



To: All Plan Holders of Record

From: Verdantas LLC
For the Owner

Re: *Addendum No. 2*
Martin's Run Pump Station & Detention Basin Improvements
City of Lorain, OH

Date: August 24, 2026

This Addendum forms a part of the contract documents and modifies the original bidding documents dated August 2026 and all previous addenda, if any. Acknowledge receipt of this addendum in the space provided in the bid forms. Failure to do so may subject the bidder to disqualification.

QUESTIONS AND ANSWERS

Q1. In reference to DWG SD-S-01 CIP Concrete Note 13, can you confirm perimeter insulation is only required at the new PS Bldg grade beam/ slab on grade portion as this is the only location on architectural drawings that shows foundation insulation?

A1. The note is intended for the concrete sub-contractor to review the architectural drawing and provide rigid insulation if needed.

Q2. In Reference to Specification Section 030000 paragraph 2.1.M, as Bio-San C500 is a very expensive admixture, please provide specific clarification on which structures or portions of structures require this admixture?

A2. The antimicrobial admixture shall be provided in all concrete surfaces exposed to sanitary wastewater and within the air space above the wastewater level. Microbiologically Induced Corrosion (MIC) can occur when sanitary sewage is present, and conditions promote the generation of hydrogen sulfide (H₂S). To mitigate the risk of biogenic sulfide corrosion and associated concrete deterioration, MIC protection is required for all concrete surfaces in contact with sanitary effluent or exposed to the wastewater vapor zone.

Q3. In reference to Specification Section 030000 paragraph 2.2.N, please clarify if and/or where corrosion-inhibiting admixtures are required?

A3. Structural concrete does not require Corrosion-Inhibiting Admixture. The admixture would be used in high traffic high salt concrete pavement application.

Q4. Please confirm if the concrete mixes are to follow the mixes listed in Specification Section 030000 or mixes listed on DWG SD-S-01?

A4. For concrete mix design, use table 1 in 030000, Concrete Class A 28-day strength (f'c) shall be 5000 psf (per ACI's Exposure Categories).

Q5. Please confirm materials and detail for the ceiling finish in the ~16'4" x 10'4" exterior covered area at the NW corner of the new PS?

A5. The area referenced above is to have vented prefinished aluminum soffit panels. All soffit materials at roof edges are to be prefinished aluminum. Ignore references to fiber cement soffit panels.

Q6. What concrete mix per Specification Section 030000 is to be used for the concrete slab topping/fill in the Detention Basin, Class C or Class D?

A6. Class D, environmental structure.

Q7. In reference to DWG 20S-01, 20S-01 Notes 1, and Specifications Section 024116.13, please indicate what equipment/appurtenances the Contractor needs to salvage and turn over to the Owner?

A7. Per Note 1, the Contractor shall coordinate with the Owner prior to demolition.

Q8. Specification Section 024116.13 paragraph 1.7.D mentions asbestos containing materials. Please provide a Hazardous Material Assessment report for the buildings to be demolished, otherwise the Contractor will have to assume the buildings are clear of any asbestos or other hazardous materials?

A8. See attached report.

Q9. Section C on DWG 30S-05 shows curb and handrail around the Intermediate Level slab opening for the pig launcher. This is not shown on the Intermediate Level plan and view on DWG 30S-02, please clarify if the curb and handrail are required at this location?

A9. Curbing, guardrail and handrail shall be as per the architectural drawing. Forty-two inch high guard railing and Thirty-six inch high handrail is required at all stair opening locations. Forty-two inch high guards are required at the pig launch opening. Curbing is required at the pig launch location and stairs to contain washdown water.

Q10. In reference to Specification Section 400523 paragraph 3.6.A, can you provide a valve schedule?

A10. See attachment to this Addendum.

Q11. In reference to Specification Section 400523 paragraph 2.5, can you clarify which type of check valve is required for this project?

A11. Swing flex valves are required for pump discharge.

Q12. Can you provide any invert/depths for the existing sewers going to the existing pump station?

A12. All known inverts/depths are provided on the drawings.

Q13. Can you provide material, class, and joint requirements for the following pipes: new 18" FM, 2" waterline to PS, 8" diversion structure discharge, and suction/ discharge piping for the pumps and pig in 30 Series?

A13. See attachment to this addendum.

Q14. Is there a schedule for the windows, the size is unclear?

A14. The window opening widths on DWG 30A-02 and the elevation heights are indicated on DWG 30A-03.

Q15. Where is the location of the General Conditions for this contract?

A15. There are no General Conditions for this project. See Instructions to Bidders and City/Contract Agreement sections of the Bid Documents.

Q16. Are seal-offs (boundary seals) required for conduit and wiring entering/leaving Classified areas? If so, can you call out where they are to be located?

A16. If an area is classified all conduits leaving area need to be sealed to prevent vapor transfer out of area.

Q17. Are intrinsically safe devices required at Classified areas?

A17. If an area is classified all equipment must be listed and rated for the area.

Q18. Can you include Specifications Divisions 13 and 16 as called out in DWG 00E-01, General Note I?

A18. Refer to Divisions 26 and 40, not 13 and 16.

Q19. Can you confirm is the use of Polywater FST Foam Sealant, which is NEC 501.15(b)(2) rated, is acceptable to use in the place of Raychem's rayflate, which is not rated to be used in explosion proof areas? In not, please provide products that are NEC rated for the conditions sought.

A19. If the product you intend to use is rated or listed for the application, it is acceptable.

Q20. Please provide a conduit schematic showing conduit and wire sizing with diagrams of routing?

A20. Source and load locations are shown. The route to and from is up to contractors to coordinate in the field.

Q21. Please provide the distances between the inside face of the dry pit wall to centerline of the first dry pit pump, as shown on Section A DWG 30D-02?

A21. Please refer to DWG 30D-01 for distances.

Q22. In reference to Specification Section 432100 paragraph 2.1.C.2, please clarify if the dry pumps need to be able to operate in submerged conditions?

A22. Yes, the pumps need to continue operating if the dry pit floods.

Q23. Can you clarify if dry pumps P-11 thru P-14 AND submersible pumps P-21 and P22 are to have submersible rated motors per Specification Section 432100 paragraph 2.1.G?

A23. Please refer to A22.

