account of any delays resulting from any of the causes specified herein, except compensation for wages for extra time for any necessary watchmen and for extra premiums on his/her bond actually paid by said CONTRACTOR on account of said additional time so required to complete all Work hereunder due only to delays caused by the OWNER or by other parties under Contract with said OWNER. The OWNER's REPRESENTATIVE shall decide the number of days that said CONTRACTOR has been so delayed and his/her decision shall be final and binding upon both parties hereto.

21. Termination for Breach

In the event that any of the provisions of this Contract are violated by the CONTRACTOR or by any of his/her subcontractors, the OWNER may serve written notice upon the CONTRACTOR and the Surety of his/her intention to terminate such contract, such notice to contain the reasons for such intention to terminate the Contract and unless within ten (10) days after the service of such notice upon the CONTRACTOR, such violation shall cease and satisfactory arrangements for correction are made, the Contract shall upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the OWNER shall immediately serve notice thereof upon the Surety and the CONTRACTOR and the Surety shall have the right to take over and perform the Contract. Provided, however, that if the Surety does not commence performance thereof within thirty (30) days from the date of the mailing to such Surety of notice of Termination, the OWNER may take over the Work and prosecute the same to completion by Contract for the account and at the expense of the CONTRACTOR and the CONTRACTOR and his/her Surety shall be liable to the OWNER for any excess cost occasioned the OWNER thereby and in such event the OWNER may take possession of the utilize in completing the Work, such materials, appliances and plans as may be on the Site of the Work and necessary therefore.

22. Cost of Work

The CONTRACTOR shall furnish the OWNER's REPRESENTATIVE reasonable facilities for obtaining such information as he may desire respecting the progress and execution of the Work and the character of materials. The CONTRACTOR, upon request, shall furnish the OWNER's REPRESENTATIVE with copies of expense bills for transportation charges, materials and equipment. In the event of cost-plus limited Work as authorized in writing by the OWNER's REPRESENTATIVE, the CONTRACTOR shall submit daily payrolls and equipment rental charges in addition to cost of materials.

When required by the OWNER's REPRESENTATIVE, the CONTRACTOR shall furnish a supplemental schedule of prices showing the breakdown cost of lump sum price items.

23. Guarantee

The CONTRACTOR hereby guarantees all of the Work to be furnished under this Contract against any defects in workmanship or materials for period of one (1) year following the date of the OWNER's REPRESENTATIVE's certification referred to in the first sentence of Section 30 of the General Conditions. Under this guarantee, the CONTRACTOR agrees to make good without delay at his/her own expense any failure of any such parts due to faulty materials, construction, or installation, or to the failure of any such equipment to successfully perform all the Work put upon it within the limits of the specifications and further shall make good any damage to any part of the Work caused by such failure. Said CONTRACTOR also agrees that the CONTRACTOR's Performance Bond shall fully

cover all guarantees contained in this paragraph.

24. OWNER's REPRESENTATIVE to Decide

All Work performed under this Contract shall be done in a first class, workmanlike manner, and done to the satisfaction of the OWNER's REPRESENTATIVE who shall have supervision of all Work included hereunder. The OWNER's REPRESENTATIVE shall in all cases determine the amount, quality, acceptability, and fitness of the several kinds of Work and materials herein specified. He/she shall decide all questions which may arise as to the fulfillment of the terms of the Contract by the CONTRACTOR, or as to the intent or purpose of the Contract, and his/her decision on any questions that may arise shall be final and conclusive as to both parties of this Contract, and his/her approval of the Work shall be a condition precedent to the final settlement and payment of any amount which may be due the CONTRACTOR.

25. Duties and Powers

Properly authorized inspectors shall be considered to be the representatives of the OWNER's REPRESENTATIVE limited to the duties and power entrusted to them. It shall be their duty to inspect the materials and workmanship of those portions of the Work to which they are assigned, either individually or collectively, under instructions of the OWNER's REPRESENTATIVE and to report any and all deviations from the plans, specifications, and other Contract provisions which may come to their notice. Any inspector shall have the right to order the Work entrusted to his/her supervision stopped if, in his/her opinion, such action becomes necessary until the OWNER's REPRESENTATIVE is notified, and he has determined and ordered that the Work shall proceed in due fulfillments of all Contract requirements.

26. No Waiver of Rights

Neither the inspection by the OWNER or OWNER's REPRESENTATIVE or any of their employees, nor any order by the OWNER for payment of money, nor any payment for, or acceptance of, the whole or any part of the Work by the OWNER or OWNER's REPRESENTATIVE, nor any extension of time, nor any possession taken by the OWNER or its employees, shall operate as a waiver of any provision of this Contract, or of any Power herein reserved to the OWNER, or any right to damage herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

27. Bonds

The successful bidder will be required to furnish for each set of executed Contract Documents and conformed copies therefore an original Performance Bond and Labor and Material Bond with surety acceptable to the OWNER as follows:

A. Bond in the amount of 100 percent of the Contract price to insure the completion of the entire Work according to the Contract.
B. Bond in the amount of 100 percent of the Contract price for the protection of the OWNER and to secure payment of all subcontractors, labor, and materialmen according to the statutes of the State of Michigan at that time in effect.

28. Prices

The CONTRACTOR agrees to accept the prices stated in the proposal form hereto attached as full compensation for furnishing all of the equipment and materials, and for doing all the Work contemplated and specified in this Contract; also for all loss or damage arising out of the nature of the Work aforesaid, or from the action of the elements, or from any unforeseen obstructions or difficulties which may be encountered in the prosecution of the same; and for all risks

of every description connected with the Work; and for well and faithfully completing the Work and the whole thereof, in full compliance with the Plans and Specifications and the requirements of the OWNER's REPRESENTATIVE under them.

29. Estimates and Payments

The OWNER agrees to pay the CONTRACTOR the sums herein specified in a one-time payment after the completion of all work as specified herein.
It is further agreed that the granting of any or payment hereunder shall in no way lessen the liability of the CONTRACTOR to replace defective Work, though the same may not have been detected at the time equipment, material, and such certificate was given or acted upon.

30. Final Estimate and Payment

Upon completion of all the Work included under this Contract and the final inspection thereof and the performance of satisfactory operation and acceptance tests, and after the CONTRACTOR has submitted acceptable evidence as to the satisfaction of all claims, the OWNER's REPRESENTATIVE will certify to that effect. The said CONTRACTOR further agrees that he shall not be entitled to demand or receive final payments for any portion of the aforesaid Work or materials, except in the manner set forth in this agreement; nor until all the stipulations, provisions and conditions herein above mentioned are complied with and the OWNER's REPRESENTATIVE shall have given his/her certificate to that effect; whereupon the OWNER will, at the expiration of thirty (30) days after such completion and deliver of such certificates, pay and hereby binds himself to pay to the CONTRACTOR in cash, the whole amount of money accruing to said CONTRACTOR under this Contract, except such sum or sums of money that have already been paid and as may be lawfully retained under any of the provisions of his/her Contract herein set forth.

31. Final Payment to Release Work

The acceptance by the CONTRACTOR of the final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR for all things done or performed for or relating to the Work and for every act and neglect of the OWNER and others relating to or arising out of the Work, excepting only his/her claims, if any, for amounts withheld by the OWNER, upon final payments. No payment, however, final or otherwise, shall operate to release the CONTRACTOR or his/her Sureties from any obligation upon or under this Contract or the CONTRACTOR's Bond.

32. Permits

All construction methods shall be performed in compliance with, but not limited to, the Michigan Soil Erosion and Sedimentation Control Act, Michigan Department of Transportation permit requirements, Berrien County Road Department permit requirements, Berrien County Drain Commission permit requirements, and City of Buchanan permit requirements. The CONTRACTOR shall be responsible for obtaining all necessary permits from the Controlling Agencies prior to the start of construction.

All required permits and permit requirements shall be incidental to the Project unless specific pay items are provided for in the Bid Proposal Form.

33. Job Site Safety

None of the specifications, conditions, plans or terms of the contract between the OWNER and CONTRACTOR or the OWNER and the OWNER's REPRESENTATIVE or inspector shall be construed to impose any responsibility upon the OWNER's REPRESENTATIVE, its employees, inspectors, or other agents, for review, determination and/or supervision of job Site safety. The construction means, manner and method remains the sole responsibility of the

CONTRACTOR, and neither the OWNER's REPRESENTATIVE nor the OWNER shall be responsible for the failure of the CONTRACTOR to provide a safe workplace for the employees, employees of other contractors or the general public.

The OWNER's REPRESENTATIVE's responsibility on the job Site is solely to determine compliance with the construction documents, drawings and specifications. The OWNER's REPRESENTATIVE is not authorized by the OWNER nor is he responsible for the construction means, manner and method undertaken by the CONTRACTOR nor is he responsible to determine and/or evaluate the job Site safety of the project. Job Site safety is the sole responsibility of the CONTRACTOR.

34. Non-Discrimination

The CONTRACTOR shall not discriminate against an employee or applicant for employment with respect to their hire, tenure, terms, conditions, or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, marital status, physical or mental disability unrelated to the individual's ability to perform the duties of the particular job or position. The CONTRACTOR further agrees that any subagreement shall contain a non-discrimination provision identical to this provision and binding upon any and all subcontractors. This covenant is required pursuant to the Elliott Larsen Civil Rights Act, 1976 Public Act 453, as amended, MCL 37.2201, et seq., and the Persons with Disabilities Civil Rights Act, 1976 Public Act 220, as amended, MCL 37.1101, et seq., and any breach thereof may be regarded as a material breach of the contract or purchase order.

END OF SECTION

SECTION 00300

BID PROPOSAL FORM

This Bid Proposal Form shall be filled in by the Bidder in ink. For complete information concerning these items, see the Technical Specifications and Drawings.

BID ITEMS

Item No.	Item	Estimated Quantity	Unit	Unit Price	Amount
1.	Mobilization and Site Administration	1	LS	$	$
2.	Obtain Permit to Enter (PTE) from Amtrak before the start of Work (See Appendix A)	1	LS	$	$
3.	Treat Feed Mill Structures for Rodents and Vermin Prior to Demolition Operations	1	LS	$	$
4.	Removal and Disposal of Regulated Asbestos Containing Materials from Former Feed Mill (See Appendix C)	1	LS	$	$
5.	Removal and Disposal of Regulated Asbestos Containing Materials from Former Tire Shop (See Appendix D)	1	LS	$	$
6.	Removal and Disposal of Regulated and Universal Waste from Former Feed Mill (See Appendix C)	1	LS	$	$
7.	Removal and Disposal of Regulated and Universal Waste from Former Tire Shop (See Appendix D)	1	LS	$	$
8.	Removal and Disposal of General Refuse including all Residual Grain from Former Feed Mill, Bins, Silos, and former Garden Center	1	LS	$	$
9.	Removal and Disposal of General Refuse from Former Tire Shop.	1	LS	$	$
10.	Former Feed Mill Buildings Demolition (Superstructure, Concrete Footings, Floors, Silos, Bins, Elevator, Former Garden Center, Slabs, Foundations, trailers, and Concrete/Asphalt Paving) and Removing, Handling, Transporting, and Disposing/Recycling of all Demolition Debris	1	LS	$	$
11.	Former Tire Shop Demolition (Superstructure, Concrete Footings, Floors, Slabs, Above Ground Storage Tanks, Concrete/Asphalt Paving, and Foundations) and Removing, Handling, Transporting, and Disposing/Recycling of all Demolition Debris. Remove and Dispose Septic System.	1	LS	$	$
12.	Disassemble, Lift, and Load Weigh Scale. Demolition, Removing, Handling, Transporting, and Disposing/Recycling of Concrete Housing. Fill and Compact Excavation.	1	LS	$	$
13.	Backfilling, Grading, and Compacting of Granular Fill (This Includes the Elevator Pit)	1	LS	$	$
14.	Load, Transport, and Dispose Soils from Soil Piles A & B.	700	Tons	$	$
15.	Site Restoration	1	LS	$	$
16.	Demobilization and Project Closeout	1	LS	$	$
	Total (Base Bid Items)				**$**

BIDDER'S NAME: _____

Bid Sum - The undersigned agrees to the performance of the work as stated for the Bid Sum from Bid Schedule of _____ Dollars ($_____)
(the above amount shall be in both words and numbers)

This offer has been prepared after our examination of the complete drawings and specifications, together with their related documents, and our examination of the conditions surrounding the completion of the proposed work including the availability of materials, equipment, and labor.

Signature: _____

Printed Name/Title: _____

Firm Name: _____

Address: _____

City, State, Zip: _____

Telephone No.: _____

Email: _____

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA:

Addendum No. 1: Received _____ Date _____

Addendum No. 2: Received _____ Date _____

Addendum No. 3: Received _____ Date _____

Addendum No. 4: Received _____ Date _____

Signature: _____

Printed Name/Title: _____

END OF SECTION

SECTION 00320

PROPOSAL AND CONTRACT

THIS CONTRACT made the _____ day of _____ 2023, by and between _____, hereinafter called the "CONTRACTOR", and City of Buchanan, hereinafter called the "OWNER".

WITNESSETH, THAT the CONTRACTOR and the OWNER for the consideration stated herein agree as follows:

ARTICLE I - SCOPE OF WORK

The CONTRACTOR shall perform everything to be performed and shall provide and furnish all of the labor, materials, necessary tools, expendable equipment and all utility and transportation services required to perform and complete in a workmanlike manner all the Work required for the construction of all items in connection with the Site Preparation Project of the OWNER all in strict accordance with the Plans and Specifications, including any and all addenda, prepared by Point Blue, LLC, acting and in these Contract Documents referred to as the OWNER's REPRESENTATIVE, which plans and specifications are made a part of this Contract, and in strict compliance with the CONTRACTOR's proposal and other Contract Documents herein mentioned which are a part of this Contract; and the CONTRACTOR shall do everything required by this Contract and the other documents constituting a part hereof.

ARTICLE II - COMPENSATION TO BE PAID TO THE CONTRACTOR

In consideration of the completion of the Work described herein and in fulfillment of all stipulations of this Contract to the satisfaction and acceptance of the OWNER's REPRESENTATIVE and the OWNER, the OWNER shall pay and the said CONTRACTOR further agrees to receive and accept payment based on the prices bid per unit for material and labor as set forth in the conformed copy of the CONTRACTOR's proposal (or bid) as filed with the OWNER on the _____ day of _____ 2023, as full compensation for furnishing all the equipment and materials and for the costs of all premiums on insurance and bonds and for doing all the Work contemplated and specified in this Contract; also for all loss or damage arising out of the nature of the Work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same; and for all risks of every description connected with the Work; and for well and faithfully completing the Work and the whole thereof, in full compliance with the Plans and Specifications and the requirements of the OWNER's REPRESENTATIVE under them.

Payments are to be made to the CONTRACTOR in accordance with and subject to the provisions embodied in the Contract Documents hereto attached.

ARTICLE III - COMPONENT PARTS OF THIS CONTRACT

This Contract consists of the following component parts, all of which are as fully a part of this Contract as if herein set out verbatim, or, if not attached, as if hereto attached.

1. General Conditions
2. Invitation to Bid
3. Instructions to Bidders
4. Specifications, including Addenda Nos. _____
5. Plans (if any)
6. Contractor's Proposal (Bid Forms)
7. Contract (this document)
8. Qualifications Statement

In the event that any provision in any of the above component parts of this Contract conflicts with any provision in any other of the component parts, the provision in the component part first enumerated above shall govern over any other component part which follow it numerically, except as may be otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed in three original counterparts the day and year first above written.

(SEAL)

Attest:

_____

_____
TITLE

(SEAL)

Attest:

_____

_____
TITLE

_____
CONTRACTOR

By:_____
SIGNATURE

_____
PRINT NAME

_____
TITLE

CITY OF BUCHANAN
OWNER

By:_____
SIGNATURE

_____
PRINT NAME

_____
TITLE

INSTRUCTIONS FOR EXECUTING CONTRACT

If the CONTRACTOR be a corporation, the following certificate should be executed:

I, _____, certify that I am the _____ of the Corporation names as CONTRACTOR herein above; that _____ who signed the foregoing Contract on behalf of the CONTRACTOR was then _____ of said Corporation; that said Contract was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

If the Contract be signed by the secretary of the corporation, the above certificate should be executed by some other officer of the corporation, under the corporate seal. In lieu of the foregoing certificate there may be attached to the Contract copies of so much of the records of the corporation as will show the official character and authority of the officers signing, duly certified by the secretary or assistant secretary under the corporate seal to be true copies.

The full name and business address of the CONTRACTOR should be inserted and the Contract should be signed with his official signature. Please have the name of the signing party or parties typewritten or printed under all signatures of the Contract.

If the CONTRACTOR should be operating as a partnership, each partner should sign the Contract. If the Contract be not signed by each partner, there should be attached to the Contract a duly authenticated power of attorney evidencing the signer's (signers') authority to sign such Contract for and in behalf of the partnership.

If the CONTRACTOR be an individual, the trade name (if the CONTRACTOR be operating under a trade name) should be indicated in the Contract and the Contract should be signed by such individual. If signed by one other than the CONTRACTOR, there should be attached to the Contract a duly authenticated power of attorney evidencing the signer's authority to execute such Contract for and on behalf of the CONTRACTOR.

QUALIFICATIONS STATEMENT

Company Name: _____

This form will be used by the OWNER'S REPRESENTATIVE to evaluate qualifications for activities outlined in this document at the City of Buchanan Demolition Project – Feed Mill & Tire Shop Project. Only those firms with the experience needed to perform the work outlined in the attached bid documents will be considered for the project. Those firms which employ qualified personnel with previous experience and/or will use experienced subcontractors will be considered.

INSTRUCTIONS:

1. Submit two copies of this form and any additional pages (limit two) together with your proposal.
2. References for each subcontractor may be requested.

EVALUATION FOR QUALIFICATIONS FORM

BUILDING DEMOLITION	YES	NO
1. Does your firm have experience in building demolition and asbestos abatement similar to size and scope as this project?	_____	_____
2. Has your firm ever developed a Crane (Pick) Plan?	_____	_____
3. Has your firm completed demolition projects adjacent to railroad tracks?	_____	_____
4. List the number of building demolition projects completed in the last five years.	_____	_____
5. List the number of asbestos abatement projects completed in the last five years.	_____	_____
6. Does your firm have sufficient staff and resources to complete this project within the allotted time frame?	_____	_____
7. List proposed Subcontractors for use on this project.		

_____
_____
_____

HAZARDOUS AND NON-HAZARDOUS (SPECIAL) WASTE PERSONNEL	YES	NO
1. Is staff experienced in hazardous waste and non-hazardous special waste activities?	_____	_____
2. Personnel experienced and trained in proper use of safety equipment?	_____	_____
3. Personnel have current EPA and OSHA 29 CFR 1910.120 hazardous waste site operations training (HAZWWOPER)?	_____	_____
4. Personnel have current training under the OSHA Asbestos Standard for Construction or General Industry?	_____	_____

Describe previous building demolition and asbestos abatement (minimum two, maximum four) projects similar to the City of Buchanan Demolition Project – Feed Mill & Tire Shop and/or most applicable to the tasks outlined in the attached documents, and supply references and telephone numbers.

Company Name: _____
Approximate $ Amount: _____
Reference Person: _____
Phone Number: _____
Description: _____
_____
_____

Company Name: _____
Approximate $ Amount: _____
Reference Person: _____
Phone Number: _____
Description: _____
_____
_____

Company Name: _____
Approximate $ Amount: _____
Reference Person: _____
Phone Number: _____
Description: _____
_____
_____

Company Name: _____
Approximate $ Amount: _____
Reference Person: _____
Phone Number: _____
Description: _____
_____
_____

Provide below any additional qualifications not addressed in the above questions:

_____
_____
_____
_____
_____
_____

DO NOT WRITE IN THIS SPACE - FOR OWNER'S REPRESENTATIVE USE ONLY - COMMENTS

CONTRACTOR'S AFFIDAVIT, WAIVER AND RELEASE OF LIENS AND OF ALL CLAIMS

The CONTRACTOR was engaged by City of Buchanan for activities in connection with the City of Buchanan Demolition Project – Feed Mill & Tire Shop pursuant to the Contract dated _____ between City of Buchanan ("OWNER") and _____ ("CONTRACTOR") related to the 111 Railroad Street and 708 South Red Bud Trail Demolition Project in Buchanan, Michigan.

In accordance with the above-described Contract, the CONTRACTOR, for and in consideration of the payments made to it by the OWNER or to a lower tier subcontractor, materialman, or supplier of the CONTRACTOR, for labor employed in and/or materials furnished for the Project pursuant to the above-referenced Contract, hereby certified as follows:

1. The CONTRACTOR hereby affirms that the total amount due from the OWNER to the CONTRACTOR for Work performed or materials supplied to the Project has been paid to and received by the CONTRACTOR, being the full and entire sum due the CONTRACTOR in connection with the Project (the "Final Payment"), the CONTRACTOR having received payment in full for all deliveries of material to and for all Work performed in connection with the Project. In consideration of the payments made to date, the CONTRACTOR hereby affirms that there are no presently outstanding claims against the Beneficiaries (as hereinafter defined) in connection with the Project, and that, upon receipt of the Final Payment; there shall be no outstanding claims against the Beneficiaries.

2. In consideration of the payments made to the CONTRACTOR, the CONTRACTOR does hereby waive, release, and quit claim in favor of the OWNER, each and every party acquiring title to and/or making a loan on the Project and the Title Company or companies examining and/or insuring, title to the Project and any and all of their successors and assigns (all of the foregoing being hereafter referred to as the "Beneficiaries") all rights that presently exist (as well as, upon receipt of the Final Payment, all rights that hereafter may accrue) to the CONTRACTOR to assert a lien or claim upon the land and improvements comprising the Project by virtue of any law in the jurisdiction in which the land and improvements are situated or any amendment of said law regarding the rights of a CONTRACTOR, subcontractor, laborer, supplier, or materialman to assert a lien or claim against the Project.

3. The CONTRACTOR has not and will not assign any claim for payment or right to perfect a claim against the Project and the CONTRACTOR has the right, power, and authority to execute this Affidavit, Waiver and Release of Liens and of All Claims.

4. In consideration of the payments made to the CONTRACTOR, the CONTRACTOR does here forever, release, waive, and discharge all of the Beneficiaries, from any and all claims of action, suits, debts, accounts, damages, encumbrances, judgments, liens, claims, and demands whatsoever, in law or equity which the CONTRACTOR and/or its successors and/or assigns ever had, and now have (as well as, upon receipt of the Final Payment, ever will have) against the said Beneficiaries, by reason of delivery of material and/or the performance of Work related to the Project.

5. The CONTRACTOR has not and will not assign any claim of payment against the Beneficiaries, and the CONTRACTOR has the right, power, and authority to execute this Affidavit, Waive and Release of Liens and of All Claims.

6. In consideration of the payments made to the CONTRACTOR, hereby agrees to indemnify and hold the OWNER and Beneficiaries harmless from any and all damages, costs, expenses, demands, suits, and legal fees, directly or indirectly, relating to any claim for compensation or lien asserted by any other party for Work, labor, services, materials, and/or equipment which relates to that which was performed or should have been performed by the CONTRACTOR, and from and against any claim relating to any Work, labor, services, materials, and/or equipment allegedly performed by or for the CONTRACTOR.

7. The CONTRACTOR warrants that all laborers and lower tier subcontractors employed by it, and all suppliers or materialmen from which it has acquired materials incorporated into the Project and any lien or bond claimant relating to the CONTRACTOR's Work have been paid in full with respect to Work performed for

which the CONTRACTOR has received payment, and that all such persons will be paid in full promptly after the CONTRACTOR receives its Final Payment, and that none of such laborers, lower tier subcontractors, suppliers, materialmen, or claimants have any claim, demand, or lien against the Project. The CONTRACTOR further warrants that all applicable taxes, fees, and benefits relating directly or indirectly to the CONTRACTOR's Work have been paid in full. The CONTRACTOR hereby agrees to indemnify and hold the OWNER and Beneficiaries harmless from any and all damages, costs, expenses, demands, suits, and legal fees, directly or indirectly relating to any lien or claim filed for compensation by any other party for Work, labor, services, material, and/or equipment allegedly performed by or for the CONTRACTOR.

8. No security interest has been given or executed by the CONTRACTOR for or in connection with any materials, appliances, machinery, fixtures, or furnishings placed upon or installed in the Project.

This Affidavit, Waiver and Release of Liens and of All Claims shall be an independent covenant and shall operate and be effective with respect to Work and labor done and materials furnished under any supplemental CONTRACTOR or contracts, whether oral or written, for extra or additional Work on the Project or for any further Work done or materials furnished at any time with respect to the Project subsequent to the execution hereof.

IN WITNESS WHEREOF, this Affidavit, Waiver and Release of Liens and of All Claims has been executed on this _____ day of _____ 2023.

WITNESS:

_____
Name

Name of CONTRACTOR:

_____

By: _____

Name: _____

Title: _____

Subscribed and sworn to me this _____ day of _____ 2023.

_____

Notary Public
My Commission Expires: _____
Notary Seal

DIVISION 1

General Requirements

SECTION 01100

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SITE SUMMARY

The City of Buchanan intends to undertake improvements of its properties located at 111 Railroad Street and 708 South Red Bud Trail in Buchanan, Michigan. The work at the Site consists of securing and abiding by an Amtrak permit (Appendix A), asbestos abatement, universal waste removal/recycling, general refuse removal/disposal, demolition of former feed mill, former garden center, and former tire shop, utility removal and capping, and site restoration. A Site Location Map and a Property Map are presented as Figures 1 and 2 in Appendix B. Demolition Plans are presented as Figures 3 and 4 in Appendix B.

By improving the aesthetic character of the area and future use of the properties and responding to environmental and building maintenance issues, the Project will enhance the Site and surrounding area.

The term Work includes, but is not necessarily limited to, pre-work submittals such as bonds, insurance, permit applications, work plans, health and safety plans, and other administrative items as specified.

1.2 SITE OBJECTIVES

The objective of the overall project is to remove the existing structures and surface features and to abate unacceptable material in order to improve the aesthetic character of the area.

1.3 GENERAL DESCRIPTION OF WORK

A. The Work to be performed under this Contract includes, but is not limited to, the following activities:
   1. Furnishing bonds and insurance.
   2. Preparing and submitting pre-Work Submittals, including all requirements of Amtrak (Appendix A).
   3. Mobilizing equipment, personnel, materials, and incidentals to the Site; establishing and maintaining temporary Site offices, construction, and decontamination facilities; obtaining permits and licenses required to commence the Work; and performing project administration.
   4. Schedule MISS DIG 811 on-site meeting, including the City of Buchanan, to coordinate the locating of utilities withing the work area prior to the Work.
   5. Removing, capping, and/or bulkheading on-site municipal utilities at road right-of-way lines.
   6. CONTRACTOR shall employ a certified, licensed exterminator to treat the former feed mill structures and to control rodents and vermin before and during demolition operations.
   7. Providing soil erosion and sedimentation control.
   8. Maintaining traffic control, dust control, and signage.
   9. Performing asbestos abatement Work.
   10. Removing, handling, loading, transporting, and disposing/recycling of universal wastes, and miscellaneous general refuse and equipment.
   11. Demolition of Site building superstructures and surface features, silos, bins, elevator, floors, above ground storage tanks, foundations, footings, concrete/asphalt paving and septic system.

12. Handling, loading, transporting, and disposing/recycling of demolition debris at licensed disposal/recycling facilities.
13. Loading of weigh scale (coordination with the Owner). Demolish, remove, dispose concrete housing of the weigh scale. Compact and fill excavation.
14. Filling excavations (and elevator pit) and compacting the fill material.
15. Grading the Site after filling and compacting operations are complete.
16. Load, transport, and dispose of soils from Soil Piles A and B.
17. Site restoration in the form of seeding, mulching, and fertilizer. Apply seed by hydroseeding.
18. Demobilizing equipment, personnel, materials, incidentals, and temporary construction facilities from the Site upon completion of the Work.
19. Performing project closeout activities.

B. The Work is to be conducted at 111 Railroad Street and 708 South Red Bud Trail in Buchanan, Michigan.

C. Contracting Method: The Work will be constructed under one prime contract.

D. The CONTRACTOR shall complete and/or submit all necessary permit application(s), paperwork, and administrative items as required by the WORK.

The CONTRACTOR shall arrange for and complete all other utility disconnects, including but not limited to, potable water, natural gas, and telephone. The CONTRACTOR shall ensure that any and all utilities disconnected in association with the Work shall not disrupt neighboring properties.

E. An asbestos containing materials (ACM) assessment has been performed at the project Site. The reports are included in Appendices C and D for the CONTRACTOR's use in completing and submitting all necessary pre-demolition notifications to all appropriate agencies.

1.4 CONTRACTOR'S USE OF SITE

A. CONTRACTOR's use of the Site shall be confined to within the property lines of both properties.

B. CONTRACTOR shall:
1. Assume full responsibility for protection and safekeeping of products stored on or off the Site.
2. Obtain and pay for all additional storage or Work areas required for its operations.

C. Site work shall be limited to Mondays through Fridays between the hours of 7:00 a.m. and 6:00 p.m. No site work shall be performed on Saturdays, Sundays, or legal holidays.

D. CONTRACTOR shall be responsible for obtaining and adhering to any and all necessary permit requirements.

1.5 NOTICE TO OWNER'S REPRESENTATIVE AND SITE ENGINEER OF ON-SITE WORK

A. CONTRACTOR shall notify OWNER's REPRESENTATIVE/SITE ENGINEER of the CONTRACTOR'S date of starting Work at the Site at least 5 business days prior to this date.

1.6 NOTICES TO OWNERS AND AUTHORITIES OF PROPERTIES ADJACENT TO THE WORK

A. Notify owners of adjacent properties and utilities when prosecution of the Work may affect them.

B. When it is necessary to temporarily obstruct the property, or when any utility service connection must be interrupted, give notices sufficiently in advance to enable the affected persons to provide for their needs. Conform notices to any applicable local ordinance and, whether delivered orally or in writing, include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01170

SITE ENGINEER

PART 1 - GENERAL

1.1 GENERAL DESCRIPTION OF WORK

A. The SITE ENGINEER is an OWNER's REPRESENTATIVE agent at the Site. The SITE ENGINEER will act as directed by and under the supervision of OWNER's REPRESENTATIVE, and will confer with OWNER's REPRESENTATIVE regarding SITE ENGINEER's actions. SITE ENGINEER's dealings in matters pertaining to the Work shall, in general, be with the OWNER's REPRESENTATIVE and CONTRACTOR. SITE ENGINEER's dealings with SUBCONTRACTORS shall only be brought through or with the full knowledge and approval of CONTRACTOR.

1. Duties and responsibilities of SITE ENGINEER:

a. Schedules: Review the progress schedule and schedule of values prepared by CONTRACTOR and consult with OWNER's REPRESENTATIVE concerning acceptability of same.

b. Conference and Meetings: Attend meetings with OWNER's REPRESENTATIVE, OWNER, and CONTRACTOR, such as pre-Work conferences, progress meetings, job conferences, and other project-related meetings, and prepare and circulate copies of meeting minutes thereof.

c. Liaison:

1) Serve as OWNER's REPRESENTATIVE liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent, and assist CONTRACTOR with understanding the intent of the Contract Documents; and assist OWNER's REPRESENTATIVE in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.

2) Assist in obtaining from OWNER additional details or information, when required for proper execution of the Work.

d. Review of Work, Rejection of Defective Work, Inspections and Tests:

1) Conduct full-time daily on-site observations of the Work in progress to assist OWNER's REPRESENTATIVE and OWNER in determining if the Work is, in general, proceeding in accordance with the Contract Documents.

2) Report to OWNER's REPRESENTATIVE whenever SITE ENGINEER believes that any Work is unsatisfactory, faulty, or defective or does not conform to the Contract Documents; or has been damaged, or does not meet the requirements of any inspection, test, or approval required to be made; and advise OWNER's REPRESENTATIVE of Work that SITE ENGINEER believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection, or approval.

3) Accompany visiting inspectors representing public of other agencies having jurisdiction over the Work, record the results of these inspections and report to OWNER's REPRESENTATIVE and OWNER.

e. Interpretation of Contract Documents: Report to OWNER's REPRESENTATIVE when clarifications and interpretations of the Contract Documents are needed and

transmit to CONTRACTOR clarifications and interpretations as issued by OWNER's REPRESENTATIVE.

f. Records:
   1) Maintain orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, and reproductions of original Contract Documents including all Addenda, Change Orders and Field Orders, additional Drawings issued subsequent to the execution of the Agreement, OWNER's REPRESENTATIVE clarifications and interpretations of the Contract Documents, progress reports, and other Project-related documents.
   2) Keep records, recording CONTRACTOR and other personnel hours on the job Site, weather conditions, data relative to questions on Change Orders or changed conditions, list of job Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to OWNER's REPRESENTATIVE.
   3) Record names, address, and telephone numbers of the CONTRACTOR, all SUBCONTRACTORS, and all major suppliers of materials and equipment.

g. Reports:
   1) Furnish OWNER's REPRESENTATIVE periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule.
   2) Consult with OWNER's REPRESENTATIVE in advance of scheduled major tests, inspections, or start of important phases of the Work.
   3) Report immediately to OWNER's REPRESENTATIVE upon the occurrence of any accident.

h. Payment Requests: Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and submit recommendations to OWNER's REPRESENTATIVE noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the Site but not incorporated in the Work.

i. Completion:
   1) Before OWNER's REPRESENTATIVE issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion or correction.
   2) Conduct a final inspection in the company of OWNER's REPRESENTATIVE, OWNER, and CONTRACTOR and prepare a final list of items to be completed or corrected.
   3) Observe that all items on the final list have been completed or corrected and make recommendations to OWNER's REPRESENTATIVE concerning acceptance.

2. Limitations of Authority of SITE ENGINEER:
   SITE ENGINEER shall not:
   a. Authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by OWNER's REPRESENTATIVE.
   b. Exceed limitations of OWNER's REPRESENTATIVE authority as set forth in the Agreement or the Contract Documents.
   c. Undertake any of the responsibilities of CONTRACTOR, SUBCONTRACTORS, or CONTRACTOR's superintendent.

d. Advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences, or procedures of the Work, unless such advice or directions are specifically required by the Contract Documents.
e. Advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.
f. Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by OWNER's REPRESENTATIVE.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

A. The items listed below refer to and are the same pay items listed in the Bid Proposal Form. They constitute all of the pay items for the completion of the Work. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant, services, CONTRACTOR's field offices, job signs, sanitary requirements, testing, safety devices, approval and record drawings, water supplies, power, maintaining traffic, dust control, removal of CONTRACTOR derived wastes, watchpersons, bonds, insurance, and all other requirements of Conditions of the Contract and the General Requirements. Compensation for all such services, things and materials shall be included in the prices stipulated for the lump sum and unit price pay items listed herein.

B. Each lump sum and unit bid price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

1.2 ESTIMATE OF QUANTITIES

A. Estimated quantities for unit price pay items, as listed in the Bid Proposal Form, are approximate only and are included solely for the purpose of comparison of Bids. OWNER and OWNER's REPRESENTATIVE do not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond therewith and reserves the right to increase or decrease any quantity or to eliminate any quantity as OWNER may deem necessary.

1.3 RELATED PROVISIONS

A. Payments to CONTRACTOR: Refer to General Conditions.

B. Changes in Contract Price: Refer to General Conditions.

C. Schedule of Values: Refer to General Conditions and Section 01280, Schedule of Values.

1.4 PAY ITEMS

A. Bid Item 1 - Mobilization and Site Administration:
   1. Description: Item 1 includes mobilization as specified.
   2. Measurement: Lump Sum.
   3. Payment: Lump sum payment for Item 1 will be full compensation for providing labor, materials, equipment, and incidentals necessary for preparing and submitting the specified submittals, completing mobilization, insurance, bonds, barriers, markings, signage, enclosures, barricades, field offices, storage, traffic and soil erosion control, dust control and monitoring, and for performing all site administration and preparation not specifically included in other Pay Items.

B. Bid Item 2 – Obtain Permit To Enter (PTE) from Amtrak Before Start of Work.:
   1. Description: Item 2 includes securing Amtrak permit as specified.
   2. Measurement: Lump Sum.
   3. Payment: Lump sum payment for Item 2 will be full compensation for providing labor and incidentals necessary for securing the PTE from Amtrak. Includes all requirements from Amtrak as specified in Appendix A, including the required Amtrak training for each employee. Obtain Amtrak Right of Way (ROW) line location, as needed from Amtrak. Survey ROW if required by Amtrak.

C. Bid Item 3 - Treat Feed Mill Structures for Rodents and Vermin Prior to Demolition Operations:
   1. Description: Item 3 includes the treatment of rodents and vermin during the Work.
   2. Measurement: Lump Sum.
   3. Payment: Lump sum payment for Item 3 will be full compensation for providing labor, materials, equipment, and incidentals necessary for treating the site buildings prior to and during demolition operations to control rodents and vermin, protecting the surrounding properties from the spread of rodents and vermin during the Work. There shall be nnp change orders entertained due to delays due to railroad coordination.

D. Bid Item 4 - Removal and Disposal of Regulated Asbestos Containing Materials (ACM) from Former Feed Mill:
   1. Description: Item 4 includes the removal and disposal of specified ACM for the former feed mill structures prior to demolition.
   2. Measurement: Lump Sum.
   3. Payment: Lump sum payment for Item 4 will be full compensation for providing labor, materials, equipment, and incidentals necessary to remove and dispose specified ACM prior to demolition.

D. Bid Item 5 - Removal and Disposal of Regulated ACM from Former Tire Shop:
   1. Description: Item 5 includes the removal and disposal of specified ACM for the tire shop structure prior to demolition.
   2. Measurement: Lump Sum.
   3. Payment: Lump sum payment for Item 5 will be full compensation for providing labor, materials, equipment, and incidentals necessary to remove and dispose of specified ACM prior to demolition.

E. Bid Item 6 - Removal and Disposal of Regulated and Universal Waste from Former Feed Mill:
   1. Description: Item 6 includes the removal and disposal (or recycling) of regulated and universal waste from former feed mill prior to demolition. This bid item does not include the removal and disposal of contaminated soil.
   2. Measurement: Lump Sum.
   3. Payment: Lump sum payment for Item 6 will be full compensation for providing labor, materials, equipment, and incidentals necessary to remove and dispose (recycle) of regulated and universal waste from former feed mill prior to demolition.

F. Bid Item 7 - Removal and Disposal of Regulated and Universal Waste from Former Tire Shop:
   1. Description: Item 7 includes the removal and disposal (or recycling) of regulated and universal waste from former tire shop prior to demolition.
   2. Measurement: Lump Sum.

3. Payment: Lump sum payment for Item 7 will be full compensation for providing labor, materials, equipment, and incidentals necessary to remove and dispose (recycle) of regulated and universal waste from former tire shop prior to demolition.

G. Bid Item 8 - Removal and Disposal of General Refuse including all Residual Grain from Former Feed Mill, Bins, Silos, and former Garden Center:
1. Description: Item 8 includes the removal and disposal of general refuse, including, but not limited to stored grain from the former feed mill, silos, and bins prior to demolition.
2. Measurement: Lump Sum.
3. Payment: The lump sum payment for Item 8 will be full compensation for all labor, equipment, materials, and incidentals necessary to remove and dispose of general refuse prior to demolition.

H. Bid Item 9 - Removal and Disposal of General Refuse from Former Tire Shop.
1. Description: Item 9 includes the removal and disposal of general refuse.
2. Measurement: Lump Sum.
3. Payment: The lump sum payment for Item 9 will be full compensation for all labor, equipment, materials, and incidentals necessary to remove and dispose of general refuse prior to demolition.

I. Bid Item 10 - Former Feed Mill Buildings Demolition:
1. Description: Item 10 includes the demolition of the former feed mill buildings (superstructure, concrete footings, floors, silos, bins, elevator, former garden center, slabs, foundations, trailers, and concrete/asphalt paving), and removing, handling, transporting, and disposing/recycling of all demolition debris. Note that the grain elevator foundations shall be removed down to 6 feet below grade. The elevator bit below 6 feet below grade shall remain. (Special precautions shall be taken to prevent demolition debris from landing on the railroad property. The Contractor's Work Plan shall outline how the protection of the railroad property will be accomplished.
2. Measurement: Lump Sum.
3. Payment: The lump sum payment for Item 10 will be full compensation for all labor, equipment, materials, and incidentals necessary to complete demolition work of the former feed mill buildings.

J. Bid Item 11 - Former Tire Shop Demolition:
1. Description: Item 11 includes the demolition of the former tire shop building (superstructure, concrete footings, floors, slabs, above ground storage tanks, concrete/asphalt paving, foundations, and septic system to the south of the building), and removing, handling, transporting, and disposing/recycling of all demolition debris.
2. Measurement: Lump Sum.
3. Payment: The lump sum payment for Item 11 will be full compensation for all labor, equipment, materials, and incidentals necessary to complete demolition work of the former tire shop building.

K. Bid Item 12 – Disassemble, Lift, and Load Weigh Scale:
1. Description: Item 12 includes coordination with the OWNER for the relocation of the in-place feed mill weigh scale, including necessary disassembly, lifting and loading on the OWNER's trailer for transport off-site. Demolish concrete housing, including removal and disposal. Compact and fill excavation.
2. Measurement: Lump Sum.

3. Payment: The unit price payment for Item 12 will be full compensation for all labor, equipment, materials, and incidentals necessary to move the in-place weigh scale to the OWNER's trailer.

L. Bid Item 13 - Backfilling, Grading, and Compacting of Granular Fill:
1. Description: Item 13 includes all labor, equipment, and materials necessary for backfilling, compacting, and grading, as specified. The source of backfill shall be from previously unused material, Class II or better, and shall be graded by feathering to generally match existing. This includes backfilling/compaction the elevator pit to grade.
2. Measurement: Lump Sum.
3. Payment: The lump sum payment for Item 13 will be full compensation for all labor, equipment, materials, and incidentals necessary for backfilling, compacting, and grading of the disturbed areas of the former feed mill and tire shop properties. Weigh tickets for sand transported shall be required as a condition for payment.

M. Bid Item 14 – Load, Transport, and Dispose Soils from Soil Piles A & B:
4. Description: Item 14 includes all labor, equipment, and materials necessary for obtaining landfill approval, loading soil, and off-site transportation of soil for disposal.
5. Measurement: Per Ton.
6. Payment: The lump sum payment for Item 14 will be full compensation for loading, transport, and disposal activities. Payment shall not be made until manifest and weigh ticket documentation is received.

N. Bid Item 15 – Site Restoration:
7. Description: Item 15 includes site restoration in the form of the placement of 3 inches of topsoil, seed, mulch, and fertilizer at disturbed areas, as specified. Apply the seed by hydroseeding.
8. Measurement: Lump Sum.
9. Payment: The lump sum payment for Item 15 will be full compensation for site restoration activities. Restoration shall be performed on all areas disturbed as a result of the performance of the Work.

O. Bid Item 16 - Demobilization and Project Closeout:
1. Description: Item 16 includes demobilization and the delivery of final project records including but not limited to waste manifests, load tickets, weigh tickets, and record documents not covered in other pay items, as specified.
2. Measurement: Lump Sum.
3. Payment: The lump sum payment for Item 16 will be full compensation for demobilization and project closeout.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01275

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01320 - Pre-Work Submittals

B. Section 01325 - Progress Schedule

C. Section 01410 - Regulatory Requirements

D. Section 02120 - Off-Site Transportation and Disposal

1.2 DESCRIPTION

A. Special project procedures are required of the CONTRACTOR due to the potentially hazardous conditions at the Site. These include the following procedures:
1. Health and Safety
2. Personnel and Personal Equipment Decontamination
3. Spill Control
4. Dust Control
5. Stormwater and Erosion Control
6. Quality Control
7. Disposal of Contaminated Materials

B. Provide controls and measures for the prevention of water and air pollution and the protection of natural resources during the execution of Work included in the Contract. Environmental protection shall include, but not be limited to, measures for preventing contaminated stormwater runoff from entering storm drains, erosion and sediment control, spill prevention and control, dust control, and odor control.

C. Control operations to provide environmental protection in conformance with local, State, and Federal laws, permits, licenses, and regulations.

D. The CONTRACTOR is required to certify that the CONTRACTOR's employees are properly trained to perform the Work required by the Contract.

E. The CONTRACTOR is required to provide proof of the CONTRACTOR's permits and all other applicable permits required to successfully complete the Contract.

1.3 REFERENCES

A. Federal References:
1. Occupational Safety and Health Administration (OSHA) Standards. Title 29, Code of Federal Regulations, Parts 1910.1001 and 1926.1101 (General Industry and Construction, respectively).
2. United States Environmental Protection Agency (USEPA), Standard Operating Safety Guides, June 1992.
3. USEPA National Emission Standards for Hazardous Air Pollutants.

B. State References:
   1. Public Act No. 154 of 1954, Occupational Safety and Health Act, as amended.
   2. Public Act No. 451 of 1994, Natural Resources and Environmental Protection Act, as amended, and including, but not limited to:
      a. Part 55 of Public Act 451, Air Pollution Control.
      b. Part 91 of Public Act 451, Soil Erosion and Sedimentation Control.
      c. Part 201 of Public Act 451, Environmental Contamination.

C. The most stringent requirement among these references shall apply.

PART 2 - PRODUCT (Not Used)

PART 3 - EXECUTION

3.1 HEALTH AND SAFETY

A. Implementation
   1. Enforce the CONTRACTOR's Health and Safety Plan (HASP) during all phases of the Work. Except for asbestos abatement activities, it is anticipated that most Work shall be conducted with personnel donned in Level D personal protection equipment (PPE), although more stringent levels of protection may be required. The level of PPE for asbestos abatement work shall be in accordance with OSHA Standards. The cost of PPE, regardless of the level that the CONTRACTOR chooses to maintain compliance with OSHA standards, shall be considered incidental to the cost of the Work. All Site personnel shall be briefed on safety and hygiene procedures and provisions of the HASP and provide signed statements that they have read and understood the HASP. Meetings shall be held, as necessary, to inform personnel of changes in the HASP and related Site conditions.

3.2 ENVIRONMENTAL PROTECTION

A. Stormwater and Sediment Control
   1. Protect any existing on-site storm sewers. Prevent debris, dust, and sediments from entering any nearby surface water by installing hay bales or other filter materials or procedures.

3.3 DUST CONTROL

A. The CONTRACTOR shall take all necessary measures for dust control and monitoring as indicated in Section 01570, Temporary Controls.

3.4 SPILL CONTROL

A. The CONTRACTOR shall take all necessary measures for spill control as indicated in Section 01570, Temporary Controls.

END OF SECTION

SECTION 01280

SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 DESCRIPTION AND USE

A. The Schedule of Values is an itemized list that establishes the amount or cost of each part of the Work. It shall be used as the basis for preparing partial payment requests and may be used as a basis for negotiations concerning additional work or credits which may arise during the construction. Quantities and unit prices may be included in the schedule when approved by or required by the OWNER's REPRESENTATIVE.

1.2 PREPARATION

A. Use THE CONTRACTOR's Bid Proposal Form (including all attachments) as basis for Schedule format and identify each item with number and title of pay items on the CONTRACTOR's Bid Form. List subitems of major products or systems as appropriate or when requested by OWNER's REPRESENTATIVE.

B. When requested by OWNER's REPRESENTATIVE, support values with data that substantiate their correctness.

C. The sum of the individual values shown on the Schedule of Values shall equal the total Contract Price.

D. Each item shall include a directly proportional amount of the CONTRACTOR's overhead and profit.

E. Schedule shall show the purchase and delivery costs for materials and equipment that the CONTRACTOR anticipates he or she shall request payment for prior to their installation.

1.3 SUBMITTALS

A. Submit Schedule of Values to the OWNER's REPRESENTATIVE for review and approval within 5 calendar days after the Notice of Award. The Schedule of Values is not a resubmittal of the successful bidder's proposal. The Schedule of Values should be detailed enough to substantiate the unit price. After review by OWNER's REPRESENTATIVE, revise and resubmit as required until accepted. No partial payment requests will be entertained until the Schedule of Values has been accepted.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01290

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Progress Payments shall be based on the Contract Price using the CONTRACTOR's Applications for Payment as recommended by the OWNER's REPRESENTATIVE not more frequently than once over the project duration. Such payment will be measured by the accepted Schedule of Values submitted by the CONTRACTOR prior to commencement of the project.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SUBMITTALS

A. The CONTRACTOR shall submit Application for Payment in triplicate to the OWNER's REPRESENTATIVE for review and recommendation for payment. The CONTRACTOR shall submit Applications for Payment in accordance with the General Conditions. Applications for Payment will be processed by the OWNER's REPRESENTATIVE as provided in the General Conditions of these specifications.

B. Upon final completion and acceptance of the Work in accordance with the General Conditions, the OWNER's REPRESENTATIVE shall pay the remainder of the Contract Price as recommended by the SITE ENGINEER. All outstanding lien waivers for labor and materials shall accompany the final request.