Q24. Is there a dry pump missing from the description provided in Specifications Section 409632?

A24. Yes, 'P-14' should be included after every 'P-13'.

Q25. Due to the 30-day demonstration period per Specification Section 406113, can an additional 44-calendar days be added to the substantial completion date?

A25. The substantial completion date will not be extended.

Q26. What is the anticipated NTP date?

A26. With an anticipated Bid Opening date of August 27, 2026, the NTP is not anticipated to be issued until Mid-December.

Q27. What elements of the new PS structure are subject to the Mass Concrete requirements of Specifications Section 033055 and DWG SD-S-01?

A27. Mass concrete shall be defined as any concrete placement having a least dimension of 4 feet or greater and shall be evaluated as mass concrete and reviewed for temperature control requirements. This note has been added to the drawings.

Q28. In reference to 10S-08 and 10S-09, what is the approximate depth of the concrete fill on the detention basin floor slab?

A28. The following statement has been added to the sheet note on 10S-05: "Concrete fill for the six flushing lanes shall be a minimum of 16 in. thick and reinforced with one mat of #5 bars at 8 in. O.C., each way with 2 in. clear cover. The two flushing lanes adjacent to the basin walls shall each be 15 ft-9 in and the four interior flushing lanes shall each be 15 ft-6 in. wide, measured between the basin walls and/or concrete curbs defining the lane limits. To provide proper operation of the tipping bucket flushing system, the finished flushing lane surface shall have a 0% cross slope and a 1% longitudinal slope. Concrete fill shall be placed against and/or on properly roughened existing concrete surfaces. The contractor may step the top surface between

adjacent flushing lanes provided each flushing lane maintains a 0% cross slope, a 1% longitudinal slope, a minimum concrete thickness of 16 in. at all locations, and a curb height of not less than 16 in. above the adjacent flushing lane surface.”

Q29. Bid documents offer some conflicting information on who is responsible for costs for onsite testing and inspection services. Is the Owner or Contractor responsible for the costs of onsite materials testing and inspection? Specification Section 013319 indicates the Contractor to employ the independent testing laboratory while DWG SD-S-01 Foundation Note #4 and Cast-in-Place Note #10 both indicate that the Owner shall employ the testing Laboratory.

A29. The Contractor will be responsible for onsite materials testing and inspection other than the testing and inspection required by the special inspector as defined by OBC/IBC chapter 17. The owner shall pay for special inspection and testing as defined in OBC/IBC chapter 17.

IBC/OBC Chapter 17 special inspections and tests do not replace the Contractor's responsibility for quality control. The Contractor remains responsible for all inspections, testing, certifications, manufacturer-required observations, commissioning activities, and quality-control measures necessary to demonstrate compliance with the Contract Documents.

Q30. The detail on SD-C/D-04 shows the asphalt being 2” thick or at least as thick as the adjacent asphalt, it is not noted what the thickness of the existing pavement is. Can a detail be provided for new asphalt work?

A30. The thickness is to be verified during construction.

Q31. In reference to DWG 30S-03, what masonry lintel detail is required for the double door in 30-01?

A31. The masonry lintel for the double doors, door 30-01, shall be MB2. See attached partial plan.

Q32. In reference to DWG 30S-03, roof framing plan has call out's A and B on the plan view, with no legend or keynote describing these. Can you provide a description of these call outs?

A32. The call A and B have been removed. At the location of A, a note has been added about roof over framing with pre-fabricated wood roof trusses. See attached partial plan.

Q33. Call outs for the new sewer between Manholes 1 and 2 on dwg 01C-04 and 01C-05 are for this to be a 36" pipe. However, it is drawn as a 24" pipe in the profile on dwg 01C-05, as well as called out as 24" pipe in the Manhole invert descriptions. Can you confirm correct size of this pipe?

A33. Refer to pipe sizing on DWG 01C-04.

Q34. Can paragraph 2.1.H. in Specification Section 432100 be removed?

A34. See Specifications Section below.

Q35. Bid Document E – Affidavit of Authority, towards the middle of the affidavit highlights the “Pearl Avenue and Tacoma Avenue Pump Station Improvements” project; please revise to highlight the “Martin’s Run Pump Station & Detention Basin Improvements” project?

A35. Section II. Bidding Forms, E. Affidavit of Authority page 62 has been revised and is enclosed with this Addendum 2.

Q36. Confirm subsequent wall forming, either in the vertical or horizontal, may commence adjacent to the recent concrete placement within 3-days.

A36. 3-days is sufficient to allow the concrete to stabilize.

Q37. Please confirm only the new Pump Station Wet Well requires a leakage test per the Watertight Structures notes on dwg SD-S-01.

A37. The new Pump Station Wet Well requires a leakage test as per the Watertight Structures notes.

Q38. Advise which structure is considered to be Buoyant per the Notes on Dwg SD-S-01.

A38. The buoyance review was limited to new construction. The EQ Basin requires limited excavation. Extensive removal of soil from the EQ Basin would require additional analysis. If the EQ basin soil removal is extensive, contact the Engineer to provide additional review of the EQ Basin.

Q39. Please remove Note Nos. 2 and 7 under “Post Installed Fasteners” dwg SD-S-02 – these stipulations are costly to the Public/Owner as the cost to get certified by ACI will be included in the bid costs.

A39. Post Installed Fasteners notes #2 and #7 are specifically included to protect personnel/public from catastrophic failures. Per note #2, IBC (or OBC) Chapter 17, Table 1705.3 (Concrete Construction) and the referenced ACI 318 §17.8.2, special inspection is required for post-installed anchors, and installers of post-installed adhesive anchors resisting sustained tension loads must be qualified/certified as ACI/CRSI Adhesive Anchor Installers or approved equivalent. The requirement applies to post-installed reinforcing bar dowels (rebar doweling) installed using an adhesive anchoring system governed by the same adhesive-anchor provisions.

Per note #2, The requirement is consistent with standard industry practice. Major post-installed anchor manufacturers, including Hilti, Simpson Strong-Tie, and DEWALT/Powers, provide installation training for their anchor systems through technical representatives, training programs, and jobsite support. In many cases, basic installer training is provided at little or no cost, and project-specific onsite training is often provided at no additional cost when a significant quantity of anchors is being purchased. The requirement for manufacturer-provided training and documented verification of installer training prior to anchor installation is not considered an unusual or burdensome project requirement.