END OF SECTION

SECTION 01310

PROJECT COORDINATION

PART 1 - GENERAL

1.1 SCOPE

A. CONTRACTOR shall be solely responsible for coordination of all of the Work, including but not necessarily limited to, supervising and directing SUBCONTRACTORS, manufacturers, fabricators, suppliers, distributors, installers, testing agencies, and all others whose services, materials, or equipment are required to ensure completion of the Work within the Contract Time.

B. CONTRACTOR shall cooperate with and coordinate his or her work with the work of any other entity, utility service company, SITE ENGINEER, or OWNER's REPRESENTATIVE performing additional work related to the Project at the Site.

C. CONTRACTOR shall not be responsible for damage done by others not under his or her jurisdiction. He or she will not be liable for any such loss or damage unless it is through the negligence of CONTRACTOR.

D. CONTRACTOR shall also coordinate the Work with the work of others to assure compliance with schedules.

PART 2 - PRODUCT (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01315

PRECONSTRUCTION CONFERENCE AND PROGRESS MEETINGS

PART 1 - GENERAL

1.1 SCOPE - PRECONSTRUCTION CONFERENCE

A. Preconstruction Conference: A preconstruction conference will be held within two business days of Notice of Award. OWNER's REPRESENTATIVE will fix the date, time, and location of the conference.

B. SITE ENGINEER will prepare the agenda, preside over the conference, record minutes to include significant proceedings and decisions, and distribute the minutes to all parties in attendance.

C. Unless previously submitted to OWNER's REPRESENTATIVE, CONTRACTOR shall bring to the conference a preliminary schedule of each of the following:
1. Construction.
2. Shop Drawings and submittals.
3. Schedule of Values.

D. CONTRACTOR shall provide any other data required, contribute appropriate items for discussion, and be prepared to discuss all items on the agenda.

1.2 PURPOSE

A. The purpose of the conference is to designate responsible personnel and establish working relationships. Matters requiring coordination will be discussed and procedures for handling such matters will be established. A complete agenda will be furnished to CONTRACTOR prior to the conference date.

1.3 REQUIRED ATTENDANCE

A. Conference shall be attended by CONTRACTOR's project manager, superintendent, and CONTRACTOR's principal SUBCONTRACTORS and its Suppliers as CONTRACTOR deems appropriate. Other attendees will be representatives of:
1. OWNER.
2. OWNER's REPRESENTATIVE.
3. SITE ENGINEER.
4. Governmental agencies having any degree of control or responsibility, if available.
5. Others as requested by OWNER, OWNER's REPRESENTATIVE, or CONTRACTOR.

1.4 SCOPE - PROGRESS MEETINGS

A. Progress Meetings: The OWNER's REPRESENTATIVE will schedule weekly progress meetings to be held at the job Site. The CONTRACTOR shall assume one meeting per week will be conducted. The CONTRACTOR shall be represented at each progress meeting by persons with full authority to act for the CONTRACTOR in regard to all portions of the Work. The SITE ENGINEER will be responsible for preparation and distribution of meeting minutes documenting each Progress Meeting.

1.5 PURPOSE

A. The purpose of the weekly progress meetings is to supply information necessary to prevent job interruptions, to observe the Work, or to inspect completed Work. However, the CONTRACTOR should be prepared to discuss all of the following:
   1. Progress of Work since last meeting.
   2. Proposed Work activities for forthcoming period.
   3. Problems, conflicts, and observations.
   4. Schedules, including off-site fabrication and delivery schedules. Corrective measures, if required.
   5. Coordination of Work with others.
   6. Change Orders.
   7. Status of Shop Drawings.
   8. Quality standards and control.
   9. Safety and security concerns.
   10. Other business.

1.6 REQUIRED ATTENDANCE

A. Progress meetings shall be attended by CONTRACTOR'S project manager, superintendent, and CONTRACTOR'S principal SUBCONTRACTORS and its Suppliers as CONTRACTOR deems appropriate. Other attendees will be representatives of:
   1. OWNER.
   2. OWNER’s REPRESENTATIVE.
   3. SITE ENGINEER.
   4. Governmental agencies having any degree of control or responsibility, if available.
   5. Others as requested by OWNER, OWNER’s REPRESENTATIVE, or CONTRACTOR.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01320

PRE-WORK SUBMITTALS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Within five calendar days following Notice of Award, CONTRACTOR shall submit the following Submittals:
   1. Work plan.
   2. Progress schedule.
   3. Schedule of Values.

B. No field activities shall be initiated by the CONTRACTOR until the CONTRACTOR has completed each of the Submittals specified in this section and until the OWNER's REPRESENTATIVE has reviewed the Work Plan. Extensions to the Contract Time will not be granted if caused by undue delay by CONTRACTOR in developing the Work Plan.

1.2 WORK PLAN

A. The Work plan shall be a technical Submittal.

B. CONTRACTOR shall submit a Work Plan (WP) which shall include the following:
   1. CONTRACTOR's project organization structure including the CONTRACTOR's staffing table with names, job categories, and responsibilities of personnel assigned to the Project. SUBCONTRACTOR shall identify the CONTRACTOR's superintendent on the project organization staffing table.
   2. Proof of the CONTRACTOR's permits, licenses, or certifications required to successfully complete the Work.
   3. Spill Prevention Plan: A description of on-site contingency procedures for spill control and cleanup. Provide names of personnel trained in spill control and list dedicated equipment to be provided on-site.
   4. Dust Control and Monitoring.
   5. Methods, procedures, and equipment to be used to complete the Work.
   6. Surface Water Control.

C. After OWNER's REPRESENTATIVE review of the WP, CONTRACTOR shall notify the OWNER's REPRESENTATIVE in writing of proposed change(s) to the WP. Proposed changes shall be subject to the review of the OWNER's REPRESENTATIVE. CONTRACTOR's proposed changes shall not be implemented at the Project Site until the OWNER's REPRESENTATIVE has approved the proposed changes.

1.3 SCHEDULE

CONTRACTOR shall submit an initial project schedule consisting of the following format and as specified in Section 01325.

A. Type: Horizontal bar chart, CPM format, or as otherwise approved by OWNER's REPRESENTATIVE.

B. Sheet Size: 8-1/2-inches by 11-inches, or as otherwise approved by OWNER's REPRESENTATIVE.

C. Time Scale: Indicate the first date in each Work week.

D. Organization:
1. Group Submittals into a separate subschedule.
2. Group product deliveries into a separate subschedule.
3. Group construction work into a separate subschedule by activity.
7. Group critical activities, which dictate the rate of progress into a separate subschedule.
5. Organize each subschedule by Specification Section number.

E. Activity Designations: Show title and related Specification Section number.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01325

PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Provide Progress Schedule Submittal(s) that conforms to the requirements below, unless otherwise approved by the OWNER's REPRESENTATIVE.

1.2 CONTENT

A. Progress Schedule Submittals shall include the following:
   1. Shop Drawing submittal dates and required approval dates.
   2. Product delivery dates.
   3. Field testing dates.
   4. Dates for beginning and completing each phase of the Work by activity and by trades.

1.3 FORMAT

A. Type: Horizontal bar chart, CPM format, or as otherwise approved by OWNER's REPRESENTATIVE.

B. Sheet Size: 8-1/2-inches by 11-inches, or as otherwise approved by OWNER's REPRESENTATIVE.

C. Time Scale: Indicate the first date in each work week.

D. Organization:
   1. Group Submittals into a separate subschedule.
   2. Group product deliveries into a separate subschedule.
   3. Group construction work into a separate subschedule by activity.
   4. Group critical activities, which dictate the rate of progress into a separate subschedule.
   5. Organize each subschedule by Specification Section number.

E. Activity Designations: Show title and related Specification Section number.

1.4 SUBMITTALS

A. CONTRACTOR shall submit initial Progress Schedule within five days after the Notice of Award.

B. CONTRACTOR shall submit updated Progress Schedules according to the following:
   1. Update schedule every month unless otherwise directed or accepted by the OWNER's REPRESENTATIVE.
   2. Submit updated schedules at progress meetings. If a schedule remains unchanged from one period to the next, submit a written notice to that effect.
   3. Attach a letter of transmittal to each updated schedule and include the following information in the letter:

a. A listing of items which have changed since the last project schedule.
b. Discussion of problems causing delays, anticipated length of delays, and proposed corrective measures.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 APPLICABILITY

This section applies to all administrative and technical submittals described in this document.

1.2 GENERAL PROCEDURES

A. A letter of transmittal shall accompany each submittal. At the beginning of each letter of transmittal provide a reference heading indicating the following:
1. OWNER's REPRESENTATIVE name
2. Project Name
3. Contract Number
4. Transmittal Number
5. Description
6. Section Number and Paragraph from the Specifications

B. If a submitted plan or schedule deviates from the requirements of the Contract Documents, CONTRACTOR shall specifically note each variation in his/her letter of transmittal.

C. A number shall be assigned to each submittal by CONTRACTOR starting with No. 001 and thence numbered consecutively. Resubmittals shall be identified by the original submittal number followed by the suffix "A" for the first resubmittal, the suffix "B" for the second resubmittal, etc.

D. CONTRACTOR shall submit three copies of all submittals to the OWNER's REPRESENTATIVE.

E. After the OWNER's REPRESENTATIVE/SITE ENGINEER completes the review, each submittal will be marked with one of the following notations:
1. Approved
2. Approved with Changes Noted
3. Returned for Corrections
4. Not Approved

The approval of shop drawings is general. Corrections and comments made do not relieve the CONTRACTOR of the responsibility for adhering to the plans, specifications, and contract. It also does not relieve the CONTRACTOR of the responsibility for any error which may exist in his/her shop drawings.

F. If a submittal is acceptable, it will be marked "Approved" or "Approved with Changes Noted". Two copies of the submittal will be returned to CONTRACTOR.

G. Upon return of a submittal marked "Approved" or "Approved with Changes Noted", CONTRACTOR may conduct work in accordance with the submitted plan, schedule, or form.

H. If a submittal marked "Approved with Changes Noted" has extensive corrections or corrections affecting other plans or work, OWNER's REPRESENTATIVE may require that CONTRACTOR

make the corrections indicated thereon and resubmit the plans for record purposes. Such submittals will have the notation, "Approved with Changes Noted – Resubmit".

I. If a submittal is unacceptable, two copies will be returned to CONTRACTOR with one of the following notations:
   1. Returned for Correction
   2. Not Approved

J. Upon return of a submittal marked "Returned for Correction", CONTRACTOR shall make the corrections indicated and repeat the initial approval procedure. The "Not Approved" notation is used to indicate a submittal that is not acceptable. Upon return of a submittal so marked, CONTRACTOR shall repeat the initial approval procedure to resubmit the appropriately revised schedule or plan.

K. Any work performed without the "Approved" or "Approved with Changes Noted" plans, schedules, and forms will be the sole responsibility of the CONTRACTOR.

L. Submittals shall be provided to the OWNER's REPRESENTATIVE well in advance of the need to begin the Site work so as not to delay the progress of the Work as outlined on the Schedule.

M. All submittals will be processed promptly, but a reasonable time should be allowed for this, for the submittals being revised and resubmitted, and for time required to return the approved submittals to CONTRACTOR.

N. It is the CONTRACTOR's responsibility to review submittals made by his/her suppliers and SUBCONTRACTORS before transmitting them to the OWNER's REPRESENTATIVE to assure proper coordination of the Work and to determine that each submittal is in accordance with his/her desires and that there is sufficient information for OWNER's REPRESENTATIVE and/or SITE ENGINEER to determine compliance with the Contract Documents. Incomplete or inadequate submittals will be returned for revision without review.

O. CONTRACTOR shall furnish required submittals with complete information and accuracy in order to achieve required approval of an item with five submittals. All costs to OWNER's REPRESENTATIVE involved with subsequent submittals requiring approval, will be back charged to CONTRACTOR, at the rate of 3.5 times direct technical labor cost, be deducting such costs from payments due CONTRACTOR for work completed.

P. The CONTRACTOR shall maintain a copy of all submittals in the field office.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01410

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 REGULATORY REQUIREMENTS

A. Applicable Codes

The CONTRACTOR shall comply with all Federal, State, and local rules, ordinances, and regulations relating to buildings, employment, the preservation of public health and safety, and so forth. All necessary permits or certifications of inspection shall be paid for and obtained by the CONTRACTOR.

B. Permits, Licenses, and Notifications

Necessary permits and licenses shall be obtained in conjunction with all work associated with this Project, and timely notification furnished of such actions required by Federal, State, regional, and local authorities and as otherwise specified herein. The CONTRACTOR shall comply with all Federal, State, and local requirements and submit the required permits/documents prior to starting Work.

In addition, CONTRACTOR shall comply with Part 91 Soil Erosion and Sedimentation Control of Public Act No. 451 of 1994, as amended (formerly the Soil and Erosion and Sedimentation Control Act of 1972, Public Act 347).

1.2 HAZARDOUS AND NON-HAZARDOUS SPECIAL WASTE MATERIAL PROJECT PROCEDURES

A. Environmental hazards (air, water, land, and liquid industrial) are handled by the Waste and Hazardous Materials Division, Michigan Department of Environment, Great Lakes, and Energy (EGLE) in carrying out the requirements of the United States Environmental Protection Agency (USEPA).

B. The Michigan Occupational Safety and Health Administration (MIOSHA) provides regulatory oversight for the safety and health of the workers. The Michigan Department of Licensing and Regulatory Affairs provides regulatory oversight for the safety of the workers.

C. The EGLE, Drinking Water and Environmental Health Division provides regulatory oversight for the health of workers.

D. Applicable Regulations:

- USEPA National Emission Standards for Hazardous Air Pollutants.
- OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard.
- RCRA, 1976 as amended - Resource Conservation and Recovery Act. This federal statute regulates generation, transportation, treatment, storage, or disposal of hazardous wastes nationally.

- Michigan Public Act 451, Part 111, 1994 – Michigan's Natural Resources and Environmental Protection Agency Act (NREPA). This statute regulates generation, transportation, treatment, storage, and disposal of hazardous wastes in Michigan.
- Michigan Public Act 451, Part 121 - NREPA. This statute regulates the transportation of liquid industrial wastes in Michigan. This includes non-hazardous liquids and hazardous liquids which are not subject to management under RCRA or Part 111 of P.A. 451.
- Michigan Public Act 451, Part 115 - NREPA. This statute regulates generation, transportation, treatment, storage, or disposal of municipal solid waste which includes non-hazardous contaminated wastes.
- Michigan Public Act 451, Part 201 - NREPA. This statute regulates sites of environmental contamination.
- 40 CFR Part 761. This federal statute regulates generation, transportation, treatment, storage, or disposal of PCB-contaminated wastes.
- 29 CFR 1910.120 regulates the training required for personnel involved with uncontrolled hazardous waste sites.
- 49 CFR 172 regulates the shipment of hazardous materials.
- Other relevant and applicable regulations.

E. Definitions: Hazardous substances are ignitable, corrosive, reactive, and/or toxic, based on their chemical characteristics, as defined in the above-referenced regulations.

F. Disposal: To use an off-site hazardous waste disposal facility, the CONTRACTOR must use the Uniform Hazardous Waste Manifest (shipping paper).

G. Federal, State, and local laws and regulations may apply to the storage, handling, and disposal of hazardous materials and wastes. The CONTRACTOR is responsible for verifying and utilizing proper rules and procedures.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01430

QUALITY CONTROL

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. General Quality Control.

B. Workmanship.

C. Manufacturer's Instructions.

D. Manufacturer's Certificates.

E. Manufacturers' Field Services.

F. Testing Laboratory and Inspection Services.

1.2 QUALITY CONTROL, GENERAL

A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.3 WORKMANSHIP

A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

B. Perform work by persons qualified to produce workmanship of specified quality.

C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.4 MANUFACTURERS' INSTRUCTIONS

A. Comply with instructions in full detail, including each step-in sequence. Should instructions conflict with the Contract Documents, request clarification from SITE ENGINEER before proceeding.

1.5 TESTING AND INSPECTION SERVICES

A. Through the OWNER'S REPRESENTATIVE, the SITE ENGINEER will provide the following services:
   1. On-site observation.
   2. Verify quantity measurements and payment.
   3. Photographs of construction progress.

B. Special inspection services shall be provided by CONTRACTOR/manufacturer as required to comply with specified standards and with Contract Documents at no additional cost to the OWNER.

C. The CONTRACTOR's services shall be performed in accordance with the requirements of governing authorities and with specified standards.

D. Reports will be submitted to SITE ENGINEER in duplicate giving observations and results of tests, indicating compliance or non-compliance with specified standards and with Contract Documents.

E. CONTRACTOR shall cooperate with SITE ENGINEER; furnish tools, samples of materials, design, mix, equipment, storage, and assistance as requested.
   1. Notify SITE ENGINEER 48 hours prior to expected time for operations requiring testing services.
   2. Make arrangements with SITE ENGINEER and pay for additional samples and tests for CONTRACTOR'S convenience.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01520

TEMPORARY CONSTRUCTION FACILITIES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall abide by all rules and regulations of the utility service company or authority having jurisdiction.

B. Suitably enclosed chemical or self-contained toilets shall be provided for the use of the workers employed on the Work. Toilets shall be located near the Work Site and secluded from observation insofar as possible. Toilets shall be serviced at regular intervals, kept clean, and supplied throughout the course of the Work.

C. CONTRACTOR shall provide and maintain a safe drinking water supply readily available to all workers.

D. CONTRACTOR shall furnish storage for his/her tools and equipment, as necessary.

E. CONTRACTOR shall:
1. Maintain and operate systems to assure continuous service.
2. Completely remove temporary materials and equipment when their use is no longer required.
3. Clean and repair damage caused by temporary installations or use of temporary facilities.
4. Restore existing facilities used for temporary utilities and construction to specified or to original condition, subject to approval of OWNER's REPRESENTATIVE.

F. The CONTRACTOR shall be responsible for the erection and maintenance of all barricades, guard rails, lights, and sign necessary for public safety and convenience, including the six-foot high chain-link fencing shown on Figures 3 and 4 in Appendix B. All hazards within the limits of the Work or detour around the Work must be marked with well-painted, well-maintained barricades, lanterns, torches, flares, reflectors, electric lights, flashers, or caution, warning and directional signs in sufficient quantity and size to adequately protect life and property. These safeguards shall be moved, changed, increased, or removed as required during the progress of the Work to meet changing conditions.

G. Barricades shall be placed in front of and around all excavations, obstructions, or construction areas so as to clearly define such areas to both drivers of vehicles and pedestrians. Whenever practical, the barricades shall be placed within three to six feet of the excavation or obstruction, and so placed that headlight beams of approaching vehicles will strike the barricades and reflecting devices head on.

H. The CONTRACTOR is responsible for all costs associated with obtaining and maintaining temporary electricity required to complete the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01540

SECURITY

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall safely guard all work, materials, equipment, and property from loss, theft, damage, and vandalism.

B. CONTRACTOR may make no claim against the OWNER, OWNER's REPRESENTATIVE, or SITE ENGINEER for damage resulting from trespass.

C. The CONTRACTOR shall make good all damage to property of OWNER and others arising from failure to provide adequate security.

D. CONTRACTOR shall secure all open excavations and other areas with hazards at the end of each day for the purpose of keeping trespassers out of open excavations when the CONTRACTOR is not present at the Site.

E. CONTRACTOR shall erect and maintain temporary 6-foot-high chain-link fencing (as shown on Figures 3 and 4 in Appendix B) for the duration of the Work. This includes temporary fencing to close Railroad Street for the duration of the Work.

F. Maintain security program throughout the contract until the Work is completed.

G. Maintain existing fencing during performance of the Work, unless otherwise directed by the SITE ENGINEER or OWNER's REPRESENTATIVE.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01550

VEHICULAR ACCESS AND PARKING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Access Roads.

B. Parking.

1.2 RELATED SECTIONS

A. Section 01520 - Temporary Construction Facilities.

B. Section 01540 - Security.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 ACCESS ROADS

A. Relocate Work as required to maintain access.

B. Coordinate all traffic routing with locally operating entities.

3.2 PARKING

A. Temporary parking areas shall be confined to CONTRACTOR's use area only.

B. Maintain all temporary parking areas free from trash and debris.

C. Temporary parking/staging for the project shall be limited to passenger vehicles, temporary facilities, and uncontaminated construction equipment only.

END OF SECTION

SECTION 01560

PROTECTION OF THE WORK AND PROPERTY

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall be responsible for taking all precautions, providing all programs, and taking all actions necessary to protect the Work and all public and private property and facilities from damage.

B. In order to prevent damage, injury, or loss, CONTRACTOR's actions shall include, but not be limited to, the following:
   1. Store apparatus, materials, supplies, and equipment in an orderly, safe manner that will not unduly interfere with the progress of the Work or the Work of any other contractor or utility service company.
   2. Provide suitable storage facilities for all materials which are subject to injury by exposure to weather, theft, breakage, or otherwise.
   3. Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.
   4. Clean up frequently all refuse, rubbish, scrap materials, and debris caused by operations, to the end that at all times the Site of the Work shall present a safe and orderly appearance.
   5. Provide barricades and guardrails around openings, for scaffolding, for temporary stairs and ramps, around excavations, elevated walkways, and other hazardous areas.

C. CONTRACTOR shall not, except after written consent from proper parties, enter or occupy privately-owned land with personnel, tools, materials, or equipment.

D. CONTRACTOR shall assume full responsibility for the preservation of all public and private property or facilities on or adjacent to the Site. If any direct or indirect damage is done by or on account of any act, omission, neglect, or misconduct in the execution of the Work by the CONTRACTOR, it shall be restored by the CONTRACTOR, at his or her expense, to a condition equal to that existing before the damage was done.

1.2 PROTECTION OF EXISTING STRUCTURES

A. Underground Structures:
   Underground structures are defined to include, but not be limited to, all sewer, water, gas, and other piping, and manholes, chambers, electrical conduits, tunnels, and other existing subsurface work located within or adjacent to the limits of the Work which are not planned for removal or demolition.

B. Surface Structures (other than those planned for demolition):
   1. Surface structures are defined as all existing buildings, structures, and other facilities above the ground surface. Included with such structures are their foundations or any extension below the surface. Surface structures include, but are not limited to, monitor wells, buildings, roads, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks, and all other facilities that are visible above the ground surface.

C. Protection of Underground and Surface Structures:

1. CONTRACTOR shall sustain in their places and protect from direct or indirect injury all underground and surface structures located within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structures. Before proceeding with the Work of sustaining and supporting such structures, CONTRACTOR shall satisfy the OWNER's REPRESENTATIVE that the methods and procedures to be used have been approved by the party owning same.
2. CONTRACTOR shall assume all risks attending the presence or proximity of all underground and surface structures within or adjacent to the limits of the Work. CONTRACTOR shall be responsible for all damage and expense for direct or indirect injury caused by his or her work to any structure. CONTRACTOR shall repair immediately all damage caused by his or her work, to the satisfaction of the OWNER of the damaged structure.

D. All other existing surface facilities which are temporarily removed to facilitate installation of the Work shall be replaced and restored to their original condition at CONTRACTOR'S expense.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01570

TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 SCOPE

A. The CONTRACTOR shall provide and maintain methods, equipment, and temporary construction, as necessary, to provide control over environmental conditions at the construction Site and adjacent areas. Remove physical evidence of temporary facilities at completion of Work.

B. Site work shall be limited to Mondays through Fridays between the hours of 7:00 a.m. and 6:00 p.m. No Site work shall be performed on Saturdays, Sundays, or legal holidays.

1.2 NOISE CONTROL

A. CONTRACTOR's vehicles and equipment shall be such as to minimize noise to the greatest degree practicable. Noise levels shall conform to the applicable OSHA standards.

1.3 DUST CONTROL

A. CONTRACTOR shall be responsible for controlling objectionable dust caused by his or her operation of vehicles and equipment, clearing, or for any reason whatever. CONTRACTOR shall apply water or use other methods subject to the SITE ENGINEER's approval which will keep dust in the air to a minimum.

B. Building demolition, excavation, loading, and transport of materials shall be conducted in a manner to minimize the formation of dust. Application of water to structures and demolition debris during removal, and to roadways and active work areas shall be utilized as required. The source of water shall be the City of Buchanan's municipal supply, the cost of which shall be the responsibility of the CONTRACTOR unless other arrangements are made with the OWNER. Excavated waste material stockpiles and trucks transporting excavated material shall be covered and secured with tarpaulins to prevent dust generation. At the discretion of the SITE ENGINEER and OWNER's REPRESENTATIVE, real-time dust monitors may be required during the performance of the Work.

1.4 WATER CONTROL

A. Provide methods to control surface water and water drainage into excavations and structures to prevent damage to the Work, the Site, or adjoining properties.
   1. Control fill, grading, and ditching to direct water away from excavations, pits, and other construction areas; and to direct drainage to proper runoff courses so as to minimize any erosion, damage, or nuisance.

B. Provide, operate, and maintain equipment and facilities of adequate size to control surface water.

C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the Site or to adjoining areas and in conformance with all environmental requirements.

1.5 POLLUTION CONTROL

A. Provide methods, means, and facilities required to prevent contamination of soil, water, or atmosphere by the discharge of noxious substances from construction operations.

B. Provide equipment and personnel, perform emergency measures to contain any spillages, and to remove contaminated soils or liquids.

C. Take special measures to prevent harmful substances from entering public waters.
   1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams or in sanitary or storm sewers.

D. Provide all labor, materials, equipment, and incidentals required to collect, contain, and dispose of solutions used for decontamination of CONTRACTOR's equipment and transport vehicles.

E. Provide systems for control of atmospheric pollutants.
   1. Prevent toxic concentrations of chemicals.
   2. Prevent harmful dispersal of pollutants into the atmosphere.

F. All CONTRACTOR's equipment used during construction shall conform to all current Federal, State, and local laws and regulations.

1.6 EROSION CONTROL

A. CONTRACTOR shall comply with Part 91 Soil Erosion and Sedimentation Control of Public Act No. 451 of 1994, as amended (formerly the Soil and Erosion and Sedimentation Control Act of 1972, Public Act 347).

B. Plan and execute construction and earthwork by methods to control surface drainage from cuts and fills, and to prevent erosion and sedimentation.
   1. Hold the areas of bare soil exposed at one time to a minimum.
   2. Provide temporary control measures (as needed) such as berms, dikes, drains, check dams, silt fence, mulch, and erosion matting.

C. Construct fills by selective placement to eliminate surface silts or clays which will erode.

D. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.

E. The cost for supplying these corrective measures is incidental to the Project.

1.7 TRAFFIC CONTROL

A. CONTRACTOR shall obtain and comply with all required traffic control permits including but not limited to the Michigan Department of Transportation, Berrien County Road Commission, and the City of Buchanan requirements.

   All traffic control shall be according to Michigan Department of Transportation Maintaining Traffic Typical Details M0010a through M2804a Non-Freeway.

B. No full lane closures will be permitted. CONTRACTOR shall maintain a continuous traffic flow of at least one lane in each direction.

1.8 PEDESTRIAN CONTROL

A. CONTRACTOR shall place temporary construction fencing or other barriers around demolition and excavation areas and shall otherwise maintain safe distances between the Work and any pedestrian traffic.

PART 2 - PRODUCTS

2.1 MONITORING INSTRUMENT

A. Real-time aerosol monitors, MIE Miniram or DataRam.

2.2 EQUIPMENT

A. Pumps and related systems compatible with contaminants.

B. Storage containers. Metallic or plastic containers are acceptable if containers are compatible with the material to be stored. All previously used containers must be certified Aclean@ (with no visible contamination present, as verified by the SITE ENGINEER) prior to use.

C. The CONTRACTOR shall provide for unexpected spills through provisions to have on-site at all times during Site Work activities, the following at a minimum.
1. Sand, clean fill, or other non-combustible absorbent,
2. Drums (55-gallon, meeting requirements specified in 49 CFR 178).
3. Shovels.
4. High-pressure water and steam for decontamination of equipment.

PART 3 - EXECUTION

3.1 DUST MONITORING

A. At the discretion of the SITE ENGINEER or OWNER's REPRESENTATIVE, the CONTRACTOR shall have a minimum of three real-time aerosol monitors at the demolition area to monitor air quality during the demolition and removal activities. One real-time monitor shall be placed in the demolition area at all times in the upwind direction, and the other two aerosol monitors shall be used in the demolition area in the downwind direction.

B. The CONTRACTOR shall closely monitor dust levels in the Project Site during the demolition and removal operations. At no time shall the concentration of aerosol dust resulting from the CONTRACTOR activities exceed 10 mg/M^3 for more than 5 minutes. If the level of dust is detected at 10 mg/M^3 for more than 5 minutes using any one of real-time aerosol monitors, the demolition operation shall be immediately suspended. Additional dust control measures shall be taken to reduce the airborne dust generated from the CONTRACTOR operation. The CONTRACTOR shall not resume the demolition activities until the level of dust drops below 10 mg/M^3 for a minimum of 10 minutes.

3.2 DUST CONTROL

A. The CONTRACTOR shall employ all necessary engineering controls and misting operations to prevent emissions of aerosol dust and migration of airborne materials to surrounding properties.

B. Watering of the Site is required to prevent dust emissions during the demolition and removal operations. A water hydrant is available in the area of the Site. The use of water shall not result in or create hazardous or objectionable conditions such as ice, flooding, pollution, and electrical shock. The cost for supplying water for dust control is incidental to the Project.

C. If the CONTRACTOR desires to temporarily stockpile any demolition debris at the Site, which may generate dust, the stockpiles shall be covered with a 10 mil plastic sheet.

D. The CONTRACTOR shall pay for the damage to the surrounding properties if the CONTRACTOR fails to control airborne dust from contaminating the surrounding properties as a result of its demolition operations.

END OF SECTION

SECTION 01710

CLEANING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Execute cleaning during progress of the Work and at completion of the Work.

B. Requirements of Regulatory Agencies:
1. In addition to the requirements herein, maintain the cleanliness of the Work and surrounding premises within the Work limits so as to comply with Federal, State, and local fire and safety laws, ordinances, codes, and regulations.
2. Comply with all Federal, State, and local anti-pollution laws, ordinances, codes, and regulations when disposing of rubbish.

C. Waste Disposal:
1. Dispose of all rubbish off-site.
2. Do not burn or bury rubbish and waste materials on the Site.
3. Do not discharge wastes into streams or waterways.

D. Decontamination Solution Disposal:
1. Dispose of all solutions and materials used for equipment decontamination and all other decontamination process residuals off-site in compliance with all Federal, State, and local anti-pollution laws, ordinances, codes, and regulations.

E. During the Work:
1. Keep the Work and surrounding premises within the Work limits free of accumulation of dirt, dust, waste materials, debris, and rubbish.
2. Keep dust generating areas wetted down.
3. Provide suitable containers for storage rubbish until time of disposal.

F. When Work is Completed:
1. Remove and dispose of all rubbish and used disposable personnel protection equipment (PPE) and temporary facilities from the Site, structures, and all facilities.
2. Repair pavement, roads, sod, and all other areas affected by construction operations and restore them to their original condition or to minimum condition specified, as directed by the SITE ENGINEER.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01720

DEMOBILIZATION

PART 1 - GENERAL

1.1 SCOPE

A. CONTRACTOR work activities for demobilization will include the following items:
1. Decontamination of all CONTRACTOR equipment and materials before it is removed from the Site.
2. Disconnection of all temporary utilities.
3. Removal of all barricades.
4. Removal of all CONTRACTOR installed temporary facilities.
5. Removal of CONTRACTOR support equipment.
6. Disposal of all CONTRACTOR-generated waste materials.
7. Submittal of all Project Record Documents to the SITE ENGINEER as specified in Section 01780.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01770

PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 FINAL REVIEW

A. CONTRACTOR shall submit written notification that:
   1. Work has been completed in accordance with Contract Documents.
   2. Project is completed and ready for final review.

B. SITE ENGINEER will make final review and comments to the CONTRACTOR.

C. Should SITE ENGINEER consider that the Work is finally complete in accordance with requirements of Contract Documents, SITE ENGINEER will request CONTRACTOR to submit project closeout documents.

D. Should SITE ENGINEER consider that the Work is not finally complete:
   1. SITE ENGINEER will notify CONTRACTOR, in writing, stating reasons.
   2. CONTRACTOR shall take immediate steps to remedy the stated deficiencies and send second written notice to SITE ENGINEER certifying that Work is complete.
   3. SITE ENGINEER will again review the Work. The value of all items not completed, up to and including the Contract retainage, shall be withheld from final payment.

1.2 FINAL REQUEST FOR PAYMENT

A. CONTRACTOR shall submit the following documents to the OWNER's REPRESENTATIVE as final Request for Payment:
   1. Written notification that project is complete.
   2. Application and Certification for Payment.
   3. Consent of Surety to final payment with power of attorney.
   4. Guarantee and Statement form.
   5. Certificate of Substantial Completion of Contract Work form. This form must be dated to reflect the actual date of substantial completion and signed by an authorized representative of the CONTRACTOR.
   6. Change Order Request to adjust the contract to coincide with actual Work performed.

PART 2 - PRODUCTS (Not Used)

PART 3- EXECUTION (Not Used)

END OF SECTION

SECTION 01780

RECORD DOCUMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall maintain and provide the OWNER's REPRESENTATIVE with record documents as specified below, except where otherwise specified or modified.

B. Maintenance of Documents:
1. CONTRACTOR shall maintain at the Project Site clean, dry, legible condition, complete sets of the following: Drawings, Specifications, Addenda, approved Shop Drawings, samples results, photographs, Change Orders, other modifications of Contract Documents, test records, survey data, load tickets, disposal tickets, field orders, field logs, and all other documents pertinent to CONTRACTOR'S Work.
2. Make documents available at all times for inspection by SITE ENGINEER and OWNER's REPRESENTATIVE.
3. Record documents shall not be used for any other purpose and shall not be removed from the Project Site without OWNER's REPRESENTATIVE approval.

C. Mark changes, revisions, additions, and deletions to the record set of Drawings using colored pencils so that the changes, revisions, additions, and deletions are legible and discernable from the original Drawings.

D. Recording:
1. Label each document "PROJECT RECORD" in 2-inch high printed letters.
2. Keep record documents current.
3. Do not permanently conceal any Work until required information has been recorded.
4. Drawings: Legibly mark to record actual construction including:
   a. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
   b. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
   c. Field changes of dimensions and details.
   d. Changes made by Change Order or Field Order.
   e. Details not on original Drawings.
5. Specifications and Addenda: Legibly mark up each Section to record:
   a. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
   b. Changes made by Change Order or Field Order.
   c. Other matters not originally specified.

E. Submittal:
1. Upon Substantial Completion of the Work, deliver record documents to OWNER's REPRESENTATIVE. Final payment will not be made until satisfactory record documents are received by OWNER's REPRESENTATIVE.
2. Accompany submittal with transmittal letter containing:
   a. Date.
   b. Project title.

c. CONTRACTOR's name and address.
d. Title and number of each record document.
e. Certification that each document as submitted is complete and accurate.
f. Signature of CONTRACTOR or his/her authorized representative.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

DIVISION 2

Site Work

SECTION 02010

HAZARDOUS AND REGULATED MATERIALS ABATEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Furnish all labor, material, equipment, and related items required to remove/abate all substances which are regulated under Federal, State, and local statutes and land ban restrictions. These substances may include, but are not limited to:
   1. Mercury-containing fluorescent light fixtures and bulbs.
   2. Potential PCB-containing light ballasts and electrical capacitors.
   3. Mercury-containing thermostat switches.
   4. CFC-containing cooling and air conditioning units.

1.2 RELATED SECTIONS

A. Section 01320 - Pre-Work Submittals.

B. Section 01410 - Regulatory Requirements.

C. Section 02120 - Off-Site Transportation and Disposal.

D. Appendix C and Appendix D – Asbestos and Universal Waste Information.

1.3 REGULATORY REQUIREMENTS

A. Comply with Federal and State Occupational Safety and Health regulations.

B. Comply with requirements of all Federal, State, and local regulatory agencies.

1.4 SUBMITTALS AND PROJECT RECORD DOCUMENTS

A. Provide all required submittals as identified in Section 01320.

B. Record and label all quantities of materials to be disposed of for review by the SITE ENGINEER and/or OWNER's REPRESENTATIVE.

C. Provide copies of all waste identification forms, manifests, weigh tickets, bills-of-lading, disposal receipts, and other relevant documentation as per Section 02110, Waste Management.

1.5 QUALIFICATIONS

A. The CONTRACTOR's base bid must identify any and all licensed and/or appropriately certified environmental SUBCONTRACTORS to be used during the project. All SUBCONTRACTORS should be appropriately licensed with the State and/or municipality.

1.6 SCHEDULING

A. Provide the anticipated dates for the abatements of the materials and substances identified herein as part of the CONTRACTOR's schedule.

B. The abatement of certain materials may require some general decommissioning or demolition of building control systems and should be coordinated with the SITE ENGINEER and the CONTRACTOR. The CONTRACTOR shall identify in the schedule any specific regulated materials removal or cleaning which may be addressed during or following the general building demolition.

PART 2 - PRODUCTS

2.1 PACKAGING AND CONTAINERIZATION MATERIALS AND EQUIPMENT INCLUDING, BUT NOT LIMITED TO:

A. Lab packing requirements as per OWNER-approved disposal or recycling facility(ies).

B. Fiberboard barrels.

C. Removable head drums, roll-off boxes, or equivalent, DOT approved.

D. Drums levels and other markings which conform with 29 CFR 1926.58 (K) and all other Federal, State, or local codes and regulations.

E. Sampling equipment and containers which are consistent with standard sampling techniques.

PART 3 - EXECUTION

Note: All pre-identified hazardous and regulated materials, as presented in Appendix C and Appendix D, shall be removed and properly disposed prior to building demolition in order to avoid the possibility that non-regulated building materials (i.e., demolition debris) are rejected at the disposal or recycling destination due to the inclusion of regulated materials. In such an event, the CONTRACTOR shall be responsible for the removal and handling of such materials at no additional cost to the OWNER.

3.1 REMOVAL OF FLUORESCENT AND OTHER HIGH INTENSITY LAMPS

A. General:
1. Many light fixtures and/or associated components may be suitable for recycling. The CONTRACTOR is encouraged to account for the recycling of such fixtures in its bid, if feasible. Those fixtures which are not suitable for recycling shall be handled and disposed of according to Section 02110 and 02120, as appropriate.

B. Removal and Management Procedures:
1. The CONTRACTOR shall be responsible for the removal of all regulated lamps from the associated lighting fixtures. The CONTRACTOR is required to remove all regulated bulbs, regardless of estimated quantities provided. All lamps shall be carefully removed from the fixtures and placed in appropriate sized containers equipped with dividers to isolate bulbs.
2. The CONTRACTOR shall manage fluorescent bulbs using one of the following procedures:

a) Transport all bulbs to an OWNER's REPRESENTATIVE-approved facility for recycling (Section 02110).
b) Crush bulbs on-site using an OWNER's REPRESENTATIVE-approved portable crushing unit. The crushing unit must be self-contained to prohibit emissions. The CONTRACTOR shall submit a manufacturer cut sheet of the proposed unit to the SITE ENGINEER for approval prior to mobilization.

3. All high intensity bulb containers intended for off-site recycling shall be either shrink-wrapped or placed in a secure crate to avoid accidental breakage. As indicated in Sections 02110 and 02120, all containers shall be labeled as hazardous waste in accordance with applicable MDOT regulations.
4. The CONTRACTOR must use all precautions when handling lamps to avoid accidental breakage. Should accidental breakage of lamps occur, then the lamp debris shall be collected and placed in segregated reinforced drums or similar containers pending disposal.
5. The CONTRACTOR shall be responsible for all workers' health and safety procedures, including personal protection equipment and worker notification, during the removal and management of the regulated lighting materials.

3.2 REMOVAL OF LIGHT BALLASTS AND ELECTRICAL CAPACITORS

A. General:
1. The CONTRACTOR shall be responsible for the removal, inspection, management, and disposal of all PCB-containing ballasts, according to all Federal, State, and local requirements as indicated in Paragraph 1.3 of this Section.
2. All ballasts shall be checked for manufacturer indications of the presence or absence of PCBs. Those ballasts which are labeled as non-PCB-containing will be managed separately from those which are to be assumed to contain PCBs.
3. The CONTRACTOR is encouraged to further verify the presence of PCBs in ballasts by contacting the manufacturers to obtain records, if available, of the contents in the ballast models.

B. Removal and Handling of Ballasts and Capacitors:
1. The CONTRACTOR shall inspect each ballast within each light fixture in an effort to view the ballast labeling. If a label clearly indicates that a ballast is non-PCB (e.g., label reading "PCB" Free or "No PCBs"), the ballast may remain in the fixture. All other ballasts encountered, labeled, or unlabeled, shall be assumed to contain PCBs and shall be removed from the lighting fixture. The CONTRACTOR shall use caution so as to not open or damage the ballasts during removal and handling.
2. The CONTRACTOR shall stage all removed ballasts on-site in reinforced containers with appropriate labeling according to 40 CFR 761. The CONTRACTOR shall employ adequate spill or leak prevention measures for each storage container.
3. The CONTRACTOR shall stage all removed capacitors on-site in reinforced containers with appropriate labeling according to 40 CFR 761. The CONTRACTOR shall employ adequate spill or leak prevention measures for each storage container.
4. The assumed PCB-containing ballasts and capacitors will be transported by the CONTRACTOR and disposed at an OWNER-approved facility licensed to accept PCB wastes in accordance with Section 02110 and 40 CFR 761.

3.3 REMOVAL OF MERCURY-CONTAINING DEVICES

A. The number and location of mercury-containing thermostats and other devices are identified in Appendix C and Appendix D. The CONTRACTOR shall be responsible for the removal of all mercury thermostats, regardless of the estimated quantities provided herein.

B. Each mercury ampule contained within the thermostats shall be removed from the device and staged in a secured steel bucket or other approved container. When removing and handling the mercury ampules, the CONTRACTOR must employ all measures outlined in the Work Plan to prevent possible leakage due to container damage.

C. The CONTRACTOR shall transport all mercury-containing ampules or devices according to all applicable MDOT regulations for recycling as described in Section 02110.

3.4 REMOVAL AND DISPOSAL OF CFC-CONTAINING COOLING AND AIR CONDITIONING UNITS

A. The number and location of air conditioning units are identified in Appendix C and Appendix D. The CONTRACTOR shall adhere to all Federal, State, and local regulations pertaining to chloro-fluorocarbons when removing, handling, recycling, or disposing of air conditioning units.

3.5 GENERAL

A. Documentation:
1. All waste disposal applications required by the disposal facility(ies), which CONTRACTOR is responsible for completing as specified in this Section.
2. Waste Manifests: CONTRACTOR shall submit copies of the waste disposal and transportation manifests which are specified in this Section. Copies shall be submitted to the SITE ENGINEER the same day that the manifests are signed by the disposal facility.
3. Weight Tickets: CONTRACTOR shall submit weigh tickets for each load of regulated waste materials that is transported to and disposed of at the disposal facility(ies). CONTRACTOR shall submit the weigh tickets to the SITE ENGINEER within 24 hours of disposal of each load of regulated waste materials.

B. Loading and Transporting:
1. CONTRACTOR shall not load and transport regulated waste materials until the CONTRACTOR has received approval from the disposal facility(ies) that the regulated waste materials can be disposed at the disposal facility(ies).
2. Once the CONTRACTOR has received approval from the disposal facility(ies) and the regulated waste materials are suitable for transport to and disposal at the disposal facility(ies), CONTRACTOR shall perform all handling, loading, and transporting, necessary to complete the Work as shown and specified.
3. CONTRACTOR shall conduct all loading and transporting activities in accordance with all Federal, State, and local regulations, including, but not limited to, USEPA regulations 40 CFR 172-179.
4. CONTRACTOR shall obtain and comply with the required permits and authorizations for transportation of regulated waste materials in accordance with State and local jurisdictions. The regulated waste materials shall be transported by a licensed waste hauler.

C. Disposal:
1. CONTRACTOR shall be responsible for obtaining approval from the disposal facility(ies) for disposing regulated waste materials at their facility(ies). In this capacity,

CONTRACTOR shall be responsible for completing and submitting all applications for waste disposal at the appropriate waste disposal facility(ies). CONTRACTOR shall also be responsible for all aspects of collecting and analyzing waste material samples which are required by the disposal facility(ies) for waste acceptance approval purposes. CONTRACTOR shall be responsible for satisfying and complying with all other requirements imposed by the disposal facility(ies).

2. CONTRACTOR shall be responsible for properly completing waste transportation and disposal manifests and all other documents required for waste shipment to the disposal facility(ies). CONTRACTOR shall sign these manifests as the Transporter. OWNER's REPRESENTATIVE or SITE ENGINEER will sign the manifests as the Generator.
3. CONTRACTOR shall retain copies of all waste transportation and disposal manifests, and all other documents required for waste shipment, for each load of waste material that is transported from the Site.
4. CONTRACTOR shall maintain a waste disposal log on-site containing the following information for each load of regulated waste materials transported for disposal:
   a. Date
   b. Material being transported off-site
   c. Volume and weight
   d. Destination
   e. Vehicle number
   f. Driver
   g. Manifest number
5. One copy of the waste disposal log shall be immediately available to the OWNER, OWNER's REPRESENTATIVE, and SITE ENGINEER at their request.

END OF SECTION

SECTION 02025

EXISTING UTILITIES AND UNDERGROUND STRUCTURES

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

A. Section 02220 – Building Demolition

B. Section 02210 - Excavation, Backfill, and Compaction

1.2 DESCRIPTION

A. Coordinate with all applicable utility owners prior to abandonment of utilities, or excavation at utility locations and proceed as directed by the utility owner. Acquire all required permits to perform the utility work.

B. The CONTRACTOR shall be responsible for any and all damage to any existing utilities, which are not to be abandoned and are to remain in service, caused by his or her efforts.

C. Contact the affected utility owner as soon as any damage is discovered.

D. The utility owner shall make the determination as to who makes the necessary repairs.

E. In areas where existing underground structures are shown or suspected, carefully uncover such structures to such extent as to enable the SITE ENGINEER to determine what adjustments, if any, need to be made to accommodate the presence or removal of such structures.

1.3 USE OF EXISTING UTILITIES

A. The CONTRACTOR shall arrange for all temporary utility services required with the appropriate utility owner.

B. The CONTRACTOR is responsible for costs for meter installations (water, electric) and all utility billings, if applicable.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 02075

REMOVAL AND DISPOSAL OF ASBESTOS

PART 1 - GENERAL

1.1 DESCRIPTION

A. The CONTRACTOR shall furnish all labor, equipment, tools, and materials for properly removing, handling, and disposing of all asbestos containing materials (ACM) within the defined Work limits. Work includes the following:
   1. Removal of all ACM from the buildings.
   2. Disposal of all ACM at a licensed disposal facility.

B. Refer to Appendix C and Appendix D – Asbestos and Universal Waste Information.

1.2 RELATED SECTIONS

A. Section 01410 - Regulatory Requirements.

B. Section 02220 - Building Demolition.

1.3 REFERENCES

A. The following specifications and standards of the issues listed below form a part of this specification to the extent required by the references thereto:

1. Code of Federal Regulations (CFR) Publications:

29 CFR 1926.1101	Asbestos (latest version)
29 CFR 1910.134	Respiratory Protection
29 CFR 1910.145	Specifications for Accident Prevention Signs and Tags
40 CFR 61	General Provisions, Subpart A
40 CFR 61	National Emission Standard for Asbestos, Subpart M
40 CFR 763	Asbestos Abatement Projects, Subpart G
49 CFR 171	General Information
49 CFR 172	Hazardous Materials
49 CFR 173	General Shipping Requirements
49 CFR 177	Transporter Requirements
49 CFR 178-79	Container Specifications

2. American National Standard Institute (ANSI) Publication:

29.2-79	Fundamentals Governing the Design and Operation of Local Exhaust Systems

3. U.S. Environmental Protection Agency (USEPA) Publication:

EPA 560/5-85-024	Guidance for Controlling Asbestos Containing Materials in Buildings

4. State of Michigan Regulations:

R299.41312	Federal Asbestos Regulations; Adoption by Rule
R325	Asbestos Contractor Licensing

1.4 QUALITY CONTROL

A. Medical Requirements: Meet all medical requirements contained in 29 CFR 1926.1101 including, but not limited to, medical exams and medical records.

B. Training:
1. Ensure that all personnel exposed to airborne asbestos are familiar with the hazards of asbestos, safety and health precautions, and the use and requirements for protective clothing and equipment.
2. A "competent person" provided by the CONTRACTOR shall directly supervise all asbestos removal activities including, but not limited to, establishment of enclosures, ensuring enclosure integrity, controlling entry and exit from the enclosure, exposure monitoring, use of protective clothing and equipment, use of hygiene facilities, and use of engineering emission controls. The "competent person" shall meet all the requirements identified in 29 CFR 1926.1101(b) and 29 CFR 1926.1101(e)(6)(iii).

C. Permits and Notification:
1. Secure necessary permits in conjunction with ACM removal, hauling, and disposition, and provide timely notification of such actions as may be required by Federal, State, regional, and local authorities.
2. Notify the OWNER's REPRESENTATIVE AND SITE ENGINEER 2 days prior to the start of asbestos Work.
3. Notify the Michigan Department of Licensing and Regulatory Affairs at least 10 days prior to commencement of Work. The CONTRACTOR shall also submit a Notice of Intent to Renovate/Demolish (NOI) to the Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division 10 days prior to commencement of the Work.
4. The costs for obtaining and submitting the permits and notifications are incidental to the Project.

D. Safety Compliance:
1. Comply with laws, ordinances, rules, and regulations of Federal, State, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials.
2. Comply with the applicable requirements of the current issue of 29 CFR 1926.1101 and 40 CFR 61, Subparts A and M.
3. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the Work.
4. Where the requirements of this specification and reference documents vary, the most stringent requirements shall apply.

E. Respirator Program: Establish a respirator program as required by 29 CFR 1910.134.

1.5 SUBMITTALS

Submit the following in the Work Plan in accordance with Section 01320 - Pre-Work Submittals:

A. Certificates of Compliance: Submit manufacturers' certification that vacuum pumps, ventilation equipment, and other equipment required to handle airborne asbestos fibers conform to ANSI 29.2.

B. Asbestos Abatement Contractor License: Submit a copy of a valid/current license for the asbestos abatement activities as required by the Michigan Department of Licensing and Regulatory Affairs.

C. Asbestos Plan: As a separate attachment to the Work Plan, submit as specified in Section 01325, "Work Plan", the abatement procedures to be used in the removal and disposal of ACM. Such plan shall be approved by a Michigan Certified Project designer (present license number in plan) and shall conform to this section and the USEPA requirements of 40 CFR 61.22.

D. The CONTRACTOR shall submit a list of ACM disposal facilities proposed for the disposal of all ACMs associated with this Contract. The list shall contain the address, telephone number, and contact name for each facility. The CONTRACTOR shall provide written approval from each disposal facility of its acceptance of ACMs from this Contract, and written notice from each asbestos disposal facility that it is in conformance with its operating permit.

E. Testing Laboratory: Submit the name, address, and telephone number of the testing laboratory selected for the monitoring of airborne concentrations of asbestos fibers along with certification that persons counting the samples have been judged proficient. Sampling is required under 29 CFR 1926.1101. Monitoring shall be conducted daily to establish the exposure of each employee who is exposed inside the Work area. The laboratory reading the tests shall be a participant of an approved and recognized Performance and Testing (PAT) program.

F. Monitoring Results: Submit all monitoring results to the OWNER's REPRESENTATIVE and SITE ENGINEER within 10 working days of such monitoring.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EQUIPMENT

A. Provide protective equipment as required by 29 CFR 1926.1101.

3.2 WORK PROCEDURE

A. The CONTRACTOR is responsible for complying with all laws, ordinances, rules, and regulations of Federal, State, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials.

B. Provide asbestos control areas with caution signs and local exhaust in accordance with these specifications and 29 CFR 1926.1101, 40 CFR 61, Subparts A and B. Use wet removal procedures. Personnel shall wear and use protective clothing and equipment as required by 29 CFR 1926.1101. Eating, smoking, or drinking shall not be permitted in the asbestos control area. Personnel of other trades not engaged in the removal and disposal of asbestos shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection provisions of this specification are complied with by the trade personnel.

3.3 ASBESTOS ABATEMENT PROCEDURES

A. General Procedures:

1. Sufficiently wet asbestos material during removal, cutting, or other handling so as to reduce the emission of airborne fibers. Asbestos-containing debris shall be kept wet at all times. Method and techniques for removal are outlined in Appendix F to 29 CFR 1926.1101.
2. Remove materials and immediately place in plastic disposal bags. Where unusual circumstances prohibit the use of plastic bags, submit an alternate proposal for containment of asbestos fibers to the OWNER's REPRESENTATIVE or SITE ENGINEER.
3. The CONTRACTOR may use the following abatement procedures (where appropriate) depending on the type of ACM and the CONTRACTOR's standard procedures. As a separate attachment to the Work Plan, alternate abatement procedures shall be detailed in the CONTRACTOR's Work Plan.

B. Full Containment:

1. Where deemed appropriate for friable ACM removal, full containment shall be used. The CONTRACTOR shall isolate the Work area for the duration of the abatement, completely sealing all openings. Any fixed objects will be covered with 6-mil polyethylene sheets taped securely in place. All polyethylene used for establishing containment areas shall be a fire retarding type.
2. The entire floor within the immediate, contained Work area will be covered with two layers of 6-mil polyethylene extended up the vertical surfaces. On a daily basis, an additional 6-mil polyethylene liner will be placed below the planned Work area.
3. Emergency exits shall be clearly marked by the CONTRACTOR's personnel and access will be maintained throughout the abatement activities. Fire extinguishers will be located in each Work area.
4. The CONTRACTOR shall install and maintain negative pressure equipment during the abatement and decontamination process. A sufficient number of negative air machines will be installed to ensure a complete air change within the containment every 15 minutes.
5. Attached to each full containment will be a three-chambered decontamination facility. The CONTRACTOR's three-chambered decontamination will consist of:
    a. An equipment room with an air lock to the Work area and curtained doorway to the shower room.
    b. A shower room with two curtained doorways, one to the equipment room and one to the clean room. The shower room will contain sufficient showers with hot and cold water to support the planned crew during each Work shift. The CONTRACTOR will contain and filter all shower waste water. Wastewater will be filtered through a 5.0 micron filter and drained into a sanitary sewer upon approval of the publicly Owned Treatment Works (POTW).
    c. A clean room with one curtained doorway/entrance and one curtained doorway into the shower room.

C. Glovebag Method

1. Where feasible, the CONTRACTOR shall isolate working areas by constructing a single layer of 6-mil polyethylene to act as an isolation barrier (mini-containment).
2. The CONTRACTOR shall isolate the Work area for the duration of the abatement, completely sealing all openings. The entire floor within the immediate Work area will be covered with two layers of 6-mil polyethylene. Any fixed objects will be covered with 6-mil polyethylene taped securely in place.
3. Emergency exits will be clearly marked by the CONTRACTOR personnel and access will be maintained throughout the abatement activities. Fire extinguishers will be located at each Work area.

4. The CONTRACTOR will install and maintain negative pressure equipment during the abatement and decontamination process. A sufficient number of negative air machines will be installed to ensure a complete air change within the containment four (4) times per hour.
5. Attached to each mini-containment will be a two-chambered decontamination facility. The CONTRACTOR's two-chambered decontamination will consist of:
   a. An equipment room with a curtained doorway to the isolated Work area and curtained doorway to the shower room.
   b. A shower room with two curtained doorways, one to the equipment room and one to the clean room. The shower room will contain at least one shower with hot and cold water. The CONTRACTOR will contain and filter all shower wastewater. Wastewater will be filtered through a 5.0 micron filter, and drained into a sanitary sewer upon approval of the POTW.
6. The CONTRACTOR may elect to use a three-stage decontamination facility as described earlier in place of the two-stage facility as a remote decontamination facility. If a remote decontamination facility is used, all personnel will be required to double-suit.
7. All abatement utilizing the glovebag method will be conducted so that the glovebag completely surrounds the object to be abated and contains all asbestos fibers released during the removal process. The glovebags will have tools and equipment to allow the CONTRACTOR to wet-down the ACM, and to maintain filtered negative-pressure on the glovebag internals. Following cutting of the insulation inside the bag, excess air will be removed by filtered vacuum, the glovebag will be removed and sealed and placed in secondary containment for disposal.
8. All of the CONTRACTOR's workers who utilize this method of removal must be highly trained, experienced, and skilled in this method.

D. Wrap and Cut Method:
1. This method of removal may be utilized when removing asbestos pipe insulation that is not damaged. Workers donning protective coveralls and 1/2 faced respirators (PAPRs if appropriate) will cordon off the Work area and post proper signs at the perimeter. The asbestos insulation will then be wrapped-in-place with two layers of 6-mil polyethylene. All seals will be spray glued and duct taped.
2. Once the insulation is wrapped, glovebags shall be attached to the pipe. The glovebag abatement shall be done every ten to twenty (10-20) feet to allow the cutting of the pipes into manageable sections. Pipe and equipment prepared in this manner shall be transported to a decontamination area for gross removal and salvage. Alternatively, wrapped equipment and piping may be sent directly to disposal if removal is not economical.
3. If pipe cut locations are not insulated, the use of glove bags will not be required at those locations.
4. A remote two-stage (or three-stage, if desired) decontamination facility shall be used for personnel decontamination.

E. Transite Panels:
1. Transite panels are non-friable and need not be removed or abated within containments. A remote decontamination facility can be utilized. For removal of transite panels, the CONTRACTOR shall:
   a. Spray (using airless sprayers) or hand-coat all sides of the panels with lock-down material and allow the panels to dry.
   b. Properly trained and attired personnel will next access the panels with ladders or personnel baskets as appropriate. Individual panels shall be rigged with C-clamps to prevent uncontrolled dropping.

c. Using hand tools such as battery-powered drills or drivers, or torches, the screws attaching the panels will be removed. The panels shall be removed from the structure, shall be plastic-wrapped, stacked and labeled for transportation to disposal.

F. Floor Tiles:

Floor tiles are non-friable, but the removal method has the potential to release asbestos fibers into the atmosphere. Therefore, for the removal of floor tiles, the CONTRACTOR shall adhere to the following:

1. The CONTRACTOR shall isolate working areas by constructing critical barriers of 6-mil polyethylene. All openings such as ducts, electrical outlets, and windows will be sealed. Any fixed objects shall be covered with 6-mil polyethylene taped securely in place.
2. Emergency exits shall be clearly marked by CONTRACTOR personnel and access will be maintained throughout the abatement activities. Fire extinguishers shall be located at each Work area.
3. A remote two- or three-stage personnel decontamination facility may be utilized, or a decontamination facility attached to the Work area.
4. The asbestos workers shall use scrapers and similar hand tools to scrape up and remove the ACM floor tiles, which shall be double-bagged (or drummed, if required by law) for disposal. The CONTRACTOR shall not use abrasive techniques such as sanding or sandblasting to remove the tiles.
5. The mastic material, if thick and ACM-contaminated, may be removed with a mastic solvent, cleaned up with rags, and drummed for disposal.

3.4 MONITORING

A. As an incidental, the CONTRACTOR shall provide third-party monitoring of airborne concentrations of asbestos fibers. Monitoring of airborne concentrations of asbestos fibers shall be in accordance with 29 CFR 1926.

B. Pre-removal Monitoring: Provide area monitoring inside prior to beginning Work to establish ambient plant air quality.

C. Monitoring After Final Cleanup: Provide asbestos control area monitoring of asbestos fibers and establish the Time Weighted Average (TWA) of less than 0.01 fibers/cc after final cleanup but before removal of the enclosure of the asbestos control area. Monitoring shall use aggressive sampling techniques as described in the "Guidance for Controlling Asbestos-Containing Materials in Buildings" EPA 560/5- 85-024, Appendix M. Sampling shall be by the phase contrast microscopy (PCM) method. A minimum of five samples shall be taken for each asbestos control area. The sampling volume for each sample is to be approximately 3000 liters. Provide area monitoring and establish the TWA 5 days after the enclosure of the asbestos control area is removed or after final cleanup when an enclosure is not required. The fiber counts from these samples shall be less than 0.01 fibers/cc. Should any of the final samples indicate a higher value, take appropriate actions to reclean the area and repeat the monitoring.

3.5 CLEANUP

A. General:
1. Remove all asbestos debris.
2. The CONTRACTOR shall take any steps necessary to ensure that less than 0.01 fibers/cc airborne asbestos remains in the Work area.

B. Housekeeping:

1. Essential parts of asbestos dust control are housekeeping and cleanup procedures. Maintain surfaces of the asbestos Work area free of accumulations of asbestos fibers. Give meticulous attention to restricting the spread of dust and debris; keep waste from being distributed over the general area. Do not blow down the space with compressed air.
2. When asbestos removal is complete, all asbestos debris is removed from the Site, and final cleanup is completed, certify the area as safe before the signs are removed. Certification shall be a written statement by the CONTRACTOR that airborne concentrations of asbestos are less than 0.01 fibers/cc and all asbestos material has been removed from the area. Dispose of filters as asbestos contaminated materials.

3.6 DISPOSAL

A. The CONTRACTOR shall be responsible for ensuring:
   1. Selection and acceptance of the ACM at an approved treatment or disposal facility.
   2. That the facility is properly permitted to accept the ACM.
   3. That the facility provides the stated disposal services.
   4. That the disposal facility is in compliance with its permit(s) at the time of ACM disposal.

B. Collect asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing which may produce airborne concentrations of asbestos fibers and place in sealed impermeable bags. Affix caution label to each bag.

C. Procedure for hauling shall comply with 40 CFR 61 (Subpart B), State, regional, and local standards. ACM shall be transported in lined trucks.

D. Dispose of asbestos materials and asbestos contaminated materials at a licensed disposal facility.

3.7 MANIFEST RECORDS

A. Originate, maintain, and provide transporter with copies of waste shipment manifests and/or bills of lading records for all ACM; verify wastes and quantities of each load shipped.

B. The manifest forms and records shall be consistent with the State of Michigan, USEPA, and U.S. Department of Transportation requirements.

C. The CONTRACTOR will sign the manifest. The SITE ENGINEER will review the manifest for completeness and accuracy prior to final release.

END OF SECTION

SECTION 02082

EXCAVATION AND DISPOSAL OF CONTAMINATED SOILS

PART 1 - GENERAL

1.1 SCOPE

A. The CONTRACTOR shall provide all labor, materials, equipment, and incidentals required to perform all excavating, handling, loading, transporting, and disposing of contaminated soils as shown and as shown on Figure 4 in Appendix B.

CONTRACTOR employees involved in this WORK (excavation and disposal of contaminated soils) shall be OSHA 40-Hour HAZWOPER-certified. Up-to-date certificates shall be submitted prior to Work.

Approximately 700 tons of contaminated soils shall be removed from Soil Piles A and B (to grade) as shown on Figure 4 in Appendix B. The CONTRACTOR shall also be responsible for making all arrangements for all contaminated soil disposal at the appropriate disposal facility(ies) in accordance with the disposal facility requirements and for preparation of all waste disposal applications and shipping manifests. The soil waste characterization laboratory analytical report is presented in Appendix F.

B. The CONTRACTOR shall provide temporary means as required to prevent discharge of sediment to bodies of water.

C. Excavation includes all contaminated materials regardless of type, character, composition, moisture, or condition thereof.

1.2 RELATED SECTIONS

A. Section 02110 - Waste Management.

B. Section 02120 - Off-Site Transportation and Disposal.

C. Section 02210 - Backfill and Compaction.

D. Appendix F - Soil Waste Characterization Laboratory Analytical Report

1.3 QUALITY ASSURANCE

A. Permits and Regulations:
1. Obtain necessary permits for work in roads, rights-of-way, railroads, etc.
2. Perform excavation Work in compliance with applicable requirements of governing authorities having jurisdiction.
3. Comply with Part 91 Soil Erosion and Sedimentation Control of Public Act No. 451 of 1994, as amended (formerly the Soil and Erosion and Sedimentation Control Act of 1972, Public Act 347).

B. Reference Standards: Comply with applicable provisions and recommendations of the following except as otherwise shown or specified:

1. OSHA Standard, Title 29, Code of Federal Regulations, Part 1926, Section .650 and .651, including all applicable appendices in Subpart P - Excavations.
2. Michigan Department of Labor and Economic Growth (MDLEG), Construction Safety Standards, all Part 9 rules on Excavation, Trenching, and Shoring.

1.4 SAFETY

A. CONTRACTOR shall be responsible for operating his or her equipment, including equipment operated by SUBCONTRACTORS, in accordance with manufacturers' instructions, specifications, and guidelines.

B. CONTRACTOR shall be responsible for the safe handling and proper use of materials employed by CONTRACTOR in the conduct of Work in accordance with manufacturers' instructions, specifications, and guidelines.

1.5 SUBMITTALS

A. CONTRACTOR shall submit the documentation specified in this paragraph at least ten days prior to the CONTRACTOR's planned start of excavation operations, unless otherwise specified herein.

B. Certifications: Submit the following:
1. Written statement that CONTRACTOR shall dispose contaminated soils in accordance with the solid waste management plans of both the shipping and receiving counties. The statement shall be signed by an officer of the CONTRACTOR and properly notarized.

C. CONTRACTOR shall submit for approval the following:
1. A full description of the CONTRACTOR's proposed disposal facility(ies), including the disposal facility(ies) licenses, permits, and compliance status. OWNER's REPRESENTATIVE will review the CONTRACTOR's proposed disposal facility(ies) for approval. If the OWNER's REPRESENTATIVE does not approve a CONTRACTOR's proposed disposal facility, CONTRACTOR shall submit the specified information for an alternate disposal facility for the OWNER's REPRESENTATIVE approval. CONTRACTOR shall not dispose of contaminated soils at a disposal facility that is not approved by OWNER's REPRESENTATIVE. CONTRACTOR shall be responsible for delays caused by proposing a disposal facility that is not acceptable to the OWNER's REPRESENTATIVE.
2. All waste disposal applications required by the disposal facility(ies), which CONTRACTOR is responsible for completing as specified in this Section.

D. Waste Manifests: CONTRACTOR shall submit copies of the waste disposal and transportation manifests, which are specified in this Section. Only the SITE ENGINEER shall sign waste manifests on behalf of the OWNER. Submit one copy to the OWNER's REPRESENTATIVE and one copy to the SITE ENGINEER. Copies shall be submitted to the OWNER's REPRESENTATIVE no later than two days after the manifests are signed by the disposal facility. Copies shall be submitted to the SITE ENGINEER the same day that the manifests are signed by the disposal facility.

E. Weigh Tickets: CONTRACTOR shall submit weigh tickets for each load of contaminated soil that is transported to and disposed at the disposal facility(ies). CONTRACTOR shall submit the weigh tickets to the SITE ENGINEER within 24 hours of disposal of each load of contaminated soils.

1.6 JOB CONDITIONS

A. Use of Explosives:
1. The use of explosives will not be permitted.

B. Protection of Persons and Property: Barricade open excavations as part of the Work.
1. Protect structures, utilities, sidewalks, pavements, curbing, site amenities, and other facilities from damage caused by fracturing, settlement, lateral movement, undermining, washout, and other damage created by earthwork operations.

C. Dust Control: Conduct all operations and maintain areas of activity to minimize creation and dispersion of dust. CONTRACTOR shall control dust generation from vehicular traffic and contaminated soil excavation and processing activities to below 10 mg/m^3. Calcium chloride shall not be used to control dust problems. If required by the SITE ENGINEER, the CONTRACTOR shall perform dust monitoring using real-time monitoring. The dust concentration should not exceed 10 mg/m^3 for 5 minutes.

D. Existing Utilities: Locate existing underground utilities in the areas of Work. Provide adequate means of protection during earthwork operations.

E. Should uncharted, or incorrectly charted, piping or other utilities, contaminated soil, industrial wastes, etc., be encountered during excavation, the CONTRACTOR shall consult the SITE ENGINEER immediately for directions. Cooperate with the utility companies in keeping respective services and facilities in operation. Repair damaged utilities to the satisfaction of the utility owner. Do not interrupt existing utilities serving others, except when permitted in writing by the OWNER's REPRESENTATIVE or OWNER, and then only after acceptable temporary utility services have been provided. Coordinate with utility companies for shut-off of services if lines are active.

F. Protection of Persons and Property: Barricade open excavations occurring as part of this Work and post with warning lights. Operate warning lights as recommended by authorities having jurisdiction or standard industry practice. Protect structures, utilities, sidewalks, pavements, and other facilities which are to remain, from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

G. All excavations shall be conducted using required OSHA safety standards by providing adequate bracing or shoring or sloping excavation side slopes at safe grades.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSPECTION

A. Should any unexpected encumbrances be encountered during excavation activities, provide SITE ENGINEER with sufficient notice and with means to examine the areas and conditions under which excavation Work is to be performed. SITE ENGINEER will notify CONTRACTOR if conditions are found that may be detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in an acceptable manner.

B. Utilities

1. The CONTRACTOR shall field verify all locations of structures, substructures, and utilities prior to the start of construction in accordance with Section 02025, Existing Utilities and Underground Structures.
2. The locations of all underground utilities and structures must be marked prior to the beginning of Work. Utility and subsurface markings shall be in a manner that will allow equipment operators and other personnel a clear view of the utility locations.
3. The CONTRACTOR shall coordinate with the utility authorities for the appropriate utility services to be turned off before exploratory excavation is started.
4. The CONTRACTOR shall disconnect utilities as necessary to complete the Work. The CONTRACTOR shall protect all substructures and utilities encountered in the excavation from any distress.
5. The CONTRACTOR shall be responsible for any damage to existing utilities caused by the CONTRACTOR's efforts.
6. The CONTRACTOR shall contact the affected utility as soon as the damage is discovered.
7. The utility shall make the determination as to who is to make the necessary repairs.

3.2 EXCAVATION

A. Perform all excavation required to complete the Work as shown on Figure 4 in Appendix B. Excavations shall include earth, silt, sand, clay, gravel, hardpan, boulders not requiring drilling and blasting for removal, decomposed rock, pavements, rubbish, waste debris, and all other materials within the excavation limits.

B. Excavations for removing contaminated soils shall be open excavations. Provide excavation protection system(s) required by ordinances, codes, law, and regulations to prevent injury to workpersons.

C. The CONTRACTOR is responsible for sloping and stabilizing all excavations in compliance with local codes and ordinances having jurisdiction, OSHA requirements or standard industry practice. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

D. The CONTRACTOR is required to obtain all construction-related permits, as necessary.

E. The CONTRACTOR shall divert clean surface water runoff away from excavations. Any surface water or groundwater which enters the excavation must be pumped, collected, and disposed of properly by the CONTRACTOR.

F. Orange or yellow fluorescent warning tape shall be installed at least 20 feet in all directions from the perimeter of the excavations.

G. Once an excavation has begun, the CONTRACTOR shall not permit smoking or any open flames within 50 feet of the excavation.

H. Excavation is required for site preparation activities and the removal of contaminated soil. No extra compensation shall be allowed for excavation Work not covered by the bid proposal.

I. In several areas of the Site which are planned for contaminated soil removal, it is anticipated and expected that the CONTRACTOR shall use small equipment, hand tools, and hand digging to

protect existing trees, shrubs, roots, structures, paved areas, site amenities, and site features while achieving desired results.

3.3 COMPLETION OF VERIFICATION SAMPLES

A. CONTRACTOR is not responsible for the collection of verification samples from the floors and sidewalls of the soil excavations. The collection of verification samples will not be performed.

3.4 UNAUTHORIZED EXCAVATION

A. All excavations outside the lines and grades shown, and which is not approved by the SITE ENGINEER, together with the removal and disposal of the associated material shall be at CONTRACTOR's expense. Unauthorized excavations shall be filled and compacted with select backfill by CONTRACTOR at his/her expense.

3.5 STOCKPILING

A. Direct loading is not anticipated for all excavation areas. Therefore, the stockpiling of contaminated soils at the Site will not be permitted. The CONTRACTOR shall work with the OWNER's REPRESENTATIVE in determining stockpile locations. In no case, however, will stockpiling of contaminated soil be permitted in areas of unimpacted soils.

3.6 LOADING AND TRANSPORTING

A. CONTRACTOR shall not load and transport contaminated soils until the CONTRACTOR has received approval from the disposal facilities that the contaminated soil can be disposed at the disposal facility.

B. Once CONTRACTOR has received approval from the disposal facility(ies), CONTRACTOR shall perform all handling, loading, and transporting necessary to complete the Work as shown and specified.

C. CONTRACTOR shall conduct all loading and transporting activities in accordance with all Federal, State, and local regulations, but not limited to, United States Department of Transportation and USEPA regulations 40 CFR 172-179.

D. CONTRACTOR shall obtain and comply with the required permits and authorizations for transportation of contaminated soils in accordance with State and local jurisdiction. The contaminated soils shall be transported by a waste hauling company experienced and trained for the handling and transportation of contaminated materials.

E. All trucks transporting contaminated soils for off-site disposal shall be covered, and secured in accordance with all Federal, State, and local regulations. Trucks used for transportation of contaminated soils shall travel on-site on routes approved by the SITE ENGINEER and off-site on authorized roads in accordance with all State and local regulations.

F. Contaminated soil transport containers shall be covered to prevent release of dust and particulate and exposure of the contaminated soils to precipitation.

G. CONTRACTOR shall inspect and clean loaded transport vehicle tires and undercarriage to remove any adhering contaminated soils prior to vehicle departure from the Site.

3.7 DISPOSAL

A. All contaminated soils transported off-site shall be disposed at a permitted Type II disposal facility in accordance with all Federal, State, and local regulations.

B. CONTRACTOR shall be responsible for obtaining approval from the disposal facility(ies) for disposing contaminated soils at their facility(ies). In this capacity, CONTRACTOR shall be responsible for completing and submitting all applications for waste disposal at the appropriate waste disposal facility(ies). CONTRACTOR is not responsible for collecting and analyzing waste material characterization samples which are required by the disposal facility(ies) for waste acceptance approval purposes. Soil sample laboratory waste characterization results are included in Appendix A of these specifications. The CONTRACTOR shall be responsible for satisfying and complying with all other requirements imposed by the disposal facility(ies).

C. CONTRACTOR shall be responsible for properly completing waste profiles and waste transportation and disposal manifests and all other documents required for waste shipment to the disposal facility(ies). CONTRACTOR shall sign these waste profiles and manifests as the Transporter. OWNER's REPRESENTATIVE or SITE ENGINEER will sign the manifests on behalf of the OWNER.

D. CONTRACTOR shall retain copies of all waste transportation and disposal manifests, and all other documents required for waste shipment, for each load of waste material that is transported from the Site.

E. CONTRACTOR shall maintain on-site a waste disposal log containing the following information for each load of contaminated soil transported for disposal:
1. Date
2. Material being transported off-site
3. Volume and/or weight
4. Destination
5. Vehicle number
6. Driver
7. Manifest number

F. One copy of the waste disposal log shall be immediately available to the OWNER, OWNER's REPRESENTATIVE, and SITE ENGINEER upon their request.

G. CONTRACTOR shall be responsible for all costs of additional transportation of contaminated soil necessitated by rejection of contaminated soils by the disposal facility due to the presence of free liquids or failure to pass the paint filter liquid test.

END OF SECTION

SECTION 02110

WASTE MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. The CONTRACTOR shall furnish all labor, materials, equipment, and related items required for the proper handling and disposal of waste material generated during the demolition of the Site. For the purpose of this specification, waste will be categorized as solid waste for disposal at a designated Type I, Type II, or Type III solid waste management facility subject to review by the OWNER's REPRESENTATIVE.

B. The CONTRACTOR is to determine the proper recycling or disposal methods to ensure that waste is recycled or disposed of according to procedures that are consistent with applicable regulations.

1.2 SECTION INCLUDES

A. Waste characterization. (Not Used)

B. Storage and packaging of wastes.

C. Selection of waste disposal method.

D. Designation of off-site disposal facilities.

E. Bill-of-lading and weigh tickets/disposal receipts.

1.3 RELATED SECTIONS

A. Section 01320 - Pre-Work Submittals.

B. Section 01520 - Temporary Construction Facilities.

C. Section 01770 - Project Closeout.

D. Section 02120 - Off-Site Transportation and Disposal.

1.4 REGULATORY REQUIREMENTS

A. Comply with Federal and State Occupational Safety and Health regulations.

B. Title 29, Code of Federal Regulations, Parts 1910 and 1926.

1.5 SUBMITTAL AND PROJECT RECORD DOCUMENTS

A. The CONTRACTOR shall provide (where applicable) all required submittals and Project records.
   1. Waste Management Records.
   2. Waste Profiles, if necessary.
   3. Waste Shipping Papers and Bills-of-Lading.

4. Weigh tickets/disposal receipts.
5. Manifests.

1.6 QUALIFICATIONS

A. The CONTRACTOR must have demonstrated experience with waste management and disposal.

1.7 SCHEDULING

A. The CONTRACTOR must adhere to waste management and disposal procedures and Project sequencing in accordance with the Schedule.

PART 2 - PRODUCTS

2.1 PACKAGING MATERIALS AND PRODUCTS INCLUDING, BUT NOT LIMITED TO:

A. Miscellaneous boxes.

B. Fiberboard barrels.

C. Removable head drums or steel roll-off boxes, DOT approved.

D. Miscellaneous bags.

E. Spill prevention and countermeasure materials and control products, including plastic sheeting and absorbent materials consistent with the requirements of Title 49 CFR 173 and applicable state and local regulations.

PART 3 - EXECUTION

3.1 WASTE CHARACTERIZATION (NOT USED)

A. No sample results.

B. The CONTRACTOR is required to handle all wastes produced during the decommissioning and demolition activities in conformance with 40 CFR 264 and State and local regulations.

3.2 STORAGE AND PACKAGING OF WASTES

A. The CONTRACTOR is required to properly label and mark waste containers immediately upon placement of waste in the container. Bulk-stored waste is to be identified with a sign that bears an appropriate waste label and any additional information that is required for waste area demarcation.

B. The CONTRACTOR must package all wastes for transport in containers that comply with the requirements outlined in Section 02120 and/or requirements of the Transporter, whichever are more stringent.

3.3 SELECTION OF WASTE DISPOSAL METHOD

A. The CONTRACTOR may dispose non-hazardous and non-recyclable solid waste at a Type, I, Type II, or Type III solid waste management facility subject to review by the OWNER's REPRESENTATIVE. The solid waste must comply with the facility operator's waste discharge requirements.

B. The CONTRACTOR may employ applicable treatment methods to render liquid wastes compliant with current standards and facilitate discharge to the POTW system.

C. For all off-site disposal activities, CONTRACTOR is to utilize a licensed Transporter or Transporters, subject to the review of the OWNER's REPRESENTATIVE, and will be responsible for meeting the packaging and loading requirements stipulated by the Transporter(s).

3.4 DESIGNATION OF OFF-SITE DISPOSAL

A. Waste designated as solid waste is to be transported to an approved solid waste management facility.

3.5 BILL-OF-LADING AND WEIGH TICKETS/DISPOSAL RECEIPTS

A. CONTRACTOR is required to prepare a bill-of lading for transport of solid waste as required by the Transporter and in conformance with all applicable transport regulations and requirements.

B. CONTRACTOR is required to submit copies to SITE ENGINEER of weigh tickets and/or disposal receipts for any solid waste removed from the facility for disposal.

END OF SECTION

SECTION 02115

CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 SCOPE

A. The CONTRACTOR shall provide all labor, materials, equipment, and incidentals required to perform all clearing necessary for the CONTRACTOR to perform the required Work as specified. Trees, stumps, and other cleared brush shall become the property of the CONTRACTOR and shall be properly disposed off-site at his or her expense.

1.2 RELATED SECTIONS

A. Section 02025 - Existing Utilities and Underground Structures

B. Section 02220 - Building Demolition

1.3 QUALITY ASSURANCE

A. Codes and Standards: State and local laws and code requirements shall govern the hauling and disposal of trees, shrubs, stumps, roots, rubbish, debris, and other matter.

1.4 JOB CONDITIONS

A. Protection:
1. Streets, roads, adjacent property, and other works and structures shall be protected throughout the entire Project. CONTRACTOR shall return to original condition, satisfactory to the OWNER, damaged facilities caused by the CONTRACTOR's operations.
2. Trees, shrubs, and grassed areas which are to remain shall be protected by fences, barricades, wrapping, or other methods as approved by the OWNER's REPRESENTATIVE. Equipment, stockpiles, etc., shall not be permitted within tree branch spread. Trees shall not be removed without approval of the OWNER's REPRESENTATIVE unless specified.

1.5 GUARANTEE

A. CONTRACTOR shall guarantee that Work performed under this Section will not permanently damage trees, shrubs, turf, or plants designated to remain, or other adjacent work or facilities. If damaged resulting from CONTRACTOR's operations appears during the period up to 12 months after completion of the Project, CONTRACTOR shall replace damaged items at no expense to OWNER.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CLEARING AND GRUBBING

A. Clearing shall be conducted only within the limits of Work shown, except as otherwise directed by SITE ENGINEER. Damage outside these limits caused by CONTRACTOR's operations shall be corrected at CONTRACTOR's expense.

B. Trees and shrubs shall be trimmed when doing so will avoid removal or damage. Trimmed or damaged trees shall be treated and repaired by persons with experience in this specialty that are approved by OWNER's REPRESENTATIVE. The CONTRACTOR shall replace trees and shrubs intended to remain that are damaged beyond repair or removed.

C. Clear the Work area of trees, shrubs, roots, and other vegetation, except for that anticipated to remain. Completely remove stumps, roots, and other debris.

D. Trees, stumps, and other cleared brush shall become the property of the CONTRACTOR and shall be properly disposed off-site at his or her expense.

E. Burning on the Site is prohibited.

END OF SECTION

SECTION 02120

OFF-SITE TRANSPORTATION AND DISPOSAL

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Insure that all vehicles entering and leaving the site comply with all safety requirements and licensing requirements of the local, State, and Federal regulations.

B. Prepare vehicles to prevent spillage or contamination.

C. Inspect vehicles before leaving the site.

D. Transport liquids, sludges, and other excavated materials from the site to an approved disposal/recycling facility.

1.2 SUBMITTALS

A. Submit the names of the disposal/recycling facilities to the OWNER's REPRESENTATIVE as part of the Work Plan.

B. Submit the transportation routes to the selected solid and liquid disposal/recycling facilities to the OWNER's REPRESENTATIVE and SITE ENGINEER for approval.

C. Submit, as part of the Work Plan, a Spill Contingency Plan for transportation of solids and liquids. The Plan shall address all the potential hazards, necessary actions to follow in case of spills, and emergency phone numbers.

D. Submit copies of all manifests and bill-of-lading to OWNER's REPRESENTATIVE for information only.

E. Submit a plan to decontaminate the vehicle wheels. This procedure could be identified in the overall decontamination plan.

1.3 PROJECT RECORD DOCUMENTATION

A. Record volume and character of material disposed.

B. Provide documentation that measuring devices used are certified by the appropriate State inspection agency.

C. The CONTRACTOR shall provide the SITE ENGINEER with written documentation and records verifying receipt and the quantity received of each load at the disposal/recycling facility and verification of proper disposal. Copies of the actual receipts must be provided.

D. The CONTRACTOR shall prepare and maintain accurate manifests or bill-of-lading for each batch of the waste materials being transported and disposed of or recycled. The CONTRACTOR is responsible for obtaining OWNER's signatures on manifests for transportation and disposal purposes.

E. All the materials which may require sampling and analysis shall be sampled and analyzed in accordance with the disposal facility requirements. The testing parameters shall be determined based on the potential for presence of the respective contaminants.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. The CONTRACTOR shall provide equipment, personnel, and facilities necessary to handle and load materials for transport.

PART 3 - EXECUTION

3.1 LOADING AND HAULING

A. Inspect haul vehicles for soil or other material adhesion to wheels and under carriage. These soils or other material shall be removed and properly handled by the CONTRACTOR before leaving the site. The decontamination procedures shall be carried out at the decontamination zone. All the vehicles shall be approved by the SITE ENGINEER before leaving the site.

B. No transport vehicles shall be allowed to leave the site which are leaking or spilling materials.

C. Provide tarpaulin covers for transport vehicles, which shall cover materials during transport. Do not overfill vehicles.

D. All transport vehicles shall be in strict conformance with all the applicable Federal, State, and local laws.

E. The CONTRACTOR is responsible for any and all actions and costs necessary to remedy waste spilled in loading or transit.

F. The CONTRACTOR shall keep accurate records for the following information: Type and quantity of materials and liquids removed from the site, and analytical testing results. SITE ENGINEER approval is required before any liquid or material leaves the site.

G. The CONTRACTOR shall provide the OWNER's REPRESENTATIVE with copies of the above records, all permits required, manifests, waste hauling permits, and necessary affidavit regarding the waste materials, including liquid disposal.

H. All transport vehicles shall be cleaned before filling with waste material.

3.2 DISPOSAL FACILITY

A. Contaminated materials shall be disposed of at an approved licensed disposal facility.

B. Arrangements for disposal shall be performed by the CONTRACTOR.

END OF SECTION

SECTION 02210

BACKFILL AND COMPACTION

PART 1 - GENERAL

1.1 SCOPE

A. The CONTRACTOR shall provide all labor, materials, equipment, and incidentals to perform backfilling and compaction in those areas excavated and disturbed during the Project activities.

B. The excavation areas shall be backfilled to original grades.

1.2 RELATED SECTIONS

A. Section 02025 - Existing Utilities and Underground Structures

B. Section 02220 – Building Demolition

1.3 SUBMITTALS

Submit the following in accordance with Section 01320, Pre-Work Submittals:

A. Provide submittals as part of the Work Plan submittal specified in Section 01320, Pre-Work Submittals.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. The off-site source of this material shall be granular material which is free of deleterious material or contamination of any kind, Class II or better.

PART 3 - EXECUTION

3.1 SAFETY

A. Examine the areas and conditions under which excavating, filling, and grading are to be performed and notify the OWNER's REPRESENTATIVE in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in an acceptable manner.

B. Barricades

1. If necessary, the CONTRACTOR shall use traffic barricades with flashing lights where driver or pedestrian safety may be jeopardized. In areas that are left open overnight, the CONTRACTOR shall provide adequate barricades to prevent unauthorized entrance into the Work area.
2. The CONTRACTOR shall be responsible for barricading and clearly marking any entrance or exit to a Work area where the safety of any person entering or exiting the area may be jeopardized. The barricade exit shall have a minimum warning that reads "DANGER - AUTHORIZED PERSONNEL ONLY." Prior to the start of Work, the CONTRACTOR

shall contact the local authorities for the requirements of barricading any Work area. The CONTRACTOR shall be responsible for all costs associated with installing and removing the barricades.

3.2 BACKFILLING

A. General: Place acceptable soil material in layers to required elevations.

B. Backfill excavations and subsurface holes as promptly as Work permits, but not until completion of the following:
1. Acceptance by the SITE ENGINEER.
2. Backfilling of voids with satisfactory materials.
3. Removal of trash and debris.

C. Wood, concrete, and masonry material will not be allowed for use as fill material.

D. Placement and Compaction: Place backfill materials in layers not more than 12" in loose depth for material compacted by heavy compaction equipment, and not more than 6" in loose depth for material compacted by hand-operated tampers.
1. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content. Compact each layer to 95% of maximum dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
2. Place backfill materials evenly adjacent to structures, to required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.

3.3 GRADING

A. General: Uniformly grade areas within limits of grading under this Section, including adjacent transition areas, in accordance with the CONTRACTOR's conceptual final grading and drainage plan submitted as part of the Work Plan. Smooth finished surface within specified tolerances, compact with uniform slopes to provide drainage to existing catch basins.

3.4 COMPACTION

A. General: Control soil during backfilling providing the minimum percentage of density specified.

B. Percentage of Maximum Density Requirements: Compact granular material to not less than 95% of Maximum Dry Density using mechanical means. Compaction/density testing is not required.

C. Moisture Control: Where a layer of backfill or fill soil material must be moisture conditioned before compaction, uniformly apply water to surface of the layer of soil material in proper quantities to prevent free water appearing on surface during or subsequent to compaction operations.
1. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
2. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing, or pulverizing until moisture content is reduced to a satisfactory level.

3.5 MAINTENANCE

A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and re-establish grades in settled, eroded, and rutted areas to prevent ponding and promote positive drainage.

B. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.

3.6 DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Removal from Site: Remove waste materials, trash, and debris, and properly dispose of off-site.

END OF SECTION

SECTION 02220

BUILDING DEMOLITION

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. The CONTRACTOR shall provide labor, materials, equipment, and incidentals as shown, specified, and required for demolition, removal, and disposal Work.
2. Building demolition activities shall commence only after completion of ACM abatement and removal of all other regulated waste materials.
3. Demolition includes structural concrete, foundations, floors, walls, slabs, doors, windows, personal items, structural steel, metals, roof, masonry, attachments, appurtenances, piping, electrical and mechanical equipment, and other existing features.
4. The slabs, footings, concrete and asphalt paving, walls, roofs, silos, bins, elevator, and tanks will be removed entirely. All foundations shall be removed entirely. The deep elevator pit shall be backfilled with Type II sand to 4 inches below grade.
5. The structures identified to be demolished include, but not necessarily limited to the following (See Table 1 in Appendix E for approximate structure dimensions):

    a) Former Feed Mill Building
    b) Grain Elevator Building
    c) Former Tire Shop Building
    d) Grain Elevator
    e) Former Garden Center
    f) Grain Elevator Base
    g) Grain Elevator Office and Electrical Control
    h) Grain Elevator Control Room
    i) Truck Dump
    j) Grain Bins #1 through #10
    k) Feed Bins #1 through #8
    l) Square Hoppers #1 and #2
    m) Molasses Above Ground Storage Tank (AST)
    n) Oil ASTs #1 through #3
    o) North Loading Bay
    p) South Loading Bay
    q) Weigh Scale (Coordinate Removal and Loading with the OWNER)
    r) Weigh Scale Concrete Pad and Drive
    s) Former Feed Mill Front Porch
    t) Dryer Fan/Tower
    u) Trailers and Debris (North of the Feed Mill Building)

B. Recycling:

1. The CONTRACTOR has the option and is *strongly* encouraged to recycle any non-contaminated material found or demolished on-site in order to reduce the costs. Although the materials are not limited, it is recommended that steel, concrete, and equipment is recycled. The CONTRACTOR will have all salvage and recycling rights for building materials and equipment currently in the building unless otherwise specified at the pre-bid meeting by the OWNER.

1.2 RELATED SECTIONS

A. Section 01710 - Cleaning.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements: All demolition Work shall be in accordance with 29 CFR 1926.850 through .860 (Subpart T - Demolition) and all other applicable Federal, State, and local laws.

B. Permits and Regulations:
1. Permits: CONTRACTOR shall secure from the appropriate agencies all required permits necessary for proper execution of the Work prior to starting Work on the project Site. Fees for securing the permits shall be paid by the CONTRACTOR, including all inspection costs which may be legally assessed by the Bureau of Construction Codes in accordance with authority granted under 1908 P.A. 371. The CONTRACTOR shall be State-licensed to perform building demolition Work.
2. Work shall be executed in accordance with the State of Michigan's Construction Codes, except where Work is specified or shown to be above such standard. The Work shall be executed in conformity with the Contract Documents and Drawings.
3. Perform demolition Work in compliance with applicable requirements of governing authorities having jurisdiction.
4. Prepare and submit the required Notice of Intent to Renovate/Demolish to the appropriate agency at least 10 days before demolition starts.

1.4 SUBMITTALS

A. CONTRACTOR shall submit copies of all permits and certifications of the CONTRACTOR required for the Work specified in this Section before the Work commences. Prior to the start of any demolition operations, the CONTRACTOR shall submit a Work Plan, which shall include a Demolition Plan, describing the Work practices to be employed during demolition operations. The required contents of this plan are specified in Section 01325.

B. CONTRACTOR shall provide the OWNER's REPRESENTATIVE with a full description of the proposed demolition debris disposal/recycling facility(ies) to include each facility's compliance status. Upon request, the CONTRACTOR shall provide all appropriate permits and licenses for review by the OWNER's REPRESENTATIVE. If necessary, on-site inspections may be requested to verify adequacy and compliance status. OWNER's REPRESENTATIVE has the authority to either approve or disapprove the CONTRACTOR's proposed disposal/recycling facility(ies) based on the review of this submittal. If CONTRACTOR's proposed disposal/recycling facility(ies) is not approved, CONTRACTOR shall propose an alternate disposal/recycling facility(ies).

C. CONTRACTOR to adhere to Amtrak requirements presented in Appendix A, including the securing of a Permit to Enter.

1.5 JOB CONDITIONS

A. Protection:
1. Comply with Amtrak requirements and specifications presented in Appendix A.
2. Perform demolition Work to prevent damage to adjacent structures to remain, which might result from falling debris or other causes, and so as to not interfere with the use and free and safe passage to and from adjacent structures.

3. Protect monitor wells shown on Figure 3 in Appendix B. Any monitor wells damaged/destroyed during the Work shall be repaired/replaced by the OWNER's REPRESENTATIVE at cost to the CONTRACTOR.
4. Erect and maintain barriers, lights, sidewalk sheds, and other necessary protective devices.
5. Repair damage to facilities to remain.
6. Closing or obstructing of roadways, sidewalks, and passageways adjacent to the Work by the placement or storage of materials will not be permitted, and all operations shall be conducted with a minimum interference to traffic on these ways.

B. Explosives:
1. Do not bring explosives onto the Site nor use explosives.

C. Open Burning:
1. No open burning will be permitted at the Site.

D. Notification:
1. Notify SITE ENGINEER at least 48 hours prior to commencement of demolition activities.
2. The CONTRACTOR shall be responsible for completing and submitting a Notification of Intent to Renovate/Demolish form in accordance with the National Emissions Standards and Hazardous Air Pollutants, 40 CFR Part 61, Subpart M and P.A. 135 of 1986, as amended, Sec. 220 (1-4) or (8) to the EGLE - Air Quality Division and the Michigan Department of Licensing and Regulatory Affairs – Asbestos Program.

E. Existing Utilities: Contact appropriate agencies, utilities, departments, and MISS DIG to locate existing public and private underground utilities in the areas of Work. If utilities are to remain in place, provide adequate means of protection during all operations.
1. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, notify the SITE ENGINEER immediately. Cooperate with utility owner in keeping adjacent services and facilities in operation. Repair damaged utilities immediately.
2. Sanitary Sewer and Storm Sewer: The CONTRACTOR shall locate and bulkhead all sewer connections from the property line prior to proceeding with demolition operations.
3. Utility shut-offs shall be the responsibility of the CONTRACTOR.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 GENERAL

A. CONTRACTOR shall load, transport, and dispose demolition debris, and other items not specified to remain, off the Site and in conformance with applicable laws and regulations.

B. Building Demolition:
1. Proceed with demolition from the top of the structure to the ground.
2. Demolish concrete and masonry in small sections.
3. Remove structural framing members and lower to ground by means of hoists, derricks, or other suitable methods.
4. Break up and remove foundations and slabs-on-grade. All foundation walls, footings, parking lots, driveways, slabs, and utilities shall be removed. Any OWNER-approved

structures remaining shall be staked by the CONTRACTOR. The staked location shall be maintained throughout the project.

3.2 STRUCTURAL REMOVALS

A. Remove structures entirely unless otherwise directed by the OWNER's REPRESENTATIVE.

B. All concrete, brick, tile, concrete block, roofing materials, reinforcement, structural or miscellaneous metals, plaster, wire mesh, and other items contained in or upon the structure shall be removed and taken from the Site, unless otherwise approved by the SITE ENGINEER. Demolished items and debris shall not be used as backfill or fill material.

3.3 MECHANICAL REMOVALS

A. Mechanical removals shall consist of dismantling and removing existing piping, pumps, motors, equipment, weigh scale, HVAC systems, and other appurtenances to complete the Work. It shall include cutting, capping, and plugging as required.

B. Underground piping to remain beyond the limits of demolition Work shall be properly capped.

3.4 UTILITY REMOVALS

A. Furnish all labor, materials, equipment, and related items required to perform decommissioning of utilities/piping at the facility in accordance with local requirements including, but not limited to, the following systems:
1. Storm sewer piping.
2. Sanitary sewer piping.
3. Watermain and water service.

3.5 ELECTRICAL REMOVALS

A. Electrical removals shall consist of the removal of existing transformers, distribution switchboards, panel boards, control panels, motors, conduits and wires, poles and overhead wiring, panel boards, lighting fixtures, wall switches, starters, and miscellaneous electrical equipment as required to complete the Work.

B. CONTRACTOR shall be responsible for determining which utility poles and associated electrical drop lines serve the existing buildings. The CONTRACTOR shall remove only those electrical drop lines serving the project Site. All utility poles shall remain undisturbed.

3.6 DUST CONTROL AND MONITORING

A. The CONTRACTOR shall employ all necessary engineering controls and misting operations to prevent the emission of dust and migration of airborne materials off-site to surrounding properties as described in Section 01570.

B. The CONTRACTOR shall perform dust monitoring using real-time aerosol monitors as indicated in Section 01570.

3.7 CLEANUP

A. CONTRACTOR shall remove from the Site all debris resulting from the demolition operations as it accumulates. Upon completion of the Work, all materials, equipment, waste material, and debris of every sort shall be removed and properly disposed, and premises shall be left clean, neat, and orderly.

B. The CONTRACTOR shall remove all utilities up to property boundaries/rights-of-way and shall physically mark such terminal locations for future use. In addition, the CONTRACTOR shall measure and record these locations using witness points. All witness points shall also be recorded.

END OF SECTION

SECTION 02370

EROSION AND SURFACE WATER CONTROL

PART 1 - GENERAL

1.1 RELATED WORK

A. Section 01100 - Summary of Work.

B. Section 01320 - Pre-Work Submittals.

C. Section 01570 - Temporary Controls.

D. Section 01710 - Cleaning.

E. Section 01720 - Demobilization.

F. Section 02120 - Off-Site Transportation and Disposal.

G. Section 02210 - Backfill and Compaction.

H. Section 02220 - Building Demolition.

1.2 DESCRIPTION OF WORK

A. The CONTRACTOR shall provide the necessary means to control surface water and erosion in accordance with all Federal, State, and local regulations.