Q40. Please remove the portion of spec section 030000-1.3.B.1 requiring a PE Stamp for each proposed concrete mix design. The Contractor and Ready-Mix Supplier will supply the mix designs, to the best of their ability and as market conditions allow, the mixes stipulated in section -2.3C, along with submitting the specified laboratory reports test reports per 1.3.G

A40. A PE stamp for each proposed concrete mix design was added because numerous projects have experienced delays and additional review efforts resulting from Contractor-submitted concrete mix designs that did not comply with the requirements of the Contract Documents. A PE stamp is required for the following concrete mix design, if used: Class A, D, G, and M. Class B, C, and F, if used, does not need a PE stamp.

Requiring a concrete mix design to be prepared, reviewed, or sealed by a Professional Engineer is not unreasonable, particularly for critical structures, severe exposure conditions, and/or wastewater facilities. The concrete producer to develop the mix design and provide supporting trial-batch and test data, with a licensed Professional Engineer reviewing and certifying conformance to the project requirements when specifically required by the Contract Documents.

Q41. Please provide the specifications and allowable manufacturers of the anchor bolts shown on Detail 8 / Dwg SD-S-04

A41. See SD-S-01, note after 26 of Cast-In-Place Concrete and Reinforcement: Anchor bolts shall be ASTM F1554-55 unless otherwise noted. Detail 13 on SD-S-04 has been added. See detail below.

BID FORMS

Replace Section II. Bidding Forms, E. Affidavit of Authority page 62 with the enclosed page 62A.

SPECIFICATIONS

In Specifications Section 263213.16, **Add** the following after paragraph 3.5:

3.6. Warranty

A. Provide a 5-year comprehensive warranty with parts, labor, and travel.

In Specifications Section 432100, **Change** paragraph 2.1.H to the following:

H. Variable Frequency Drives (VFDs)

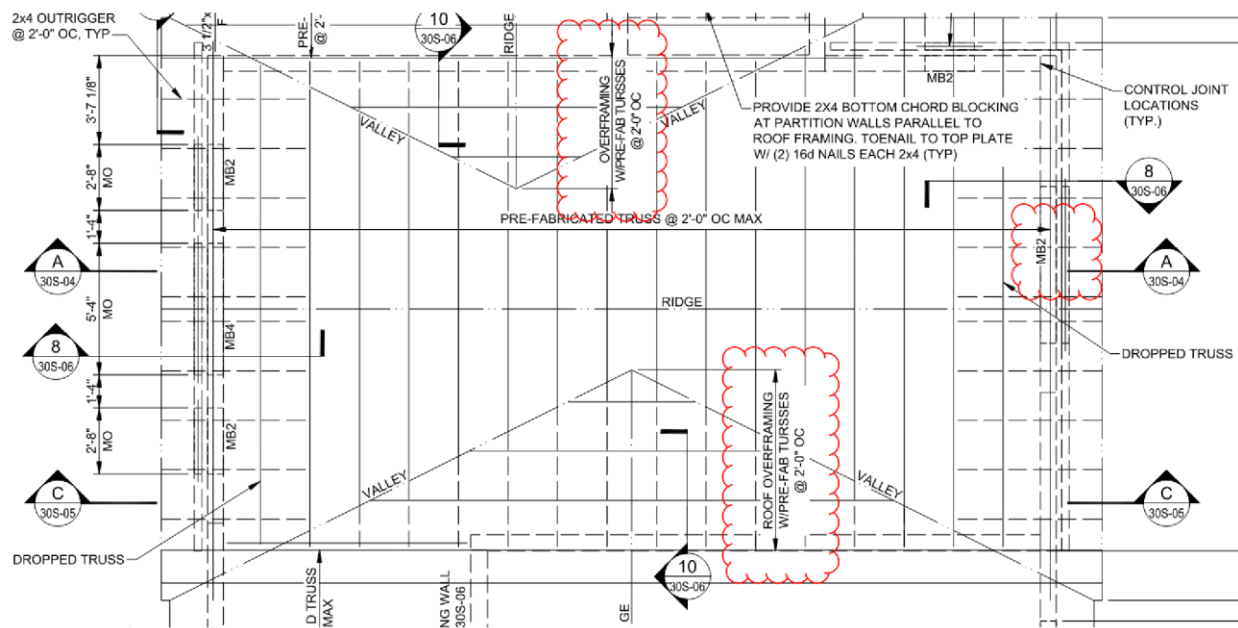
1. VFDs for the pumps specified herein shall be provided by the pump manufacturer and shall meet the requirements of Specification Division 26.
2. Other VFDs shall be provided by the respective manufacturer or Electrical Contractor.
3. MCC shall be supplied by the Electrical Contractor.

CLARIFICATIONS

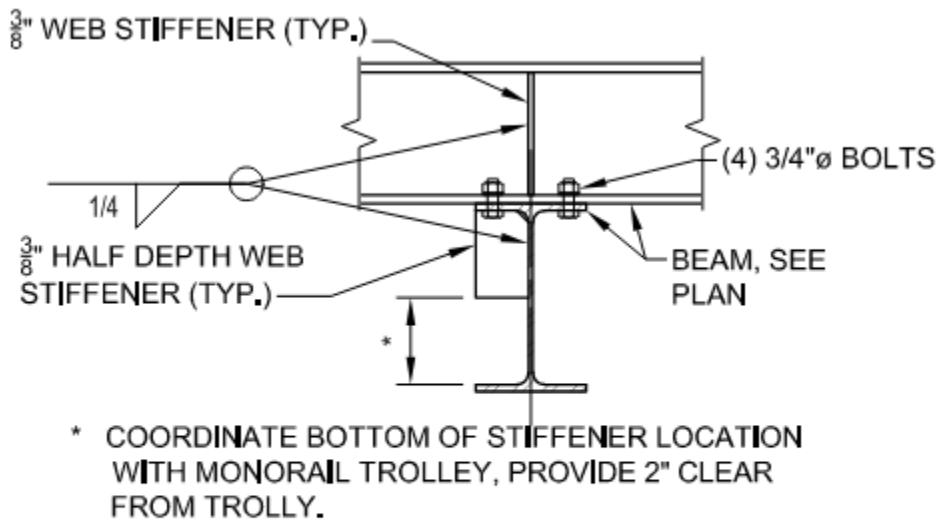
The last day to receive questions will be Thursday, August 27, 2026.