B. Erosion, sedimentation, and surface water control shall also be performed to reduce the commingling of such materials with contaminated material at the Site and reducing the potential for exacerbation of contaminants at the Site.

C. Work shall include the provision and installation of all materials, equipment, and labor necessary for the removal of surface water and for the provision of erosion and sediment control structures as specified herein.

D. Permanent Control: Furnish and place mulch and seed at vegetated areas which are disturbed due to construction activities. Mulch shall be used to keep soil in place until vegetation is established.

E. Temporary Control:
1. When the use of hay bales and/or silt fence will be required to prevent soil erosion runoff, furnish, and place such materials as temporary erosion and pollution control devices at locations shown in the CONTRACTOR's approved Work Plan or as directed by the OWNER's REPRESENTATIVE. The CONTRACTOR shall provide an Erosion Control Plan prior to initiating on-site Work.

F. Construction under this project shall be subject to review and/or inspection by the appropriate Federal, State, and Local agencies responsible for ensuring the adequacy of sedimentation control measures.

G. Treatment of runoff water (or soil impacted as a result of runoff water migration) is the responsibility of the CONTRACTOR and will be conducted at no additional cost to the OWNER or OWNER's REPRESENTATIVE.

1.3 SUBMITTALS

A. Erosion, sedimentation, and surface water control shall be outlined as part of the requirements of Section 01320, Pre-Work Submittals.

B. Copies of any applicable permits required for erosion, sedimentation, and surface water control shall be submitted to the OWNER's REPRESENTATIVE prior to initiating any Site Work.

1.4 REFERENCES

The publications listed below form a part of this specification to the extent referenced. Where referenced in the text, the publications are referred to by the basis designation only.

A. U.S. Environmental Protection Agency
   1. 430/9-73-007 Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity.
   2. 540/2-85/003 Dust Control at Hazardous Waste Sites, November 1985.

B. U.S. Department of Agriculture, Soil Conservation Service
   1. Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas.

C. State of Michigan
   1. Part 91 of Public Act 451 of 1994 Natural Resources and Environmental Protection Act, Soil Erosion and Sediment Control.

D. Other References
   1. Michigan Department of Environment, Great Lakes, And Energy, Michigan Nonpoint Source Best Management Practices Manual, v2014.05.14.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Mulch: Choose from one of the following types of mulch:
   1. Straw: Use small grain straw that is reasonably free of grain, weeds, seeds, or mold. Hay should be used only if straw is not available.
   2. Straw Mulch Blankets: Made of a uniform layer of straw with a net covering on one side. Straw should be free of grain, weeds, seeds, or mold.
   3. Excelsior Blankets: Made of evenly distributed coarse wood fibers reinforced by netting.

B. Seed for Erosion Control: For temporary control MDOT Cereal Rye specifications shall be adhered.

C. Hay Bales
   1. Consist of rectangular-shaped bales of hay or straw weighing at least 40 pounds per bale.
   2. Free from primary noxious weed seeds and rough or wood materials.

D. Silt Fence: Shall be a commercially produced product capable of sustaining a minimum 30 gallon/minute/square foot flow, with apparent opening sizes of a maximum 0.600 mm and minimum No. 30 U.S. Standard Mesh.

PART 3 - EXECUTION

3.1 PERFORMANCE

A. Dust Control
1. Provisions shall be taken to keep down dust during all times of construction activities, including during non-working periods.
2. Sprinkle or treat with dust suppressants the soil at the Site, haul roads, and other operations disturbed by operations. Calcium chloride is not permitted, however.
3. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming.
4. Air blowing will be permitted only for cleaning non-particulate debris such as steel reinforcing bars except as otherwise specified.
5. Do not unnecessarily shake bags of cement, concrete, mortar, or plaster.

B. Erosion Control Provisions
1. Protect drainageways from construction activities with fiber mats or by using straw/hay bales.
2. Protect areas where existing drainage ditches are to be excavated by constructing straw dikes at the top of slopes to divert storm runoff from the disturbed area or at the toe of slopes to retain sediments, as conditions permit.
3. Prior to removal of all sediment control measures, remove all retained silt or other materials and handle as appropriate.

C. Mulch
1. Undertake immediately after each area has been properly prepared. When seed for erosion control is sown prior to placing the mulch, place mulch on the seeded areas within 48 hours after seeding.
2. Straw: Spread uniformly at a rate of 1.5 to 2 tons per acre.
3. Straw Mulch and Excelsior Blankets: Apply netting side up. Lay down slope blankets first, working up slope. Install in accordance with manufacturer's published specifications. Excelsior mulch blankets shall be made from fibers cut from sound, green timber. The blankets shall be made of a uniform web of interlocking fibers with a backing of net on one side only. The blanket shall be produced in the form of a tightly compressed roll not less than 35 inches in width, and shall have the net on the outside of the fiber mat. Roll weight when manufactured shall average 0.09 pounds per square foot, ∀ 10%. Weight of each roll at the time of manufacture shall be written or stenciled on roll wrapper, or on an attached tag. Average of entire shipment shall be approximately 0.09 pounds per square foot area. The net backing for the blanket and the pins or staples for anchoring the blanket shall meet MDOT 1990 Standard Specifications for Construction of Subsection 8.21.11-a-3 and shall provide the necessary reinforcement for protecting the blanket during shipping, handling, and installation.

D. Silt Fence: Install in accordance with the manufacturer's published specifications. Install around the perimeter of the excavation, trenching, and staging areas, as Federal, State, and Local regulations require, in accordance with the Work Plan provided by the CONTRACTOR.

E. Hay Bales for Erosion Control
   1. Place to provide for temporary control of erosion and/or pollution.
   2. Stake with required stakes.
   3. Hay bales will be placed around all drainage structures to prevent sediment erosion.

3.2 MAINTENANCE

A. If any staples from the matting become loosened or raised, or if any matting becomes loose, torn, or undermined, make satisfactory repairs immediately, with no extra compensation.

B. Maintain areas mulched or matted, with no extra compensation, until the completion of the Contract.

C. Maintain both new and existing erosion control structures and materials.

END OF SECTION

SECTION 02396

SITE RESTORATION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. The CONTRACTOR shall furnish all labor, materials, equipment, tools, and appurtenances required to place 3 inches of topsoil, fertilize, seed (by hydroseeding), and mulch all areas disturbed, regraded, or re-establishing a ground cover during the course of construction.

B. The CONTRACTOR shall comply with all applicable codes, ordinances, rules, regulations and laws of local, municipal, State, or Federal authorities having jurisdiction.

1.2 SUBMITTALS

A. A manufacturer's Certificate of Compliance for the seed mixture shall be submitted by the manufacturer with each shipment of each type of seed. These certificates shall include the guaranteed percentages of purity, weed content and germination of the seed, net weight, and the date of shipment. No seed may be sown until the CONTRACTOR has submitted these certificates.

1.3 QUALITY ASSURANCE

A. A satisfactory stand of grass, as determined by the OWNER, shall be required. To be acceptable, bare spots shall be scattered, there shall be no bare spots larger than one square yard, and the stand of grass shall consist of a uniform stand of at least 75 percent established permanent grass species within one year of initial seeding.

B. Maintain erosion and sediment controls in accordance with Section 02200 of these Specifications.

1.4 DEFINITIONS

A. Weeds include, but are not limited to, Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Broome Grass.

1.5 QUALITY CONTROL

A. The CONTRACTOR shall submit to the OWNER and OWNER's REPRESENTATIVE evidence of compliance with the testing specified at least 7 days prior to placement.

PART 2 - PRODUCTS, IF USED

2.1 TOPSOIL

A. Organic-rich topsoil, free of deleterious material.

2.2 SEED

A. Uniform mixtures composed of seed of the following proportions by weight:
   1. All areas: MDOT Roadside seed mixture THV, TUF, or TGM.

B. The required seeding dates shall be between April 15 and May 15 except as otherwise directed by the OWNER.

C. The OWNER, through the OWNER's REPRESENTATIVE and/or SITE ENGINEER, reserves the right to change the seed mixture and recommended seeding dates based upon the time of year in which the construction is performed (i.e., winter rye).

2.3 FERTILIZER

A. The CONTRACTOR shall apply fertilizer in accordance with manufacturer's instructions.

B. The CONTRACTOR shall apply fertilizer after smoothing of the vegetative layer and prior to roller compaction.

C. The CONTRACTOR shall not apply fertilizer at the same time or with the same machine as that will be used to apply seed unless hydroseeding.

D. The CONTRACTOR shall mix fertilizer thoroughly into the upper four inches of the vegetative layer with a disc, spring-tooth harrow, or other suitable equipment.

E. The CONTRACTOR shall lightly water the ground surface to aid the dissipation of fertilizer.

2.4 MULCH

A. Straw mulch shall be oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.

B. Wood fiber mulch shall consist of wood fiber produced from clean, whole uncooked wood, formed into resilient bundles having a high degree of internal friction and shall be dry when delivered to the facility.

2.5 WATER

A. Water shall be clean, fresh, potable, and free of substances or matter that could inhibit vigorous growth of grass.

PART 3 - EXECUTION

3.1 INSPECTION

A. The CONTRACTOR shall verify that the prepared vegetative layer is ready to receive the Work of this Section.

3.2 DELIVERY, STORAGE, AND HANDLING

A. The CONTRACTOR shall deliver grass seed mixture in sealed containers showing weight, seed mix, year of production, date of packaging, and location of packaging. Seed in damaged packaging shall not be acceptable.

B. The CONTRACTOR shall deliver fertilizer in waterproof bags showing weight, chemical analysis, and the name of manufacturer. Fertilizer in damaged packaging is not acceptable.

3.3 FERTILIZING

A. The CONTRACTOR shall apply fertilizer in accordance with manufacturer's instructions.

B. The CONTRACTOR shall apply fertilizer after smoothing of the vegetative layer and prior to roller compaction.

C. The CONTRACTOR shall not apply fertilizer at the same time or with the same machine as that will be used to apply seed unless hydroseeding.

D. The CONTRACTOR shall mix fertilizer thoroughly into the upper 4 inches of the vegetative layer with a disc, spring-tooth harrow, or other suitable equipment.

E. The CONTRACTOR shall lightly water the ground surface to aid the dissipation of fertilizer.

3.4 SEEDING

A. The CONTRACTOR shall apply seed at the rates shown in PART 2 of this Section or as recommended by the Berrien County Natural Resources Conservation Service. Seed evenly in two intersecting directions. Rake in lightly. Do not seed area in excess of that which can be mulched on same day.

B. Planting season shall be as indicated in PART 2 herein or as recommended by the Berrien County Natural Resource Conservation Service.

C. The CONTRACTOR shall not sow immediately following rain, when the ground is too dry, frozen, or during windy periods.

3.5 MULCHING

A. Straw mulch shall be applied at a rate of 2 tons per acre.

B. Straw mulch shall be properly anchored to prevent removal by wind.

C. Wood fiber mulch shall be applied to seeded area at a rate of 1,500 pounds per acre. Immediately before spraying, the mulching material shall be mixed with water in the sprayer and kept uniformly suspended in the water by agitation during the spraying operation.

3.6 HYDROSEEDING

A. When applying seed, lime, fertilizer, or mulch materials with hydroseeders, do not use more than 100 to 150 pounds of solids per 100 gallons of water. If inoculate is in a seed, fertilizer, and lime slurry, it should be used within three to four hours, or a fresh supply of inoculate should be added. It is preferable to hydroseed when the soil is moist.

3.7 RESEEDING

A. Where vegetative coverage is less than 75 percent with one year of initial seeding, the CONTRACTOR shall place additional seed in accordance with Sections 3.4 or 3.6 herein, at no additional cost to the OWNER.

END OF SECTION

APPENDIX A

Amtrak Permit to Enter Applications and Specifications

Amtrak Process

A1. After Amtrak confirms it has all info to initiate the PTE process, allow 30 business days for the PTE Return Package to be sent to Permittee. The PTE Return Package will outline the paperwork, payment, and insurance requirements.

A2. After Amtrak receives payment and the completed PTE Return Package paperwork from permittee and deems it complete, allow 3 weeks for the PTE to be processed.

A3. After the PTE is processed, Amtrak starts plan/calc review. Allow a **minimum** of 30 business days ***each time*** you submit plans/calcs for review.

A4. If plans/calcs are approved, Amtrak will issue a letter of no exception at which time construction may be scheduled if construction is included in the PTE, subject to the terms and conditions of the executed PTE and Amtrak requirements.

Please do not request status updates until the appropriate amount of time has elapsed (i.e. 30 business days or 3 weeks, as applicable). Due to the number of permit requests, we are unable to respond to status update requests. Thank you for your patience and understanding.

****

Please do not hold up the return of the PTE application and/or return package for the submittal preparation. Amtrak can process the PTE while you are revising the plans.

****

In order for your plans to move through the Amtrak review process quickly, please ensure that the plans conform to the attached EP3005 specifications. In addition, ensure the following Standard Notes. The Standard Notes are by no means a comprehensive list of items that are required to get your plans approved. They are more of a guide to be used and are the most recent design review comments generated for a similar project. It is being passed along so that your design engineers can try to minimize the number of submissions Amtrak has to review.

EP 3014 is attached for your reference. It is recommended that your design engineer and/or contractor use section 3.1 on PDF page 9 of 16 as a checklist.

****

The following Standard Notes must be added to the crane pick plan:

a) All work on or adjacent railroad property must comply with Amtrak Engineering Practices EP3014 – Maintenance and Protection of Railroad Traffic During Contractor Operations.

b) All underground utilities, cable, and facilities must be located and protected before any excavating, drilling, boring/directional drilling, ground penetrating activities, or construction takes place. This includes railroad and commercial utilities, cables, duct lines, and facilities. These activities will not be performed in close proximity to the railroad duct lines unless monitored by on-site Amtrak Communications and Signal (C&S) department personnel. Hand digging may be required, as directed by

Amtrak through the on-site Amtrak C&S support personnel. Amtrak maintains the right to access all existing cables and conduits throughout construction. Amtrak also reserves the right to upgrade and install new cables and conduits in the affected area. The “one-call” process must be followed. Be aware that Amtrak is not part of the one-call process; contact Amtrak Engineering to have all railroad underground utilities and assets located. If requested by Amtrak, existing depths of utilities being crossed must be verified through test pits performed by the Contractor as directed by and under the direct supervision of Amtrak C&S support personnel. Precautions must be taken to prevent any interruption to railroad operation.

c) Any work (or equipment being staged onsite during construction) performed at or near a railroad crossing must not obstruct the view of flashing light units or gates to oncoming traffic.

d) Prior to entering Amtrak’s property for any work, the contractor must execute Amtrak’s standard Temporary Permit to Enter Upon Property (PTE). The fully executed PTE, written notice to proceed from Amtrak that all requirements of the PTE have been met and proof of safety training must, at all times, be furnished by the contractor at the project site.

e) All persons that are on or adjacent to the railroad property must successfully complete the Contractor Orientation Training. All Contractors must carry their “Amtrak Contractor Roadway Worker Protection” card with them at all times while on or adjacent to railroad property.

f) Any debris or damage resulting from work shall be immediately reported to the railroad. Railroad shall be repaired by railroad forces at project expense.

Should you have any questions, comments, or require additional information, please contact Permit@Amtrak.com. Thank you.

Kathy Haywood, PE, CFM

Third Party Development Lead – Amtrak Engineering I&C

Amtrak | 30th Street Station | 2955 Market Street | Box 64 | Philadelphia, PA 19104

Email: Permit@Amtrak.com

AMTRAK®

SCOPE AND NATURE

This practice provides procedures for Contractors to follow, when working on Amtrak Right-of-Way, adjacent to Amtrak tracks, to assure the protection of trains and maintenance of scheduled railroad operations.

SPECIAL REFERENCE

Note: This information was included under former Engineering Practice 1305.

Contractors shall comply with procedures detailed in the following specifications, when applicable:

Section	Title	Revision No.	Revision Date
01141A	Safety and Protection of Railroad Traffic and Property	4	10/01/12
01142A	Submission Documentation Required for Amtrak Review and Approval of Plans for Bridge Erection, Demolition and Other Crane/ Hoisting Operations over Railroad Right-of-Way	1	12/15/05
01520A	Requirements for Temporary Protection Shields for Demolition and Construction of Overhead Bridges and Other Structures	1	08/07/01
02261A	Requirements for Temporary Sheeting and Shoring to Support Amtrak Tracks	3	06/20/08

SPECIAL MATERIALS

Not Applicable

PROCEDURE

1. The Contractor shall conform to the applicable specifications.

2. Amtrak I&C shall assure that agencies and other third parties proposing construction on or adjacent to Amtrak Right-of-Way conform to Amtrak requirements detailed herein.

3. Amtrak Design and Construction shall review the Contractor’s proposed design and construction procedures for conformance with specifications, with sound engineering design practice and with the procedures detailed in the applicable Engineering Practice documents.

4. Amtrak Construction shall monitor the activities of the Contractor on-site to assure compliance/ adherence to approved procedures throughout the construction period.

REPORTING

As detailed in the specifications.

RESPONSIBILITY

Amtrak I&C Staff	Comply with Procedure
Director Project Initiation & Development	Assure Compliance
Amtrak Design Staff	Comply with Procedure
Director Structures Design	Assure Compliance
Amtrak Construction Staff	Comply with Procedure
Deputy Chief Engineer Construction	Assure compliance

SECTION 01141A – SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY

PART 1 - GENERAL

1.1 SCOPE

A. This specification describes the safety procedures and protection provisions for Contractors and Permittees entering and working upon railroad property.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PRE-ENTRY MEETING

A. Before entry of Permittee and/or Contractors onto Railroad's property, a pre-entry meeting shall be held at which time Permittee and/or Contractors shall submit for written approval of the Chief Engineer, plans, computations and a detailed description of proposed methods for accomplishing the work, including methods for protecting Railroad's traffic. Any such written approval shall not relieve Permittee and/or Contractor of their complete responsibility for the adequacy and safety of their operations.

3.2 RULES, REGULATIONS AND REQUIREMENTS

A. Railroad traffic shall be maintained at all times with safety and continuity, and Permittee and/or Contractors shall conduct their operations in compliance with all rules, regulations, and requirements of Railroad (including these Specifications) with respect to any work performed on, over, under, within or adjacent to Railroad's property. Permittee and/or Contractors shall be responsible for acquainting themselves with such rules, regulations and requirements. Any violation of Railroads safety rules, regulations, or requirements shall be grounds for the immediate suspension of the Permittee and/or Contractor work, and the re-training of all personnel, at the Permittee's expense.

3.3 MAINTENANCE OF SAFE CONDITIONS

A. If tracks or other property of Railroad are endangered during the work, Permittee and/or Contractor shall immediately take such steps as may be directed by Railroad to restore safe conditions, and upon failure of Permittee and/or Contractor to immediately carry out such direction, Railroad may take whatever steps are reasonably necessary to restore safe conditions. All costs and expenses of restoring safe conditions, and of repairing any damage to Railroad's trains, tracks, right-of-way or other property caused by the operations of Permittee and/or Contractors, shall be paid by Permittee.

3.4 PROTECTION IN GENERAL

A. Permittee and/or Contractors shall consult with the Chief Engineer to determine the type and extent of protection required to insure safety and continuity of railroad traffic. Any Inspectors, Track Foremen, Track Watchmen, Flagman, Signalmen, Electric Traction Linemen, or other employees deemed necessary by Railroad, at its sole discretion, for protective services shall be obtained from Railroad by Permittee and/or Contractors. The cost of same shall be paid directly to Railroad by Permittee. The provision of such employees by Railroad, and any other precautionary measures taken by Railroad, shall not relieve Permittee and/or Contractors from their complete responsibility for the adequacy and safety of their operations.

3.5 PROTECTION FOR WORK NEAR ELECTRIFIED TRACK OR WIRE

A. Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and Railroad's requirements regarding clearance to be maintained between equipment and tracks and/or energized wires, and otherwise regarding work in the vicinity of electrified tracks, must be strictly observed. No employees or equipment will be permitted to work near overhead wires, except when protected by a Class A employee of Railroad. **Permittee and/or Contractors must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any overhead wire**.

3.6 FOULING OF TRACK OR WIRE

A. No work will be permitted within twenty-five (25) feet of the centerline of track or the energized wire or have potential of getting within twenty-five (25) feet of track wire without the

approval of the Chief Engineer's representative. Permittee and/or Contractors shall conduct their work so that no part of any equipment or material shall foul an active track or overhead wire without the written permission of the Chief Engineer's representative. When Permittee and/or Contractors desire to foul an active track, they must provide the Chief Engineer's representative with their site-specific work plan a minimum of twenty-one (21) working days in advance, so that, if approved, arrangements may be made for proper protection of Railroad. Any equipment shall be considered to be fouling a track or overhead wire when located (a) within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire, or (b) in such a position that failure of same, with or without a load, would bring it within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire and requires the presence of the proper Railroad protection personnel.

B. If acceptable to the Chief Engineer's representative, a safety barrier (approved temporary fence or barricade) may be installed at fifteen (15) feet from centerline of track or overhead wire to afford the Permittee and/or Contractor with a work area that is not considered fouling. Nevertheless, protection personnel may be required at the discretion of the Chief Engineer's representative.

3.7 TRACK OUTAGES

A. Permittee and/or Contractors shall verify the time and schedule of track outages from Railroad before scheduling any of their work on, over, under, within, or adjacent to Railroad's right-of-way. Railroad does not guarantee the availability of any track outage at any particular time. Permittee and/or Contractors shall schedule all work to be performed in such a manner as not to interfere with Railroad operations. Permittee and/or Contractors shall use all necessary care and precaution to avoid accidents, delay or interference with Railroad's trains or other property.

3.8 DEMOLITION

A. During any demolition, the Contractor must provide horizontal and vertical shields, designed by a Professional Engineer registered in the state in which the work takes place. These shields shall be designed in accordance with the Railroad's specifications and approved by the Railroad, so as to prevent any debris from falling onto the Railroad's right-of-way or other property. A grounded temporary vertical protective barrier must be provided if an existing vertical protective barrier is removed during demolition. In addition, if any openings are left in an existing bridge deck, a protective fence must be erected at both ends of the bridge to prohibit unauthorized persons from entering onto the bridge.

B. Ballasted track structure shall be kept free of all construction and demolition debris. Geo-textiles or canvas shall be placed over the track ties and ballast to keep the ballast clean.

3.9 EQUIPMENT CONDITION

A. All equipment to be used in the vicinity of operating tracks shall be in "certified" first-class condition so as to prevent failures that might cause delay to trains or damage to Railroad's property. No equipment shall be placed or put into operation near or adjacent to operating tracks without first obtaining permission from the Chief Engineer's representative. **Under no**

circumstances shall any equipment or materials be placed or stored within twenty-five (25) feet from the centerline of an outside track, except as approved by the Site Specific Safety Work Plan. To insure compliance with this requirement, Permittee and/or Contractors **must establish a twenty-five (25) foot foul line prior to the start of work** by either driving stakes, taping off or erecting a temporary fence, or providing an alternate method as approved by the Chief Engineer's representative. Permittee and/or Contractors will be issued warning stickers which must be placed in the operating cabs of all equipment as a constant reminder of the twenty-five (25) foot clearance envelope.

3.10 STORAGE OF MATERIALS AND EQUIPMENT

A. No material or equipment shall be stored on Railroad's property without first having obtained permission from the Chief Engineer. Any such storage will be on the condition that Railroad will not be liable for loss of or damage to such materials or equipment from any cause.

B. If permission is granted for the storage of compressed gas cylinders on Railroad property, they shall be stored a minimum of 25 feet from the nearest track in an approved lockable enclosure. The enclosure shall be locked when the Permittee and/or Contractor is not on the project site.

3.11 CONDITION OF RAILROAD'S PROPERTY

A. Permittee and/or Contractors shall keep Railroad's property clear of all refuse and debris from its operations. Upon completion of the work, Permittee and/or Contractors shall remove from Railroad's property all machinery, equipment, surplus materials, falsework, rubbish, temporary structures, and other property of the Permittee and/or Contractors and shall leave Railroad's property in a condition satisfactory to the Chief Engineer.

3.12 SAFETY TRAINING

A. All individuals, including representatives and employees of Permittee and/or Contractor, before entering onto Railroad's property and before coming within twenty-five (25) feet of the centerline of the track or energized wire must first attend Railroad's Contractor Orientation Computer Based Training Class. The Contractor Orientation Class will be provided electronically at **www.amtrakcontractor.com**. Upon successful completion of the course and test, the individual taking the course will receive a temporary certificate without a photo that is valid for three weeks. The individual must upload a photo of himself/herself that will be embedded in the permanent ID card. The photo ID will be mailed to the individual's home address and must be worn/displayed while on Railroad property. Training is valid for one calendar year. All costs of complying with Railroad's safety training shall be at the sole expense of Permittee and/or Contractor. The Permittee and/or Contractor shall appoint a qualified person as its Safety Representative. The Safety Representative shall continuously ensure that all individuals comply with Railroad's safety requirements. All safety training records must be maintained with the Permittee's and/or Contractor's site specific work plan.

3.13 NO CHARGES TO RAILROAD

A. It is expressly understood that neither these Specifications, nor any document to which they are attached, include any work for which Railroad is to be billed by Permittee and/or Contractors, unless Railroad gives a written request that such work be performed at Railroad's expense.

END OF SECTION 01141A

SECTION 01142A – SUBMISSION DOCUMENTATION REQUIRED FOR AMTRAK REVIEW AND APPROVAL OF PLANS FOR BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/ HOISTING OPERATIONS OVER RAILROAD RIGHT-OF-WAY

PART 1 - GENERAL

1.1 SCOPE

A. Amtrak requires that a site-specific work plan for accomplishing hoisting operations be prepared for every applicable project, and for each type of lift on a project.
   1. The plan shall demonstrate adherence to Amtrak safety rules.
   2. The plan shall demonstrate constructibility.
   3. The plan shall minimize impact to rail operations.
   4. The approved plan will provide the basis for field inspection/ verification of the actual work.

B. Preparation, review and approval of the Crane/ Hoisting site-specific work plan does not relieve the Contractor from meeting other Amtrak requirements for adequate planning and documentation of proposed work procedures within the Right-of-Way of the railroad..

C. Current Amtrak safety rules shall be adhered to in every respect.

D. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/ hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 THE CONTRACTOR SHALL PROVIDE, AT A MINIMUM, THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL BY AMTRAK ENGINEERING STRUCTURES:

A. Plan view showing location(s) of cranes, operating radii, with delivery and/or disposal locations shown. Provide all necessary dimensions for locating the elements of the plan.

B. Plans and computations showing the weight of the pick.

C. Crane rating sheets, demonstrating that cranes are adequate for 150% of the calculated pick weight. That is, the cranes shall be capable of picking 150% of the load, while maintaining normal, recommended factors of safety. The adequacy of the crane for the proposed pick shall be determined by using the manufacturer's published crane rating chart and not the maximum crane capacity. Crane and boom nomenclature is to be indicated.

D. Calculations demonstrating that slings, shackles, lifting beams, etc. are adequate for 150% of the calculated pick weight.

E. Location plan showing obstructions, indicating that the proposed swing is possible. "Walking" of load using two cranes will not be permitted. Rather, multiple picks and repositioning of the crane may be permitted to get the load to the needed location for the final pick, if necessary.

F. Data sheet listing types and sizes of slings and other connecting equipment. Include copies of catalog cuts for specialized equipment. Detail attachment methods on the plans.

G. A complete procedure, indicating the order of lifts and any repositioning or re-hitching of the crane or cranes.

H. Temporary support of any components or intermediate stages, as may be required.

I. A time schedule of the various stages, as well as a schedule for the entire lifting process.

END OF SECTION 01142A

SECTION 01520A – REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDS FOR DEMOLITION AND CONSTRUCTION OF OVERHEAD BRIDGES AND OTHER STRUCTURES

PART 1 - GENERAL

1.1 SCOPE

A. This engineering practice describes items to be included in the design and construction of temporary protection shields for construction overhead and near to Amtrak tracks.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/ hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTORS WORKING ON OVERHEAD OR NEARBY DEMOLITION AND/OR CONSTRUCTION ADJACENT TO AMTRAK TRACKS, SHALL CONFORM TO THE FOLLOWING

DESIGN AND CONSTRUCTION REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDING:

A. The Contractor shall maintain a specified level of protection to railroad facilities, during demolition and construction activities that occur overhead and nearby Amtrak tracks, as shown on the Contract Plans, as detailed in the Contract Specifications, and as described below.

B. Prior to the start of construction, the Contractor shall submit to Amtrak for review and approval, detailed, site specific plans for temporary protection shields. The plans will be reviewed as to the methods of erection, and as to whether or not the proposed installation will provide the required level of protection. No construction shall proceed until the Contractor has received written approval of the Contractor's complete, site specific plans, from Amtrak.

C. The Contractor shall design the protection shields to conform to all applicable and governing federal, state and local laws and regulations.

D. Drawings for the proposed temporary protection shields shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.

E. Protection shields shall be designed for the following, minimum load and size criteria.
   1. The horizontal shield design liveload on horizontal surfaces shall be the greater of a minimum of 100 pounds per square foot (psf) [5000 Pascals] or the anticipated liveload to be produced by the Contractor's anticipated operations. When determining the appropriate design live load, the designer shall consider factors such as the physical capacity of proposed debris-catching platforms to retain materials, and the type of equipment the platforms might support. Positive means of demolition and construction controls shall be provided to assure that debris that may collect on the shield will not exceed the design live load. The horizontal protection shield, in plan view, shall cover no less than the area directly over the tracks plus ten feet minimum beyond the centerline of the outermost tracks.
   2. The vertical shield shall be designed to carry a minimum 30 psf [1500 Pascals] allowance for wind load. The vertical shield shall extend a minimum of 6'-6" [1950 millimeters] above the top of the adjacent surface, such as curb or sidewalk. Anti-climb wings shall be installed at each end, as necessary, to restrict access to the railroad property.

F. The vertical and horizontal clearance envelopes required for maintenance of railroad operations, shall be indicated on the site specific work plans. These clearances are subject to review and approval by Amtrak. If applicable, both temporary and permanent envelopes shall be indicated on the plans. The temporary protection shields shall be installed outside the limits of these minimum vertical and horizontal clearances shown on the site specific work plans.

G. In electrified territory, temporary protection shields shall be bonded and grounded.

H. Temporary protection shields shall be designed and constructed to prevent dust, debris, concrete, formwork, paint, tools, or anything else from falling onto the railroad property below.

I. The temporary protection shields shall be attached to the structure in accordance with site specific work plans submitted by the Contractor and approved by Amtrak. Drilling in structural members and welding will generally not be permitted in members that are scheduled to remain in place in the reconstructed structure. For existing members scheduled for demolition or for later reconstruction, any proposed attachment shall be designed with consideration of potential existing, deteriorated conditions.

J. The Contractor shall provide the Amtrak on-site representative, for review and approval prior to any construction activity in the effected area, a proposed construction schedule for the installation, maintenance and removal of the temporary protection shields.

K. The temporary protection shields shall be installed prior to the start of any other work over the railroad in the effected areas. No construction shall proceed until the Amtrak on-site representative reviews and approves the Contractor's installed protection. Before proceeding with the work, Amtrak must be satisfied, in its sole judgment, that sufficient protection has been provided to proceed with the work.

L. The Contractor shall install and remove temporary protection shields only when an Amtrak representative is on-site.

M. The Contractor shall not install or remove temporary protection shields during train operations.

N. Temporary protection shields shall remain in place for the duration of construction activities over and nearby the railroad in the effected areas. The Contractor may remove temporary construction only after approved by Amtrak on-site representatives.

O. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.

END OF SECTION 01520A

SECTION 02261A – REQUIREMENTS FOR TEMPORARY SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS

PART 1 - GENERAL

1.1 SCOPE

A. This engineering practice describes items to be included in the design and construction of temporary sheeting and shoring construction adjacent and proximate to Amtrak tracks.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for temporary sheeting and shoring has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTORS INSTALLING TEMPORARY CONSTRUCTION SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS SHALL CONFORM TO THE FOLLOWING:

A. Footings for all piers, columns, walls, or other facilities shall be located and designed so that any temporary sheeting and shoring for support of adjacent track or tracks during construction, will not be closer than toe of ballast slope. The dimension from gage of rail to toe of ballast, along tangent track, is 7'-5"; see dimensions on Track standard plans for curved track dimensions.

B. USE OF SHEETING: When support of track or tracks is necessary during construction of the above-mentioned facilities, interlocking steel sheeting, adequately braced and designed to carry Cooper E80 live-load plus 50 percent impact allowance is required. Soldier piles and lagging will be permitted for track support ONLY when required penetration of steel sheet piling cannot be obtained, due to site-specific conditions that make steel sheet piling placement impracticable, in the opinion of the authorized, Amtrak design review engineer.
   1. For usual soil conditions and limited excavations, sheeting is required when the near-track excavation extends beneath or nearer to the track than the Theoretical Railroad Embankment Line. The Theoretical Railroad Embankment Line is defined as a line that starts at grade, ten foot from the centerline of the outer track, and extends downward, away from the track, at a slope of 1-1/2 horizontal to one vertical.
   2. For special soil conditions, such as soft organic soils and rock conditions, and for unusual excavation conditions, temporary supports for excavations may be necessary even when the limits fall beyond the Theoretical Railroad Embankment Line, requiring site specific analysis by a professional, geotechnical engineer.
   3. See Sketch SK-1, "Normal Requirements for Sheet Piling Adjacent to Tracks".

C. Exploratory trenches, three feet deep and 15 inches wide in the form of an "H", with outside dimensions matching the proposed outside dimensions of sheeting, shall be hand dug, prior to placing and driving the sheeting, in any area where railroad or utility underground installations are known or suspected. These trenches are for exploratory purposes only, and shall be backfilled and immediately compacted, in layers. This work shall be performed only in the presence of a railroad inspector.

D. Absolute use of track is required while driving sheeting adjacent to running track. Track usage shall be prearranged per standard procedures, through the Amtrak project representative.

E. Cavities adjacent to sheet piling, created by pile driving, shall be filled with sand, and any disturbed ballast shall be restored and tamped immediately.

F. Sheet piling cutoffs
   1. During construction, sheeting shall be cut off at an elevation no higher than the top of tie.
   2. At the completion of construction activities involving the use of sheet piling, sheet piling may be pulled if there will be no adverse impact to the railroad track support bed, as determined by the Amtrak site engineer. This will generally be permitted when both of these conditions are met:
      a. the sheeting face is at least ten feet distant from the centerline of track, and
      b. the bottom of the excavation that the sheeting supported prior to backfilling, does not fall within an assumed influence zone under the tracks. The assumed influence

zone is defined as the area, as seen in cross-sectional view, falling beneath the Theoretical Underground Track Disturbance Line. This line is defined as a line that starts at the end and bottom of the ties, and extends from the track outward and downward at a one-to-one (45-degree) slope.

3. Sheet piling that is to be left in-place, shall be cut off below the ground line
   a. at least eighteen inches below final ground line at the sheeting, and
   b. no higher than 24 inches below the elevation of the bottom of the nearest ties
4. See Sketch SK-1, "Normal Requirements for Sheet Piling Adjacent to Tracks".

G. The excavation adjacent to the track shall be covered, ramped and protected by handrails, barricades and warning lights, as required by applicable safety regulations, and as directed by Amtrak.

H. Final backfilling of excavation shall conform to project specifications.

I. The Contractor shall provide Amtrak with a detailed schedule of proposed construction operations, detailing each step of the proposed temporary construction operations in proximity to Amtrak tracks, so that Amtrak may review and approve the proposed operations, and may properly inspect and monitor operations.

J. Drawings for the proposed temporary sheeting and shoring shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.

K. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.

1. When Amtrak grants approval for sheeting closer than standard minimum clearances, the Contractor shall develop a survey plan, if not already required by the project, for the adjacent tracks, to be conducted prior to, during, and after the temporary sheeting construction operations. If settlement is detected, construction operations shall be suspended until the track has been returned to its initial condition, and stabilized, as determined by the Amtrak project site representative.
2. The Contractor shall stockpile ten (10) tons of approved ballast at the project site, and maintain that amount in ready reserve, to allow for the possible need to restore track profile.

L. Particular care shall be taken in the planning, design and execution of temporary construction, as relates to railroad slope protection and drainage facilities. Erosion and sediment control best management practices shall be designed and employed, as approved by Amtrak. Any unintended disruption to railroad drainage facilities, caused by the temporary construction, shall be promptly remedied, as directed by the Engineer, solely at the Contractor's cost.

M. The following Information Sketch is attached:

1. Figure No. SK-1: Normal Requirements for Sheet Piling Adjacent to Track

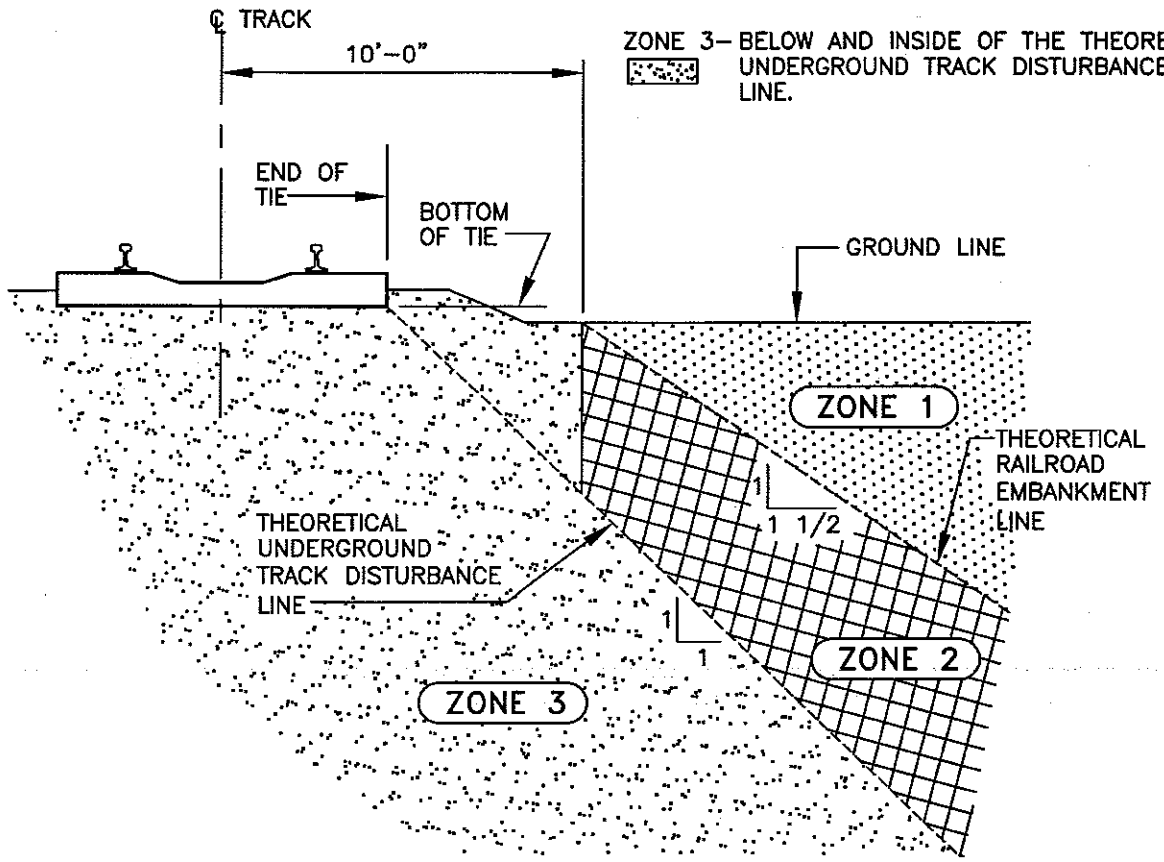
END OF SECTION 02261A

LEGEND

ZONE 1 – ABOVE AND OUTSIDE THE THEORETICAL RAILROAD EMBANKMENT LINE.

ZONE 2 – FARTHER THAN 10 FEET FROM THE CENTERLINE OF TRACK, BELOW THE THEORETICAL RAILROAD EMBANKMENT LINE AND ABOVE THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.

ZONE 3 – BELOW AND INSIDE OF THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.



NORMAL REQUIREMENTS FOR SHEET PILING ADJACENT TO TRACK

(1) EXCAVATIONS WITHIN ZONE 1 – ABOVE AND OUTSIDE OF THE THEORETICAL RAILROAD EMBANKMENT LINE – DO NOT NORMALLY REQUIRE SHEETING TO PROTECT RAILROAD ROAD BED. SHEETING MAY BE REQUIRED FOR OTHER REASONS.

(2) EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 2 REQUIRE SHEETING, BUT THE SHEETING MAY NORMALLY BE PULLED AFTER THE EXCAVATION HAS BEEN BACKFILLED.

(3) EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 3 WILL NORMALLY REQUIRE THE SHEETING TO BE LEFT IN PLACE AND CUT–OFF PER REQUIREMENTS.

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

SKETCH 1

SPEC. 02261A – REV. 1

Designed	Drawn	Date
CJR	JLM	8/06/01

File No:	
Design No:	3501
Sheet No.	1 of 1
Dwg. No.	SK–1

TEMPORARY PERMIT TO ENTER UPON PROPERTY (PTE) REQUEST

AMTRAK

Section 1: Permittee Contact Information – *for company signing PTE*

Contact Name					
Contact Email		Contact Phone			
Company Name					
Company Address					
City		State		Zip	

Section 2: Invoice Information – ☐ *check if same as Section 1 above*

☐ ***Check here if a DOT project, and the cost of protection services is covered by a DOT agreement. Provide project number, name, and/or WBS in Notes in Section 4.***

☐ ***Check here if the cost of protection services is covered under an easement, license, or other agreement. Provide reference and/or WBS in Notes in Section 4. Attach executed license agreement to this PTE application.***

Contact Name					
Contact Email		Contact Phone			
Company Name					
Company Address					
City		State		Zip	

Section 3: Project Location – *Attach map with at least two intersections labeled & limits of project area shown.*

Address					
City		State		Zip	
Nearest intersection (or coordinates)		Mile Post *(if known)*			

Section 4: Project Information – *Check / fill in Box 4a, 4b, or 4c*

This information is limited to work on railroad property or has the ability to adversely affect railroad property. For example, you have a $1M, one year project, but only $5k & 2 days have the ability to adversely affect railroad property. Use $5k and 2 days for this box.

Work Value

Time to complete Work ☐ days ☐ months

Notes

☐ 4a – Bridge Inspection(s)	Fill in number of separate bridges for bridge inspection(s)
☐ 4b – Field Survey	Fill in number of separate locations OR fill in distance in miles
☑ 4c – Other (See next page.)	

Section 4c: Continued with Additional Information – ***Fill in 4c1, 4c2, or 4c3 if you checked 4c on previous page.***

☐ 4c1 – Utility Related – *Copy of easement, license, and/or agreement should be attached.*

Choose One: Replace in-kind (existing) New *(plans must be attached)*

Choose Utility Location: Aerial (Above-ground) Under Ground

Choose Utility Type: Electric Gas Fiber Optic Water

Other _____

Length of Utility: ft mi

Utility Crosses tracks is longitudinal (parallel to tracks) both crosses & runs longitudinally

Notes:

☐ 4c2 – Maintenance – *Replace in-kind. No changes to minimum clearances (horizontal & vertical) from existing.*

Roadway work – milling & repaving only. No changes to striping, width, or addition of anything in railroad ROW.

Maintenance other than roadway work AND not a utility. Provide comprehensive information below, i.e. tree trimming.

Notes:

☑ 4c3 – Other – *Describe below.*

Notes:

Section 5: Construction Information

1. Will this work be performed over the tracks or come within 25 ft of centerline of nearest track? ☐ Yes ☐ No
2. How far away (measured horizontally) from the tracks do you expect to be performing this work?

   ft. from centerline of nearest track
3. When does your work have to be scheduled? ☐ Day ☐ Night ☐ Either day or night
4. Does your work have to be performed on consecutive days/nights or can it be performed intermittently?

   ☐ Consecutive Required ☐ Intermittent Required ☐ Prefer consecutive but will take intermittent
5. Notes:

Section 6: For Electrified Territory Only

1. Do you expect that the overhead catenary system (OCS) needs to be de-energized to perform your work?

   ☐ Yes ☐ No

   If yes, how many shifts do you need OCS de-energization?

   days (This estimate assumes hours of work per day.)

   ☐ Consecutive Days/Nights Required ☐ Intermittent Days/Nights are Possible
2. What is the minimum distance a worker or his/her equipment is expected to be from the OCS?

   ft. from OCS measured ☐ vertically ☐ horizontally
3. Notes:

Amtrak®

AERIAL CHECKLIST

JOB NAME:		**SHEET No.**	1 of 2
		SUBMITTAL:	
SUBMITTED BY:		**DISCIPLINE:**	ALL
REVIEWED BY:	Amtrak	**DATE:**	3/30/23

ITEM NO.	DWG. SPEC.	COMMENTS
1.	General	A drawing border with title block and unique sheet number must be provided for each drawing in the plan set. A state licensed Professional Engineer shall sign and stamp/seal all submitted drawings and calculations.
2.	General	The following notes must be added to the plan set: a) All work on or adjacent railroad property must comply with Amtrak Engineering Practices EP3014 – Maintenance and Protection of Railroad Traffic During Contractor Operations. b) All underground utilities, cable, and facilities must be located and protected before any excavating, drilling, boring/directional drilling, ground penetrating activities, or construction takes place. This includes railroad and commercial utilities, cables, duct lines, and facilities. These activities will not be performed in close proximity to the railroad duct lines unless monitored by on-site Amtrak Communications and Signal (C&S) department personnel. Hand digging may be required, as directed by Amtrak through the on-site Amtrak C&S support personnel. Amtrak maintains the right to access all existing cables and conduits throughout construction. Amtrak also reserves the right to upgrade and install new cables and conduits in the affected area. The "one-call" process must be followed. Be aware that Amtrak is not part of the one-call process; contact Amtrak Engineering to have all railroad underground utilities and assets located. If requested by Amtrak, existing depths of utilities being crossed must be verified through test pits performed by the Contractor as directed by and under the direct supervision of Amtrak C&S support personnel. Precautions must be taken to prevent any interruption to railroad operation. c) Design and construction must comply with the requirements of Amtrak's Specification for Wire, Conduit and Cable Occupations. If requested by railroad, utility must conduct appropriate EMI/EMF studies and provide appropriate remedies, at Utility's expense, to correct any inductive interference with railroad facilities. d) Any work (or equipment being staged onsite during construction) performed at or near a railroad crossing must not obstruct the view of flashing light units or gates to oncoming traffic. e) Prior to entering Amtrak's property for any work, the contractor must

Amtrak®

AERIAL CHECKLIST

JOB NAME:		**SHEET No.**	2 of 2
		SUBMITTAL:	
SUBMITTED BY:		**DISCIPLINE:**	ALL
REVIEWED BY:	Amtrak	**DATE:**	3/30/23

ITEM NO.	DWG. SPEC.	COMMENTS
		execute Amtrak's standard Temporary Permit to Enter Upon Property (PTE). The fully executed PTE, written notice to proceed from Amtrak that all requirements of the PTE have been met and proof of safety training must, at all times, be furnished by the contractor at the project site. f) All persons that are on or adjacent to the railroad property must successfully complete the Contractor Orientation Training. All Contractors must carry their "Amtrak Contractor Roadway Worker Protection" card with them at all times while on or adjacent to railroad property. g) When the contractor requests protection services from Amtrak, he must notify Amtrak that the protection provided may include track personnel for ground penetrating activities. h) Any debris or damage resulting from work shall be immediately reported to the railroad. Railroad shall be repaired by railroad forces at project expense.
3.	General	Track Monitoring may be required to be performed during construction. See specifications. This can be addressed by providing a proposed Track Monitoring Plan, or plans, that illustrate where track monitoring points are to be located and the monitoring details.
4.	General	Support of Excavation (SOE) may be required. See EP3014 for SOE determination and requirements.

NATIONAL RAILROAD PASSENGER CORPORATION
TEMPORARY PERMIT TO ENTER UPON PROPERTY
C.E.-17 (REVISED 09/03/21)

Transmittal Date:
File: E-47-
Internal Order:
WBS Element:
Reference:

1. TEMPORARY PERMISSION. Temporary permission is hereby granted to:

_____

(hereinafter called "Permittee")

to enter property owned and/or controlled by the National Railroad Passenger Corporation (hereinafter called "Railroad") for the purpose of _____, under the terms and conditions set forth below.

- Permittee is required to pay the $___.00 Temporary Permit preparation fee.

- If Railroad approves the use of its Blanket Railroad Protective Liability Insurance (RRPLI) Program for the work, Permittee shall include the $___.00 RRPLI Program.

2. LOCATION AND ACCESS. (Give map reference, description or both – include city and state)

MP __ , __ , __

(hereinafter called "Property").