PLANS

On plan sheet 30S-03, see the red clouded areas for the additional notes added to the Partial Roof Framing Plan:

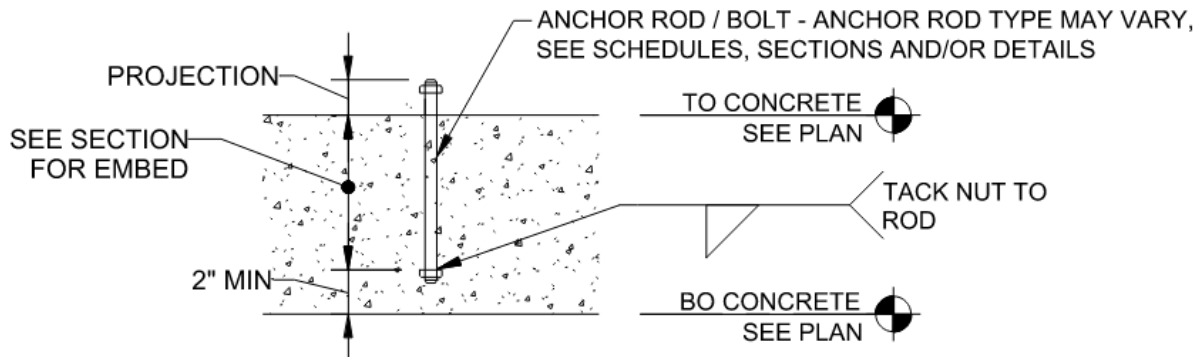


On plan sheet 30S-30, replace part of Section 4 with the following.



4 SECTION
 30S-06 SCALE: 3/4" = 1'-0"

The following detail has been added to sheet SD-D-04.



NOTES:

1. USE HEAD BOLTS OR TACK WELD
2. COORDINATE PROJECTION WITH EQUIPMENT SUPPLIER UNLESS NOTED OTHERWISE
3. DO NOT USE 'J' BOLTS. 'J' BOLTS ARE NOT ACCEPTABLE
4. ANCHOR BOLTS TO BE STAINLESS STEEL UNLESS NOTED OTHERWISE

13 TYPICAL CONCRETE ANCHOR DETAIL
 SD-S-04 SCALE: NTS

Addendum No. 2
Date: August 24, 2026
Page 10

RS/CZ/MB:mep

Enclosures

Z:\Project Files\KA-LZ\Lorain\42706 - Martin Run Pump Station Bidding And Cons\P242706\SPEC\Addenda\Addendum 02\Addendum 02.Doc

E. AFFIDAVIT OF AUTHORITY

MARTIN'S RUN PUMP STATION & DETENTION BASIN IMPROVEMENTS

(To be completed and executed if the Contractor is anything other than a sole proprietorship.)

State of _____ (State Where Completing this Form)

County of _____ (County Where Completing this Form) ss:

_____, (Your Name), being duly sworn, deposes and says that he or she is the _____ (Position) of _____ (Business Name), a _____ (Type of Entity) organized and existing under and by virtue of the laws of the State of _____ (State), and having its principal office at: _____ (Address), _____ (City), _____ (County), _____ (State).

Affiant further says that he is familiar with the records, minute books and by-laws of _____ (Business Name).

Affiant further says that _____ (Name of Person Signing Contract) _____ (Title of Person Signing Contract) of _____ (Business Name) is duly authorized to sign the Contract for the City of Lorain Martin's Run Pump Station & Detention Basin Improvements on behalf of _____ (Business Name) by virtue of _____.
(Describe how the person signing the Contract has Authority to sign for example: "a provision of the by-laws" or "a resolution of the Board of Directors"—if by resolution, give date of adoption.)

_____, _____
(Your Signature) (Your Position)

The foregoing instrument was acknowledged before me this _____ (date) by _____ (name of person acknowledged). Signature and Seal of person taking acknowledgement:

Process Valve Schedule				
Type	Size (in.)	Operator	Qty	Service
<i>10 Series – Equalization Basin</i>				
GV	4	ES	6	Water supply
<i>30 Series – New Pump Station</i>				
GV	18	CW	1	Pig Launcher Isolation
PV	12	HW	4	Pump Suction
CV	8	N/A	4	Pump Discharge
PV	8	CW	4	Pump Discharge
GV	18	CW	1	Combined Pump Discharge
PV	6	CW	1	Pig Launcher Supply Line
PV	2	CW	1	Pig Launcher Drain Line
TCV	2	N/A	1	Pig Launcher Drain Line

Addendum 02, Q13 Pipe Schedule				
Service	Material	Size (in.)	End Type	Remarks
Force Main	DIP	18	MJ	Class 53
Pump Station Water Service	PVC	2	MJ	SCH 40
Diversion Chamber Pump Discharge	DIP	8	FL	Class 53
Pump Suction	DIP	As noted on the plans		Class 53
Pump Discharge	DIP	8	FL	Class 53
Pig Launcher	DIP	18	FL	Class 53

COMPREHENSIVE ASBESTOS SURVEY

Martin's Run Pump Station Building
2511 Robinhood Drive
Lorain, Lorain County, Ohio

June 27, 2021

Prepared for:
CT Consultants, Inc.
8150 Sterling Court
Mentor, Ohio 44060

Prepared by:



6105 Heisley Road ♦ Mentor, Ohio 44060
440-357-1260 ♦ Fax 440-357-1510



HZW
Environmental
Consultants

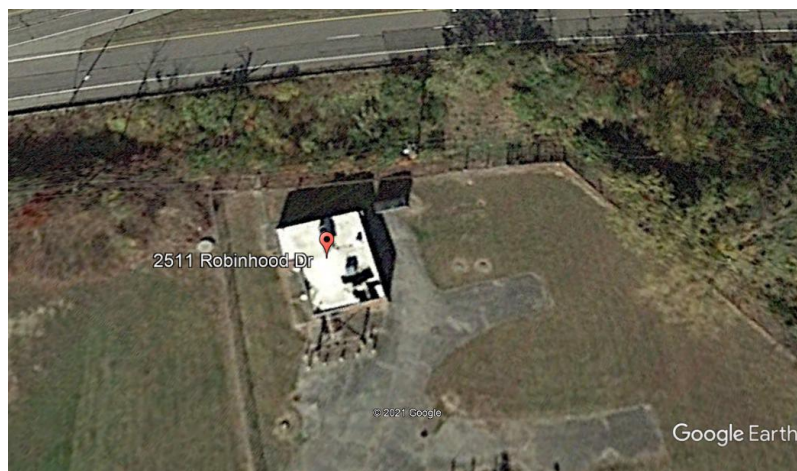
June 27, 2021

Mr. Tom Voldrich
CT Consultants, Inc.
8150 Sterling Court
Mentor, Ohio 44060

Subject: Report of Findings of a Comprehensive Asbestos Survey Conducted at the Martin's Run Pump Station Building Located at 2511 Robinhood Drive, Lorain, Lorain County, Ohio (HZW Project No. H21094-05)

Dear Mr. Voldrich:

HZW Environmental Consultants, LLC (HZW) is pleased to submit this letter report that presents the findings from a comprehensive asbestos survey conducted at the Martin's Run Pump Station building located at 2511 Robinhood Drive, Lorain, Lorain County, Ohio, herein referred to as the "subject building". As indicated by CT Consultants, Inc., (the Client), the subject building is scheduled to be demolished. The purpose of the asbestos survey was to identify asbestos-containing materials (ACMs) located at the subject building prior to manual demolition activities being performed. An aerial photograph depicting the exterior of the subject building is provided below.



Photograph 01

Exterior View of the Martin's Run Pump Station Building Located at
2511 Robinhood Drive, Lorain, Lorain County, Ohio

METHODS OF INVESTIGATION

General

During June 2021, a representative of HZW, certified as an Asbestos Hazard Evaluation Specialist (AHES), performed a comprehensive asbestos survey at the subject building. This certification is required to be maintained by the inspector in accordance with the Asbestos School Hazard Abatement Reauthorization Act (ASHARA) and the Ohio Environmental Protection Agency (Ohio EPA) asbestos regulations.

The asbestos survey was conducted in accordance with the Environmental Protection Agency's (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP) survey protocol. NESHAP regulations require no specific survey protocol be followed; however, the Asbestos Hazard Emergency Response Act (AHERA) protocol is recommended. Therefore, the asbestos survey at the subject building was conducted in accordance with AHERA protocol. AHERA protocol requires that each building and/or building construction be surveyed separately for building materials suspect for containing asbestos. In addition, AHERA protocol requires that all functional spaces (specific area or building construction within a building) also be identified. Once the functional spaces are identified, then all homogeneous areas of building materials located in a specific functional space and suspect for containing asbestos are subsequently identified. A homogeneous area is a building material/area that is uniform in texture, color, date of application, use or system and appears identical in every other respect.

Bulk Sampling Protocol

In accordance with AHERA, HZW classified each homogeneous area/building material suspect for containing asbestos into one (1) of three (3) categories, based on the material's ability to be crumbled, pulverized, or reduced to powder by hand pressure (herein referred as "friable"), prior to performing the bulk sampling activities. These three (3) categories are as follows:

Surfacing Materials	Thermal System Insulation (TSI)	Miscellaneous Friable and Nonfriable Materials
Examples include fireproofing and acoustical plaster.	Examples include, but are not limited to pipe lagging, pipe wrap, block insulation, batt insulation and mudded fitting insulation.	Examples of miscellaneous friable materials include, but are not limited to ceiling tile, drywall and joint compound. Examples of nonfriable materials include, but are not limited to, floor tile and mastic, roofing materials and transite.

Once categorized, HZW subsequently determined the quantity of each homogeneous area/building material within each specific functional space. HZW based the bulk sampling protocol on the AHERA category assigned to a specific homogeneous area/building material and the quantity of that area/material identified. The bulk sampling protocol performed at the subject building consisted of the following:

- For Surfacing Materials, if the quantity of the homogeneous area/material is less than 1,000 square feet (ft²), HZW collects a minimum of three (3) samples from this area/material. If the size of the homogeneous area/material is between 1,000 and 5,000 ft², then HZW collects a minimum of five (5) samples from this area/material. If the size of the homogeneous area/material is greater than 5,000 ft², then HZW collects a minimum of seven (7) samples from this area/material.
- For TSI, HZW either assumes the suspect material contains asbestos or collects at least three (3) bulk samples from each specific homogeneous area/material identified.
- For Miscellaneous Friable Materials and Nonfriable Materials, The number of bulk samples HZW collects of these materials is at the discretion of the inspector and in a “manner sufficient” to prove the asbestos content of the material. Nonfriable roofing materials identified in good to fair condition were not sampled and were; therefore, assumed to contain asbestos.

Condition Categorization

In determining the condition of a material, HZW used the following guidelines:

General Damage Category	Criteria
Good	No Damage
Fair	Up to 10% overall damage Up to 25% localized damage
Poor	Over 10% overall damage Over 25% localized damage

Analytical Laboratory

Any bulk samples collected were submitted to CA Labs, LLC of Baton Rouge, Louisiana, for analysis of asbestos content by polarized light microscopy (PLM) using the Environmental Protection Agency (EPA) Method 600/R-93/116. Buildings materials identified by PLM as containing three (3) percent asbestos or less were subsequently analyzed by 400 Point Count Methodology.

ASBESTOS REGULATIONS

Federal Regulations

The Occupational Safety and Health Administration's (OSHA's) Asbestos Standard for the Construction Industry (29 CFR 1926.1101) regulates all renovation and demolition work involving buildings materials which contain any amount of asbestos. Buildings owners and/or contractors who perform renovation and/or demolition activities which disturb buildings materials identified as containing asbestos are required to conduct these activities in accordance with OSHA's Asbestos Standard. An asbestos-containing material (ACM), as defined by OSHA and the EPA, is any material containing more than one percent (1%) asbestos as determined by Polarized Light Microscopy (PLM).