3. INDEMNIFICATION. Permittee hereby releases and agrees to defend, indemnify and hold harmless Railroad, as well as its officers, directors, employees, agents, successors, assigns and subsidiaries (collectively the "Indemnified Parties"), irrespective of negligence or fault on the part of the Indemnified Parties, from and against any and all losses and liabilities, penalties, fines, demands, claims, causes of action, suits, and costs (including cost of defense and attorneys' fees), which any of the Indemnified Parties may hereafter incur, be responsible for, or pay as a result of either or both of the following:

A. injury, death, or disease of any person, and/or

B. damage (including environmental contamination and loss of use) to or loss of any property, including property of Railroad

arising out of or in any degree directly or indirectly caused by or resulting from activities of or work performed by Railroad and/or Permittee (as well as Permittee's employees, agents, contractors, subcontractors, or any other person acting for or by permission of Permittee) in connection with this Temporary Permit. The foregoing obligation shall not be limited by the existence of any insurance policy or by any limitation on the amount or type of damages, compensation, or benefits payable by or for Permittee or any contractor or subcontractor and shall survive the termination or expiration of this Temporary Permit for any reason.

As used in this section, the term "Railroad" also includes all commuter agencies and other railroads with rights to operate over Railroad property, and their respective officers, directors, employees, agents, successors, assigns and subsidiaries.

4. COMPENSATION FOR PREPARATION OF TEMPORARY PERMIT. Permittee will pay to Railroad the Temporary Permit preparation fee outlined in section 1 as compensation for the preparation of this Temporary Permit. This fee is to be paid upon Permittee's execution of this Temporary Permit.

5. STARTING OF USE OF PROPERTY. Permittee shall notify Railroad's Deputy Chief Engineer-Construction, or his/her designee, in writing, at least fifteen (15) working days before it desires to enter upon the Property. No entry upon the Property will be permitted until this Temporary Permit has been fully executed and specific written permission to enter upon the Property has been received by Permittee via electronic mail from Railroad's Engineering – I&C Department.

6. PERMITTEE ACTIVITIES; FLAGGING SERVICES. All activities performed by or on behalf of Permittee shall be performed so as not to interfere with Railroad's operations or facilities. In no event shall personnel, equipment or material cross a track(s) without special advance permission from Railroad's Deputy Chief Engineer-Construction or his/her designee.

If conditions warrant at any time, Permittee will have sole responsibility for arranging and paying for flagging and/or other protection services (collectively "Protective Services"). Railroad will grant permission for the Protective Services provider to enter upon Amtrak property; however, Railroad will have the right to require the removal of any Protective Services provider from its property at any time. All payments due to any Protective Services provider contracted by Permittee shall be paid directly by Permittee under an agreement between Permittee and the Protective Services provider.

7. CLEARANCES. All equipment and material of Permittee shall be kept away from the tracks by the distances set forth in Attachment A hereof, unless specifically otherwise authorized in writing by Railroad's Deputy Chief Engineer-Construction or his/her designee. Permittee shall conduct all operations so that no part of any equipment or material can foul: an operating track; transmission, communication or signal line; or any other structure or facility of Railroad.

8. RESTORATION OF PROPERTY. Upon completion of its work, Permittee shall, at the option of Railroad, leave the Property in a condition satisfactory to Railroad or restore the Property to its original condition. This may include the restoration of any fences removed or damaged by Permittee.

9. TERM OF TEMPORARY PERMIT. The term shall commence on the date Railroad executes this Temporary Permit ("Execution Date"). Railroad will not execute this Temporary Permit until Railroad has received: payment of any fees/costs identified in section 1 hereof, payment of the fee set forth in section 4 hereof, and satisfactory evidence of the insurance required pursuant to section 11 hereof. The term shall extend until the end of the period Railroad determines is necessary for Permittee to accomplish the purpose set forth in section 1 hereof; provided, however, Railroad reserves the right to revoke this Temporary Permit at any time for any reason, and in no event shall this Temporary Permit extend beyond one (1) year from the Execution Date. Under no circumstances shall this Temporary Permit be construed as granting to Permittee any right, title or interest of any kind in any property of Railroad.

10. SAFETY AND PROTECTION. All work on, over, under, within or adjacent to the Property shall be performed in accordance with the document entitled "SPECIFICATIONS REGARDING SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY," a copy of which is attached hereto as Attachment A and incorporated herein. Failure to comply with Railroad's safety requirements and Attachment A shall, at Railroad's option, result in immediate termination of this Temporary Permit, denial of future Temporary Permit requests by Permittee, and forfeiture of all funds paid to Railroad.

11. INSURANCE. Before Permittee commences any work on, over, under, within or adjacent to the

Property, Permittee and its contractors (unless Permittee opts to provide the required coverage for them), shall furnish to Railroad's Senior Manager Engineering, evidence of the insurance coverages specified in the document entitled "INSURANCE REQUIREMENTS - NATIONAL RAILROAD PASSENGER CORPORATION," a copy of which is attached hereto as Attachment B and incorporated herein.

12. SAFETY TRAINING CLASS. No person may enter upon Railroad property or within twenty-five (25) feet of the centerline of any track or energized wire until he/she has successfully completed Railroad's contractor orientation computer-based safety training class, as noted in section 12 of Attachment A.

13. COMPLIANCE BY CONTRACTORS. Permittee shall take all steps necessary to ensure that its contractors and subcontractors comply with the terms and conditions of this Temporary Permit.

14. REIMBURSEMENT OF COSTS; PAYMENTS. Railroad shall not be responsible for any costs incurred by Permittee in relation to any matter whatsoever. Permittee is required to reimburse Railroad for all costs incurred by Railroad in relation to this Temporary Permit, including any cost in reviewing any plans, drawings or other submissions.

Except as specified in section 4 hereof, all payments due from Permittee to Railroad under this Temporary Permit shall be due and payable within thirty (30) days from the date of invoice. Permittee shall have no right to set off against any payment due under this Temporary Permit any sums which Permittee may believe are due to it from Railroad for any reason whatsoever. In the event that Permittee shall fail to pay, when due, any amount payable by it under this Temporary Permit, Permittee shall also pay to Railroad, together with such overdue payment, interest on the overdue amount at a rate of one and one-half percent (1.5%) per month or the highest rate allowed by law, if less than the foregoing, calculated from the date the payment was due until paid. Railroad also has the right to suspend its support services, without penalty, until Permittee has paid all past due amounts with accrued interest. All payments due from Permittee to Railroad hereunder shall be: (a) made by check drawn from currently available funds; (b) made payable to National Railroad Passenger Corporation; and (c) delivered to the address indicated on the invoice. (However, the permit fee referenced in section 4 hereof and the Railroad Protective Liability premium referenced in Attachment B, if applicable, shall be delivered to Railroad at the address set forth in section 4 hereof.) All payment obligations of Permittee under this Temporary Permit shall survive the termination or expiration of this Temporary Permit for any reason.

15. ENVIRONMENTAL AND GEOTECHNICAL TESTS AND STUDIES. Permittee shall not perform any environmental or geotechnical tests or studies (e.g., air, soil or water sampling) unless specifically identified and authorized in section 1 hereof. If any such tests or studies are performed, Permittee shall promptly furnish to Railroad, at no cost, a copy of the results including any reports or analyses obtained or compiled. Except as may be required by applicable law or as authorized by Railroad in writing, Permittee shall not disclose the results of any such tests or studies to anyone other than Railroad or Permittee's client. Failure to comply with the provisions of this clause shall, at Railroad's option, result in immediate termination of this Temporary Permit, forfeiture of all compensation paid Railroad therefor, and pursuance of any other remedies (at law or in equity) that may be available to Railroad. The obligations of Permittee under this section shall survive the termination or expiration of this Temporary Permit for any reason.

16. SEVERABILITY. If any provision of this Temporary Permit is found to be unlawful, invalid or unenforceable, that provision shall be deemed deleted without prejudice to the lawfulness, validity and enforceability of the remainder of the Temporary Permit.

17. GOVERNING LAW. This Temporary Permit shall be governed by and construed under the laws of the District of Columbia and pursuant to 49 USC 28103(b) which precludes and preempts any other federal or state laws. All legal proceedings in connection with any dispute arising under or relating to this Temporary Permit shall be brought in the United States District Court for the District of Columbia.

18. REPRESENTATIONS AND CERTIFICATIONS. By signing this Temporary Permit, Permittee hereby certifies: (a) that this document has not been altered in any manner from the original version as submitted by Railroad; and (b) that, if flagging services are required under section 6 hereof, Permittee has retained or will retain the services of a flagging contractor authorized by Amtrak prior to construction.

AGREED TO AND ACCEPTED BY PERMITTEE:

_____

By: _____
(signature)

Title: _____
Must be an Owner/Partner or duly authorized representative

Date: _____

NATIONAL RAILROAD PASSENGER CORPORATION

By: _____
VP Engineering Services

Date: _____
Execution Date

Expiration Date: (For Amtrak Use Only)

☒ 1 year from Execution Date

☐ Other: _____

☐ Project Completion

ATTACHMENT A
Temporary Permit to Enter Upon Property

SPECIFICATIONS REGARDING SAFETY
AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY (Revised 3/27/2020)

National Railroad Passenger Corporation

In the following Specifications, "Temporary Permit" means Railroad's "Temporary Permit to Enter Upon Property"; "Railroad" means National Railroad Passenger Corporation; "Chief Engineer" means Railroad's Chief Engineer or his/her duly authorized representative; "Permittee" means the party so identified in the Temporary Permit; and "Contractor" means the entity retained by the Permittee or the entity with whom Railroad has contracted in a Preliminary Engineering Agreement, Design Phase Agreement, Construction Phase Agreement, Force Account Agreement, License Agreement or other such agreement, as applicable. Reference to "Permittee/Contractor" includes both the Permittee and the Contractor.

(1) Pre-Entry Meeting: Before entry of Permittee/Contractor onto Railroad's property, a pre-entry meeting shall be held at which time Permittee/Contractor shall submit, for written approval of the Chief Engineer, plans, computations, a site specific safety work plan and site specific work plans that include a detailed description of proposed methods for accomplishing the work and protecting Permittee/Contractor from interfering with railroad traffic in accordance with Amtrak Engineering Practices EP3014. Any such written approval shall not relieve Permittee/Contractor of its complete responsibility for the adequacy and safety of its operations.

(2) Rules, Regulations and Requirements: Railroad traffic shall be maintained at all times with safety, security and continuity, and Permittee/Contractor shall conduct its operations in compliance with all rules, regulations, and requirements of Railroad (including these Specifications) with respect to any work performed on, over, under, within or adjacent to Railroad's property. Permittee/Contractor shall be responsible for acquainting itself with such rules, regulations and requirements. Any violation of such rules, regulations, or requirements shall be grounds for the termination of the Temporary Permit and/or the immediate suspension of Permittee/Contractor work, and the re-training of all personnel, at Permittee's/Contractor's expense.

(3) Maintenance of Safe Conditions: If tracks or other property of Railroad are endangered during the work, Permittee/Contractor shall immediately notify Railroad and take such steps as may be directed by Railroad to restore safe conditions, and upon failure of Permittee/Contractor to immediately carry out such direction, Railroad may take whatever steps are reasonably necessary to restore safe conditions. All costs and expenses of restoring safe conditions, and of repairing any damage to Railroad's trains, tracks, right-of-way or other property caused by the operations of Permittee/Contractor, shall be paid by Permittee/Contractor. Any work (or equipment being staged onsite during the work) performed at or near a railroad crossing must not obstruct the view of flashing light units or gates to oncoming traffic.

(4) Protection in General: Permittee/Contractor shall consult with the Chief Engineer to determine the type and extent of protection required, if any, to ensure safety and continuity of railroad traffic. Any provision of protection personnel by Railroad, and any other precautionary measures taken by Railroad, shall not relieve Permittee/Contractor from its complete responsibility for the adequacy and safety of its operations.

(5) Protection for Work Near Electrified Track or Wire: Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and Railroad's requirements regarding clearance to be maintained between equipment and tracks and/or energized wires, and otherwise regarding work in the vicinity thereof must be strictly observed. No employees or equipment will be permitted to work near overhead wires, except when protected by a Class A employee of Railroad.

Permittee/Contractor must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any overhead wire.

(6) Fouling of Track or Wire: No work will be permitted within twenty-five (25) feet of the centerline of a track or energized wire or that has the potential of getting within twenty-five (25) feet of such track or wire without the approval of the Chief Engineer. Permittee/Contractor shall conduct its work so that no part of any equipment or material shall foul an active track or overhead wire without the written permission of the Chief Engineer. When Permittee/Contractor desires to foul an active track or overhead wire, it must provide the Chief Engineer with its site-specific work plan a minimum of twenty-one (21) working days in advance, so that, if approved, arrangements may be made for proper protection. Any equipment shall be considered to be fouling a track or overhead wire when located (a) within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire, or (b) in such a position that failure of same, with or without a load, would bring it within such distance in (a) above and shall require the presence of the proper protection personnel.

If acceptable to the Chief Engineer, a safety barrier (approved temporary fence or barricade) may be installed at fifteen (15) feet from centerline of track or overhead wire to afford Permittee/Contractor with a work area that is not considered fouling. Nevertheless, protection personnel may also be required.

(7) Track Outages: Permittee/Contractor shall verify the time and schedule of track outages from Railroad before scheduling any of its work on, over, under, within, or adjacent to Railroad's right-of-way. Railroad does not guarantee the availability of any track outage at any particular time. Permittee/ Contractor shall schedule all work to be performed in such a manner as not to interfere with Railroad operations. Permittee/Contractor shall use all necessary care and precaution to avoid accidents, delay or interference with Railroad's trains or other property.

(8) Demolition: During any demolition, Permittee/Contractor must provide horizontal and vertical shields, designed by a professional engineer registered in the state in which the work takes place. These shields shall be designed in accordance with Railroad's specifications and approved by Railroad, so as to prevent any debris from falling onto Railroad's right-of-way or other property. A grounded temporary vertical protective barrier must be provided if an existing vertical protective barrier is removed during demolition. In addition, if any openings are left in an existing bridge deck, a protective fence must be erected at both ends of the bridge to prohibit unauthorized persons from entering onto the bridge. Ballasted track structure must be kept free of all construction and demolition debris.

(9) Equipment Condition and Location: All equipment to be used in the vicinity of operating tracks shall be in "certified" first-class condition so as to prevent failures that might cause delay to trains or damage to Railroad's property. No equipment shall be placed or put into operation near or adjacent to operating tracks without first obtaining permission from the Chief Engineer. Under no circumstances shall any equipment be placed or put into operation within twenty-five (25) feet from the centerline of an outside track, except as approved by Railroad in accordance with Permittee's/Contractor's site-specific safety work plan. To ensure compliance with this requirement, Permittee/Contractor must establish a twenty-five (25) foot foul line prior to the start of work by either driving stakes, taping off or erecting a temporary fence, or providing an alternate method as approved by the Chief Engineer. Permittee/Contractor will be issued warning stickers which must be placed in the operating cabs of all equipment as a constant reminder of the twenty-five (25) foot clearance envelope.

If work to be performed on Railroad property involves heavy trucks, equipment, or machinery along the right-of-way, duct lines and pull boxes shall be inspected by on-site Railroad personnel and the equipment operator to ensure they can withstand the weight.

(10) Storage of Materials and Equipment: No material or equipment shall be stored on Railroad's property without first having obtained permission from the Chief Engineer. Any such storage will be on the condition that Railroad will not be liable for loss of or damage to such materials or equipment from any cause.

If permission is granted for the storage of compressed gas cylinders on Railroad property, they shall be stored a minimum of twenty-five (25) feet from the nearest track in an approved lockable enclosure. The enclosure shall be locked when Permittee/Contractor is not on the project site.

(11) Condition of Railroad's Property: Permittee/Contractor shall keep Railroad's property clear of all refuse and debris from its operations. Upon completion of the work, Permittee/Contractor shall remove from Railroad's property all machinery, equipment, surplus materials, falsework, rubbish, temporary structures, and other property of Permittee/Contractor and shall leave Railroad's property in a condition satisfactory to the Chief Engineer.

(12) Safety Training: All individuals, including representatives and employees of Permittee/ Contractor, before entering onto Railroad's property and before coming within twenty-five (25) feet of the centerline of a track or overhead wire, must first complete Railroad's contractor orientation computer-based safety training class. The class is provided electronically at www.amtrakcontractor.com. Upon successful completion of the class and test, the individual taking the class will receive a temporary certificate without a photo that is valid for fourteen (14) days. The individual must upload a photo of himself/herself that will be embedded in the permanent ID card. The photo ID will be mailed to the individual's home address and must be worn/displayed while on Railroad property. Training is valid for one calendar year. All costs of complying with Railroad's safety training shall be at the sole expense of Permittee/Contractor. Permittee/Contractor shall appoint a qualified person as its Safety Representative. The Safety Representative shall continuously ensure that all individuals comply with Railroad's safety requirements. All safety training records must be maintained with Permittee's/Contractor's site-specific work plan.

(13) No Charges to Railroad: It is expressly understood that neither these Specifications, nor any document to which they are attached, include any work for which Railroad is to be billed by Permittee/Contractor, unless Railroad makes a specific written request that such work be performed at Railroad's expense.

(14) Utilities: All underground utilities, cables, and facilities must be located and protected before any excavating, drilling of any kind, boring, ground penetrating activities, or construction activities take place. This includes, but is not limited to, Railroad and commercial utilities, cables, duct lines, and facilities. The "call before you dig" process must be followed. Railroad is not part of that process; therefore, Permittee/Contractor must contact Railroad's Engineering Department to have Railroad's underground utilities and assets located. If requested by Railroad, existing depths of any utilities being crossed must be verified through test pits performed by Permittee/Contractor as directed by and under the direct supervision of Railroad personnel. Hand digging may be required, as directed by Railroad's on-site support personnel. No activities may be performed in close proximity to Railroad duct bank or communication facilities unless monitored by on-site Railroad personnel. Railroad maintains the right to access its existing cables and conduits throughout construction and reserves the right to upgrade and install new cables and conduits in the affected area. Precautions must be taken by Permittee/Contractor to prevent any interruption to Railroad's operations.

ATTACHMENT B
INSURANCE REQUIREMENTS
NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK)
Revised as of September 1, 2021

DEFINITIONS

In these Insurance Requirements, "Railroad" or "Amtrak" shall mean National Railroad Passenger Corporation and, as appropriate, its subsidiary, Washington Terminal Company ("WTC"). "Contractor" shall mean the party identified as "Permittee" in the Temporary Permit to Enter Upon Property or the party with whom Amtrak has contracted in another agreement (e.g., Preliminary Engineering Agreement, Design and/or Construction Phase Agreement, Force Account Agreement, License Agreement), as well as its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Contractor. "Operations" shall mean activities of or work performed by Contractor. "Agreement" shall mean the Temporary Permit to Enter Upon Property or other such agreement, as applicable.

INSURANCE

Contractor shall procure and maintain, at its sole cost, the types of insurance specified below:

1. **Workers' Compensation Insurance** complying with the requirements of the statutes of the jurisdiction(s) in which the Operations will be performed, covering all employees of Contractor. Employer's Liability coverage shall have the following minimum limits of coverage:

$1,000,000	Each Accident
$1,000,000	Disease Policy Limit
$1,000,000	Disease Each Employee

   In the event the Operations are to be performed on, over, or adjacent to navigable waterways, a U.S. Longshoremen and Harbor Workers' Compensation Act Endorsement and an Outer Continental Lands Act Endorsement are required.

2. **Commercial General Liability (CGL) Insurance** covering liability of Contractor with respect to all operations to be performed and all obligations assumed by Contractor under the terms of the Agreement. Products-completed operations, independent contractors and contractual liability coverages are to be included, with the contractual exclusion related to construction/demolition activity within fifty (50) feet of the railroad deleted and with no exclusions for Explosion/Collapse/ Underground (X-C-U). Coverage shall include bodily injury (including disease or death), personal injury and property damage (including loss of use) liability.

   This policy shall have the following minimum limits of coverage:

$2,000,000	Each Occurrence
$2,000,000	Annual Policy Aggregate
$2,000,000	Products and Completed Operations

   In addition, the following shall apply:

   A. The policy shall name National Railroad Passenger Corporation (and, as appropriate, WTC) and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds with respect to the operations to be performed.
   B. The policy shall include an ISO endorsement Form CG 24 17 10 01 or its equivalent providing

contractual liability coverage for railroads listed as additional insureds.

C. Coverage for such additional insureds shall be primary and non-contributory with respect to any other insurance the additional insureds may carry.
D. Such coverage may be provided by a combination of a primary CGL policy and a following form excess or umbrella liability policy.

3. **Automobile Liability Insurance** covering the liability of Contractor arising out of the use of any vehicles which bear, or are required to bear, license plates according to the laws of the jurisdiction in which they are to be operated, and which are not covered under Contractor's CGL insurance. The policy shall have the following minimum limits of coverage:

$1,000,000	Each Occurrence, Combined Single Limit

In addition, the following shall apply:

A. The policy shall name National Railroad Passenger Corporation (and, as appropriate, WTC) and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds with respect to the operations to be performed.
B. Coverage shall include bodily injury (including disease or death), personal injury and property damage (including loss of use) liability and cover damages resulted from loading and unloading activities.
C. In the event Contractor will be transporting and/or disposing of any hazardous material or waste off of the jobsite, a MCS-90 Endorsement is to be added to this policy and the limits of liability are to be increased to **$5** million each occurrence.

4. **Railroad Protective (RRP) Liability Insurance** covering the Operations performed by Contractor within fifty (50) feet vertically or horizontally of railroad tracks. The policy shall be written on a current ISO Occurrence Form (claims-made forms are unacceptable) in the name of National Railroad Passenger Corporation (and, as appropriate WTC) and all commuter agencies and railroads that operate over the property or tracks at issue). The policy shall have the following minimum limits of coverage:

$2,000,000	Each Occurrence
$6,000,000	Policy Aggregate

In addition, the following shall apply:

A. The policy shall have coverage for losses arising out of injury to or death of all persons, and for physical loss or damage to or destruction of property, including the loss of use thereof.
B. Policy Endorsement CG 28 31 - Pollution Exclusion Amendment is required to be endorsed onto the policy.
C. "Physical Damage to Property" as defined in the policy is to be deleted and replaced by the following endorsement:

"It is agreed that 'Physical Damage to Property' means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control."

D. In the alternative, and upon Amtrak's approval, Contractor may elect to have Amtrak insure the Operations under its Blanket RRP Liability Insurance Program. The premium, which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of the Agreement, shall be prepaid by Contractor. In the event Contractor and Amtrak agree to insure the Operations under Amtrak's RRP Program, **Contractor shall include the RRP**

premium outlined in section 1, and send its payment prior to commencement of Operations.

5. **All Risk Property Insurance** covering damage to or loss of all personal property of Contractor used during Operations including, but not limited to, tools, equipment, construction trailers and their contents and temporary scaffolding at the project site, whether owned, leased, rented or borrowed for the full replacement cost value. Such insurance policies shall include a waiver of subrogation and any other rights of recovery in favor of Amtrak.

6. **Contractor's Pollution Liability Insurance** covering the liability of Contractor arising out of any sudden and/or non-sudden pollution or impairment of the environment, including clean-up costs and defense, which arise from the Operations of Contractor. The policy shall have the following minimum limits of coverage:

$2,000,000	Each Occurrence
$2,000,000	Annual Policy Aggregate

In addition, the following shall apply:

A. The policy shall name National Railroad Passenger Corporation (and, as appropriate, WTC) and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds.
B. The coverage shall be maintained during the term of the Operations and for at least two (2) years following completion thereof.

7. **Pollution Legal Liability Insurance** is required if any hazardous material or waste is to be transported or disposed of off of the jobsite. Contractor or its transporter, as well as the disposal site operator, shall maintain this insurance. The policy shall have the following minimum limits of coverage:

$2,000,000	Each Occurrence
$2,000,000	Annual Policy Aggregate

In addition, the following shall apply:

A. Contractor shall designate the disposal site and provide a certificate of insurance from the disposal facility to Amtrak.
B. The policy shall name National Railroad Passenger Corporation (and, as appropriate, WTC) and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds.
C. Any additional insurance coverages, permits, licenses and other forms of documentation required by the United States Department of Transportation, the Environmental Protection Agency and/or related state and local laws, rules and regulations shall be obtained by Contractor.

8. **Professional Liability Insurance** covering the liability of Contractor for any errors or omissions committed by Contractor providing professional design or engineering services in the performance of the Operations, regardless of the type of damages. The policy shall have the following minimum levels of coverage:

$2,000,000	Per Claim
$2,000,000	Annual Policy Aggregate

In addition, the following shall apply:

A. The coverage shall be maintained during the Operations and for at least three (3) years following completion thereof.
B. The policy shall have a retroactive date that coincides with or precedes any design work on the project.
C. If Contractor is not performing professional design or engineering services, Contractor may elect to satisfy this requirement through the addition of endorsement CG2279 "Incidental Professional Liability" to its CGL policy.

MISCELLANEOUS

1. **General**

A. All insurance shall be procured from insurers authorized to do business in the jurisdiction(s) where the Operations are to be performed.
B. Contractor shall require all subcontractors to carry the insurance required herein or Contractor may, at its option, provide the coverage for any or all subcontractors, provided the evidence of insurance submitted by Contractor to Amtrak so stipulates.
C. The insurance shall provide for thirty (30) days prior written notice to Amtrak in the event coverage is substantially changed, canceled or non-renewed.
D. Unless noted otherwise herein, all insurance shall remain in force until all Operations are satisfactorily completed, all Contractor personnel and equipment have been removed from Railroad property, and any work has been formally accepted.
E. Contractor may provide for the insurance coverages with such deductible or retained amount as Amtrak may approve from time to time, except, however, that Contractor shall, at its sole cost, pay for all claims and damages which fall within such deductible or retained amount on the same basis as if there were full commercial insurance in force.
F. Contractor's failure to comply with the insurance requirements set forth in these Insurance Requirements shall constitute a violation of the Agreement.

2. **Waiver of Subrogation** As to all insurance policies required herein, Contractor waives all rights of recovery, and its insurers must waive all rights of subrogation of damages against Amtrak (and, as appropriate, WTC) and their agents, officers, directors, and employees. The waiver must be stated on the certificates of insurance.

3. **Punitive Damages** Unless prohibited by law, no liability insurance policies required herein shall contain an exclusion for punitive or exemplary damages.

4. **Claims-Made Insurance** If any liability insurance specified herein shall be provided on a claims-made basis then, in addition to coverage requirements above, the following shall apply:

A. The retroactive date shall coincide with or precede Contractor's start of Operations (including subsequent policies purchased as renewals or replacements);
B. The policy shall allow for the reporting of circumstances or incidents that might give rise to future claims;
C. Contractor shall maintain similar insurance under the same terms and conditions that describe each type of policy listed above (e.g., CGL, Professional Liability, Pollution Legal Liability) for at least three (3) years following completion of Operations; and
D. If insurance is terminated for any reason and not replaced with insurance meeting the requirements herein, Contractor shall purchase an extended reporting provision of at least four (4) years to report claims arising from Operations.

5. **Evidence of Insurance**

A. Contractor shall submit to Amtrak the original RRP Liability Insurance Policy and certificates

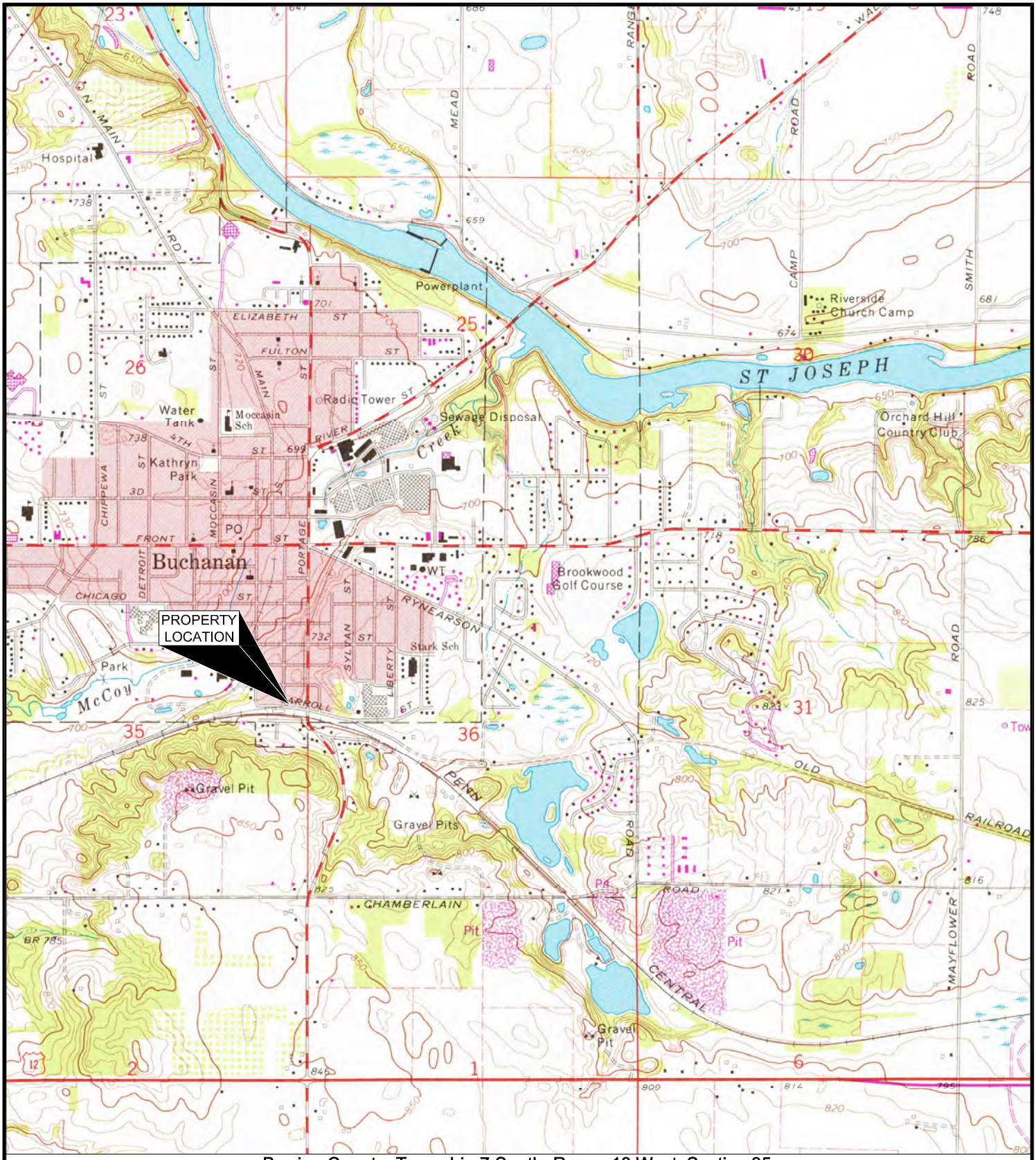
of insurance evidencing the other required insurance. In addition, Contractor agrees to provide certified copies of the insurance policies for the required insurance within thirty (30) days of Amtrak's written request.

B. Contractor shall furnish evidence of insurance as specified herein at least fifteen (15) days prior to commencing Operations. The fifteen (15) day requirement may be waived by Amtrak in situations where such waiver will benefit Amtrak, but under no circumstances will Contractor begin Operations without providing satisfactory evidence of insurance as approved by Amtrak.
C. Prior to the cancellation, renewal, or expiration of any insurance policy specified above, Contractor shall furnish evidence of insurance replacing the cancelled or expired policies.
D. ALL INSURANCE DOCUMENTS SHALL INCLUDE A DESCRIPTION OF THE PROJECT AND THE LOCATION ALONG THE RAILROAD RIGHT-OF-WAY (typically given by milepost designation) IN ORDER TO FACILITATE PROCESSING.
E. Evidence of insurance coverage shall be sent to:

Senior Manager Engineering
National Railroad Passenger Corporation
30th Street Station, Mailbox 64
2955 Market Street
Philadelphia, PA 19104-2817

APPENDIX B

Figures



Berrien County, Township 7 South, Range 18 West, Section 35

N
W E
S

0 1000 2000

SCALE: 1" = 2000'

pointblue

FIGURE 1
SITE LOCATION MAP

CITY OF BUCHANAN DEMOLITION PROJECT - FEED MILL AND TIRE SHOP
111 RAILROAD STREET AND 708 SOUTH RED BUD TRAIL
BUCHANAN, MICHIGAN

REVISION		DATE: 3/13/2023	APPROVED: SHM
DATE:	BY:	DRAWN: MAT	JOB No: C5140

pointblue

FIGURE 2
PROPERTY MAP

CITY OF BUCHANAN DEMOLITION PROJECT - FEED MILL AND TIRE SHOP
111 RAILROAD STREET AND 708 SOUTH RED BUD TRAIL
BUCHANAN, MICHIGAN

REVISION		DATE: 3/13/2023	APPROVED: SHM
DATE:	BY:	DRAWN: MAT	JOB No: C5140

LEGEND

- STRUCTURE TO BE DEMOLISHED
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND NATURAL GAS
- OVERHEAD ELECTRIC
- STORM SEWER
- SANITARY SEWER
- UNDERGROUND ELECTRIC
- MUNICIPAL WATER
- PROPERTY LINE
- EXISTING CHAIN LINK FENCE
- TEMPORARY FENCE (SEE NOTE)
- MONITOR WELL LOCATION

NOTE: Contractor shall protect flush mounted monitor wells throughout demolition activities. Damaged monitor wells shall be replaced by Owner's Representative and back-charged to the contractor.

RESIDENTIAL

MW-21

MW-14

MW-22

MW-11 MW-11i

TEMPORARY 6' HIGH CHAIN LINK CONSTRUCTION FENCE IN-PLACE DURING DEMOLITION WORK

FORMER BUCHANAN GARDEN CENTER
111 RAILROAD STREET

MW-19

MW-12i

MW-12

MW-7 MW-7i

MW-20

FEED BINS

North Loading Bay

#3

#2

Square Hopper #1

#1

MW-13

MW-4i MW-4D MW-4

MW-5

MW-6i MW-6

MOLASSES AST

FEED BINS

#4

#5

#6

#7

Square Hopper #2

MW-3R MW-3D

MW-8 MW-8i

MW-16

MW-2

FORMER BUCHANAN FEED MILL
111 RAILROAD STREET

South Loading Bay

MW-23

MW-18 MW-10

MW-9i MW-9

MW-15

FEED BIN #8

Retail Front Porch

PC-3

FORMER TIRE SHOP
708 SOUTH RED BUD TRAIL

MW-1

MW-17

RED BUD TRAIL

RAILROAD STREET

WEIGH SCALE TO BE RELOCATED

RAILROAD TRACKS

N W E S

0 15 30

SCALE: 1" = 30'

pointblue

FIGURE 3
FEED MILL/TIRE SHOP DEMOLITION PLAN

CITY OF BUCHANAN DEMOLITION PROJECT - FEED MILL AND TIRE SHOP
111 RAILROAD STREET AND 708 SOUTH RED BUD TRAIL
BUCHANAN, MICHIGAN

REVISION		DATE: 3/13/2023	APPROVED: SHM
DATE:	BY:	DRAWN: MAT	JOB No: C5140

RESIDENTIAL

ELECTRIC SUBSTATION

TEMPORARY 6' HIGH CHAIN LINK CONSTRUCTION FENCE IN-PLACE DURING DEMOLITION WORK

RESIDENTIAL

DAYS AVENUE

RAILROAD STREET

FORMER BUCHANAN FEED MILL
111 RAILROAD STREET

SOIL PILE A

SOIL PILE B

TRUCK DUMP

Elevator Structure Base

GRAIN BIN #6

GRAIN ELEVATOR BUILDING

GRAIN BIN #3

GRAIN BIN #4

GRAIN BIN #7

GRAIN BIN #9

GRAIN BIN #10

GRAIN BIN #5

GRAIN BIN #2

GRAIN BIN #1

GRAIN BIN #8

DRYER FAN

GRAIN ELEVATOR OFFICE

ELECTRICAL CONTROL ROOMS (2 STORIES)

RAILROAD TRACKS

WOODED

LEGEND

- STRUCTURE TO BE DEMOLISHED
- APPROXIMATE PROPERTY LINE
- EXISTING CHAIN LINK FENCE
- TEMPORARY FENCE (SEE NOTE)

N

W E

S

0 15 30

SCALE: 1" = 30'

pointblue

FIGURE 4
GRAIN ELEVATOR BUILDING DEMOLITION PLAN

CITY OF BUCHANAN DEMOLITION PROJECT - FEED MILL AND TIRE SHOP
111 RAILROAD STREET AND 708 SOUTH RED BUD TRAIL
BUCHANAN, MICHIGAN

REVISION		DATE: 3/13/2023	APPROVED: SHM
DATE:	BY:	DRAWN: MAT	JOB No: C5140

APPENDIX C

Environmental Review and Hazard Assessment – Former Buchanan Feed Mill

PREPARED BY:

PRISM SCIENCE & TECHNOLOGY, LLC

Environmental Review and Hazard Assessment

Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism Project No. 19.1120

15 October 2019

Prepared for:

City of Buchanan
302 North Red Bud Trail
Buchanan, Michigan 49107

Prism Science & Technology, LLC
3133 Lakeshore Drive
St. Joseph, Michigan 49085
Tel (269) 983-5775
Fax (269) 983-5333

Brownfields

Environmental

Site Remediation

Ecological Services

Regulatory Permitting

Industrial Compliance

OSHA Compliance & Training

WWW.PRISMSCITECH.COM

Table of Contents

Executive Summary

Environmental Review and Hazard Assessment

Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism No. 19.1120

15 October 2019

Prism Science & Technology, LLC (Prism) has performed the Environmental Review and Hazard Assessment for the property located at 111 Railroad Street (parcel number 11-58-1500-0089-03-3) in Buchanan, Berrien County, Michigan (herein referenced as the Property). The following conclusions have been made as a result of the activities conducted at the Property:

- No underground storage tanks (USTs) remain at the Property. Prism evaluated the north-central portion of the Property for tanks associated with the historical use of this area as a bulk tank plant. A small heating oil tank was discovered and removed. No other USTs were identified during trenching activities and no evidence of petroleum impact was identified at this area.

- One 55-gallon drum containing unknown liquid (most likely waste oil) is located west of the grain elevator building. The City of Buchanan Department of Public Works intends to handle and properly recover the contents of the drum.

- The direct contact exposure pathway was evaluated through the collection of surface soil samples for laboratory analysis of select metals. Arsenic was identified in one shallow soil sample at a concentration above non-residential direct contact criteria.

- Groundwater sampling was conducted at the Property to evaluate the vapor intrusion exposure pathway. No parameters were detected in groundwater samples at concentrations above applicable vapor intrusion criteria and this exposure pathway is not considered potentially complete.

- Groundwater impacted with petroleum parameters is present on-site at concentrations above drinking water protection criteria. This exposure pathway is not considered potentially complete because the City of Buchanan municipal water supply is available at the Property.

- Three asbestos-containing materials (ACM) are present at the Property including 701 square feet of floor tile and mastic inside the feed mill/store front building, 792 square feet of silo sealant on the exterior grain bins, and 241 square feet of transite paneling located inside the side panel building near the grain bins. The ACM is required to be removed prior to the commencement of any renovation or demolition.

- Lead and cadmium were detected in the majority of the paint chip samples collected. The City of Buchanan is obligated to inform any contractors that lead or cadmium were detected at the site and to wear the proper personal protective equipment (PPE) during building renovation and demolition activities.

- A total of 92 fluorescent bulbs, eleven electric lamps, one thermostat, and ten small (<40 pound) bags of pesticides were identified as universal waste during this assessment which will require special handling for disposal and recycling.

- Numerous hazardous materials including Household Hazardous Waste (HHW) are located at the Property including fertilizer, diesel exhaust fluid, mineral oil, hydraulic fluid, agricultural lime, white line chalk, mare match, corta-flex, and tail adhesive/mousse which will require special handling for disposal and recycling.

The objective of this assessment was to identify abandoned wastes or materials which require special handling and/or disposal and any hazards associated with the reuse of the Property by the City of Buchanan. It is the understanding of Prism that reuse of the Property would require demolition of the structures and associated components. Prism researched the Property history to identify historical concerns, conducted a hazard assessment of asbestos, metals in paint, and universal waste, collected shallow soil samples to evaluate the direct contact pathway, and collected groundwater samples to evaluate the vapor intrusion pathway. The sections that follow discuss field techniques, sample collection methodology, laboratory analysis, and results.

Environmental Review and Hazard Assessment

Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism No. 19.1120

15 October 2019

1.0 Introduction

1.1 Purpose

The objective of this assessment was to identify abandoned wastes or materials which require special handling and/or disposal and any hazards associated with the reuse of the property by the City of Buchanan located at 111 Railroad Street (parcel number 11-58-1500-0089-03-3) in Buchanan, Berrien County, Michigan (herein referenced as the Property). It is the understanding of Prism that reuse would require demolition of the structures and associated components.

1.2 Property History

According to available information, the Property has been included in the City of Buchanan since at least the early-1860s. Railroad tracks and railroad spurs have been located at the Property from approximately the early-1870s until the mid-1960s. A freight house was located at the southwestern portion of the Property from at least the early-1870s until it became occupied by the Pears East Grain Company in the early-1910s. The Pears East Grain Company occupied the building until the late-1930s when it was razed. A brick passenger depot for the railroad adjacent to the south of the Property was located at the southern portion of the Property from at least the early-1870s until the late-1970s. A second passenger depot associated with this railroad track occupied the central portion of the Property from at least the early-1910s until the mid-1920s. Standard Oil Company occupied the central portion of the Property and operated a bulk petroleum plant from the late-1920s until the early-1960s. In the mid-1960s, two feed mill structures were constructed at the central and southeastern portions of the Property.

Between the late-1970s and the mid-1990s, three buildings were located at the northeastern portion of the Property. In 2015, two of these buildings were razed. In 2019, the Property was transferred to the Berrien County Treasurer and is currently occupied by a feed mill/retail building, a grain elevator building, a garden center, and associated feed and grain bins.

1.3 Location

The Property consists of an irregularly shaped, 3.46-acre parcel of land (parcel number 11-58-1500-0089-03-3) located at 111 Railroad Street in Buchanan, Berrien County, Michigan (Township 7 South, Range 18 West, Section 35). A Site Location Map and a Site Orientation Map are provided as Figures 1 and 2 in Appendix A.

The Property is located in a mixed-use area in Buchanan. The Property is bound by Jordan Street, Days Avenue, South Oak Street, and residential properties to the north, a commercial property and South Red Bud Trail to the east, vacant wooded land to the west, and railroad tracks to the south.

2.0 Site Reconnaissance

2.1 Property Overview

The Property consists of an irregularly shaped, 3.46-acre parcel of land (parcel number 11-58-1500-0089-03-3) located at 111 Railroad Street in Buchanan, Michigan. A Site Orientation Map depicting the parcel boundary is presented as Figure 2 in Appendix A. Photographs of the Property and adjacent properties taken by Prism personnel on 30 July 2019 are presented as Plates 1 through 57 in Appendix B.

Utilities that are available at the Property consist of municipal water and sanitary sewer, storm sewer, electricity, telephone, and natural gas.

A Database Report prepared by Environmental Risk Information Services (ERIS) was reviewed for this assessment. The Database Report contains a search of federal and state environmental databases and is presented in Appendix A. According to available information, the Property is listed in the aboveground storage tank (AST) database since a propane tank was formerly located at the Property.

A Physical Setting Report, Historical Aerials, and Fire Insurance maps provided by ERIS were also reviewed and are presented in Appendix A.

2.2 Property Exterior

The Property consists of three structures previously occupied by a feed mill company (Buchanan Feed Mill) including a feed mill/retail building and associated feed bins, grain elevator building and associated grain bins, and a garden center. The western portion of the Property consists of dense, wooded land. Mounded material was noted in the wooded portion at the western boundary. A weigh scale and concrete steps are located at the southern portion of the Property. Railroad tracks are located adjacent to the south of the Property. The Property features are depicted in Figures 3 and 4 of Appendix A.

The feed mill/retail building (5,267 SF) was constructed in 1920 of steel and concrete block on a partial basement (see Plate 1 in Appendix B). Eight feed bins surround the eastern portion of the building and one feed bin is located north of the building.

The 676 SF garden center, located at the northeastern portion of the Property, was constructed in 1920 of wood on a concrete slab and was utilized originally for residential purposes.

The grain elevator building and associated grain bins consist of a large storage building, ten grain bins, and connected storage rooms (a truck dump, dryer fan, grain elevator office, and electrical control rooms). The structures were constructed in approximately 1900 of steel and concrete and are located at the western portion of the Property.

One 55-gallon drum containing unknown liquid (most likely waste oil) is located west of the grain elevator building (see Plates 33 and 34 in Appendix B).

A 2,000-gallon capacity plastic AST is located on the north side of the feed mill/store building (see Plate 3 in Appendix B) and contains approximately 10 gallons of brown liquid. According to an interview with a previous Buchanan Feed Mill employee (Mr. Cole Casal), this AST contains molasses which was previously mixed with grain for animal feed.

Evidence of cinders, slag, brick pieces, etc. was observed at surface soils at the western portion of the Property during site reconnaissance activities. This material appeared to be present in limited areas at the western portion of the Property. Surface soil samples were collected at these areas to evaluate soil quality. The shallow soil sample locations are depicted on Figure 4 in Appendix A.

Soil samples SS-1, SS-2, SS-3, and SS-4 were transferred into new, pre-cleaned glass containers for analysis of arsenic, cadmium, chromium, lead, and mercury. Following appropriate preservation activities, the collected samples were immediately placed in an ice-filled cooler. The samples were subsequently delivered to ALS Laboratory Group (ALS) of Holland, Michigan, by a laboratory courier under COC documentation for chemical analysis.

The soil sample results have been compared to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) criteria established in Table 3. Soil: Part 201 Generic Non-Residential Cleanup Criteria (GNRCC) for Drinking Water Protection (DWP), Groundwater Surface Water Interface (GSI), Direct Contact (DC), and Statewide Default Background Levels (SDBL).

Arsenic was detected in each of the soil samples at concentrations above reporting limits ranging from 3.4 mg/kg to 230 mg/kg. Arsenic is present in SS-1 at a concentration of 230 mg/kg which exceeds the SDBL and GNRCC for DWP, GSI, and DC. Arsenic is present in SS-2 and SS-3 at concentrations of 30 mg/kg and 36 mg/kg which exceed the SDBL and GNRCC for DWP and GSI.

Chromium was detected in each of the soil samples at concentrations above reporting limits ranging from 6.4 mg/kg to 19 mg/kg. Chromium was detected in SS-2 at a concentration of 19 mg/kg which exceeds the SDBL and GNRCC for GSI.

Lead was detected in each of the soil samples at concentrations above reporting limits ranging from 20 mg/kg to 780 mg/kg. Lead was detected in SS-3 at a concentration of 780 mg/kg which exceeds the SDBL and GNRCC for DWP.

Mercury and cadmium were also detected in one or more soil samples at concentrations above reporting limits but below applicable GNRCC.

Laboratory analytical results are presented as Table 5 in Appendix C and are included in Appendix D.

2.3 Property Interior

The feed mill/store front building consists of open storage rooms, an office, and a store front. The interior of this building was observed to be in poor condition with a foul odor (rotting animal food and animal excrement) and evidence of rodents was noted (see Plates 13 through 17 in Appendix B). The basement was empty and dry (see Plate 18 in Appendix B).

The garden center building was unoccupied during site reconnaissance activities. Prism observed this building from the exterior since a key was not available to access the interior. The building is unoccupied and was previously used as a garden nursery.

The grain elevator building and associated grain bins consist of a large storage building, ten grain bins, and connected storage rooms. A truck dump is located north of the main grain elevator building entrance. A dryer fan is located west of Grain Bins #5 and #6, which historically powered the elevator system. The grain elevator office and associated electrical control rooms are located south of the main grain elevator building. The interior

of the grain elevator building includes two pits that drop down to approximately 30 feet. The structures previously stored grain which was elevated up to the grain bins.

2.4 Underground Storage Tanks

The Property was evaluated for the potential presence of USTs. No visual evidence (i.e., fill ports or vent pipes) of USTs presently existing at the Property was discovered during site reconnaissance activities. No USTs were identified at the Property during site reconnaissance activities.

According to fire insurance maps, Standard Oil Company operated a bulk petroleum plant at the central portion of the Property from the late-1920s until the early-1960s. The plant included the use of six tanks, though it is uncertain whether these tanks were above or underground. Information was not available regarding the removal of these tanks. Copies of the fire insurance maps reviewed are presented in Appendix A.

On 19 September 2019, Prism personnel marked an area at the north-central portion of the Property to evaluate for remaining tanks associated with the historical bulk tank plant. The City of Buchanan provided excavating equipment (backhoe) to trench out a 40 foot by 30 foot by 5 feet area to evaluate for remaining tanks. The UST investigation area is depicted on Figure 3 in Appendix A. The trenching covered approximately 145 linear feet to investigate for any of the remaining USTs.

Subsurface soil conditions encountered during this assessment consisted of brown, fine- to medium-grained sand. Large pieces of concrete (former footings) as well as glass, brick, and bottles were encountered toward the eastern end of the excavation.

One small (250-gallon) heating oil tank was discovered at the western edge of the excavated area. The UST was positioned in a north-south orientation and the bottom was located approximately 4.5 feet below ground level (bgl). The dimensions of the tank were 3 feet in diameter and 5 feet in length. Approximately 45 gallons of water were present inside the UST during assessment activities. The tank was observed to be generally in poor condition with rust and pitting. The fluids were pumped into a plastic 55-gallon drum and a sample was collected (Water-1) for off-site disposal characterization prior to tank removal. Based on waste characterization results, the fluids were accepted by the City of Buchanan wastewater treatment plant. The results of laboratory analysis are presented in Appendix D.

Soil samples were collected from beneath each end of the heating oil tank, classified by a project geologist, and inspected for evidence of petroleum odors and/or staining. The soil samples were tested in the field for the presence of residual organic vapors utilizing a calibrated (to an isobutylene standard) photoionization detector (PID). The PID detects organic vapors through an ionization process which creates an electric current. The intensity of the current is depicted on a direct read meter corresponding to a concentration presented in parts per million (ppm) equivalent isobutylene. The presence of petroleum odors or adverse staining was not noted in the soil samples collected. Residual organic vapors were not detected by field screening soil samples with the PID.

The tank is not regulated by Michigan's Underground Storage Tank Act (Part 211 of the Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended) but it is regulated by Michigan's Flammable and Combustible Liquids Rules. The tank was removed, properly recycled, and has been properly closed in accordance with Michigan's Flammable and Combustible Liquids Rules.

No other tanks were discovered and no evidence of staining, adverse odors, or PID readings were noted during the trenching activities. No additional activities associated with the former tanks is warranted.

2.5 Materials Storage and Handling

Various materials storage was observed at the Property during site reconnaissance activities. The materials observed, quantity, and location are summarized in Table 1.

Table 1. Materials Storage

Material	Description	Location	Quantity
Molasses	2,000-Gallon AST	Feed Store Building	1
Waste Oil (assumed)	55-Gallon Drum	West of Grain Elevators	1
Fertilizer	Large Bag (>40 Lb.)	Feed Store Building	10
Fertilizer	Small Bag (<40 Lb.)	Feed Store Building	34
Fertilizer	1-Gallon Plastic Container	Storage Trailer	10
Herbicide/Pesticide	Small Bag (<40 Lb.)	Feed Store Building	10
Diesel Exhaust Fluid	1/2-Gallon Plastic Container	Feed Store Building	2
Vitamins	Small Bag (<40 Lb.)	Feed Store Building	7
Vitamins	5-Gallon Bucket	Feed Store Building	3
Vitamins	1-Gallon Plastic Container	Feed Store Building	4

Material	Description	Location	Quantity
Mineral Oil	1-Gallon Plastic Container	Feed Store Building	1
Hydraulic Fluid	5-Gallon Bucket	Feed Store Building	2
Hydraulic Fluid	5-Gallon Bucket	Grain Elevator Building	1
Agricultural Lime	Large Bag (>40 Lb.)	Feed Store Building	15
White Line Chalk	Large Bag (>40 Lb.)	Feed Store Building	7
Mare Match	5-Gallon Bucket	Feed Store Building	12
Cat Litter	Large Bag (>40 Lb.)	Feed Store Building	48
Salt Blocks	Blocks	Feed Store Building	5
Corta-Flex	1/2-Gallon Plastic Containers	Feed Store Building	6
Tail Adhesive/Mousse	Aerosol Can	Feed Store Building	4
Feed - General	Buckets - Various Sizes	Feed Store Building	29
Feed - General	Bags - Various Sizes	Feed Store Building	385

2.6 Waste Disposal

No waste disposal or dumpsters were observed at the Property during site reconnaissance activities. Two trailers are parked at the north-central portion of the Property and are currently used for storage of residential materials and scrap metal.

2.7 On-Site Migration of Contamination

An on-site migration of contamination of petroleum has occurred from the adjacent property to the east (Baroda Tire Center Too, Inc.). Notice of this migration was provided by Prism to the owners of the Property in documentation dated 13 December 2012. Permanent monitor wells are located across the Property for groundwater monitoring purposes (see Plate 19 in Appendix B). According to available information reviewed, a vapor intrusion investigation was conducted at the adjacent gasoline station property and chlorinated volatile organic compounds (cVOCs) were detected in sub-slab soil gas samples collected. Since the contamination being investigated at the adjacent property is petroleum-based, the monitor wells at the Property have not been sampled for cVOCs. Therefore, groundwater samples were collected from two of the existing monitor wells located at the Property and subjected to analysis of cVOCs.

Groundwater samples were collected from monitor wells MW-6 and MW-15 utilizing a new disposable bailer. Three well volumes were purged prior to sampling to ensure the collection of representative samples.

The results of laboratory analysis performed on the two groundwater samples have been compared to the EGLE criteria established in Table 1. Groundwater: Part 201 GNRCC for Drinking Water (DW), GSI, and Groundwater Volatilization to Indoor Air Criteria (GVII).

1,2,4-trimethylbenzene, ethylbenzene, and xylenes were detected in MW-15 at concentrations which exceed the GNRCC for GSI. 1,2,4-trimethylbenzene was also detected in MW-15 at a concentration which exceeds the GNRCC for DW.

1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, isopropylbenzene, n-propylbenzene, and xylenes were detected in MW-6 and/or MW-15 at concentrations below applicable criteria.

Since monitor wells MW-6 and MW-15 are located within the 30-foot lateral inclusion zone for petroleum VOCs, the vapor intrusion pathway was evaluated. The monitor wells were sampled and no parameters were present in groundwater samples at concentrations in excess of applicable vapor intrusion screening levels.

No cVOCs were detected in the groundwater samples collected at the Property.

An on-site migration of groundwater contamination was identified in previous reports and was confirmed with current groundwater sampling and analysis. It should be noted that the City of Buchanan municipal water supply is available at the Property. Based on the data obtained, no exposure pathways associated with the on-site migration of contamination are relevant or complete.

Laboratory analytical results are presented as Table 6 in Appendix C and are included in Appendix D.

3.0 Building Inspection

3.1 Asbestos Assessment

Prism performed a pre-demolition assessment for ACM on 30 July 2019. The pre-demolition asbestos assessment included the collection of samples from eleven suspect ACMs (15 layered by the laboratory). The assessment was performed pursuant to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) and the Occupational Safety and Health Administration (OSHA) for asbestos and current industry standards.

The asbestos surveying, sampling, assessment, and report were conducted in accordance with the guidelines set forth in United States Environmental Protection Agency (USEPA) 40 CFR 73 Subpart E (763.86 through 763.88) and/or 29 CFR 1910.1001 and 29 CFR 1926.1101, where applicable.

The pre-demolition asbestos assessment and lead-based paint assessment were conducted by Ms. Chloe A. Borton of Prism. Ms. Borton is a State of Michigan Accredited Asbestos Building Inspector (A46492).

In an effort to identify suspect ACM, general inspection procedures were followed in accordance with USEPA standards under the NESHAP. A visual inspection (survey) was combined with the collection of an appropriate number and distribution of bulk suspect asbestos-containing samples.

Determination of suspect ACM was based on visual examination, knowledge of building materials which typically contain asbestos, and material age. Specifically, materials similar in type, color, and texture were classified into homogeneous areas (HAs) within each functional space. An appropriate number and distribution of samples were collected from suspect material in each HA and functional space. Homogeneous materials suspected of containing asbestos were assessed and classified by category and as friable or non-friable. If applicable, the condition of each of the homogeneous suspected ACM was assessed and qualified as good, fair, or poor, and its USEPA classification type identified (surface material, thermal system insulation, or miscellaneous material).

Pre-demolition sampling was conducted where necessary within the building. Other than the roofing materials, based on the physical layout, accessibility, construction of the spaces, and the ability to perform destructive sampling, it is not likely that suspect ACM was hidden from view and/or not accounted for in this assessment within the building.

Samples were collected from a total of eleven suspect ACM materials (layered where necessary) and submitted to an independent laboratory certified under the National Voluntary Laboratory Accreditation Program (NVLAP) for analysis. These eleven initial bulk asbestos samples were submitted to SanAir Technologies Laboratory of Powhatan, Virginia, for analysis by Polarized Light Microscopy (PLM) utilizing USEPA Method 600/R-93/116.

The following is a summary of ACM present which will require the proper removal and disposal prior to demolition activities:

Summary of Asbestos-Containing Materials

Description of ACM	Location	Total Quantity
1'x1' Floor Tile – Red and White Mastic	Feed Mill/Store Front Building	701 Square Feet
Sealant – Silo #6 Sealant – Silo #2 Underlayment	Exterior Grain Bins	792 Square Feet
Transite Paneling	Side Panel Building	241 Square Feet

Due to the preparation of the sampled materials and the minute level of observation by the laboratory personnel, the descriptions in the analytical report might not match the sample descriptions recorded by Prism inspectors in the field. Prism sample descriptions and locations should be used to identify materials that were sampled and Prism sample numbers should be used to correlate analytical results for the sampled materials.

It will be required to remove the ACM identified prior to the commencement of the demolition activities. If suspect ACM not identified within the report are encountered during demolition activities for which no analytical data exists, Prism recommends the material(s) remain undisturbed until the asbestos content of the material(s) is determined in accordance with the USEPA and OSHA regulations.

The Notification of Intent to Renovate/Demolish form required by the NESHAP regulations must be prepared and submitted to the EGLE-Air Quality Division (AQD) at least 10 working days prior to demolition of a building, regardless of whether or not ACMs are present. A 10 working-day notice is required if ACM is present and included for removal and the quantity is greater than 260 linear feet and/or 160 square feet.

The Asbestos Abatement Contractors Licensing Act (i.e., Act 135, P.A. 1986, as amended) requires asbestos abatement contractors and exempt trade groups to notify the Michigan Department of Licensing and Regulatory Affairs (LARA) Asbestos Program of any asbestos abatement project exceeding 10 linear feet or 15 square feet, or both, of friable asbestos materials. This requires a 10-calendar day notice.

The locations of suspect ACM and ACM samples are depicted on Figures 3 and 4 in Appendix A. Further information regarding the ACM is presented in Table 2 in Appendix C. Sample information and laboratory analytical results are presented in Appendix D.

3.2 Metals In Paint Assessment

The lead- and cadmium-based paint assessment included the collection of fifteen paint chip samples from suspect locations inside the buildings. The results will assist contractors in developing a plan to comply with OSHA's Lead Exposure in Construction Standard 29 CFR 1926.62.

In an effort to identify suspect lead- and cadmium-based paint, general inspection procedures were followed in accordance with USEPA standards. A survey was combined with the collection of an appropriate number and distribution of bulk suspect lead- and cadmium-based paint samples. Determination of suspect lead-based paint was based on visual examination and material age. Specifically, visually deteriorated (e.g., peeling or flaking) paint similar in color was classified into homogenous areas within each functional space.

Samples were collected from a total of fifteen suspect lead-based paints and submitted to an independent laboratory certified under the National Lead Laboratory Accreditation Program (NLLAP) for analysis. These samples were submitted to GPI Laboratories, Inc. of Grand Rapids, Michigan, for analysis of lead and/or cadmium in paint.

Fourteen out of the fifteen paint chip samples collected contained a percentage of lead above reporting limits ranging from 0.01% to 16%. Cadmium was detected in one paint chip sample located within the grain elevator building.

The OSHA construction standard does not specifically list a lead or cadmium concentration that is considered a hazardous level. Representatives of the City of Buchanan are obligated to inform contractors that lead and cadmium were detected in coatings at the site and provide them with a copy of the analytical report. The employer of construction crews is required to perform monitoring for their employees depending on the scope of work when lead or cadmium is present on a jobsite in compliance with the OSHA standard.

The locations of paint chip samples are depicted on Figures 3 and 4 in Appendix A. Further information regarding the lead-based paint is presented in Table 3 in Appendix C. Sample information and laboratory analytical results are presented in Appendix D.

3.3 Universal Waste Inventory

The universal waste inventory consisted of identifying and quantifying hazardous building contents which can be considered universal wastes at the time of disposal in accordance with Michigan Administrative Code (MAC) R 2.99.9228. Non-regulated HHW items were identified and quantified during this assessment. In addition, remaining retail inventory, considered non-hazardous, was also assessed.

Tabulated results of the universal waste inventory are presented in Table 4 in Appendix C. Table 4 also includes items classified as HHW. Hazardous building components which were identified during the inventory can be classified into three universal waste categories including electric lamps, devices containing elemental mercury, and pesticides.

A fluorescent bulb (electric lamp) was noted on the exterior of the grain elevator building, several fluorescent bulbs were identified in the garden center, and multiple fluorescent bulbs were found in several rooms throughout the feed mill/retail building (including the store, office, furnace room, and electrical room). Table 4 identifies the location and quantity of the fluorescent bulbs, if the bulbs are currently in use or if the bulbs are in storage, and the length range of the bulbs. Fluorescent bulbs contain small amounts of mercury sealed in the glass tubes that can be released if the bulbs are broken. A total of 92 fluorescent bulbs were identified during the inventory with 82 of the bulbs currently in service. Eleven electric lamps were identified which contain mercury and/or sodium vapor – nine exterior bulbs mounted on three light poles and two bulbs mounted on the exterior of the feed mill/retail building.

A thermostat was identified in the furnace room of the feed mill/retail building which contains a tilt switch that contains elemental mercury.

A total of ten small (<40 pound) bags of pesticide were identified in the feed mill/retail building. These items should be handled as universal waste.

Numerous hazardous materials including HHW are located at the Property including fertilizer, diesel exhaust fluid, mineral oil, hydraulic fluid, agricultural lime, white line chalk, mare match, corta-flex, and tail adhesive/mousse. Other residual retail inventory identified, such as cat litter, salt blocks, and vitamins could be repurposed or disposed of at a sanitary landfill. The livestock feed is assumed spoiled and should be disposed of at a sanitary landfill.

Universal waste materials, HHW, and other remaining retail inventory should be properly removed, recycled, or disposed prior to any building demolition activities in areas where materials were identified.

4.0 Conclusions and Recommendations

Prism performed an Environmental Review and Hazard Assessment of the property located at 111 Railroad Street (parcel number 11-58-1500-0089-03-3) in Buchanan, Berrien County, Michigan (herein referenced as the Property).

The objective of this assessment was to identify abandoned wastes or materials which require special handling and/or disposal and any hazards associated with the reuse of the Property by the City of Buchanan. It is the understanding of Prism that reuse of the Property would require demolition of the structures and associated components. Prism researched the Property history to identify historical concerns, conducted a hazard assessment of asbestos, metals in paint, and universal waste, collected shallow soil samples to evaluate the direct contact pathway, and collected groundwater samples to evaluate the vapor intrusion pathway.

The following conclusions are presented:

- No USTs remain at the Property. Prism evaluated the north-central portion of the Property for tanks associated with the historical use of this area as a bulk tank plant. A small heating oil tank was discovered and removed. No other USTs were identified during trenching activities and no evidence of petroleum impact was identified at this area.

- One 55-gallon drum containing unknown liquid (most likely waste oil) is located west of the grain elevator building. The City of Buchanan Department of Public Works intends to handle and properly recover the contents of the drum.

- The direct contact exposure pathway was evaluated through the collection of surface soil samples for laboratory analysis of select metals. Arsenic was identified in one shallow soil sample at a concentration above non-residential direct contact criteria.

- Groundwater sampling was conducted at the Property to evaluate the vapor intrusion exposure pathway. No parameters were detected in groundwater samples at concentrations above applicable vapor intrusion criteria and this exposure pathway is not considered potentially complete.

- Groundwater impacted with petroleum parameters is present on-site at concentrations above drinking water protection criteria. This exposure pathway is not considered potentially complete because the City of Buchanan municipal water supply is available at the Property.

- Three ACM are present at the Property including 701 square feet of floor tile and mastic inside the feed mill/store front building, 792 square feet of silo sealant on the exterior grain bins, and 241 square feet of transite paneling located inside the side panel building near the grain bins. The ACM is required to be removed prior to the commencement of any renovation or demolition.

- Lead and cadmium were detected in the majority of the paint chip samples collected. The City of Buchanan is obligated to inform any contractors that lead or cadmium were detected at the site and to wear the proper PPE during building renovation and demolition activities.

- A total of 92 fluorescent bulbs, eleven electric lamps, one thermostat, and ten small (<40 pound) bags of pesticides were identified as universal waste during this assessment which will require special handling for disposal and recycling.

- Numerous hazardous materials including HHW are located at the Property including fertilizer, diesel exhaust fluid, mineral oil, hydraulic fluid, agricultural lime, white line chalk, mare match, corta-flex, and tail adhesive/mousse which will require special handling for disposal and recycling.

The results of laboratory analysis confirm that arsenic was detected in one shallow soil sample at a concentration above non-residential direct contact criteria. An area of impacted shallow soils is located at the western portion of the Property, although the extent of impact is not delineated. Although the impacted soils are present at the surface, the Property is currently unoccupied and not subject to regular pedestrian or visitor traffic. As defined in Part 201, Sections 20126(4)(c) and 324.20107a(5) of Michigan's Natural Resources and Environmental Protection Act (NREPA), P.A. 451 of 1994, as amended, due care obligations do not apply to the City of Buchanan since they acquired the Property as a gift and are exempt from liability.

As plans for Property redevelopment evolve and the City of Buchanan becomes an operator of the Property, a strategy for this material should be established to evaluate due care obligations and prevent direct contact exposure to these impacted surface soils. In order to establish the best response action, additional investigation might be necessary to delineate the extent of impact. The direct contact exposure pathway can be addressed through capping with clean material or a paved surface, soil abatement, or access can be restricted to this area of the Property.

It will be required to remove the ACM identified prior to the commencement of the demolition activities. If suspect ACM not identified within the report are encountered during demolition activities for which no analytical data exists, Prism recommends the material(s) remain undisturbed until the asbestos content of the material(s) is determined in accordance with the USEPA and OSHA regulations.

The Notification of Intent to Renovate/Demolish form required by the NESHAP regulations must be prepared and submitted to the EGLE-AQD at least 10 working days prior to demolition of a building, regardless of whether or not ACMs are present. A 10 working-day notice is required if ACM is present and included for removal and the quantity is greater than 260 linear feet and/or 160 square feet.

The Asbestos Abatement Contractors Licensing Act (i.e., Act 135, P.A. 1986, as amended) requires asbestos abatement contractors and exempt trade groups to notify the Michigan LARA Asbestos Program of any asbestos abatement project exceeding 10 linear feet or 15 square feet, or both, of friable asbestos materials. This requires a 10-calendar day notice.

The OSHA construction standard does not specifically list a lead or cadmium concentration that is considered a hazardous level. Representatives of the City of Buchanan are obligated to inform contractors that lead and cadmium were detected in coatings at the site and provide them with a copy of the analytical report. The employer of construction crews is required to perform monitoring for their employees depending on the scope of work when lead or cadmium is present on a jobsite in compliance with the OSHA standard.

All universal waste materials and HHW should be properly removed, recycled, or disposed of in accordance with MAC R 2.99.9228 prior to any building renovation or demolition activities in areas where universal waste materials and HHW were identified. The universal waste materials and HHW need to be properly disposed of at a municipal waste landfill and/or a recycling center which accepts these wastes.

5.0 Limitations

The findings presented herein are based solely on the services described, and not on scientific tasks or procedures beyond the scope of agreed upon services. This report makes no warranty regarding the presence or absence of affected materials across the Property other than the soil and groundwater samples specifically described and those parameters specifically tested for by the laboratory.

The specified areas were inspected to determine the location and nature of ACM and assessed in accordance with the provisions of the Asbestos NESHAP and current industry standards. The metals in paint assessment was limited to inspecting and sampling visually deteriorated paint (e.g., peeling or flaking). The conclusions and recommendations of the asbestos, metals in paint, and universal waste inventory are based on the conditions at the time of the sampling and analytical data provided from the sample analysis.

6.0 Report Preparation

Prism conducted an environmental review and hazard assessment for the property located at 111 Railroad Street (parcel number 11-58-1500-0089-03-3) in Buchanan, Berrien County, Michigan (the Property). The objective of this assessment was to identify abandoned wastes or materials which require special handling and/or disposal and any hazards associated with the reuse of the Property by the City of Buchanan.

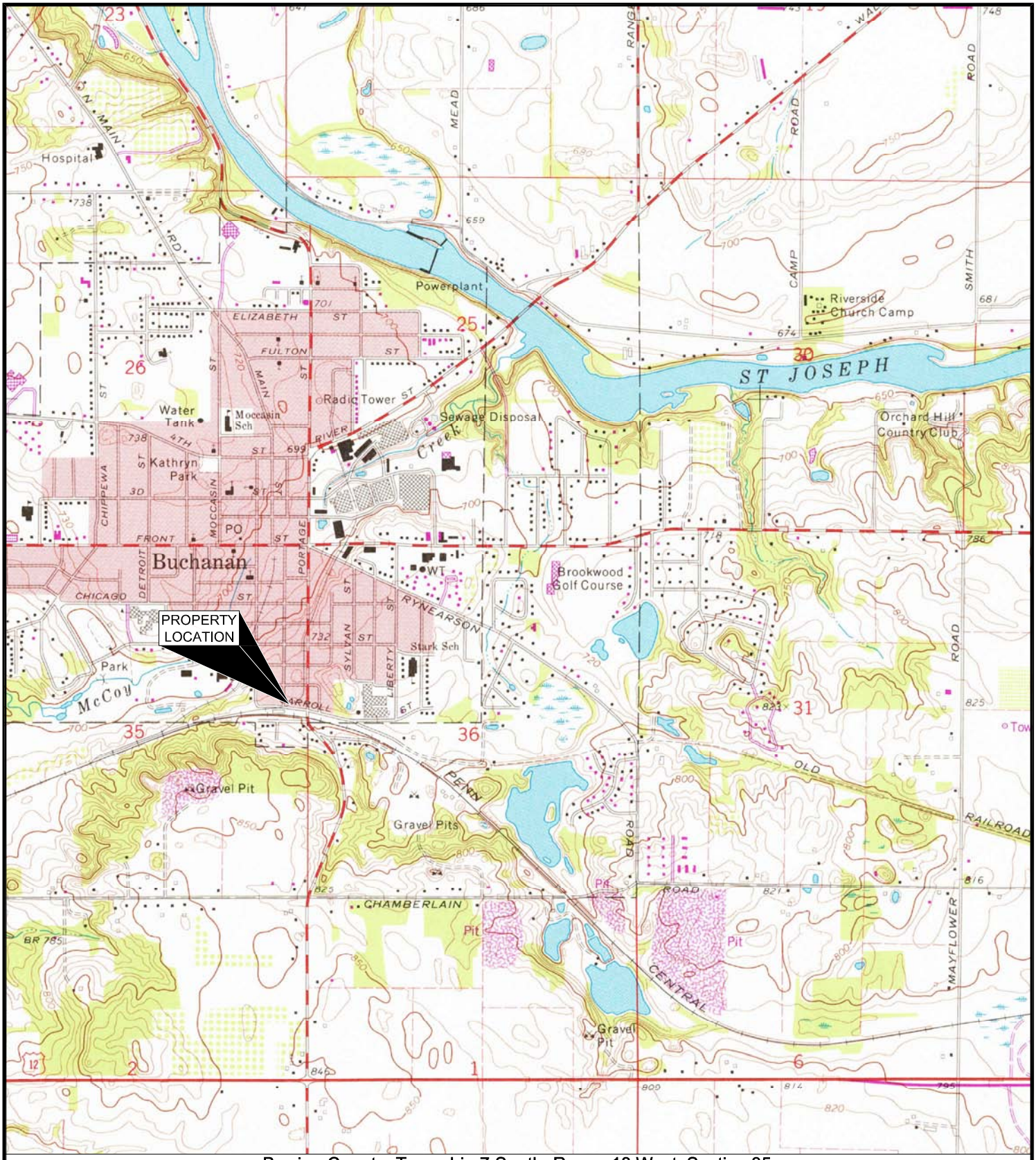
The field investigative activities were performed by Ms. Chloe A. Borton, LPG, ESA Team Leader/Geologist, Mr. Mark A. Turner, Project Manager, and Mr. Shea H. Muller, PE, Project Engineer. Mr. Mark C. Seaman, CPG, Principal, provided general project management and technical oversight. This report was written by Ms. Borton, LPG, and reviewed by Mr. Muller, PE.

Chloe A. Borton, LPG
ESA Team Leader/Geologist

Shea H. Muller, PE
Project Engineer

7.0 Appendices

Appendix A: Figures and Property Information
Appendix B: Site Photographs
Appendix C: Tables
Appendix D: Laboratory Analytical Results



Berrien County, Township 7 South, Range 18 West, Section 35

N
W E
S

0 1000 2000

SCALE: 1" = 2000'

PRISM SCIENCE & TECHNOLOGY

FIGURE 1
SITE LOCATION MAP

FORMER BUCHANAN FEED MILL
111 RAILROAD STREET
BUCHANAN, MICHIGAN

REVISION		DATE: 8/23/19	APPROVED: MCS
DATE:	BY:	DRAWN: MAT	JOB No: 19.1120

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SCALE: 1" = 200'

PRISM SCIENCE & TECHNOLOGY

FIGURE 2
SITE ORIENTATION MAP

FORMER BUCHANAN FEED MILL
111 RAILROAD STREET
BUCHANAN, MICHIGAN

REVISION		DATE: 8/23/19	APPROVED: MCS
DATE:	BY:	DRAWN: CAB	JOB No: 19.1120

250-GALLON HEATING OIL UST

FORMER UST LOCATIONS

MW-22

RESIDENTIAL

MW-11 MW-11i

UST INVESTIGATION TRENCHES

MW-12i

MW-12

MW-7

MW-7i

MW-20

FEED BINS

MW-4i

MW-4D MW-4

MW-5

MW-13

MW-6i

MOLASSES AST

MW-6

FEED BINS

MW-3R

MW-3D

HA-5

MW-8

MW-8i

MW-16

MW-2

FEED MILL BUILDING (RETAIL)

MW-23

MW-18

MW-10

MW-9

MW-9i

HA-4

PC-1&2

HA-6

HA-3

MW-15

FEED BIN

HA-2

PC-4

HA-1

PC-3

BARODA TIRE CENTER TOO (FORMER GASOLINE STATION)

MW-1

MW-17

RESIDENTIAL

DAYS AVENUE

RED BUD TRAIL

RAILROAD STREET

GRAIN BIN #9

GRAIN BIN #10

WEIGH SCALE

RAILROAD TRACKS

LEGEND

- APPROXIMATE PROPERTY LINE
- MONITOR WELL LOCATION
- POSITIVE ACM SAMPLE
- SUSPECT ACM SAMPLE
- PAINT CHIP SAMPLE

N W E S

0 10 20

SCALE: 1" = 20'

PRISM SCIENCE & TECHNOLOGY

FIGURE 3
FEED MILL BUILDING SITE PLAN

FORMER BUCHANAN FEED MILL
111 RAILROAD STREET
BUCHANAN, MICHIGAN

REVISION		DATE: 7/24/19	APPROVED: MCS
DATE:	BY:	DRAWN: MAT	JOB No: 19.1120

RESIDENTIAL

ELECTRIC SUBSTATION

RESIDENTIAL

DAYS AVENUE

MW-23

HA-4

HA-6

HA-2

RAILROAD STREET

SS-1

SS-2

AREA OF EXPOSED CINDERS/SLAG FILL

SS-3

TOPSOIL PILE

SS-4

55-GALLON DRUM OF USED OIL/WATER

PC-9

PC-10

TRUCK DUMP

HA-8

GRAIN BIN #6

GRAIN ELEVATOR BUILDING

GRAIN BIN #3

GRAIN BIN #4

GRAIN BIN #7

GRAIN BIN #9

GRAIN BIN #10

HA-7

PC-5

GRAIN BIN #5

PC-12

GRAIN BIN #2

GRAIN BIN #1

GRAIN BIN #8

WEIGH SCALE

DRYER FAN

PC-14

PC-11

HA-10

HA-9

GRAIN ELEVATOR OFFICE

PC-15

HA-11

ELECTRICAL CONTROL ROOMS (2 STORIES)

RAILROAD TRACKS

WOODED

LEGEND

- APPROXIMATE PROPERTY LINE
- MONITOR WELL LOCATION
- POSITIVE ACM SAMPLE
- SUSPECT ACM SAMPLE
- PAINT CHIP SAMPLE

N

W E

S

0 15 30

SCALE: 1" = 30'

PRISM SCIENCE & TECHNOLOGY

FIGURE 4
GRAIN ELEVATOR BUILDING SITE PLAN

FORMER BUCHANAN FEED MILL
111 RAILROAD STREET
BUCHANAN, MICHIGAN

REVISION		DATE: 7/24/19	APPROVED: MCS
DATE: 8/23/19	BY: MAT	DRAWN: MAT	JOB No: 19.1120

Table 2
Results of NESHAP Asbestos Assessment
Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism No. 19.1120

Homogeneous Sample	Material Description	Location	Asbestos Type	Friable/Non-Friable	Quantity
HA-1	1'x1' Floor Tile - Red and White	Storefront - Feed Mill Building	2% Chrysotile	Non-Friable (Category I)	701 SF
	Black Mastic		3% Chrysotile		
HA-2	Textured Ceiling Surfacing, Texture	Storefront - Feed Mill Building	Non-Detect	NA	NQ
	Textured Ceiling Surfacing, Sheetrock		Non-Detect		
HA-3	1'x2' Ceiling Tile - White Pockmark Pattern	Office - Feed Mill Building	Non-Detect	NA	NQ
HA-4	Ceiling Fiberboard - White	Feed Mill Building	Non-Detect	NA	NQ
HA-5	Rubber Gasket	Exterior - Feed Mill Building	Non-Detect	NA	NQ
HA-6	Drywall - Wall	Storefront - Feed Mill Building	Non-Detect	NA	NQ
HA-7	HA-7A Tar Paper - Ceiling	Side Transfer Building	Non-Detect	NA	NQ
	HA-7B Concrete - Ceiling		Non-Detect		
HA-8	Sealant	Silo #6 Exterior	15% Chrysotile	Friable	792 SF
HA-9	HA-9A Sealant	Silo #2 Exterior	10% Chrysotile	Friable	
	HA-9B Underlayment Sealant		50% Chrysotile		
HA-10	Window Glazing	Exterior Office	Non-Detect	NA	NQ
HA-11	Transite Paneling - Gray	Panel Room	30% Chrysotile	Non-Friable (Category II)	241 SF

Notes:
Samples collected by Prism Science & Technology, LLC on 30 July 2019.
Samples analyzed by SanAir Technologies Laboratory.
Non-Detect - Asbestos was not detected in the sample.
NA - Not applicable.
NQ - Not quantified.
SF - Square Feet.

Table 3
Results of Paint Assessment
Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism No. 19.1120

Sample ID	Paint Chip Description	Location	Lead Percentage	Cadmium Percentage
PC-1	Red (Steel Beam)	Main Feed Building	2.4%	NT
PC-2	Green (Steel Beam)	Main Feed Building	0.013%	NT
PC-3	White - Exterior Windowsill	Main Feed Building	ND	NT
PC-4	Light Blue - Exterior	Main Feed Building	1.7%	NT
PC-5	Green - Interior	Silo Building	0.22%	0.0031%
PC-6	Red - Interior	Silo Building	0.0025%	ND
PC-7	Yellow - Interior	Silo Building	0.55%	ND
PC-8	Blue - Interior	Silo Building	0.01%	ND
PC-9	Robbins Egg Blue - Exterior	Side Transfer Building	3.2%	NT
PC-10	Light Yellow - Exterior Posts	Silo Building	10%	NT
PC-11	Silver - Exterior	Hopper	0.23%	NT
PC-12	Brown/Gray - Interior	Office	0.0053%	NT
PC-13	Seafoam Green - Interior	Office	0.38%	NT
PC-14	Brick Red - Exterior	Office	0.11%	NT
PC-15	Orange - Exterior Stairwell	Office	16%	NT

Notes:
Samples collected by Prism Science & Technology, LLC on 30 July 2019.
Samples analyzed by GPI Laboratories, Inc. of Grand Rapids, Michigan.
ND = Not Detected.
NT = Not Tested.

Table 4
Universal Waste Inventory
Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism No. 19.1120

Material	Description	Location	Quantity
Electric Lamp, Fluorescent	12-inches long or less - Installed	Grain Elevator Building (exterior)	1
Electric Lamp, Fluorescent	Over 36-inches long - Installed	Garden Center	6
Electric Lamp, Fluorescent	Over 36-inches long - Stored	Feed Store Building	82
Electric Lamp, Fluorescent	Over 36-inches long - Installed	Feed Store Building	3
Electric Lamp, Mercury or Sodium Vapor	Pole-mounted	Grain Elevator Building (exterior)	3
Electric Lamp, Mercury or Sodium Vapor	Pole-mounted	Feed Store Building (exterior)	6
Electric Lamp, Mercury or Sodium Vapor	Building-mounted	Feed Store Building (exterior)	2
Mercury-Containing Thermostat	4-inch diameter cover - Installed	Feed Store Building	1
Pesticide	Small Bag (<40 Lb)	Feed Store Building	10
Fertilizer	Large Bag (>40 Lb) (HHW)	Feed Store Building	10
Fertilizer	Small Bag (<40 Lb) (HHW)	Feed Store Building	34
Fertilizer	1-Gallon Plastic Container (HHW)	Storage Trailer	10
Diesel Exhaust Fluid	1/2 Gallon Plastic (HHW)	Feed Store Building	2
Mineral Oil	1-Gallon Plastic Container (HHW)	Feed Store Building	1
Hydraulic Fluid	5-Gallon Bucket (HHW)	Feed Store Building	2
Hydraulic Fluid	5-Gallon Bucket (HHW)	Grain Elevator Building	1
Roof Cement	1-Gallon Can (HHW)	Grain Elevator Building	1
Agricultural Lime	Large Bag (>40 Lb) (HHW)	Feed Store Building	15
White Line Chalk	Large Bag (>40 Lb) (HHW)	Feed Store Building	7
Mare's Match	5-Gallon Bucket (HHW)	Feed Store Building	12
Corta-Flx	1/2-Gallon Plastic Containers (HHW)	Feed Store Building	6
Tail Adhesive/Mousse	Aerosol Cans (HHW)	Feed Store Building	4

Notes:
HHW = Household Hazardous Waste

Table 5
Results of Laboratory Analysis - Soil
Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism No. 19.1120

Parameter	Units	TDL	SDBL	DWP	GSI	DC	SS-1	SS-2	SS-3	SS-4
Date Collected							**9/19/19**	**9/19/19**	**9/19/19**	**9/19/19**
Mercury - Date Analyzed							**9/24/19**	**9/24/19**	**9/24/19**	**9/24/19**
Mercury	mg/Kg	0.05	0.13	1.7	0.050(M)	580	ND	ND	0.070	ND
Metals - Date Analyzed							**9/25 and 9/26**	**9/25/19**	**9/25 and 9/26**	**9/25/19**
Arsenic	mg/Kg	0.1	5.8	4.6	4.6	37	230	30	36	3.4
Cadmium	mg/Kg	0.2	1.2	6	(G,X)	2,100	0.82	0.60	1.1	ND
Chromium	mg/Kg	2	18	30	3.3	9,200	17	19	16	6.4
Lead	mg/Kg	10	21	700	(G,X)	900 (DD)	160	120	780	20

Notes:

Samples collected by Prism Science & Technology, LLC and analyzed by ALS Laboratory Group, Holland, Michigan.

TDL = Target detection limit unless otherwise noted in parentheses.

SDBL = Statewide Default Background Level established in Table 3. Soil: Non-Residentail Part 201 Generic Cleanup Criteria and Screening Levels.

DWP = Drinking Water Protection criteria established in Table 3. Soil: Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels.

GSI = Groundwater Surface Water Interface Protection criteria established in Table 3. Soil: Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels.

DC = Direct Contact criteria established in Table 3. Soil: Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels.

Shaded cells indicate an exceedance in one or more cleanup criteria.

G = Groundwater surface water interface criterion depends upon the pH or water hardness, or both of the receiving surface water.

X = GSI Criterion shown in tables is not protective for surface water used as a drinking water source.

DD = Hazardous substance causes developmental effects.

M = Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

ND = Not Detected.

mg/Kg = milligrams per kilogram.

PRISM SCIENCE & TECHNOLOGY

Table 6
Results of Laboratory Analysis - Groundwater
Former Buchanan Feed Mill
111 Railroad Street
Buchanan, Michigan

Prism No. 19.1120

Parameter	Units	TDL	DW	GSI	GVII	MW-6	MW-15
Date Collected						**9/19/19**	**9/19/19**
VOCs - Date Analyzed						**9/26/19**	**9/26/19**
1,1,1-Trichloroethane	µg/L	1	200	89	660,000	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	1	8.5	78 (X)	12,000	ND	ND
1,1,2-Trichloroethane	µg/L	1	5.0	330 (X)	17,000	ND	ND
1,1,2-Trichlorotrifluoroethane	µg/L	1	170,000	32	170,000	ND	ND
1,1-Dichloroethane	µg/L	1	880	740	1,000,000	ND	ND
1,1-Dichloroethene	µg/L	1	7.0	130	200	ND	ND
1,2,4-Trichlorobenzene	µg/L	5	70	99 (X)	300,000	ND	ND
1,2,4-Trimethylbenzene	µg/L	1	63 (E)	17	56,000	9.4	120
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.2	ID	220	ND (1.0)	ND (1.0)
1,2-Dibromoethane	µg/L	0.05	0.05	5.7 (X)	2,400	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	µg/L	1	600	13	160,000	ND	ND
1,2-Dichloroethane	µg/L	1	5.0	360 (X)	9,600	ND	ND
1,2-Dichloropropane	µg/L	1	5.0	230 (X)	16,000	ND	ND
1,3,5-Trimethylbenzene	µg/L	1	72 (E)	45	61,000	1.8	6.7
1,3-Dichlorobenzene	µg/L	1	6.6	28	18,000	ND	ND
1,4-Dichlorobenzene	µg/L	1	75	17	16,000	ND	ND
2-Butanone	µg/L	25	13,000	2,200	240,000,000	ND	ND
2-Hexanone	µg/L	50	1,000	ID	4,200,000	ND	ND
4-Methyl-2-pentanone	µg/L	50	1,800	ID	20,000,000	ND	ND
Acetone	µg/L	50	730	1,700	1,000,000,000	ND	ND
Benzene	µg/L	1	5.0	200 (X)	5,600	1.1	ND
Bromodichloromethane	µg/L	1	80	ID	4,800	ND	ND
Bromoform	µg/L	1	80	ID	470,000	ND	ND
Bromomethane	µg/L	5	10	5.0 (M)	4,000	ND	ND
Carbon disulfide	µg/L	5	800	ID	250,000	ND	ND
Carbon tetrachloride	µg/L	1	5.0	38 (X)	370	ND	ND
Chlorobenzene	µg/L	1	100	25	210,000	ND	ND
Chloroethane	µg/L	5	430	1,100 (X)	5,700,000	ND	ND
Chloroform	µg/L	1	80	350	28,000	ND	ND
Chloromethane	µg/L	5	260	ID	8,600	ND	ND
cis-1,2-Dichloroethene	µg/L	1	70	620	93,000	ND	ND
cis-1,3-Dichloropropene	µg/L	1	8.5	9.0 (X)	3,900	ND	ND
Cyclohexane	µg/L	5	NA	NA	NA	ND	20
Dibromochloromethane	µg/L	5	80	ID	14,000	ND	ND
Dichlorodifluoromethane	µg/L	5	1,700	ID	220,000	ND	ND
Ethylbenzene	µg/L	1	74 (E)	18	110,000	ND	55
Isopropylbenzene	µg/L	5	800	28	56,000	ND	13
Methyl acetate	µg/L	1	NA	NA	NA	ND (2.0)	ND (2.0)
Methyl tert-butyl ether	µg/L	5	40 (E)	7,100 (X)	47,000,000	ND	ND
Methylene chloride	µg/L	5	5.0	1,500 (X)	220,000	ND	ND
n-Propylbenzene	µg/L	1	80	ID	ID	6.6	28
Styrene	µg/L	1	100	80 (X)	170,000	ND	ND
Tetrachloroethene	µg/L	1	5.0	60 (X)	25,000	ND	ND
Toluene	µg/L	1	790 (E)	270	530,000	ND	ND
trans-1,2-Dichloroethene	µg/L	1	100	1500 (X)	85,000	ND	ND
trans-1,3-Dichloropropene	µg/L	1	8.5	9.0 (X)	3,900	ND	ND
Trichloroethene	µg/L	1	5.0	200 (X)	2,200	ND	ND
Trichlorofluoromethane	µg/L	1	2,600	NA	1,100,000	ND	ND
Vinyl chloride	µg/L	1	2.0	13 (X)	1,100	ND	ND
Xylenes (total)	µg/L	3	280 (E)	49	190,000	31	81

Notes:

Samples collected by Prism Science & Technology, LLC and analyzed by ALS Laboratory Group of Holland, Michigan.

TDL = Target detection limit unless otherwise noted in parenthesis.

DW = Drinking Water criteria established in Table 1. Groundwater: Residential and Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels.

GSI = Groundwater Surface Water Interface Protection criteria established in Table 1. Groundwater: Residential and Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels.

GVII = Groundwater Volatilization to Indoor Air criteria established in Table 1. Groundwater: Residential and Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels.

Shaded cells indicate an exceedance in one or more cleanup criteria.

E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the NREPA.

M = Calculated criterion is below the method detection limit, therefore, the criterion defaults to the method detection limit.

X = GSI criterion shown in tables is not protective of surface water used as a drinking water source.

ID = Inadequate data available to develop criteria.

ND = Not Detected.

NA = Not Available.

µg/L = micrograms per liter.

PRISM SCIENCE & TECHNOLOGY

APPENDIX D

Environmental Review and Hazard Assessment – Former Tire Shop

Asbestos, Metals in Paint, and Universal Waste Report

708 South Red Bud Trail
Buchanan, Michigan

Point Blue No. C5130

15 March 2023

Prepared For:

City of Buchanan
302 North Red Bud Trail
Buchanan, Michigan 49107

Prepared By:

Point Blue, LLC
P.O. Box 304
St. Joseph, Michigan 49085
pointblu.com

Table of Contents

Attachments

1.0 Executive Summary

Point Blue, LLC (Point Blue) was retained by the City of Buchanan to perform a pre-demolition building inspection for asbestos containing materials (ACM), heavy metals in paint, and universal waste in the former tire center structure located at 708 South Red Bud Trail and the former garden center located at 111 Railroad Street in Buchanan, Michigan. The assessment and sampling activities were conducted on 15 February 2023.

Two types of building materials located in the former tire shop structure contain asbestos at the 708 South Red Bed Trail site. Approximately 371 square feet of gray 12" by 12" floor tile present in the cashier/waiting area (FS-1) contains 2% chrysotile asbestos. Approximately 133 square feet of gray 9" by 9" floor tile located in the office (FS-7) contains 7% chrysotile asbestos.

It should be noted that three layers of floor tile and mastic are present in the cashier/waiting area, including mastic that contains <1% chrysotile asbestos. When the results of analysis of all samples from a homogeneous area indicate no asbestos present (less than or equal to 1%), the homogeneous area is considered to be a non-ACM. However, when the results of analysis indicate the presence of asbestos below 1%, the Federal Occupational Safety and Health Administration (OSHA) interpretation of November 24, 2001 requires that, although the material is not technically ACM, certain work practices and engineering controls be in place to prevent exposure to asbestos (i.e., dust control, etc.). Essentially, those materials containing less than 1% asbestos must be handled (but not disposed of) as if they were ACM.

ACM were not identified in the former garden center structure at the 111 Railroad Street site during this investigation.

The ACM identified in this report is required to be removed prior to the commencement of demolition activities. If suspect ACM not identified within the report are encountered during renovation activities for which no analytical data exists, Point Blue recommends the material(s) remain undisturbed until the asbestos content of the material(s) is determined in accordance with the United States Environmental Protection Agency (USEPA) and the Occupational Safety and Health Administration (OSHA) regulations.

Two paint chip samples (PC-1 and PC-2) were collected from the interior of the former tire center structure. These samples were analyzed by the laboratory and indicated detectable levels of lead and cadmium. Lead was detected in paint chip samples PC-1 and PC-2 at concentrations of 480 mg/Kg and 42 mg/Kg, respectively. Cadmium was detected in paint chip sample PC-1 at a concentration of 11 mg/Kg. Results are further summarized in Section 3.0 of this report.

Based on the building construction of the former garden center structure, paint samples were not collected or analyzed.

It is noted that building owners are obligated to inform any contractors that lead or other regulated heavy metals were detected at the site and provide them with copies of the analytical reports. The employer of construction workers is required by MIOSHA standards to perform personal air monitoring for their employees depending on the scope of work when lead is present on a jobsite.

Various universal wastes were identified in the former tire center structure including fluorescent lamps, new/used oil, battery cleaner, paint, insecticide, refrigerant, propane, and roof cement. Universal waste was not identified in the former garden center structure.

Universal waste materials and household hazardous waste (HHW) should be properly removed, recycled, or disposed of in accordance with Michigan Administrative Code (MAC) R 2.99.9228 prior to any building demolition activities in areas where universal waste materials and HHW were identified.

2.0 Introduction

Point Blue was retained by the City of Buchanan to perform a pre-demolition building inspection for asbestos, heavy metals in paint, and universal waste for the former tire shop structure located at 708 South Red Bud Trail and the former garden center structure located at 111 Railroad Street in Buchanan, Michigan. The assessment and sampling activities were conducted on 15 February 2023 by licensed asbestos inspector Mark Turner (State of Michigan license number A55236) and Project Engineer, Shea Muller.

The inspection is required by the USEPA under the National Emission Standards for Hazardous Air Pollutants (NESHAP) standard and enforced by the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Samples were collected and analyzed to determine lead and cadmium content in surface coatings and an inventory of universal wastes present completed to determine materials that could be disturbed during demolition activities.

Samples of suspected ACM were obtained using USEPA/OSHA protocols by a State of Michigan accredited inspector and analyzed to determine if asbestos fibers were present, and, if found, the types and percentages of asbestos were reported. Pre-demolition sampling was conducted where necessary within the structures and on the exterior of the structures. Based on the physical layout, accessibility, construction of the spaces, and the ability to perform destructive sampling, it is not likely that suspect ACM was hidden from view and/or not accounted for in this assessment within the structures.

The structures were divided into functional spaces and building materials that could possibly contain asbestos were identified and categorized as homogenous areas and presented in this report as Table 1 in Attachment 1. Representative samples of suspect ACM were collected and analyzed by a laboratory. Suspect ACM sample locations are presented on Figure 1 in Attachment 2. It should be noted that potential ACM was not identified in the former garden center structure and no samples were collected.

Two surface coating samples were collected from the interior of the former tire center structure and analyzed for the presence of lead and cadmium by an accredited laboratory. Based on the building construction of the former garden center structure, paint chip

samples were not collected. The results will assist contractors in developing a plan to comply with OSHA's Lead Exposure in Construction Standard 29 CFR 1926.62.

The universal waste inventory consisted of identifying and quantifying hazardous building contents which can be considered universal wastes at the time of disposal in accordance with MAC R 2.99.9228. In addition, non-regulated waste items commonly known as HHW were identified and quantified during this assessment. Universal waste present in the former tire center structure is summarized on Table 2 in Attachment 2. Universal waste was not present in the former garden center structure.

3.0 Analytical Results

Asbestos

A total of nine bulk samples were submitted to SanAir Technologies Laboratory of Powhatan, Virginia, and three bulk samples were submitted to DeLisle Associates, LTD of Portage, Michigan, for asbestos analysis. All samples were analyzed by Polarized Light Microscopy (PLM) utilizing USEPA Method 600/R-93/116. The results of the laboratory analysis identifying ACM are presented in the table below:

Description of ACM	Location of Material	Total Quantity
12” by 12” Gray Floor Tile	Cashier/Waiting Area (FS-1)	371 SF
Floor Tile Mastic*	Cashier/Waiting Area (FS-1)	371 SF
9” by 9” Gray Floor Tile	Office (FS-7)	133 SF

*Contains <1% Chrysotile Asbestos.
SF = Square Feet

All sample results are summarized on Table 1 in Attachment 1. Due to the preparation of the sampled materials and the minute level of observation by the laboratory personnel, the descriptions in the analytical reports might not match the sample descriptions recorded by the Point Blue inspector in the field. Point Blue sample descriptions and locations should be used to identify materials that were sampled, and to correlate analytical results for the materials. The asbestos laboratory data is presented in Attachment 3.

Metals

Two paint chip samples were collected from suspect paint and submitted for analysis to SanAir Technologies Laboratory of Powhatan, Virginia. All samples were analyzed for the presence of lead and cadmium utilizing USEPA Method M3050B/6010C. Determination of suspect metals containing paint was based on visual examination and material age. Each of the paint samples were above the detection limit for lead and/or cadmium. The results of laboratory analysis are presented in the table below:

Sample Number	Location/Description of Material	Lead Analysis (mg/Kg)	Cadmium Analysis (mg/Kg)
PC-1	Repair Bays East Side (FS-2) – Red/White Paint	480	11
PC-2	Cashier/Waiting Area (FS-1) – White Paint	42	Non-Detect

The laboratory data for the metals analysis is presented in Attachment 4.