The Asbestos NESHAP (40 C.F.R. Part 61, Subpart M) regulates which ACMs must be removed prior to renovation and demolition activities being performed. If the quantity of regulated ACMs (RACMs) to be disturbed as part of a renovation or demolition activity meets or exceeds 160 square feet on facility components, 260 linear feet on pipes or 35 cubic feet off facility components, then the activity would be regulated under the Asbestos NESHAP. RACMs are defined as 1) friable ACMs, 2) Category I Nonfriable ACMs that has become friable, 3) Category I Nonfriable ACMs that will be or have been subjected to sanding, grinding, cutting or abrading, or 4) Category II Nonfriable ACMs that have a high probability of becoming or have become crumbled, pulverized, or reduced to powder by the forces expected to act on the materials in the course of the demolition or renovation activities. A friable ACM is a material that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Examples of friable ACMs consist of asbestos-containing pipe insulation, fireproofing, and ceiling tile. Examples of Category I Nonfriable ACMs consist of asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products. Examples of Category II Nonfriable ACMs consist of any material, excluding Category I Nonfriable ACMs.

State Regulations

The Ohio EPA Asbestos regulations are under Chapter 3745-20 and 3745-22 of the Ohio Administrative Code (OAC) also referred to as the “Emission Control Rules”. Chapter 3745-20 is nearly identical to the Asbestos NESHAP, 40 CFR, Part 61, Subpart M, cited above. Chapter 3745-22 is the former Ohio Department of Health asbestos “Licensing Rules”, which on January 1, 2018, were adopted by the Ohio EPA. Chapter 3745-22 encompasses the rules governing asbestos hazard abatement contractors, specialists, project designers, workers, and training courses.

Under the Asbestos NESHAP and Ohio EPA Asbestos regulations the “Notification of Demolition and Renovation” form is required to be submitted ten (10) days prior to any of the following activities being performed:

- Demolition of a facility, regardless of whether asbestos is involved. This includes all structure that will be intentionally burned for fire training purposes.
- Renovation of a facility when the amount of RACM stripped, removed, dislodged, cut, drilled, or similarly disturbed exceeds 260 linear feet on pipes or 160 square feet on other facility components or 35 cubic feet off facility components.
- Abatement at a facility when the activity involves the removal, renovation, enclosure, repair or encapsulation of *friable* ACMs in an amount greater than 50 linear feet on pipes or 50 square feet on other facility components.

FINDINGS AND DISCUSSION

Based on the findings of the asbestos survey, three (3) homogeneous areas of building materials suspect for containing asbestos were identified. A total of four (4) bulk samples [two (2) from suspect water proofing tar coating and 2 from cementitious pipe sleeves] were collected from two (2) of the three (3) homogeneous areas identified. The remaining homogeneous area was not sampled and consisted of roof material. Based on the laboratory analytical report for the 4 bulk samples submitted for analysis only the cementitious pipe sleeve was identified as containing asbestos. The quantity of RACM identified at the subject building is below the threshold quantity established by the Ohio EPA, therefore, the asbestos-containing cementitious pipe sleeve is not regulated by the EPA and is not required to be abated prior to the demolition activities commencing.

In addition, the assumed asbestos-containing roofing material is not regulated by the Ohio EPA, therefore, it also is not required to be abated prior to the demolition activities commencing. OSHA, unlike the EPA, would regulate the handling of these materials by employees per 29 CFR 1926.1101.

HZW's Asbestos Bulk Sampling Information form which documents the suspect homogeneous areas of building materials identified at the subject building, and their quantity and condition if identified as containing asbestos is included as **Attachment 1**. A site sketch of the subject building documenting the room designations and bulk sample locations is also included as **Attachment 1**. The laboratory analytical report for the bulk samples collected at the subject building is included as **Attachment 2**.

RECOMMENDATIONS

Based on the findings of the comprehensive asbestos survey conducted at the subject building, the following recommendations are presented for consideration:

1. Notify any outside contractor(s) prior to them working at the subject building of the presence of the asbestos-containing cementitious pipe sleeve and the assumed asbestos-containing roofing materials. *Contractors disturbing building materials identified as containing asbestos or assumed to contain asbestos are required to conduct their activities in accordance with OSHA's Asbestos Standard for the Construction Industry as well as the Asbestos NESHAP/Ohio EPA Asbestos regulations.*
2. Submit the Ohio EPA "Notification of Demolition and Renovation" form to the Ohio EPA 10 days prior to any of the following activities being performed.
 - Demolition of a facility, regardless of whether asbestos is involved. This includes all structure that will be intentionally burned for fire training purposes.
 - Renovation of a facility, when the amount of RACM stripped, removed, dislodged, cut, drilled, or similarly disturbed exceeds 260 linear feet on pipes or 160 square feet on other facility components or 35 cubic feet off facility components.
 - Abatement at a facility, when the activity involves the removal, renovation, enclosure, repair or encapsulation of friable ACM in an amount greater than 50 linear feet on pipes or 50 square feet on other facility components.
3. Ensure that the demolition activities are performed in accordance with Ohio EPA and OSHA regulations.

QUALIFICATIONS

The professional environmental consulting services were provided by HZW's licensed AHES, Mr. Carmen Rocco. Ms. Joan A. Sablar, HZW's Group Leader, was responsible for ensuring that the project was conducted in accordance with all applicable federal, state and local regulations as well as for generation of this report.

HZW appreciates the opportunity you have given us to provide professional consulting services to CT Consultants, Inc. Should you have any questions regarding the information presented above, please do not hesitate to contact us.

Sincerely,

HZW ENVIRONMENTAL CONSULTANTS, LLC

Carmen Rocco

Carmen Rocco

Asbestos Hazard Evaluation Specialist
(OEPA License No. ES 33794)

Joan A. Sablar

Joan A. Sablar

Asbestos Hazard Evaluation Specialist
(OEPA License No. ES 31652)

MPF:mpf\jas\H21094-05

Attachments

I:\2021\H21094-05\Martin's Run Pump Station 2511 Robinhood Drive, Lorain, Ohio Asbestos Survey Report.doc





ATTACHMENT 1

- ASBESTOS BULK SAMPLING INFORMATION FORM
- SITE DRAWING DOCUMENTING ROOM DESIGNATIONS AND BULK
SAMPLING LOCATIONS

ASBESTOS BULK SAMPLING INFORMATION FORM

Martin Run Pump Station
Asbestos Survey – 2511 Robinhood Drive, Lorain, Lorain County, Ohio
HZW Environmental Consultants, LLC – Project No. H21094-05