Universal Waste

Various hazardous building contents were identified within the former tire center structure which can be considered universal wastes at the time of disposal. Fluorescent lamps (electric lamps) were noted throughout the building, specifically in the repair bays, cashier/waiting area, office, and mezzanine. Various sized containers of new/used oil, battery cleaner, insecticide, paint, refrigerant, roof cement, and propane were also located throughout the structure. A listing of these items is presented in Table 2 in Attachment 1.

4.0 Regulatory Compliance and Regulations

The OSHA Asbestos Standard for Construction (29 CFR 1926.1101) requires that all structures covered by the standard must be inspected for asbestos-containing building materials (ACBM) prior to demolition. Prior inspection data may be suitable for this purpose if it complies with the requirements of the standard.

A pre-demolition survey/inspection must adhere to the NESHAP inspection protocol and be performed by a Michigan accredited asbestos building inspector or Certified Industrial Hygienist. The building survey must include the presence, location, and quantity of all suspected ACM. Laboratory analysis information must be a part of the building survey document. NESHAP regulations require the removal of all ACM that could become friable during the demolition process. Any material that would not be a source of asbestos fiber release may be left in the structures during demolition, but the resulting debris must be disposed of as ACM.

The Notification of Intent to Demolish form required by the NESHAP regulations must be prepared and submitted to the EGLE-Air Quality Division (AQD) at least 10 working days prior to demolition of a building, regardless of whether or not ACMs are present. A 10 working day notice is required if ACM is present and included for removal and the quantity is greater than 260 LF and/or 160 SF.

The Asbestos Abatement Contractors Licensing Act (i.e., Act 135, P.A. 1986, as amended) requires asbestos abatement contractors and exempt trade groups to notify the Michigan Department of Licensing and Regulatory Affairs (LARA) Asbestos Program of any asbestos abatement project exceeding 10 LF or 15 SF, or both, of friable ACM. This requires a 10 calendar day notice.

Universal waste materials and HHW should be properly removed, recycled, or disposed of in accordance with MAC R 2.99.9228 prior to any building renovation or demolition activities in areas where universal waste materials and HHW were identified.

5.0 Conclusions and Recommendations

The ACM identified in this report that will be disturbed during demolition activities are required to be removed prior to the commencement of the demolition activities. Asbestos abatement activity must be conducted in accordance with the requirements of the MIOSHA Asbestos in Construction Standard, Part 602, and the Asbestos NESHAP, 40 CFR Part 61. All ACM must be removed by a properly licensed asbestos abatement contractor. If any suspect ACM not identified within the report is encountered during renovation activities for which no analytical data exists, Point Blue recommends the material(s) remain undisturbed until the asbestos content of the material(s) is determined in accordance with USEPA and OSHA regulations.

The floor tile located in the cashier/waiting area (FS-1) and the floor tile located in the office area (FS-7) of the former tire center structure are considered an ACM. The ACM must be removed prior to demolition of the structure. It should be noted that the tile mastic located in the cashier/waiting area (FS-1) also contained <1% chrysotile. Although the mastic does not need to be disposed of as ACM, appropriate work practices and engineering controls must be in place to prevent exposure to asbestos (i.e., dust control, etc.).

Lead and cadmium were detected in each of the paint chip samples collected from the structure. The OSHA construction standard does not specifically list a lead or cadmium concentration that is considered a hazardous level. Building owners are obligated to inform any contractors that lead, or other regulated heavy metals were detected at the site and provide them with copies of the analytical reports. The employer of construction workers is required by MIOSHA standards to perform personal air monitoring for their employees depending on the scope of work when lead is present on a jobsite.

Various universal wastes were identified throughout the former tire center structure. Universal waste materials and HHW should be properly removed, recycled, or disposed of in accordance with MAC R 2.99.9228 prior to any building renovation or demolition activities in areas where universal waste materials and HHW were identified.

6.0 Limitations

Point Blue was retained by the City of Buchanan to perform a pre-demolition building inspection for asbestos, heavy metals in paint, and universal waste in the former tire center structure located at 708 South Red Bud Trail and the former garden center structure located at 111 Railroad Street in Buchanan, Michigan.

The specified areas were inspected to determine the location and nature of ACM and assessed in accordance with the provisions of the Asbestos NESHAP and current industry standards. The project areas were located within the structure and destructive sampling was conducted. Given the conditions of the survey, no unidentified material should remain.

The heavy metals in paint assessment was performed on surfaces that would be disturbed during demolition activities. Surfaces were selected that would adequately assess various paints present across the age of the structure.

The conclusions and recommendations are based on the conditions at the time of the sampling and analytical data provided from the sample analysis. This report is for the explicit use of the City of Buchanan. Other use is strictly prohibited without the written consent of Point Blue, LLC and the City of Buchanan.

Mark Turner
Project Manager
Accreditation Number A55236

Shea H. Muller
Project Engineer

Attachment 1

Tables

Table 1
Functional Space Summary - Asbestos
Former Tire Center
708 South Red Bud Trail
Buchanan, Michigan

Project No. C5130

Floor	FS	FS Name	Material Description	Quantity	Unit	Sample Number	Sample Result	Required Action	Notes/Location
1	FS-1	Cashier/Waiting Area	HA-1: 12" by 12" Red/White Floor Tile and Mastic	371	SF	HA-1	Non-Detect	None	Tile and mastic non-detect.
			HA-2: 12" by 12" Gray w/White Marbling Floor Tile and Mastic	371	SF	HA-2	2% Chrysotile	Remove before Demolition	
			HA-3: 12" by 12" Gray w/Black Marbling Floor Tile and Mastic	371	SF	HA-3	<1% Chrysotile	None	Mastic <1% Chrysotile ACM.
			HA-4: Concrete Slab Floor	371	SF	NA	None	None	
			HA-5: Concrete Block Wall	1,066	SF	NA	None	None	
			HA-6: Drywall Ceiling	371	SF	HA-9a	Non-Detect	None	
			HA-7: Wood Roof Joists	371	SF	NA	None	None	
	FS-2	Repair Bays East Side	HA-4: Concrete Slab Floor	812	SF	NA	None	None	
			HA-5: Concrete Block Wall	1,710	SF	NA	None	None	
			HA-8: Popcorn Over Dywall Ceiling	812	SF	HA-8	None	None	
			HA-6: Drywall Ceiling	812	SF	HA-9a	Non-Detect	None	
			HA-7: Wood Roof Joists	812	SF	None	None	None	
			HA-4: Wood Joist Ceiling	812	SF	None	None	None	
	FS-3	Sink Room	HA-4: Concrete Slab Floor	30	SF	NA	None	None	
			HA-5: Concrete Block Wall	119	SF	NA	None	None	
			HA-11: Wood Panel Walls	35	SF	NA	None	None	
			HA-7: Wood Roof Joists	30	SF	NA	None	None	
	FS-4	Storage Room	HA-4: Concrete Slab Floor	20	SF	NA	None	None	
			HA-5: Concrete Block Wall	35	SF	NA	None	None	
			HA-9: Drywall Walls	161	SF	HA-9a	Non-Detect	None	
			HA-10; Cellulose Board Ceiling	20	SF	NA	None	None	
			HA-7: Wood Roof Joists	20	SF	NA	None	None	
	FS-5	Hallway	HA-4: Concrete Slab Floor	105	SF	NA	None	None	
			HA-5: Concrete Block Wall	147	SF	NA	None	None	
			HA-11: Wood Panel Walls	147	SF	NA	None	None	
			HA-6: Drywall Ceiling	105	SF	HA-9a	Non-Detect	None	

Notes:
Samples collected by Point Blue, LLC on 15 February 2023.
Samples analyzed by SanAir Technologies Laboratory of Powhatan, Virginia and BDN Industrial Hygiene Consultants of Portage, Michigan.
Non-Detect - Asbestos was not detected in the sample.
FS - Functional Space.
NA - Not Applicable.
NQ - Not Quantified (Quantity of building material not calculated unless positive for asbestos)
SF - Square Feet.

pointblue

Table 1
Functional Space Summary - Asbestos
Former Tire Center
708 South Red Bud Trail
Buchanan, Michigan

Project No. C5130

Floor	FS	FS Name	Material Description	Quantity	Unit	Sample Number	Sample Result	Required Action	Notes/Location
1	FS-6	Parts Storage Room	HA-4: Concrete Slab Floor	990	SF	NA	None	None	
			HA-5: Concrete Block Wall	NQ	SF	NA	None	None	
			HA-11: Wood Panel Walls	294	SF	NA	None	None	
			HA-9: Drywall Walls	6,636	SF	HA-9b	Non-Detect	None	
			HA-6: Drywall Ceiling	990	SF	HA-9a	Non-Detect	None	
	FS-7	Office	HA-12: 9" by 9" Gray Floor Tile and Mastic	133	SF	HA-12	7% Chrysotile	Remove before Demolition	Mastic non-detect.
			HA-4: Concrete Slab Floor	133	SF	NA	None	None	
			HA-9: Drywall Walls	329	SF	HA-9b	Non-Detect	None	
			HA-6: Drywall Ceiling	133	SF	NA-9a	None	None	
	FS-8	Repair Bay West Side	HA-4: Concrete Slab Floor	774	SF	NA	None	None	
			HA-5: Concrete Block Wall	1,830	SF	NA	None	None	
			HA-7: Wood Roof Joists	774	SF	NA	None	None	
	FS-9	Mezzanine	HA-18: Wood Floor	NQ	SF	NA	None	None	
			HA-5: Concrete Block Wall	NQ	SF	NA	None	None	
			HA-7: Wood Roof Joists	NQ	SF	NA	None	None	
	FS-10	Bathroom	HA-4: Concrete Slab Floor	30	SF	NA	None	None	
			HA-13: Brown Faux Stone Linoleum and Mastic	30	SF	HA-13	Non-Detect	None	
			HA-5: Concrete Block Wall	119	SF	NA	None	None	
			HA-11: Wood Panel Walls	35	SF	NA	None	None	
			HA-14: 1' by 1' White Ceiling Tile	30	SF	HA-14	Non-Detect	None	
			HA-7: Wood Roof Joists	30	SF	NA	None	None	
	FS-11	Exterior	HA-15: Roof Flashing Cement	NQ	SF	HA-15	Non-Detect	None	
			HA-16: Roofing Material	3,575	SF	HA-16	Non-Detect	None	
			HA-17: Shingles	NQ	SF	HA-17	Non-Detect	None	

Notes:
Samples collected by Point Blue, LLC on 15 February 2023.
Samples analyzed by SanAir Technologies Laboratory of Powhatan, Virginia and DeLisle Associates LTD of Portage, Michigan.
Non-Detect - Asbestos was not detected in the sample.
FS - Functional Space.
NA - Not Applicable.
NQ - Not Quantified (Quantity of building material not calculated unless positive for asbestos)
SF - Square Feet.

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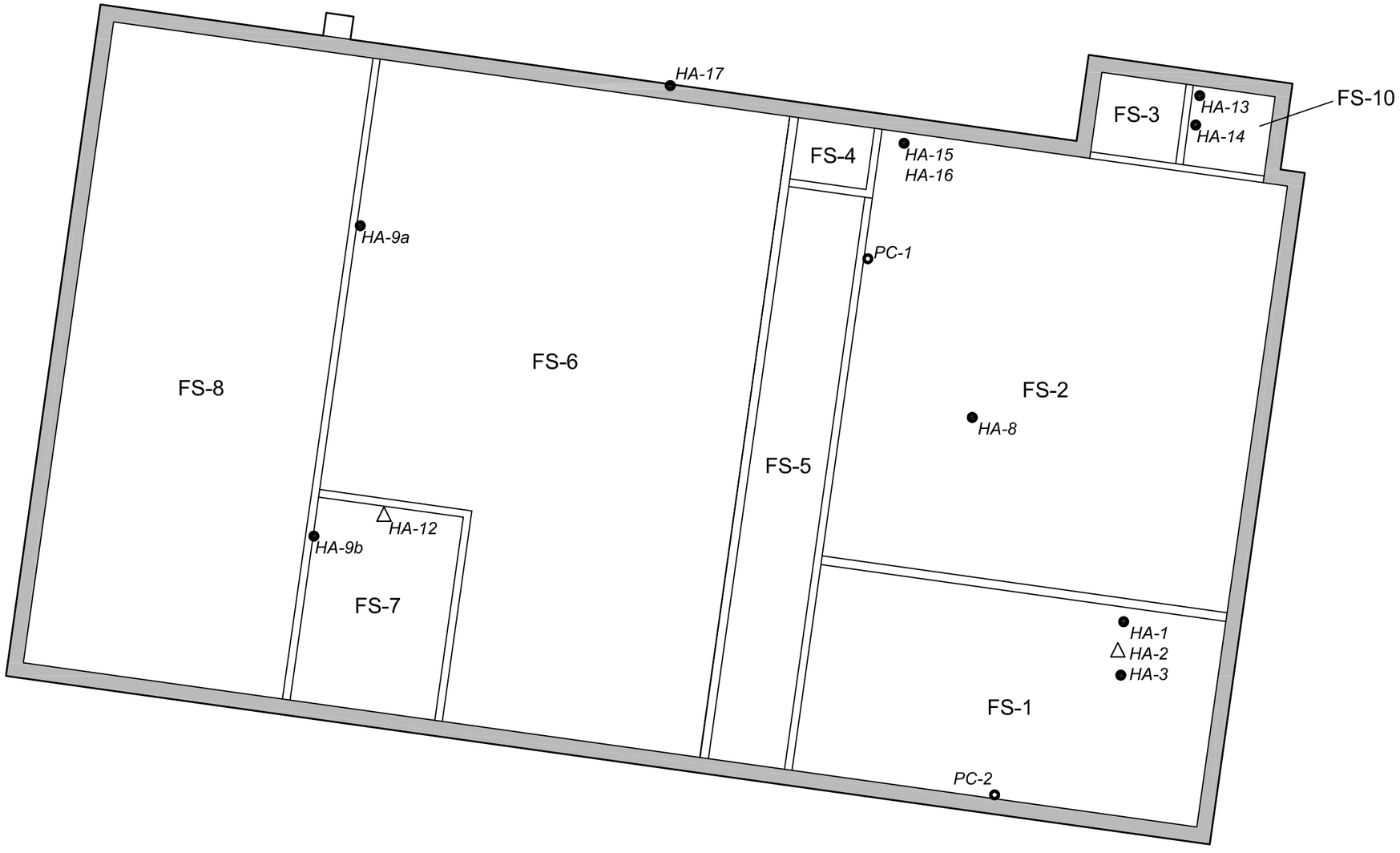
Table 2
Universal Waste Inventory
Former Tire Center
708 South Red Bud Trail
Buchanan, Michigan

Point Blue No. C5130

Material	Description	Location	Quantity
Electric Lamp, Fluorescent (and ballast)	12-foot Long	Repair Bays	8
Electric Lamp, Fluorescent (and ballast)	8-foot Long	Cashier/Waiting Room	12
Electric Lamp, Fluorescent (and ballast)	Less than 8-foot Long	Offices & Mezzanine	24
New/Used Oil	16-oz Container	Repair Bays and Mezzanine	10
New/Used Oil	1-gallon Container	Repair Bays	4
New/Used Oil	5-gallon Pail	Mezzanine	16
Battery Cleaner	12-oz Can	Repair Bays	2
Insecticide	20-oz Can	Repair Bays	3
Paint	1-gallon Can	Offices & Mezzanine	4
Refrigerant	Car and Truck (unmounted)	Garage Office	1
Air Conditioner	Window Mounted	Garage Office	1
Propane	20-lb Compressed Gas Cylinder	Attic	10
Roof Cement	5-gallon Container	Attic	3
Electric Lamp, Fluorescent (and ballast)	Building Mounted on Northwest Exterior Wall	Exterior	1
Rubber Tires	Car and Truck (unmounted)	Attic	15

Attachment 2

Figure



N
W E
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0 4 8
SCALE: 1" = 8'

LEGEND

- ● = SUSPECT ACM SAMPLE LOCATION
- △ = POSITIVE ACM SAMPLE LOCATION
- ○ = PAINT SAMPLE LOCATION

pointblue

FIGURE 1
SAMPLE LOCATION MAP

FORMER TIRE CENTER
708 SOUTH RED BUD TRAIL
BUCHANAN, MICHIGAN

REVISION		DATE: 2/27/23	APPROVED: MCS
DATE: 3/13/23	BY: MAT	DRAWN: NAT	JOB No: C5130

Attachment 3

Laboratory Analytical Results - Asbestos

DeLisle Associates LTD
Geologists • Industrial Hygienists • Educators

Asbestos Analytical Laboratory Report

AIHA Laboratory Identification # 101013

Name: Mark Turner
Point Blue, LLC
PO Box 304
St. Joseph, MI 49085

Lab No: 11079B
Job No: N/A
PO No: C5130
Date Received: February 17, 2023
Date Analyzed: February 21, 2023

Project Site: Baroda Tire Too

The samples submitted to this laboratory have been analyzed and the results are compiled in the table below.

Lab Sample #	Client Sample #	Client Sample Location	Client Sample Description	Laboratory Physical Description		Code *	Asbestos Identification	Non-Asbestos Fibrous Material	Non-Fibrous Material
77419	HA-8	Repair Bay	Popcorn Ceiling	Layer 1	White Fiber & Fill	A	None Detected	No Fibers Detected	Calcite Mica
				Layer 2	Gray Fiber & Fill		None Detected	No Fibers Detected	Calcite
77420	HA-9a	FS-6	Drywall & Mud	Drywall	White & Brown Fiber & Fill	A	None Detected	13% Cellulose	Gypsum
				Joint Compound	White Fiber & Fill		None Detected	8% Cellulose	Paint Calcite
77421	HA-9b	Office	Drywall & Mud	Drywall	White & Brown Fiber & Fill	A	None Detected	10% Cellulose	Gypsum
				Joint Compound	White Fiber & Fill		None Detected	4% Cellulose	Paint Calcite Perlite Mica

*Codes: **a.** Sample consisted of two or more layers; each layer was analyzed separately. **b.** Sample received wet; had to be dried prior to analysis. **c.** Sample was homogenized. **d.** Sample was ashed; some non-asbestos fibers, including cellulose may have been burned off in the process.

Analysis performed in accordance with EPA 600/R-93/116 for asbestos using polarized light microscopy (PLM). The percentage of each component is visually estimated by volume. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Fine fibers like those in floor tile may not be discernible by this method. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" results on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles. All samples are archived at the laboratory for 30 days after final analysis. At the end of this time, samples are automatically destroyed unless written notification is received. Samples can be archived or returned for a nominal fee. This report and its contents are only valid when reproduced in full. DeLisle maintains liability limited to cost of analysis.

The above report relates only to the items tested. Please contact me at (269) 373-4500 if you have any questions. It has been a pleasure assisting you.

Sincerely,
DeLisle Associates LTD

Greg Millgard
Laboratory Analyst

5050 S. Sprinkle Road, Portage, Michigan 49002
Phone 269.373.4500 Fax 269.373.1044
www.delisleassoc.net

Asbestos Bulk Chain of Custody

SEND TO: Attn: Laboratory
DeLisle Associates LTD
5050 S. Sprinkle Rd.
Portage, MI 49002
Phone (269) 373-4500 / Fax (269) 373-1044

Job Number: _____

Client P.O. #:	C5130	Phone Number:	269-934-3737
Client Name:	Point Blue, LLC	Fax Number:	N/A
Address:	P.O. Box 304	Project Site:	Baroda Tire Too
	St. Joseph, MI 49085	Contact Person:	Mark TURNER

	Sample Number	Sample Description	Location Sampled
1	HA-8	Popcorn Ceiling	Repair Bay
2	HA-9a	Drywall + Mud	FS-6
3	HA-9b	Drywall + Mud	Office

Date Sample(s) Sent to Lab: _____ ☐ Same Day ☐ 1 Business Day ☒ 2-5 Business Days

Comments: Sampled 2/15/23 Total Number of Samples: 3

Relinquished by: [signature] Date: 2/16/23 Time: 11:10 AM

Received by: [signature] Date: 2/17/23 Time: 12:07 am

Relinquished by: _____ Date: _____ Time: _____

Received by: _____ Date: _____ Time: _____

How do you want to receive your report? ☐ Call ☐ Fax ☐ Mail
☒ email mat@pointblu.com

SanAir Technologies Laboratory

The Identification Specialists

Analysis Report prepared for Point Blue, LLC

Report Date: 3/1/2023

Project Name: Baroda Tire Too

Project #: C5130

SanAir ID#: 23010114

NVLAP TESTING

NVLAP LAB CODE 200870-0

10501 Trade Court | North Chesterfield, Virginia 23236
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com

SanAir ID Number
23010114
FINAL REPORT
3/1/2023 10:23:24 AM

Name: Point Blue, LLC
Address: P.O. Box 304
St. Joseph, MI 49085
Phone: (269) 934-3737

Project Number: C5130
P.O. Number: C5130
Project Name: Baroda Tire Too
Collected Date: 2/15/2023
Received Date: 2/17/2023 10:10:00 AM

Dear Mark Turner,

We at SanAir would like to thank you for the work you recently submitted. The 9 sample(s) were received on Friday, February 17, 2023 via UPS. The final report(s) is enclosed for the following sample(s): HA-1, HA-2, HA-3, HA-12, HA-13, HA-14, HA-15, HA-16, HA-17.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:
- 9 samples in Good condition.

SanAir Technologies Laboratory

SanAir ID Number
23010114
FINAL REPORT
3/1/2023 10:23:24 AM

Name: Point Blue, LLC
Address: P.O. Box 304
St. Joseph, MI 49085
Phone: (269) 934-3737

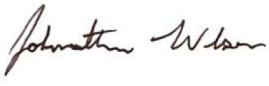
Project Number: C5130
P.O. Number: C5130
Project Name: Baroda Tire Too
Collected Date: 2/15/2023
Received Date: 2/17/2023 10:10:00 AM

Analyst: Hogrefe, Sarah

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
HA-1 / 23010114-001 12" By 12" Floor Tile W/ Mastic, Floor Tile	Red Non-Fibrous Homogeneous		100% Other	None Detected
HA-1 / 23010114-001 12" By 12" Floor Tile W/ Mastic, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected
HA-2 / 23010114-002 12" By 12" Marble Floor Tile W/ Mastic, Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
HA-2 / 23010114-002 12" By 12" Marble Floor Tile W/ Mastic, Floor Tile	Gray Non-Fibrous Homogeneous		98% Other	2% Chrysotile
HA-2 / 23010114-002 12" By 12" Marble Floor Tile W/ Mastic, Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
HA-3 / 23010114-003 12" By 12" Marble Floor Tile W/ Mastic, Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
HA-3 / 23010114-003 12" By 12" Marble Floor Tile W/ Mastic, Floor Tile	Gray Non-Fibrous Homogeneous		100% Other	None Detected
HA-3 / 23010114-003 12" By 12" Marble Floor Tile W/ Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile
HA-12 / 23010114-004 9"x9" Floor Tile W/ Mastic, Floor Tile	Gray Non-Fibrous Homogeneous		93% Other	7% Chrysotile
HA-12 / 23010114-004 9"x9" Floor Tile W/ Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected

Analyst: 
Analysis Date: 3/1/2023

Approved Signatory: 
Date: 3/1/2023

SanAir Technologies Laboratory

SanAir ID Number
23010114
FINAL REPORT
3/1/2023 10:23:24 AM

Name: Point Blue, LLC
Address: P.O. Box 304
St. Joseph, MI 49085
Phone: (269) 934-3737

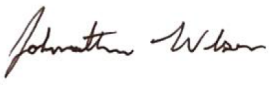
Project Number: C5130
P.O. Number: C5130
Project Name: Baroda Tire Too
Collected Date: 2/15/2023
Received Date: 2/17/2023 10:10:00 AM

Analyst: Hogrefe, Sarah

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
HA-13 / 23010114-005 Stone Linoleum	Brown Non-Fibrous Heterogeneous		100% Other	None Detected
HA-14 / 23010114-006 1' By 1' Ceiling Tile	White Fibrous Homogeneous	99% Cellulose	1% Other	None Detected
HA-15 / 23010114-007 Flashing Cement	Black Non-Fibrous Heterogeneous	15% Cellulose	85% Other	None Detected
HA-16 / 23010114-008 Roofing Material	Black Fibrous Homogeneous	85% Cellulose	15% Other	None Detected
HA-17 / 23010114-009 Shingle	Black Fibrous Homogeneous	10% Glass	90% Other	None Detected

Analyst: 
Analysis Date: 3/1/2023

Approved Signatory: 
Date: 3/1/2023

Disclaimer

This report is the sole property of the client named on the SanAir Technologies Laboratory chain-of-custody (COC). Results in the report are confidential information intended only for the use by the customer listed on the COC. Neither results nor reports will be discussed with or released to any third party without our client's written permission. The final report shall not be reproduced except in full without written approval of the laboratory to assure that parts of the report are not taken out of context. The information provided in this report applies only to the samples submitted and is relevant only for the date, time, and location of sampling. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample(s) in the condition in which they arrived at the laboratory and information provided by the client on the COC, such as: project number, project name, collection dates, po number, special instructions, samples collected by, sample numbers, sample identifications, sample type, selected analysis type, flow rate, total volume or area, and start stop times that may affect the validity of the results in this report. Samples were received in good condition unless otherwise noted on the report. SanAir assumes no responsibility or liability for the manner in which the results are used or interpreted. This report does not constitute and shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any other U.S. governmental agencies and may not be certified by every local, state, and federal regulatory agencies.

Samples are held for a period of 60 days. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations.

For NY state samples, method EPA 600/M4-82-020 is performed.

NYELAP Disclaimer:
Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Asbestos Certifications
NVLAP lab code 200870-0
City of Philadelphia: ALL-460
PA Department of Environmental Protection Number: 68-05397
California License Number: 2915
Colorado License Number: AL-23143
Connecticut License Number: PH-0105
Massachusetts License Number: AA000222
Maine License Number: LB-0075, LA-0084
New York ELAP lab ID: 11983
Rhode Island License Number: PCM00126, PLM00126, TEM00126
Texas Department of State Health Services License Number: 300440
Commonwealth of Virginia 3333000323
Washington State License Number: C989
West Virginia License Number: LT000616
Vermont License: AL166318
Louisiana Department of Environmental Quality: 212253, Cert 05088

Revision Date: 8/14/2020

SanAir Technologies Laboratory
10501 Trade Ct., Suite 100
N. Chesterfield, VA 23236
804.897.1177 / 888.895.1177
Fax 804.897.0070
sanair.com

Asbestos Chain of Custody

Form 140, Rev 7, 10/20/2022

SanAir ID Number: 23010114

Company: Point Blue, LLC	Project #: C5130	Collected by: Mark Turner
Address: P.O. Box 304	Project Name: Baroda Tire Too	Phone #: 269-934-3737
City, St., Zip: St. Joseph, MI 49085	Date Collected: 2/15/2023	Fax #: NA
State of Collection: MI Account#: 4123	P.O. Number: C5130	Email: mat@pointblu.com

Bulk

ABB	PLM EPA 600/R-93/116	☑
	Positive Stop	☐
ABEPA	PLM EPA 400 Point Count	☐
ABB1K	PLM EPA 1000 Point Count	☐
ABBEN	PLM EPA NOB**	☐
ABBCH	TEM Chatfield**	☐
ABBTM	TEM EPA NOB**	☐
ABQ	PLM Qualitative	☐

** Available on 24-hr. to 5-day TAT

Water

ABHE	EPA 100.2	☐

Air

ABA	PCM NIOSH 7400	☐
ABA-2	OSHA w/ TWA*	☐
ABTEM	TEM AHERA	☐
ABATN	TEM NIOSH 7402	☐
ABT2	TEM Level II	☐
Other:		☐

New York ELAP

ABEPA2	NY ELAP 198.1	☐
ABENY	NY ELAP 198.6 PLM NOB	☐
ABBNY	NY ELAP 198.4 TEM NOB	☐
	Positive Stop	☐

Soil

ABSE	PLM EPA 600/R-93/116 (Qual.)	☐

Vermiculite

ABB	PLM EPA 600/R-93/116	☐
ABEPA3	PLM EPA 400 Point Count	☐
ABCM	Cincinnati Method	☐

Dust

ABWA	TEM Wipe ASTM D-6480	☐
ABDMV	TEM Microvac ASTM D-5755	☐

Matrix	Other	
		☐

Turn Around Times				
	3 HR (4 HR TEM) ☐	6 HR (8HR TEM) ☐	12 HR ☐	1 Day ☐
	☐ 2 Days	☐ 3 Days	☐ 4 Days	■ 5 Days

Special Instructions

Sample #	Sample Identification/Location	Volume or Area	Sample Date	Flow Rate*	Start – Stop Time*	
HA-1	12" by 12" Red/White Floor Tile w/Mastic					
HA-2	12" by 12" Gray w/White Marble Floor Tile w/Mastic					
HA-3	12" by 12" Gray w/Black Marble Floor Tile w/Mastic					
HA-12	9" by 9" Gray Floor Tile w/Mastic					
HA-13	Brown Stone Linoleum					
HA-14	1' by 1' Ceiling Tile					
HA-15	Flashing Cement					
HA-16	Roofing Material					
HA-17	Shingle Brown/Black					

Relinquished by	Date	Time	Received by	Date	Time
[signature]	2/16/23	11:10 AM	IRM	2/17/23	10:10 am

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Ground and Next Day Air shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

Attachment 4

Laboratory Analytical Results - Paint Samples

SanAir Technologies Laboratory

Analysis Report

prepared for

Point Blue, LLC

Report Date: 2/24/2023
Project Name: Baroda Tire Too
Project #: C5130
SanAir ID#: 23010034

NVLAP LAB CODE 200870-0

Lab ID # 162952

Virginia SBE
Certification # 652931

Texas Licensed Mold Analysis Laboratory
License # LAB0166

SanAir Technologies Laboratory

804.897.1177 www.sanair.com

SanAir Technologies Laboratory, Inc.
10501 Trade Ct., N. Chesterfield, VA 23236
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

Point Blue, LLC
P.O. Box 304
St. Joseph, MI 49085

February 24, 2023

SanAir ID # 23010034
Project Name: Baroda Tire Too
Project Number: C5130

Dear Mark Turner,

We at SanAir would like to thank you for the work you recently submitted. The 2 sample(s) were received on Friday, February 17, 2023 via UPS. The final report(s) is enclosed for the following sample(s): PC-1, PC-2.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Abisola Kasali
Metals Laboratory Director
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample Conditions:
2 sample(s) in Good condition

SanAir Technologies Laboratory
10501 Trade Ct.
N. Chesterfield, VA 23236-3993
804.897.1177 / 888.895.1177
Fax 804.897.0070
sanair.com

Metals & Lead Chain of Custody

Form 70, Revision 11, 09/21/21

SanAir ID Number: 23010034 ~~2300~~ EA 2117123

Company: Point Blue, LLC	Project #: C5130	Phone #: 269-934-3737
Address: P.O. Box 304	Project Name: Baroda Tire Too	Phone #:
City, St., Zip: St. Joseph, MI 49085	Date Collected: 2-16-2023	Fax #:
Samples Collected By: Mark Turner	P.O. Number: C5130	Email: mat@pointblu.com
Account #: 4123	U.S. State Collected in: MI	Email:

Matrix Types

- ☐ **Air** (ug/m³)
- ☐ **Wipe** (ug/ft²)
- ☑ **Paint** ☐**Soil** ☐**Bulk** (ug/g or ppm)
- ☑ **Other:** Total Cadmium

Metals Analysis Types

- Total Concentration of Lead ☑
- Total Concentration of RCRA 8 Metals ☐
- TCLP for Lead ☐
- TCLP for RCRA 8 Metals ☐
- ☐ ICP-total concentration of metals (please list metals):

Turn Around Time				
	Same Day ☐	1 Day ☐	2 days ☐	3 Days ☐
	☐ 4 Days	☑ Standard (5 day)	☐ Other Test:	

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
PC-1	2/15/2023 2:00 PM	Red/White Paint Chip				
PC-2	2/15/2023 2:05 PM	White Paint Chip				

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
[signature]	2/16/23	11:10 AM	EA	2/17/23	10:10 AM

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Ground and Next Day Air shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

Page 1 of 1

Environmental Hazards Services, L.L.C.
7469 Whitepine Rd
Richmond, VA 23237
Telephone: 800.347.4010

Paint
Metals
Analysis Report

Client: San Air Technologies
10501 Trade Court
Richmond, VA 23236

Report Number: 23-02-03275

Received Date: 02/21/2023
Reported Date: 02/23/2023

Project/Test Address: 23010034

Client Number:
201219

Laboratory Results

Fax Number:

Lab Sample Number	Client Sample Number	Analyzed Date:	Analyte:	Concentration ppm (mg/kg)	Narrative ID
23-02-03275-001	PC-1	02/21/2023	Cadmium (Cd)	11	
			Lead (Pb)	480	
23-02-03275-002	PC-2	02/21/2023	Cadmium (Cd)	<1.0	
			Lead (Pb)	42	

Environmental Hazards Services, L.L.C

Client Number: 201219 Report Number: 23-02-03275
Project/Test Address: 23010034

Lab Sample Number	Client Sample Number	Analyzed Date:	Analyte:	Concentration ppm (mg/kg)	Narrative ID

Analyst: Carlos Gonzalez

Method: Mercury (Hg): EPA SW846 7471B
All other metals: EPA SW846 3050B/6010D

Reviewed By Authorized Signatory:

Tasha Eaddy

QA/QC Clerk

Sample Results denoted with a "less than" (<) sign contains less than the reporting limit for each particular metal, based on a 50mL volume. The reporting limit is 0.10 ug for Mercury, 0.5ug for Cadmium and Beryllium, 1ug for Arsenic and Thallium and 2.5ug for all other metals. To convert metals concentration (ppm) to % by weight, divide the above concentration by 10,000.

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the client. Unless otherwise noted, samples are reported without a dry weight correction. Sample location, description, area, volume, etc., was provided by the client. If the report does not contain the result for a field blank, it is due to the fact that the client did not include a field blank with their samples. These sample results do not reflect blank correction. This report shall not be reproduced except in full, without the written consent of Environmental Hazards Services, L.L.C. NY ELAP #11714.

LEGEND	ug = microgram	ppm = parts per million
	mL = milliliter	mg/kg = milligrams per kilogram

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

Company Name	SanAir Technologies Laboratory, Inc.	Account #	
Company Address	10501 Trade Court	City/State/Zip	N. Chesterfield, VA 23236
Phone	804-897-1177	Email	iaq@sanair.com; efowler@sanair.com; shicks@sanair.com; akasali@sanair.com
Project Name / Testing Address	23010034		
PO Number		Collected By	

Turn-Around Time: ○ 5 DAY ✓ 3 DAY ○ 2 DAY ○ 1 DAY ○ SAME DAY OR WEEKEND - Must Call Ahead

LAB NUMBER	Client Sample ID	Collection Date & Time	METALS: Pb TCLP	TCLP RCRA 8	RCRA 8 Total	Toxic Metal Profile	Welding Fume Profile	TX 11 TCLP	CA 17 Total	Other Metals	PARTICULATES: Total Nuisance Dust	Respirable Dust	TSP Gravimetric	TSP Pb	PM- 10	AIR: Total Time (Mins.)	Flow Rate (L/min.)	Vol. Total Liters	WIPES: AREA (Circle The Unit of Measurement Used: cm or in)
1	PC-1	2/16/23								Pb + Cd									X
2	PC-2	↓								↓									X
3																			X
4																			X
5																			X
6																			X
7																			X
8																			X
9																			X
10																			X
11																			X
12																			X
13																			X
14																			X
15																			X

Released By: Erin Fowler Date: 2/17/23 Time: 5:00pm

Signature: E. Fowler

LAB USE ONLY – BELOW THIS LINE

Received By: Amy Vejnar

Signature:

Date: 2/21/23 Time: 9:38 ☑ AM ☐ PM

☐ Portal Contact Added

23-02-03275

Due Date: 02/24/2023 (Friday)

AE 2Pb+Cd

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010

RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

APPENDIX E

Structures Dimensions and Descriptions

Table 1
Structures Dimensions and Descriptions
708 South Red Bud Trail and 111 Railroad Street
Buchanan, Michigan

Point Blue No. C5140

Structure	Diameter (ft)	Length (Y, ft)	Width (X, ft)	Height (Z, ft)	Area (ft^2)	Description & Building Materials
Grain Bin #1	14.02	-	-	41.33	154.38	Steel silo with concrete base
Grain Bin #2	14.02	-	-	42.47	154.38	Steel silo with concrete base
Grain Bin #3	14.02	-	-	42.47	154.38	Steel silo with concrete base
Grain Bin #4	14.02	-	-	41.33	154.38	Steel silo with concrete base
Grain Bin #5	14.02	-	-	32.55	154.38	Steel silo with concrete base
Grain Bin #6	14.02	-	-	32.55	154.38	Steel silo with concrete base
Grain Bin #7	16.74	-	-	42.81	220.09	Steel silo with concrete base
Grain Bin #8	16.74	-	-	42.81	220.09	Steel silo with concrete base
Grain Bin #9	33.02	-	-	45.38	856.34	Steel silo with concrete base
Grain Bin #10	33.02	-	-	52.32	856.34	Steel silo with concrete base
Molasses AST	8.87	-	-	19.88	61.79	Large plastic storage tank
Feed Bin #1	9.01	-	-	33.94	63.76	Steel silo on ground level
Feed Bin #2	12.05	-	-	29.92	114.04	Steel silo on ground level
Feed Bin #3	5.98	-	-	18.10	28.09	Steel silo on ground level
Feed Bin #4	9.13	-	-	27.50	65.47	Steel silo on ground level
Feed Bin #5	5.00	-	-	19.88	19.63	Steel silo on ground level
Feed Bin #6	7.00	-	-	28.42	38.48	Steel silo on ground level
Feed Bin #7	6.88	-	-	26.49	37.18	Steel silo on ground level
Feed Bin #8	12.26	-	-	46.87	118.05	Height of bin volume = 24.91' , steel grain bin, mounted above retail building porch
Square Hopper #1	-	14.88	14.88	52.45	221.41	Height of hopper volume = 30.35', elevated steel hopper mounted on steel supports
Square Hopper #2	-	6.33	12.48	34.00	79.00	Height of hopper volume = 16.83', elevated steel hopper mounted on steel supports
Elevator	-	22.55	20.33	64.35	458.44	Large tower with steel siding
Truck Dump	-	13.91	20.33	23.75	282.79	Steel sided structure with large garage door
Elevator Office & Electrical	-	12.80	20.33	NM	260.22	Small steel building
North Loading Bay	-	12.88	26.22	16.13	337.71	Concrete base with metal grate and steel covered roof
South Loading Bay	-	19.54	31.87	20.48	441.33	IR, Concrete pavement and loading dock, steel support beams, roof attached to retail building
Weigh Scale	-	86.96	12.34	-	1,074.88	Flat concrete pad
Feed Mill Building (Retail)	-	127.62	62.02	19.46	6,903.32	IR, Wood, concrete, and cinder block building with wood siding
Retail Front Porch	-	26.17	46.99	14.69	1,125.45	IR, Wooden covered porch with steel support beams
Dryer Fan Tower	-	12.13	25.03	NM	263.67	IR, Tall steel tower
Elevator Structure Base	-	34.96	85.87	3.50	2,451.67	IR, Large concrete platform supporting grain elevator structures

Notes:

- All values are estimated

- Heights measured against site assessment photos using https://eleif.net/photo_measure.html

AST = Aboveground storage tank

ft = Feet

ft^2 = Square feet

IR = Indicates structure with irregular shape. Area calculated from length and width and area given may not match. Assume area given is most accurate.

NM = Indicates dimension could not be estimated.

APPENDIX F

Soil Waste Characterization Laboratory Analytical Report

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

March 31, 2023

Mr. Mark Seaman
Point Blue, LLC
2600 S. Cleveland Ave.
St. Joseph, MI 49085

RE: Trace Project 23C0465
Client Project 111 Railroad

Dear Mr. Seaman:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAP Accreditation, Trace certifies that these test results meet all requirements of the NELAP Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAP at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink
Senior Project Manager
Enclosures

NJDEP Accreditation No. MI008

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

SAMPLE SUMMARY

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
23C0465-01	WC-Comp-1	Solid	Client	03/09/23	03/10/23 12:14

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

ANALYTICAL RESULTS

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

Trace ID: 23C0465-01 Matrix: Solid Date Collected: 03/09/23
Sample ID: WC-Comp-1 Date Received: 03/10/23 12:14

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TCLP										
Analysis Method: EPA 6010D										
Batch: T133779										
Arsenic	<0.30	mg/L	0.30	1	03/16/23	bjv	03/17/23	ckd		5.0
Barium	<1.0	mg/L	1.0	1	03/16/23	bjv	03/17/23	ckd		100
Cadmium	<0.10	mg/L	0.10	1	03/16/23	bjv	03/17/23	ckd		1.0
Chromium	<0.50	mg/L	0.50	1	03/16/23	bjv	03/17/23	ckd		5.0
Copper	<0.50	mg/L	0.50	1	03/16/23	bjv	03/17/23	ckd		
Lead	<0.50	mg/L	0.50	1	03/16/23	bjv	03/17/23	ckd		5.0
Selenium	<0.60	mg/L	0.60	1	03/16/23	bjv	03/17/23	ckd		1.0
Silver	<0.10	mg/L	0.10	1	03/16/23	bjv	03/17/23	ckd		5.0
Zinc	<0.50	mg/L	0.50	1	03/16/23	bjv	03/17/23	ckd		
Analysis Method: EPA 7470A										
Batch: T133714										
Mercury	<0.010	mg/L	0.010	1	03/15/23	bjv	03/16/23	acs		0.20
PESTICIDES/PCBS										
Analysis Method: EPA 8082A										
Batch: T133563										
Aroclor-1016	<330	ug/kg dry	330	1	03/13/23	kbc	03/14/23	av		
Aroclor-1221	<330	ug/kg dry	330	1	03/13/23	kbc	03/14/23	av		
Aroclor-1232	<330	ug/kg dry	330	1	03/13/23	kbc	03/14/23	av		
Aroclor-1242	<330	ug/kg dry	330	1	03/13/23	kbc	03/14/23	av		
Aroclor-1248	<330	ug/kg dry	330	1	03/13/23	kbc	03/14/23	av		
Aroclor-1254	<330	ug/kg dry	330	1	03/13/23	kbc	03/14/23	av		
Aroclor-1260	<330	ug/kg dry	330	1	03/13/23	kbc	03/14/23	av		
Surrogates:										
Tetrachloro-m-xylene	68	%	40-113	1	03/13/23	kbc	03/14/23	av		
Decachlorobiphenyl	56	%	32-111	1	03/13/23	kbc	03/14/23	av		
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270E										
Batch: T133807										

CERTIFICATE OF ANALYSIS

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

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ANALYTICAL RESULTS

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

Trace ID: 23C0465-01 Matrix: Solid Date Collected: 03/09/23
Sample ID: WC-Comp-1 Date Received: 03/10/23 12:14

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Bis(2-chloroethyl)ether	<100	ug/kg dry	100	2	03/17/23	kbc	03/21/23	avl		
2-Chlorophenol	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Phenol	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
1,3-Dichlorobenzene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
1,4-Dichlorobenzene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
1,2-Dichlorobenzene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Benzyl alcohol	<3300	ug/kg dry	3300	2	03/17/23	kbc	03/21/23	avl		
Bis(2-chloroisopropyl)ether	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2-Methylphenol (o-Cresol)	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
3,4-Methylphenol (m,p Cresol)	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
N-Nitrosodi-n-propylamine	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Hexachloroethane	<300	ug/kg dry	300	2	03/17/23	kbc	03/21/23	avl		
Nitrobenzene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Isophorone	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2-Nitrophenol	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2,4-Dimethylphenol	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Bis(2-chloroethoxy)methane	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Benzoic acid	<3300	ug/kg dry	3300	2	03/17/23	kbc	03/21/23	avl		
1,2,4-Trichlorobenzene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2,4-Dichlorophenol	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Naphthalene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
4-Chloroaniline	<500	ug/kg dry	500	2	03/17/23	kbc	03/21/23	avl		
Hexachlorobutadiene	<91	ug/kg dry	91	2	03/17/23	kbc	03/21/23	avl		
4-Chloro-3-methylphenol	<280	ug/kg dry	280	2	03/17/23	kbc	03/21/23	avl		
2-Methylnaphthalene	<500	ug/kg dry	500	2	03/17/23	kbc	03/21/23	avl		
Hexachlorocyclopentadiene	<410	ug/kg dry	410	2	03/17/23	kbc	03/21/23	avl		
2,4,6-Trichlorophenol	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2,4,5-Trichlorophenol	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2-Chloronaphthalene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2-Nitroaniline	<830	ug/kg dry	830	2	03/17/23	kbc	03/21/23	avl		
Dimethyl phthalate	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Acenaphthylene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2,6-Dinitrotoluene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		

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ANALYTICAL RESULTS

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

Trace ID: 23C0465-01 Matrix: Solid Date Collected: 03/09/23
Sample ID: WC-Comp-1 Date Received: 03/10/23 12:14

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
3-Nitroaniline	<830	ug/kg dry	830	2	03/17/23	kbc	03/21/23	avl		
Acenaphthene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Dibenzofuran	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
2,4-Dinitrotoluene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
4-Nitrophenol	<1600	ug/kg dry	1600	2	03/17/23	kbc	03/21/23	avl		
2,4-Dinitrophenol	<1600	ug/kg dry	1600	2	03/17/23	kbc	03/21/23	avl		
Diethyl phthalate	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Fluorene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
4-Chlorophenyl phenyl ether	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
4-Nitroaniline	<830	ug/kg dry	830	2	03/17/23	kbc	03/21/23	avl		
4,6-Dinitro-2-methylphenol	<830	ug/kg dry	830	2	03/17/23	kbc	03/21/23	avl		
N-Nitrosodiphenylamine	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
4-Bromophenyl phenyl ether	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Hexachlorobenzene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Pentachlorophenol	<860	ug/kg dry	860	2	03/17/23	kbc	03/21/23	avl		
Phenanthrene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Anthracene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Carbazole	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Di-n-butyl phthalate	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Fluoranthene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Pyrene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Butyl benzyl phthalate	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Chrysene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
3,3'-Dichlorobenzidine	<2000	ug/kg dry	2000	2	03/17/23	kbc	03/21/23	avl		
Bis(2-ethylhexyl)phthalate	<480	ug/kg dry	480	2	03/17/23	kbc	03/21/23	avl		
Di-n-octyl phthalate	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	2	03/17/23	kbc	03/21/23	avl		

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

Trace ID: 23C0465-01 Matrix: Solid Date Collected: 03/09/23
Sample ID: WC-Comp-1 Date Received: 03/10/23 12:14

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Surrogates:											
2-Fluorophenol	*	**27**	%	38-81	2	03/17/23	kbc	03/21/23	avl	314	
Phenol-d5	*	**30**	%	32-102	2	03/17/23	kbc	03/21/23	avl	314	
Nitrobenzene-d5		43	%	36-98	2	03/17/23	kbc	03/21/23	avl		
2-Fluorobiphenyl	*	**33**	%	44-105	2	03/17/23	kbc	03/21/23	avl	314	
2,4,6-Tribromophenol	*	**28**	%	38-101	2	03/17/23	kbc	03/21/23	avl	314	
Terphenyl-d14	*	**28**	%	46-109	2	03/17/23	kbc	03/21/23	avl	314	
PESTICIDES/PCBS											
Analysis Method: EPA 8081B											
Batch: T133681											
4,4'-DDT		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
4,4'-DDE		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
4,4'-DDD		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Aldrin		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
alpha-BHC		<12	ug/kg dry	12	1	03/15/23	kbc	03/15/23	av		
alpha-Chlordane		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
beta-BHC		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Chlordane		<30	ug/kg dry	30	1	03/15/23	kbc	03/15/23	av		
delta-BHC		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Dieldrin		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Endosulfan I		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Endosulfan II		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Endosulfan sulfate		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Endrin		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Endrin aldehyde		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Endrin ketone		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
gamma-BHC (Lindane)		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
gamma-Chlordane		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Heptachlor		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Heptachlor epoxide		<20	ug/kg dry	20	1	03/15/23	kbc	03/15/23	av		
Methoxychlor		<50	ug/kg dry	50	1	03/15/23	kbc	03/15/23	av		
Toxaphene		<200	ug/kg dry	200	1	03/15/23	kbc	03/15/23	av		

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ANALYTICAL RESULTS

Trace Project ID: 23C0465
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Trace ID: 23C0465-01 Matrix: Solid Date Collected: 03/09/23
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PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
PESTICIDES/PCBS										
Surrogates:										
Tetrachloro-m-xylene	40	%	39-104	1	03/15/23	kbc	03/15/23	av		
Decachlorobiphenyl	31	%	27-114	1	03/15/23	kbc	03/15/23	av		
VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8260D										
Batch: T133862										
Dichlorodifluoromethane	<250	ug/kg dry	250	50	03/18/23	nw	03/19/23	kl		
Chloromethane	<250	ug/kg dry	250	50	03/18/23	nw	03/19/23	kl		
Vinyl chloride	<56	ug/kg dry	56	50	03/18/23	nw	03/19/23	kl		
Bromomethane	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl		
Chloroethane	<250	ug/kg dry	250	50	03/18/23	nw	03/19/23	kl		
Trichlorofluoromethane	<100	ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
Diethyl ether	<280	ug/kg dry	280	50	03/18/23	nw	03/19/23	kl	N	
Tert-butyl alcohol	<3500	ug/kg dry	3500	50	03/18/23	nw	03/19/23	kl	N	
1,1-Dichloroethene	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Acetone	<1000	ug/kg dry	1000	50	03/18/23	nw	03/19/23	kl		
Iodomethane	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl	N	
Carbon disulfide	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl		
Methyl-tert-butyl ether	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl		
Methylene chloride	<250	ug/kg dry	250	50	03/18/23	nw	03/19/23	kl		
Acrylonitrile	<140	ug/kg dry	140	50	03/18/23	nw	03/19/23	kl		
trans-1,2-Dichloroethene	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
1,1-Dichloroethane	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Diisopropyl Ether	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl	N	
2-Butanone	<1000	ug/kg dry	1000	50	03/18/23	nw	03/19/23	kl		
cis-1,2-Dichloroethene	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
t-Butyl Ethyl Ether	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl	N	
Bromochloromethane	<100	ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
Tetrahydrofuran	<1400	ug/kg dry	1400	50	03/18/23	nw	03/19/23	kl	N	
Chloroform	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
1,1,1-Trichloroethane	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Carbon tetrachloride	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		

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ANALYTICAL RESULTS

Trace Project ID: 23C0465
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PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE ORGANIC COMPOUNDS BY GC-MS									
Benzene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
t-Amyl Methyl Ether	<350 ug/kg dry	350	50	03/18/23	nw	03/19/23	kl	N	
1,2-Dichloroethane	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Cyclohexane	<350 ug/kg dry	350	50	03/18/23	nw	03/19/23	kl	N	
Trichloroethene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
1,2-Dichloropropane	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Dibromomethane	<250 ug/kg dry	250	50	03/18/23	nw	03/19/23	kl		
Bromodichloromethane	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
cis-1,3-Dichloropropene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
4-Methyl-2-pentanone	<3500 ug/kg dry	3500	50	03/18/23	nw	03/19/23	kl		
Toluene	**100 ug/kg dry**	**100**	**50**	**03/18/23**	**nw**	**03/19/23**	**kl**		
trans-1,3-Dichloropropene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
1,1,2-Trichloroethane	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Tetrachloroethene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
2-Hexanone	<3500 ug/kg dry	3500	50	03/18/23	nw	03/19/23	kl		
Dibromochloromethane	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
1,2-Dibromoethane (EDB)	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Chlorobenzene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
1,1,1,2-Tetrachloroethane	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
Ethylbenzene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
m,p-Xylene	<140 ug/kg dry	140	50	03/18/23	nw	03/19/23	kl	N	
o-Xylene	**81 ug/kg dry**	**70**	**50**	**03/18/23**	**nw**	**03/19/23**	**kl**	**N**	
Xylenes, total	<210 ug/kg dry	210	50	03/18/23	nw	03/19/23	kl		
Styrene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Bromoform	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
Isopropylbenzene	<250 ug/kg dry	250	50	03/18/23	nw	03/19/23	kl		
1,1,2,2-Tetrachloroethane	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
1,2,3-Trichloropropane	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
trans-1,4-Dichloro-2-butene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
Bromobenzene	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
n-Propylbenzene	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
1,3,5-Trimethylbenzene	<100 ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
t-Butyl Benzene	<70 ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		

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ANALYTICAL RESULTS

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PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
VOLATILE ORGANIC COMPOUNDS BY GC-MS										
1,2,4-Trimethylbenzene	<100	ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
sec-Butylbenzene	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
p-Isopropyltoluene	<140	ug/kg dry	140	50	03/18/23	nw	03/19/23	kl		
1,3-Dichlorobenzene	<100	ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
1,4-Dichlorobenzene	<100	ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
n-Butylbenzene	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl		
1,2,3-Trimethylbenzene	<70	ug/kg dry	70	50	03/18/23	nw	03/19/23	kl	N	
1,2-Dichlorobenzene	<100	ug/kg dry	100	50	03/18/23	nw	03/19/23	kl		
1,2-Dibromo-3-chloropropane	<140	ug/kg dry	140	50	03/18/23	nw	03/19/23	kl		
Hexachloroethane	<140	ug/kg dry	140	50	03/18/23	nw	03/19/23	kl	N	
1,2,4-Trichlorobenzene	<330	ug/kg dry	330	50	03/18/23	nw	03/19/23	kl		
Naphthalene	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl		
1,2,3-Trichlorobenzene	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl		
2-Methylnaphthalene	<350	ug/kg dry	350	50	03/18/23	nw	03/19/23	kl	N	
Surrogates:										
1,2-Dichloroethane-d4	93	%	68-133	50	03/18/23	nw	03/19/23	kl		
Toluene-d8	103	%	75-120	50	03/18/23	nw	03/19/23	kl		
4-Bromofluorobenzene	105	%	69-119	50	03/18/23	nw	03/19/23	kl		
1,2-Dichlorobenzene-d4	102	%	72-127	50	03/18/23	nw	03/19/23	kl		
WET CHEMISTRY										
Analysis Method: ASTM D2974-07a										
Batch: T133568										
% Solids	**83**	**% by Wt.**	**0.10**	**1**	**03/13/23**	**aeo**	**03/13/23**	**aeo**	**N**	
Analysis Method: EPA 1010B										
Batch: T133790										
Flashpoint	> 200	°F	1.00	1	03/16/23	ljs	03/16/23	ljs		
Analysis Method: EPA 9045D										
Batch: T133544										
Corrosivity-pH	**7.89**			**1**	**03/10/23**	**ljs**	**03/10/23**	**ljs**		
pH measured at temperature (°C)	**21.3**			**1**	**03/10/23**	**ljs**	**03/10/23**	**ljs**	**N**	

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ANALYTICAL RESULTS

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

Trace ID: 23C0465-01 Matrix: Solid Date Collected: 03/09/23
Sample ID: WC-Comp-1 Date Received: 03/10/23 12:14

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA Chapter 7.3										
Batch: T133826										
Cyanide, Reactive	<0.50	mg/kg dry	0.50	1	03/17/23	jh	03/17/23	jh		
Sulfide, Reactive	<5.0	mg/kg dry	5.0	1	03/17/23	jh	03/17/23	jh	N	

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QUALITY CONTROL RESULTS

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133779
QC Batch Method: EPA 3015 Microwave Assisted Digestions for Liquids

Analysis Description: Arsenic, TCLP
Analysis Method: EPA 6010D

METHOD BLANK: T133779-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.10	0.10	
Arsenic	mg/L	<0.30	0.30	
Barium	mg/L	<1.0	1.0	
Cadmium	mg/L	<0.10	0.10	
Chromium	mg/L	<0.50	0.50	
Copper	mg/L	<0.50	0.50	
Lead	mg/L	<0.50	0.50	
Selenium	mg/L	<0.60	0.60	
Zinc	mg/L	<0.50	0.50	

METHOD BLANK: T133779-BLK2

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.10	0.10	
Arsenic	mg/L	<0.30	0.30	
Barium	mg/L	<1.0	1.0	
Cadmium	mg/L	<0.10	0.10	
Chromium	mg/L	<0.50	0.50	
Copper	mg/L	<0.50	0.50	
Lead	mg/L	<0.50	0.50	
Selenium	mg/L	<0.60	0.60	
Zinc	mg/L	<0.50	0.50	

LABORATORY CONTROL SAMPLE: T133779-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.0278	<0.10	89	80-120	
Arsenic	**mg/L**	**0.0556**	**<0.30**	**140**	**80-120**	**112**
Barium	mg/L	0.889	<1.0	100	80-120	
Cadmium	mg/L	0.0278	<0.10	98	80-120	
Chromium	mg/L	0.0278	<0.50	100	80-120	
Copper	mg/L	0.889	0.888	100	80-120	
Lead	mg/L	0.0556	<0.50	98	80-120	

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LABORATORY CONTROL SAMPLE: T133779-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Selenium	mg/L	0.0556	<0.60	105	80-120	
Zinc	mg/L	0.889	0.900	101	80-120	

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133714
QC Batch Method: EPA 7470A Prep
Analysis Description: Mercury, TCLP
Analysis Method: EPA 7470A

METHOD BLANK: T133714-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.010	0.010	

METHOD BLANK: T133714-BLK2

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.010	0.010	

LABORATORY CONTROL SAMPLE: T133714-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	<0.010	98	80-120	

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133622
QC Batch Method: Leaching proceedures
Analysis Description: TCLP Extraction, Metals
Analysis Method: EPA 1311

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133563
QC Batch Method: EPA 3550C Ultrasonic Extraction
Analysis Description: PCBs
Analysis Method: EPA 8082A

METHOD BLANK: T133563-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1016	ug/kg wet	<330	330	
Aroclor-1221	ug/kg wet	<330	330	
Aroclor-1232	ug/kg wet	<330	330	

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METHOD BLANK: T133563-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1242	ug/kg wet	<330	330	
Aroclor-1248	ug/kg wet	<330	330	
Aroclor-1254	ug/kg wet	<330	330	
Aroclor-1260	ug/kg wet	<330	330	
Tetrachloro-m-xylene (S)	%	101	40-113	
Decachlorobiphenyl (S)	%	96	32-111	

LABORATORY CONTROL SAMPLE: T133563-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1016	ug/kg wet	533	575	108	37-132	
Aroclor-1260	ug/kg wet	533	593	111	48-130	
Tetrachloro-m-xylene (S)	**%**	**33.3**	**39.7**	**119**	**40-113**	**312.5**
Decachlorobiphenyl (S)	%	33.3	34.9	105	32-111	

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133681
QC Batch Method: EPA 3550C Ultrasonic Extraction
Analysis Description: Pesticides, Organochlorine
Analysis Method: EPA 8081B

METHOD BLANK: T133681-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
4,4'-DDT	ug/kg wet	<20	20	
4,4'-DDE	ug/kg wet	<20	20	
4,4'-DDD	ug/kg wet	<20	20	
Aldrin	ug/kg wet	<20	20	
alpha-BHC	ug/kg wet	<10	10	
alpha-Chlordane	ug/kg wet	<20	20	
beta-BHC	ug/kg wet	<20	20	
Chlordane	ug/kg wet	<30	30	
delta-BHC	ug/kg wet	<20	20	
Dieldrin	ug/kg wet	<20	20	
Endosulfan I	ug/kg wet	<20	20	
Endosulfan II	ug/kg wet	<20	20	
Endosulfan sulfate	ug/kg wet	<20	20	
Endrin	ug/kg wet	<20	20	
Endrin aldehyde	ug/kg wet	<20	20	
Endrin ketone	ug/kg wet	<20	20	
gamma-BHC (Lindane)	ug/kg wet	<20	20	
gamma-Chlordane	ug/kg wet	<20	20	
Heptachlor	ug/kg wet	<20	20	

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METHOD BLANK: T133681-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Heptachlor epoxide	ug/kg wet	<20	20	
Methoxychlor	ug/kg wet	<50	50	
Toxaphene	ug/kg wet	<170	170	
Tetrachloro-m-xylene (S)	%	54	39-104	
Decachlorobiphenyl (S)	%	55	27-114	

LABORATORY CONTROL SAMPLE: T133681-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
4,4'-DDT	ug/kg wet	16.7	<20	66	45-121	
4,4'-DDE	ug/kg wet	16.7	<20	61	50-120	
4,4'-DDD	ug/kg wet	16.7	<20	58	47-118	
Aldrin	ug/kg wet	16.7	<20	53	37-121	
alpha-BHC	ug/kg wet	16.7	<10	50	48-111	
alpha-Chlordane	ug/kg wet	16.7	<20	55	50-117	
beta-BHC	ug/kg wet	16.7	<20	58	50-109	
delta-BHC	ug/kg wet	16.7	<20	52	47-117	
Dieldrin	ug/kg wet	16.7	<20	61	39-117	
Endosulfan I	ug/kg wet	16.7	<20	54	44-112	
Endosulfan II	ug/kg wet	16.7	<20	61	38-113	
Endosulfan sulfate	ug/kg wet	16.7	<20	60	30-129	
Endrin	ug/kg wet	16.7	<20	70	47-113	
Endrin aldehyde	ug/kg wet	16.7	<20	50	15-104	
Endrin ketone	ug/kg wet	16.7	<20	56	40-116	
gamma-BHC (Lindane)	ug/kg wet	16.7	<20	52	36-121	
gamma-Chlordane	ug/kg wet	16.7	<20	57	38-122	
Heptachlor	**ug/kg wet**	**16.7**	**<20**	**48**	**50-112**	**105**
Heptachlor epoxide	ug/kg wet	16.7	<20	57	44-119	
Methoxychlor	ug/kg wet	16.7	<50	65	42-114	
Tetrachloro-m-xylene (S)	%	33.3	20.1	60	39-104	
Decachlorobiphenyl (S)	%	33.3	21.0	63	27-114	

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133682
QC Batch Method: EPA 3550C Ultrasonic Extraction
Analysis Description: Semi-volatiles, TCL list
Analysis Method: EPA 8270E

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

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QC Batch: T133807
QC Batch Method: EPA 3550C Ultrasonic Extraction
Analysis Description: Semi-volatiles, TCL list
Analysis Method: EPA 8270E

METHOD BLANK: T133807-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Bis(2-chloroethyl)ether	ug/kg wet	<100	100	
2-Chlorophenol	ug/kg wet	<330	330	
Phenol	ug/kg wet	<330	330	
1,3-Dichlorobenzene	ug/kg wet	<330	330	
1,4-Dichlorobenzene	ug/kg wet	<330	330	
1,2-Dichlorobenzene	ug/kg wet	<330	330	
Benzyl alcohol	ug/kg wet	<3300	3300	
Bis(2-chloroisopropyl)ether	ug/kg wet	<330	330	
2-Methylphenol (o-Cresol)	ug/kg wet	<330	330	
3,4-Methylphenol (m,p Cresol)	ug/kg wet	<330	330	
N-Nitrosodi-n-propylamine	ug/kg wet	<330	330	
Hexachloroethane	ug/kg wet	<300	300	
Nitrobenzene	ug/kg wet	<330	330	
Isophorone	ug/kg wet	<330	330	
2-Nitrophenol	ug/kg wet	<330	330	
2,4-Dimethylphenol	ug/kg wet	<330	330	
Bis(2-chloroethoxy)methane	ug/kg wet	<330	330	
Benzoic acid	ug/kg wet	<3300	3300	
1,2,4-Trichlorobenzene	ug/kg wet	<330	330	
2,4-Dichlorophenol	ug/kg wet	<330	330	
Naphthalene	ug/kg wet	<330	330	
4-Chloroaniline	ug/kg wet	<330	330	
Hexachlorobutadiene	ug/kg wet	<50	50	
4-Chloro-3-methylphenol	ug/kg wet	<280	280	
2-Methylnaphthalene	ug/kg wet	<330	330	
Hexachlorocyclopentadiene	ug/kg wet	<330	330	
2,4,6-Trichlorophenol	ug/kg wet	<330	330	
2,4,5-Trichlorophenol	ug/kg wet	<330	330	
2-Chloronaphthalene	ug/kg wet	<330	330	
2-Nitroaniline	ug/kg wet	<830	830	
Dimethyl phthalate	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
2,6-Dinitrotoluene	ug/kg wet	<330	330	
3-Nitroaniline	ug/kg wet	<830	830	
Acenaphthene	ug/kg wet	<330	330	
Dibenzofuran	ug/kg wet	<330	330	
2,4-Dinitrotoluene	ug/kg wet	<330	330	
4-Nitrophenol	ug/kg wet	<830	830	
2,4-Dinitrophenol	ug/kg wet	<830	830	
Diethyl phthalate	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	

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METHOD BLANK: T133807-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
4-Chlorophenyl phenyl ether	ug/kg wet	<330	330	
4-Nitroaniline	ug/kg wet	<830	830	
4,6-Dinitro-2-methylphenol	ug/kg wet	<830	830	
N-Nitrosodiphenylamine	ug/kg wet	<330	330	
4-Bromophenyl phenyl ether	ug/kg wet	<330	330	
Hexachlorobenzene	ug/kg wet	<330	330	
Pentachlorophenol	ug/kg wet	<800	800	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Carbazole	ug/kg wet	<330	330	
Di-n-butyl phthalate	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Butyl benzyl phthalate	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
3,3'-Dichlorobenzidine	ug/kg wet	<2000	2000	
Bis(2-ethylhexyl)phthalate	ug/kg wet	<330	330	
Di-n-octyl phthalate	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	
2-Fluorophenol (S)	%	73	38-81	
Phenol-d5 (S)	%	78	32-102	
Nitrobenzene-d5 (S)	%	75	36-98	
2-Fluorobiphenyl (S)	%	76	44-105	
2,4,6-Tribromophenol (S)	%	80	38-101	
Terphenyl-d14 (S)	%	79	46-109	

LABORATORY CONTROL SAMPLE: T133807-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bis(2-chloroethyl)ether	ug/kg wet	3330	2520	76	49-95	
2-Chlorophenol	ug/kg wet	3330	2450	74	49-93	
Phenol	ug/kg wet	3330	2540	76	40-90	
1,3-Dichlorobenzene	ug/kg wet	3330	2440	73	52-88	
1,4-Dichlorobenzene	ug/kg wet	3330	2410	72	37-106	
1,2-Dichlorobenzene	ug/kg wet	3330	2440	73	50-88	
Bis(2-chloroisopropyl)ether	ug/kg wet	3330	2590	78	47-97	
2-Methylphenol (o-Cresol)	ug/kg wet	3330	2700	81	40-105	

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LABORATORY CONTROL SAMPLE: T133807-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
3,4-Methylphenol (m,p Cresol)	ug/kg wet	3330	2560	77	40-105	
N-Nitrosodi-n-propylamine	ug/kg wet	3330	2750	82	51-106	
Hexachloroethane	ug/kg wet	3330	2590	78	52-96	
Nitrobenzene	ug/kg wet	3330	2750	82	55-95	
Isophorone	ug/kg wet	3330	2760	83	52-93	
2-Nitrophenol	ug/kg wet	3330	2780	83	40-168	
2,4-Dimethylphenol	ug/kg wet	3330	2490	75	16-80	
Bis(2-chloroethoxy)methane	ug/kg wet	3330	2610	78	46-100	
1,2,4-Trichlorobenzene	ug/kg wet	3330	2480	74	49-100	
2,4-Dichlorophenol	ug/kg wet	3330	2550	77	58-115	
Naphthalene	ug/kg wet	3330	2560	77	59-91	
4-Chloroaniline	ug/kg wet	3330	2440	73	10-100	
Hexachlorobutadiene	ug/kg wet	3330	2530	76	56-97	
4-Chloro-3-methylphenol	ug/kg wet	3330	2860	86	50-96	
2-Methylnaphthalene	ug/kg wet	3330	2480	74	45-105	
Hexachlorocyclopentadiene	ug/kg wet	3330	2510	75	25-105	
2,4,6-Trichlorophenol	ug/kg wet	3330	2740	82	63-116	
2,4,5-Trichlorophenol	ug/kg wet	3330	2630	79	50-110	
2-Chloronaphthalene	ug/kg wet	3330	2650	80	54-96	
2-Nitroaniline	ug/kg wet	3330	2910	87	25-110	
Dimethyl phthalate	ug/kg wet	3330	2690	81	61-105	
Acenaphthylene	ug/kg wet	3330	2570	77	49-94	
2,6-Dinitrotoluene	ug/kg wet	3330	2860	86	47-148	
3-Nitroaniline	ug/kg wet	3330	2590	78	25-110	
Acenaphthene	ug/kg wet	3330	2710	81	52-105	
Dibenzofuran	ug/kg wet	3330	2550	76	50-105	
2,4-Dinitrotoluene	ug/kg wet	3330	2830	85	51-108	
4-Nitrophenol	ug/kg wet	3330	2960	89	22-112	
2,4-Dinitrophenol	ug/kg wet	3330	2640	79	56-159	
Diethyl phthalate	ug/kg wet	3330	2750	82	58-104	
Fluorene	ug/kg wet	3330	2760	83	58-106	
4-Chlorophenyl phenyl ether	ug/kg wet	3330	2640	79	59-104	
4-Nitroaniline	ug/kg wet	3330	2730	82	35-115	
4,6-Dinitro-2-methylphenol	ug/kg wet	3330	2690	81	65-149	
4-Bromophenyl phenyl ether	ug/kg wet	3330	2620	79	62-110	
Hexachlorobenzene	ug/kg wet	3330	2690	81	64-101	
Pentachlorophenol	ug/kg wet	3330	2760	83	30-111	
Phenanthrene	ug/kg wet	3330	2700	81	61-108	
Anthracene	ug/kg wet	3330	2840	85	57-106	
Carbazole	ug/kg wet	3330	2750	82	45-115	
Di-n-butyl phthalate	ug/kg wet	3330	2760	83	57-109	

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LABORATORY CONTROL SAMPLE: T133807-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Fluoranthene	ug/kg wet	3330	2710	81	54-129	
Pyrene	ug/kg wet	3330	2470	74	47-114	
Butyl benzyl phthalate	ug/kg wet	3330	2800	84	60-116	
Benzo (a) anthracene	ug/kg wet	3330	2680	80	58-114	
Chrysene	ug/kg wet	3330	2770	83	52-123	
Bis(2-ethylhexyl)phthalate	ug/kg wet	3330	2880	86	49-121	
Di-n-octyl phthalate	ug/kg wet	3330	2980	90	50-146	
Benzo (b) fluoranthene	ug/kg wet	3330	2830	85	47-142	
Benzo (k) fluoranthene	ug/kg wet	3330	2760	83	53-126	
Benzo (a) pyrene	ug/kg wet	3330	2920	87	56-121	
Indeno (1,2,3-cd) pyrene	ug/kg wet	3330	2910	87	51-123	
Dibenz (a,h) anthracene	ug/kg wet	3330	3270	98	52-131	
Benzo (g,h,i) perylene	ug/kg wet	3330	2980	90	45-116	
2-Fluorophenol (S)	%	3330	2500	75	38-81	
Phenol-d5 (S)	%	3330	2740	82	32-102	
Nitrobenzene-d5 (S)	%	3330	2780	83	36-98	
2-Fluorobiphenyl (S)	%	3370	2690	80	44-105	
2,4,6-Tribromophenol (S)	%	3330	2810	84	38-101	
Terphenyl-d14 (S)	%	3330	2460	74	46-109	

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133862
QC Batch Method: EPA 5035A Purge-and-Trap for Solids and Wastes

Analysis Description: Volatiles, Full MDEQ+ List
Analysis Method: EPA 8260D

METHOD BLANK: T133862-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Dichlorodifluoromethane	ug/kg wet	<250	250	
Chloromethane	ug/kg wet	<250	250	
Vinyl chloride	ug/kg wet	<40	40	
Bromomethane	ug/kg wet	<200	200	
Chloroethane	ug/kg wet	<250	250	
Trichlorofluoromethane	ug/kg wet	<100	100	
Diethyl ether	ug/kg wet	<200	200	
Tert-butyl alcohol	ug/kg wet	<2500	2500	
1,1-Dichloroethene	ug/kg wet	<50	50	
Acetone	ug/kg wet	<1000	1000	
Iodomethane	ug/kg wet	<100	100	
Carbon disulfide	ug/kg wet	<250	250	
Methyl-tert-butyl ether	ug/kg wet	<250	250	

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METHOD BLANK: T133862-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Methylene chloride	ug/kg wet	<250	250	
Acrylonitrile	ug/kg wet	<100	100	
trans-1,2-Dichloroethene	ug/kg wet	<50	50	
1,1-Dichloroethane	ug/kg wet	<50	50	
Diisopropyl Ether	ug/kg wet	<250	250	
2-Butanone	ug/kg wet	<750	750	
cis-1,2-Dichloroethene	ug/kg wet	<50	50	
t-Butyl Ethyl Ether	ug/kg wet	<250	250	
Bromochloromethane	ug/kg wet	<100	100	
Tetrahydrofuran	ug/kg wet	<1000	1000	
Chloroform	ug/kg wet	<50	50	
1,1,1-Trichloroethane	ug/kg wet	<50	50	
Carbon tetrachloride	ug/kg wet	<50	50	
Benzene	ug/kg wet	<50	50	
t-Amyl Methyl Ether	ug/kg wet	<250	250	
1,2-Dichloroethane	ug/kg wet	<50	50	
Cyclohexane	ug/kg wet	<250	250	
Trichloroethene	ug/kg wet	<50	50	
1,2-Dichloropropane	ug/kg wet	<50	50	
Dibromomethane	ug/kg wet	<250	250	
Bromodichloromethane	ug/kg wet	<100	100	
cis-1,3-Dichloropropene	ug/kg wet	<50	50	
4-Methyl-2-pentanone	ug/kg wet	<2500	2500	
Toluene	ug/kg wet	<100	100	
trans-1,3-Dichloropropene	ug/kg wet	<50	50	
1,1,2-Trichloroethane	ug/kg wet	<50	50	
Tetrachloroethene	ug/kg wet	<50	50	
2-Hexanone	ug/kg wet	<2500	2500	
Dibromochloromethane	ug/kg wet	<100	100	
1,2-Dibromoethane (EDB)	ug/kg wet	<50	50	
Chlorobenzene	ug/kg wet	<50	50	
1,1,1,2-Tetrachloroethane	ug/kg wet	<100	100	
Ethylbenzene	ug/kg wet	<50	50	
m,p-Xylene	ug/kg wet	<100	100	
o-Xylene	ug/kg wet	<50	50	
Xylenes, total	ug/kg wet	<150	150	
Styrene	ug/kg wet	<50	50	
Bromoform	ug/kg wet	<100	100	
Isopropylbenzene	ug/kg wet	<250	250	
1,1,2,2-Tetrachloroethane	ug/kg wet	<50	50	
1,2,3-Trichloropropane	ug/kg wet	<100	100	
trans-1,4-Dichloro-2-butene	ug/kg wet	<50	50	
Bromobenzene	ug/kg wet	<100	100	
n-Propylbenzene	ug/kg wet	<100	100	

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METHOD BLANK: T133862-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
1,3,5-Trimethylbenzene	ug/kg wet	<100	100	
t-Butyl Benzene	ug/kg wet	<50	50	
1,2,4-Trimethylbenzene	ug/kg wet	<100	100	
sec-Butylbenzene	ug/kg wet	<50	50	
p-Isopropyltoluene	ug/kg wet	<100	100	
1,3-Dichlorobenzene	ug/kg wet	<100	100	
1,4-Dichlorobenzene	ug/kg wet	<100	100	
n-Butylbenzene	ug/kg wet	<50	50	
1,2,3-Trimethylbenzene	ug/kg wet	<50	50	
1,2-Dichlorobenzene	ug/kg wet	<100	100	
1,2-Dibromo-3-chloropropane	ug/kg wet	<100	100	
Hexachloroethane	ug/kg wet	<100	100	
1,2,4-Trichlorobenzene	ug/kg wet	<330	330	
Naphthalene	ug/kg wet	<330	330	
1,2,3-Trichlorobenzene	ug/kg wet	<250	250	
2-Methylnaphthalene	ug/kg wet	<330	330	
1,2-Dichloroethane-d4 (S)	%	101	68-133	
Toluene-d8 (S)	%	103	75-120	
4-Bromofluorobenzene (S)	%	99	69-119	
1,2-Dichlorobenzene-d4 (S)	%	102	72-127	

LABORATORY CONTROL SAMPLE: T133862-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Dichlorodifluoromethane	ug/kg wet	50.0	<250	87	46-153	
Chloromethane	ug/kg wet	50.0	<250	85	42-162	
Vinyl chloride	ug/kg wet	50.0	45.9	92	47-184	
Bromomethane	ug/kg wet	50.0	<200	85	34-189	
Chloroethane	ug/kg wet	50.0	<250	91	74-151	
Trichlorofluoromethane	ug/kg wet	50.0	<100	95	71-172	
Diethyl ether	ug/kg wet	50.0	<200	95	50-150	
Tert-butyl alcohol	ug/kg wet	250	<2500	92	50-150	
1,1-Dichloroethene	ug/kg wet	50.0	<50	95	64-156	
Acetone	ug/kg wet	50.0	<1000	105	70-130	
Iodomethane	ug/kg wet	50.0	<100	85	70-130	
Carbon disulfide	ug/kg wet	50.0	<250	95	70-130	
Methyl-tert-butyl ether	ug/kg wet	50.0	<250	92	50-150	
Methylene chloride	ug/kg wet	50.0	<250	88	38-167	
Acrylonitrile	ug/kg wet	50.0	<100	95	50-150	
trans-1,2-Dichloroethene	ug/kg wet	50.0	<50	93	62-142	
1,1-Dichloroethane	ug/kg wet	50.0	<50	95	62-120	
Diisopropyl Ether	ug/kg wet	50.0	<250	98	50-150	

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LABORATORY CONTROL SAMPLE: T133862-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
2-Butanone	ug/kg wet	50.0	<750	92	70-130	
cis-1,2-Dichloroethene	ug/kg wet	50.0	<50	97	80-120	
t-Butyl Ethyl Ether	ug/kg wet	50.0	<250	97	50-150	
Bromochloromethane	ug/kg wet	50.0	<100	95	80-120	
Tetrahydrofuran	ug/kg wet	50.0	<1000	91	50-150	
Chloroform	ug/kg wet	50.0	<50	95	80-120	
1,1,1-Trichloroethane	ug/kg wet	50.0	<50	93	83-128	
Carbon tetrachloride	ug/kg wet	50.0	<50	94	79-141	
Benzene	ug/kg wet	50.0	<50	97	80-120	
t-Amyl Methyl Ether	ug/kg wet	50.0	<250	91	50-150	
1,2-Dichloroethane	ug/kg wet	50.0	<50	85	80-120	
Cyclohexane	ug/kg wet	50.0	<250	97	50-150	
Trichloroethene	ug/kg wet	50.0	<50	94	69-133	
1,2-Dichloropropane	ug/kg wet	50.0	<50	94	80-120	
Dibromomethane	ug/kg wet	50.0	<250	92	80-120	
Bromodichloromethane	ug/kg wet	50.0	<100	95	80-120	
cis-1,3-Dichloropropene	ug/kg wet	50.0	<50	98	73-121	
4-Methyl-2-pentanone	ug/kg wet	50.0	<2500	94	70-130	
Toluene	ug/kg wet	50.0	<100	92	80-120	
trans-1,3-Dichloropropene	ug/kg wet	50.0	<50	97	73-118	
1,1,2-Trichloroethane	ug/kg wet	50.0	<50	95	80-120	
Tetrachloroethene	ug/kg wet	50.0	<50	96	70-120	
2-Hexanone	ug/kg wet	50.0	<2500	95	70-130	
Dibromochloromethane	ug/kg wet	50.0	<100	94	76-116	
1,2-Dibromoethane (EDB)	ug/kg wet	50.0	<50	95	78-113	
Chlorobenzene	ug/kg wet	50.0	<50	96	80-120	
1,1,1,2-Tetrachloroethane	ug/kg wet	50.0	<100	95	77-120	
Ethylbenzene	ug/kg wet	50.0	<50	98	78-120	
m,p-Xylene	ug/kg wet	100	<100	100	78-122	
o-Xylene	ug/kg wet	50.0	<50	99	78-122	
Xylenes, total	ug/kg wet	150	<150	100	78-122	
Styrene	ug/kg wet	50.0	50.4	101	76-121	
Bromoform	ug/kg wet	50.0	<100	97	71-115	
Isopropylbenzene	ug/kg wet	50.0	<250	97	78-127	
1,1,2,2-Tetrachloroethane	ug/kg wet	50.0	<50	95	81-124	
1,2,3-Trichloropropane	ug/kg wet	50.0	<100	96	69-116	
trans-1,4-Dichloro-2-butene	ug/kg wet	50.0	<50	98	50-150	
Bromobenzene	ug/kg wet	50.0	<100	97	80-120	
n-Propylbenzene	ug/kg wet	50.0	<100	99	76-123	
1,3,5-Trimethylbenzene	ug/kg wet	50.0	<100	100	81-125	
t-Butyl Benzene	ug/kg wet	50.0	<50	99	72-129	

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LABORATORY CONTROL SAMPLE: T133862-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
1,2,4-Trimethylbenzene	ug/kg wet	50.0	<100	101	79-129	
sec-Butylbenzene	ug/kg wet	50.0	<50	99	73-133	
p-Isopropyltoluene	ug/kg wet	50.0	<100	98	76-129	
1,3-Dichlorobenzene	ug/kg wet	50.0	<100	96	80-120	
1,4-Dichlorobenzene	ug/kg wet	50.0	<100	96	80-120	
n-Butylbenzene	ug/kg wet	50.0	<50	100	81-127	
1,2,3-Trimethylbenzene	ug/kg wet	50.0	<50	100	50-150	
1,2-Dichlorobenzene	ug/kg wet	50.0	<100	96	80-120	
1,2-Dibromo-3-chloropropane	ug/kg wet	50.0	<100	92	58-123	
Hexachloroethane	ug/kg wet	50.0	<100	92	50-150	
1,2,4-Trichlorobenzene	ug/kg wet	50.0	<330	100	74-116	
Naphthalene	ug/kg wet	50.0	<330	100	63-118	
1,2,3-Trichlorobenzene	ug/kg wet	50.0	<250	100	74-114	
2-Methylnaphthalene	ug/kg wet	50.0	<330	104	50-150	
1,2-Dichloroethane-d4 (S)	%	30.0	28.9	96	68-133	
Toluene-d8 (S)	%	30.0	29.8	99	75-120	
4-Bromofluorobenzene (S)	%	30.0	30.7	102	69-119	
1,2-Dichlorobenzene-d4 (S)	%	30.0	29.7	99	72-127	

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133568
QC Batch Method: % Solids
Analysis Description: Solids, Dry Weight
Analysis Method: ASTM D2974-07a

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133790
QC Batch Method: EPA 1010B
Analysis Description: Flash Point (Ignitability)
Analysis Method: EPA 1010B

LABORATORY CONTROL SAMPLE: T133790-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Flashpoint	°F	127	125	99	95-105	

Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133544
QC Batch Method: EPA 9045D
Analysis Description: Corrosivity (pH for waste), 9040/9045
Analysis Method: EPA 9045D

CERTIFICATE OF ANALYSIS

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Trace Project ID: 23C0465
Client Project ID: 111 Railroad

QC Batch: T133826
QC Batch Method: EPA Chapter 7.3

Analysis Description: Reactivity - Cyanide
Analysis Method: EPA Chapter 7.3

METHOD BLANK: T133826-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Cyanide, Reactive	mg/kg wet	<0.50	0.50	
Sulfide, Reactive	mg/kg wet	<5.0	5.0	

LABORATORY CONTROL SAMPLE: T133826-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Cyanide, Reactive	mg/kg wet	2.00	2.10	105	79-116	
Sulfide, Reactive	mg/kg wet	10.0	9.12	91	74-126	

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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
RDL	Reporting Detection Limit
MCL	Maximum Contamination Limit
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the laboratory is not accredited by NELAP for this compound
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.
Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

DATA QUALIFIERS

Trace ID: 23C0465-01RE1

Analysis: EPA 8270E

2,4,6-Tribromophenol	Note 314 : The surrogate was out of control low when compared to the control limits. All results and reporting limits must be considered estimated.
2-Fluorobiphenyl	Note 314 : The surrogate was out of control low when compared to the control limits. All results and reporting limits must be considered estimated.
2-Fluorophenol	Note 314 : The surrogate was out of control low when compared to the control limits. All results and reporting limits must be considered estimated.
Phenol-d5	Note 314 : The surrogate was out of control low when compared to the control limits. All results and reporting limits must be considered estimated.
Terphenyl-d14	Note 314 : The surrogate was out of control low when compared to the control limits. All results and reporting limits must be considered estimated.

Trace ID: T133563-BS1

Analysis: EPA 8082A

Tetrachloro-m-xylene	Note 312.5 : The surrogate recovery was out of control high when compared to control limits. Because all the spike recoveries are acceptable, no data require qualification.

Trace ID: T133681-BS1

Analysis: EPA 8081B

Heptachlor	Note 105 : The LCS recovery was out of control low. The result and reporting limit for this analyte, in this quality control batch, must be considered estimated.

Trace ID: T133779-BS1

CERTIFICATE OF ANALYSIS

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Analysis: EPA 6010D

Arsenic	Note 112 : The LCS recovery was out of control high. Because there were no positive results for this analyte in this QC batch, no data require qualification.

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March 30, 2023

Jon Mink
Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444
TEL: (231) 773-5998
FAX: (231) 773-6537

RE: 23C0465

Dear Jon Mink:

Order No.: 23031070

Summit Environmental Technologies, Inc. received 1 sample(s) on 3/15/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Brian J. Fackelman

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **23031070**
Date: **3/30/2023**

CLIENT: Trace Analytical Laboratories, Inc.
Project: 23C0465

WorkOrder Narrative:
23031070: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

 The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

WorkOrder Comments:
23031070: State required accreditation not specified; results may not be reported as certified data.

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Workorder Sample Summary

WO#: **23031070**
30-Mar-23

CLIENT: Trace Analytical Laboratories, Inc.
Project: 23C0465

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23031070-001	WC-Comp-1 23C0465-01		3/9/2023	3/15/2023 10:05:00 AM	Solid

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Analytical Report

(consolidated)

WO#: **23031070**

Date Reported: **3/30/2023**

CLIENT: Trace Analytical Laboratories, Inc. **Collection Date:** 3/9/2023

Project: 23C0465

Lab ID: 23031070-001 **Matrix:** SOLID

Client Sample ID: WC-Comp-1 23C0465-01

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HERBICIDES BYSW8321				**SW8321A**	**SW8321A**	Analyst: **JDB**
HERBICIDES BY EPA 8321A MODIFIED						
2,4-D	ND	0.497	U	mg/Kg	10	3/21/2023 2:00:00 PM
MCPP	ND	0.0994	U	mg/Kg	1	3/29/2023 11:00:00 AM
MCPA	ND	0.0994	U	mg/Kg	1	3/29/2023 11:00:00 AM
Dinoseb	ND	0.497	U	mg/Kg	10	3/21/2023 2:00:00 PM
Dichloroprop	ND	0.497	U	mg/Kg	10	3/21/2023 2:00:00 PM
Dicamba	ND	0.497	U	mg/Kg	10	3/21/2023 2:00:00 PM
Dalapon	ND	0.994	U	mg/Kg	10	3/21/2023 2:00:00 PM
2,4,5-TP	ND	0.497	U	mg/Kg	10	3/21/2023 2:00:00 PM
2,4,5-T	ND	0.497	U	mg/Kg	10	3/21/2023 2:00:00 PM
2,4-DB	ND	0.497	U	mg/Kg	10	3/21/2023 2:00:00 PM
Surr: 2,4-Dichlorophenylacetic aci	64.3	70 - 130	S	%Rec	10	3/21/2023 2:00:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
U	Samples with CalcVal < MDL

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23031070**

30-Mar-23

Client: Trace Analytical Laboratories, Inc.

Project: 23C0465 **BatchID:** **63650**

Sample ID: **MB-63650** SampType: **MBLK** TestCode: **SVOC-Herb_** Units: **mg/Kg** Prep Date: **3/20/2023** RunNo: **160536**

Client ID: **PBS** Batch ID: **63650** TestNo: **SW8321A** **SW8321A** Analysis Date: **3/21/2023** SeqNo: **4265919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-D	ND	0.493									U
MCPP	ND	0.987									U
MCPA	ND	0.987									U
Dinoseb	ND	0.493									U
Dichloroprop	ND	0.493									U
Dicamba	ND	0.493									U
Dalapon	ND	0.987									U
2,4,5-TP	ND	0.493									U
2,4,5-T	ND	0.493									U
2,4-DB	ND	0.493									U
Surr: 2,4-Dichlorophenylacetic acid	1.08		0.9869		110	70	130				

Sample ID: **LCS-63650** SampType: **LCS** TestCode: **SVOC-Herb_** Units: **mg/Kg** Prep Date: **3/20/2023** RunNo: **160536**

Client ID: **LCSS** Batch ID: **63650** TestNo: **SW8321A** **SW8321A** Analysis Date: **3/21/2023** SeqNo: **4265920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-D	0.890	0.508	1.016	0	87.6	10	196				
Dinoseb	0.961	0.508	1.016	0	94.6	10	276				
Dichloroprop	0.958	0.508	1.016	0	94.3	10	194				
Dicamba	1.01	0.508	1.016	0	99.7	10	190				
Dalapon	11.7	1.02	10.16	0	115	10	130				
2,4,5-TP	0.985	0.508	1.016	0	97.0	10	195				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23031070**

30-Mar-23

Client: Trace Analytical Laboratories, Inc.

Project: 23C0465 **BatchID:** **63650**

Sample ID: **LCS-63650** SampType: **LCS** TestCode: **SVOC-Herb_** Units: **mg/Kg** Prep Date: **3/20/2023** RunNo: **160536**

Client ID: **LCSS** Batch ID: **63650** TestNo: **SW8321A** **SW8321A** Analysis Date: **3/21/2023** SeqNo: **4265920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-T	0.940	0.508	1.016	0	92.5	10	203				
2,4-DB	0.865	0.508	1.016	0	85.1	10	214				
Surr: 2,4-Dichlorophenylacetic acid	1.05		1.016		103	70	130				

Sample ID: **LCSD-63650** SampType: **LCSD** TestCode: **SVOC-Herb_** Units: **mg/Kg** Prep Date: **3/20/2023** RunNo: **160536**

Client ID: **LCSS02** Batch ID: **63650** TestNo: **SW8321A** **SW8321A** Analysis Date: **3/21/2023** SeqNo: **4265921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-D	0.985	0.494	0.9886	0	99.6	10	196	0.8899	10.1	20	
Dinoseb	0.921	0.494	0.9886	0	93.2	10	276	0.9610	4.21	30	
Dichloroprop	0.975	0.494	0.9886	0	98.6	10	194	0.9580	1.74	30	
Dicamba	1.04	0.494	0.9886	0	105	10	190	1.013	2.37	30	
Dalapon	12.1	0.989	9.886	0	122	10	130	11.70	3.42	30	
2,4,5-TP	0.984	0.494	0.9886	0	99.5	10	195	0.9854	0.174	20	
2,4,5-T	0.902	0.494	0.9886	0	91.2	10	203	0.9397	4.13	30	
2,4-DB	0.846	0.494	0.9886	0	85.6	10	214	0.8645	2.13	30	
Surr: 2,4-Dichlorophenylacetic acid	1.10		0.9886		112	70	130		0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-44
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **23031070**
Date: **3/30/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B/MB+	The analyte was detected in the associated blank.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor
DF	Dilution Factor	**RF**	Response Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

SUBCONTRACT ORDER

23C0465 23031070

SENDING LABORATORY:

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444
Phone: 231.773.5998

RECEIVING LABORATORY:

Summit Environmental Technologies, Inc.
3310 Win Street
Cuyahoga Falls, OH 44223
Phone :(330) 253-8211

Project Manager: Jon Mink

Note Our New Email address: TraceSubOut@trace-labs.com

PO # 23C0465

Matrix: Solid Sampled: 03/09/23 00:00 TAT: Standard

Sample ID: WC-Comp-1 23C0465-01

Analysis Needed:

Herbicides 8321 Solid- Subcontract

2.3+0.1=2.4
UPS cooler

Released By	Date	Received By	Date
	3/10/23		03/15/23 1005
Released By	Date	Received By	Date

Page 1 of 1

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TRA-MI-49444** Work Order Number: **23031070** RcptNo: **1**

Logged by:	**Anthony W. Britton**	**3/15/2023 10:05:00 AM**	
Completed By:	**Anthony W. Britton**	**3/15/2023 4:34:32 PM**	
Reviewed By:	**Brian J. Fackelman**	**3/17/2023 3:33:50 PM**	

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? UPS

Log In

3. Coolers are present? Yes ☐ No ☑ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
box	2.4	Good	Not Present			

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE
ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

CHAIN-OF-CUSTODY RECORD

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
www.trace-labs.com

Trace ID No. 23C0465

Report Results To:

Company Name:	Point Blue, LLC
Report To:	Mark Turner/Mark Seaman/Connor Tierney
Mailing Address:	P.O. Box 304
City, State, Zip Code:	St. Joseph, Michigan 49085
Office Phone: 269-934-3737	Cell Phone: 269-944-9876
Email Address:	mat@pointblu.com/mark@pointblu.com/Nate@pointblu.com

Bill To:

PO #:	C5140
Contact Name:	Sandy Tjader-Kempski
Billing Address (if different):	P.O. Box 304
City, State, Zip Code:	St. Joseph, Michigan 49085
Phone Number:	269-934-3737
Billing Email Address:	sandy@pointblu.com

Turnaround Requirements:

- ☒ Standard, 5-10 Days
- ☐ 3 Day*
- ☐ 1 Day*

*Results provided end of business day, requires prior approval.

Matrix Key:

S = Soil / Solid, WI = Wipes, W = Water, LW = Liquid Waste, SL = Sludge, A = Air, OI = Oil, D = Drinking Water

Trace Use:

Logged By: MC
Checked By: SK
Soil Volatiles Preserved (circle if applicable): MeOH Low Level Lab
Sampling Time:

Project Name: 111 Railroad
Sampled By: Mark Turner

Trace No.	Date Collected	Time Collected	Client Sample ID	Metals Field Filtered (Y / N)	Matrix	Number of Containers	Preservation: Cool	HCl	HNO_3	H_2SO_4	NaOH	Other	RCI	PCBs	TCLP Michigan 10	VOCs	SVOCs	Pesticides/Herbicides	Remarks	Possible Health Hazards?
1	3/9/2023	11:45	WC-Comp-1		S	4	×					×	X	X	X	X	X	X		

Analysis Requested

Please Sign

	Released By	Received By	Date	Time	Released By	Received By	Date	Time
1)			3/10/23	11:45	2)	ABoyle	3/10/23	1400
3)					4)			

In executing this Chain of Custody, the client acknowledges the terms as set forth at www.trace-labs.com/terms-of-agreement.

☐ Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

Form 70-Z.1

CERTIFICATE OF ANALYSIS

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

TRACE ANALYTICAL LABORATORIES, INC.

Lab Weight Check – Methanol/DI Water Preserved Soils

Trace ID: 23C04165 Sample Weight Checked By SB

Date: 3/10/23 Balance ID: 14

Sample #	Weight of VOA and MeOH or DI (g) Use only for MeOH Calculation QEC Weight	Weight of VOA and MeOH or DI (g) 2nd weight on vial TRACE Weight	Weight of VOA, MeOH or DI & Soil (g) FINAL Weight	Bottle and MeOH or DI LIMS#	Amount of Soil added (g) (FINAL Wt - TRACE Wt)	Volume of MeOH (QEC-TRACE)/0.792 subtract this value from 10
-01 D	33.39g	33.30g	52.34g	22K0208		

Form 70-N.3
Effective 6/20/19

F:\Support Documentation Worksheets\70-Sample Receiving\70-N.3 Lab Weight Check for Methanol Preserved Soils.doc

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
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www.trace-labs.com

Sample Log In Checklist

23C0465
Point Blue, LLC
Project Manager: Jon Mink

	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: 0.0°C)	IR-12 (CF: +0.2°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Date: 3/10/23									
Time: 1400									
Logged by: SB									
Package Description: BOX									
Package Temp °C	17.7	17.7		☑					
Representative Sample Temp °C	13.0	13.0		☑					☑

Sample Receipt

Yes	No	
☐	☑	Received on ice or other coolant
☐	☑	Ice still present upon receipt
☐	☑	Custody seals present
☐ Yes ☐ No		Custody seals intact (if applicable)

☑ Trace Courier ☐ Client Drop-off ☐ UPS ☐ Fed Ex ☐ US Mail ☐ Other

Sample Condition

Yes	No	N/A	
☑	☐	☐	All sample containers arrived unbroken and labeled
☑	☐	☐	Sufficient sample to run requested analyses
☐	☐	☑	Correct chemical preservative added to samples
☐	☐	☑	Samples preserved at Trace
☐	☐	☑	Chemical preservation verified, check EMD pH test strip used (if applicable)
			☐ pH 0-2.5 (Lot: HC291593) ☐ pH 11.0-13.0 (Lot: HC022540) ☐ Other
☐	☐	☑	Air bubbles absent from VOAs

Chain of Custody (COC)

Yes	No	
☑	☐	All bottle labels agree with COC
☑	☐	COC filled out properly
☑	☐	COC signed by client

Notes:

Form 70-A.46
Effective 2/6/23

TRACE Analytical Laboratories, Inc.