HOMOGENEOUS											
ID	MATERIAL	LOCATION	VALIDATION FOR SAMPLING	BULK SAMPLE NO.	AHERA CATEGORY			QUANTITY & CONDITION			RESULT
					SUR.	TSI	MISC. F/NF	GOOD	FAIR	POOR	ASBESTOS % BY LAYER
A	Water Proofing Tar Coating - Black	Basement, Rooms 5, 6, 7 and Stairwell 1	Minimum 2 Samples	01							ND
				02							ND
B	Cementitious Pipe Sleeves – 16-inch	Basement, Rooms 6 and 8	Minimum 2 Samples	03			X		6		15
				04				In.ft. Known		15	
C	Rubber Membrane Roofing System - White	Structure Roof	Category I Nonfriable in Fair Condition, Not Sampled				X		952 sq.ft.		Assumed

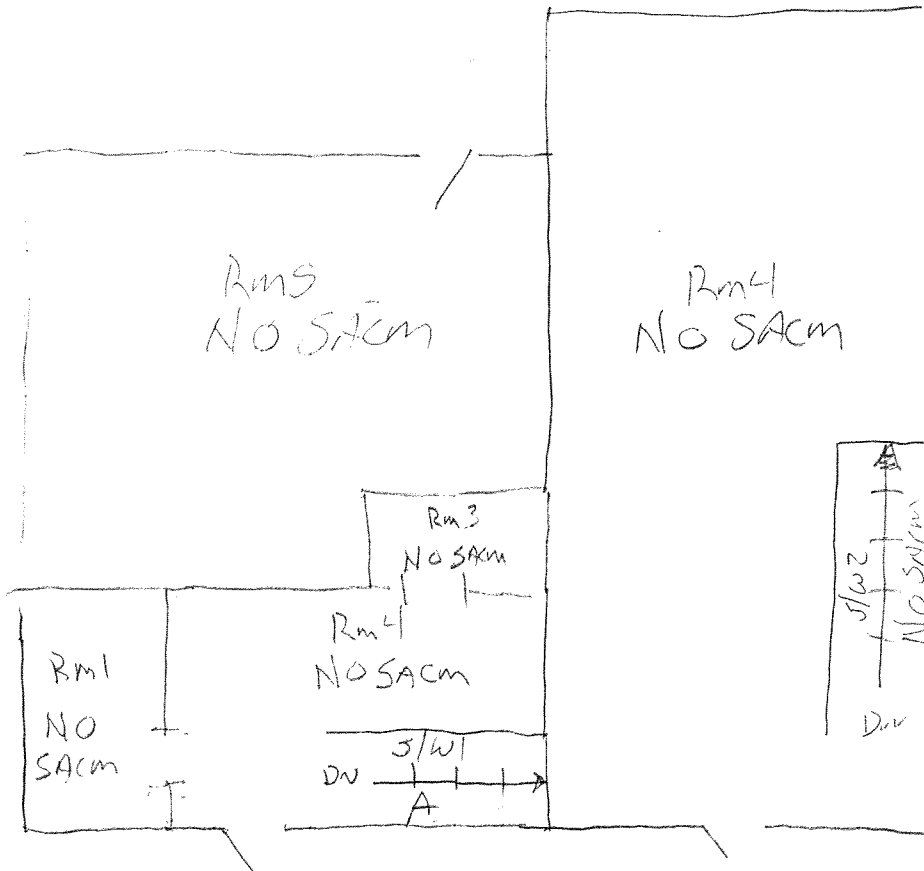


HZW ENVIRONMENTAL
CONSULTANTS, LLC

6105 Heisley Road • Mentor, Ohio 44060
Phone 440-357-1260 • 800-804-8484
Fax 440-357-1510
A Woman-Owned Business Enterprise

PROJECT 2511 Robinhood Drive
PROJECT NO. H21094-05
PAGE NO. _____ OF _____
FIELD REPRESENTATIVE CA DATE 06/11/12
SCALE _____ (F)

INDICATE DIRECTION
OF NORTH





HZW ENVIRONMENTAL
CONSULTANTS, LLC

6105 Heisley Road • Mentor, Ohio 44060
Phone 440-357-1260 • 800-804-8484
Fax 440-357-1510
A Woman-Owned Business Enterprise

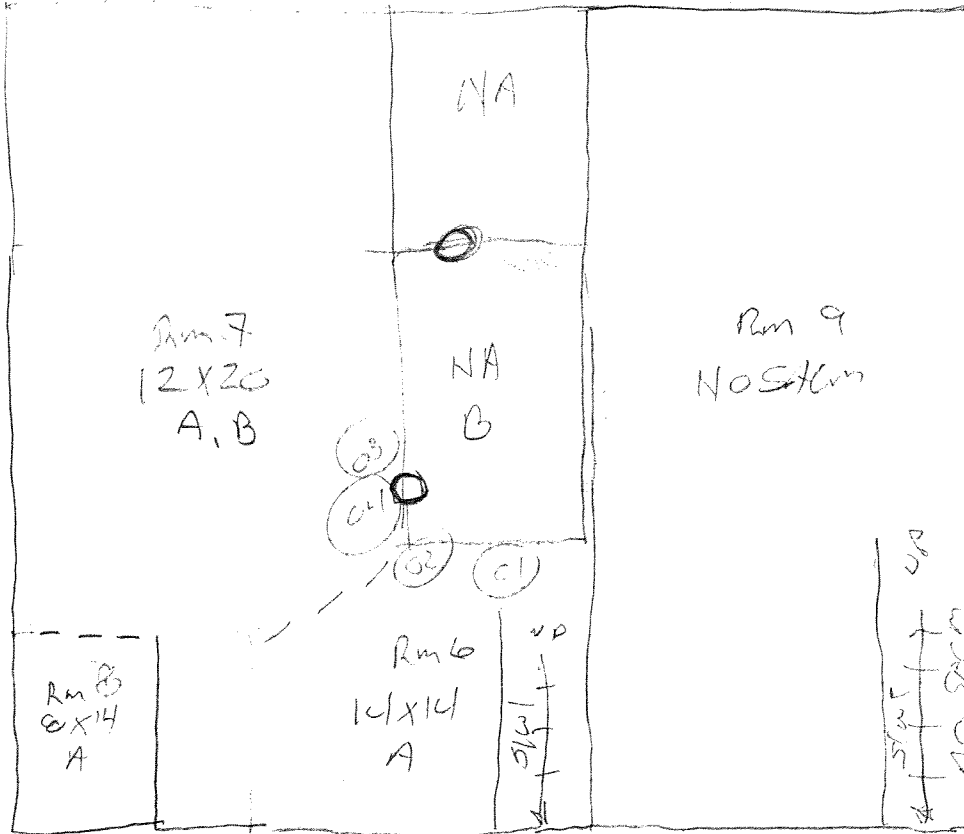
PROJECT ZS11 Robinhood Drive
PROJECT NO. H121094-CS
PAGE NO. 3 OF
FIELD REPRESENTATIVE CR DATE 01/01/21
SCALE (F)

Basement

INDICATE DIRECTION
OF NORTH



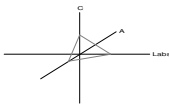
O = 1/4" B





ATTACHMENT 2

➤ LABORATORY ANALYTICAL REPORT



Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

HZW Environmental Consultants

6105 Heisley Rd.
Mentor, OH 44060

Attn: Joan Sablar

Customer Project: 2511 Robinhood Drive, Martin Run Pump Station

Reference #: CBR21063371

Date: 6/18/2021

Analysis and Method

Summary of polarizing light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved)). The sample is first viewed with the aid of stereomicroscopy. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are performed. Calibrated liquid refractive oils are used as liquid mounting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjunction with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may have trace amounts of actinolite-tremolite, where not found by PLM should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may even contain a related asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

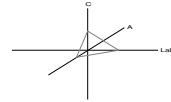
Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Quantification of <1% will actually be reported as ≤1% (allowable variance close to 1% is high). Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos and the "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one of these disciplines. Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. This report is not covered by the scope of AIHA accreditation. Analysis performed at CA Labs, LLC 12232 Industriplex, Suite 32 Baton Rouge, LA 70809.



Overview of Project Sample Material Containing Asbestos

Customer Project:	2511 Robinhood Drive, Martin Run Pump Station	CA Labs Project #:	CBR21063371
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent
			List of Affected Building Material Types

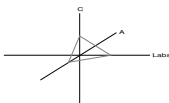
Gray Transite

03	03-1	Gray Transite	15% Chrysotile
04	04-1	Gray Transite	15% Chrysotile

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastonite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

This report relates to the items tested. This report is not to be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, AIHA LAP, LLC, or any other agency of the federal government. This report may not be reproduced except in full without written permission from CA Labs. These results are submitted pursuant to CA Labs' current terms and sale, condition of sale, including the company's standard warranty and limitations of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of ninety (90) days before discarding. A shipping or handling fee may be assessed for the return of any samples.



Polarized Light Asbestiform Materials Characterization

Customer Info: Attn: Joan Sablar
HZW Environmental Consultants
6105 Heisley Rd.
Mentor, OH 44060

Customer Project:
2511 Robinhood Drive, Martin
Run Pump Station

CA Labs Project #:
CBR21063371

Phone # 440-357-1260
Fax # 440-357-1510

Turnaround Time:
5 Days

Date: 6/18/2021
Samples Received: 6/14/2021
Date Of Sampling:
Purchase Order #:

Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
01		01-1	Black Tar	Y	None Detected		100% qu,ma,bi
02		02-1	Black Tar	Y	None Detected		100% qu,ma,bi
03		03-1	Gray Transite	Y	15% Chrysotile		85% qu,ma,ca
04		04-1	Gray Transite	Y	15% Chrysotile		85% qu,ma,ca

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116)
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for
identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gypsum - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastinite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:


Zo Andriampenomanana
Analyst


Senior Analyst
Alicia Stretz


Laboratory Director
Chris Williams

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested



C.A. Labs, LLC.
12232 Industriplex
Suite 32
Baton Rouge, LA 70809

Phone: 225-751-5632
Fax: 225-751-5634
Mobile: 225-993-3471

2511 Robinhood Drive, Martin Run
Chain of Custody Pump Station

Client Name: HZW Environmental Consultants, LLC
Client Address: 6105 Heasley Rd, Mentor, OHIO 44060
phone number: (440) 357-1260
fax number: (440) 357-1510
Project Number: HZ1094-OS
Contact: Joan Seablar
CA Labs job #: CBR 21068371
Billing Address: (if different)
Send Reports to: M.Ferguson@H2WEnv.com
Project Name:
Reports Results VIA: EMAIL ☒ FAX ☐ VERBAL ☐

Total # Samples Submitted:	Total # Samples to be Analyzed:	Material Matrix:
4		Air / Bulk / Water

Asbestos: please call ahead for availability of all rush and/or after hours samples.

TEM	TA Time	PLM	TA Time	Optical / IAQ	TA Time
Circle analysis and TA time		Circle analysis and TA time		Allergen Particle:	
AHERA	4 hour	Improved	4 hour	tape/bulk/swab	4 hour
EPA Level II	8 hour	Interim	8 hour	Cyclax-d cassettes	8 hour
Drinking Water	16 hour		16 hour	Air-o-cell cassettes	16 hour
Wipe	24 hour	AHERA	24 hour	Anderson cultures	24 hour
Micro-vac	2 days		2 days	Bulk/swab cultures	2 days
NIOSH 7402	3 days	Point Count	3 days	Bacteria cultures	3 days
Chatfield Bulk	5 days	(NESHAPS)	5 days	PCM: NIOSH 7400	5-10 days

Lead: Circle analysis and TA time

Matrix:	Paint Chips	Soil	Air	Wipes	Wastewater	TCLP
TA Time:	8 hour	1 day	2 days	3 days	5 days	6-10 days

Sample Information:

Sample Number:	Sample Location:	Sample Date/Time:	Sample Volume (L)
01	Tgr		
02			
03	Cementitious pipe		
04			

\\data\wordpro\forms\ChainofCustody.lwp

Revision 2 3/12/01

Page 1

Custody Information:
Samples relinquished:

Signature / Date / Time
[Signature] / 06-11-21

Samples received:

Signature / Date / Time
[Signature] / 6-14-2021 8:50

Samples relinquished:

Signature / Date / Time

Samples received:

Signature / Date / Time

STOP AT 1ST (+)

Point count 3% or less