PHASE II SUBSURFACE INVESTIGATION
SAMPLING AND ANALYSIS PLAN

Former Steel Ceilings Site
500 North Third Street
Coshocton, Coshocton County, Ohio

September, 2010

Prepared For

Coshocton Port Authority
106 South Fourth Street
Coshocton, Ohio 43812

Under Cooperative Agreement with U.S.EPA
Cooperative Agreement #2B-00E88801-01

Prepared By

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1.0 INTRODUCTION/BACKGROUND

BJAAM Environmental, Inc. (BJAAM) has prepared this Phase II Subsurface Investigation Sampling and Analysis Plan (SAP) for the Coshocton Port Authority under the Under Cooperative Agreement with United States Environmental Protection Agency (US EPA) #2B-00E88801-1 (Hazardous Substance Grant). The purpose of this SAP is to document and report proposed sampling activities and rationale, data quality objectives, data generation methodologies, and quality assurance measures associated with the proposed Phase II Subsurface Investigation. All sampling procedures and analytical methods will be conducted in accordance with the Quality Assurance Project Plan (QAPP) for Coshocton County, which was approved by the US EPA on June 9, 2010.

The Phase I ESA was conducted for the Steel Ceilings Site (Subject Property) located at located at 500 North Third Street, Coshocton, Ohio in accordance with Ohio Administrative Code (OAC) 3745-300-06 and American Society for Testing and Materials (ASTM) E1527-05. All appropriate inquiry (AAI) into previous ownership and uses of the Subject Property has been conducted consistent with good commercial or customary practice. The Phase I ESA is under separate cover.

Based on the results of these findings, it has been determined that the following thirteen (13) IAs/RECs need to be further assessed:

1. Hazardous Waste Drum Storage Area (DSA) (Solid Waste Management Unit (SWMU) 1), Raw Material and Empty DSA (AOC 2), and Former Gas Holding Tank/Gasometer
2. Building 10 - Paint Booth Satellite Accumulation Area (SAA) (SWMU 2), Xylene Still and SAA (SWMU 3), Former Tricholoroethene (TCE) Still and SAA (SWMU 4), and Underground Holding Tank (SWMU 8)
3. Scrap Metal Storage Area (SWMU 5)
4. DSA 1 (SWMU 6)
5. DSA 2 (SWMU 7) and Suspected Buried Drums and Septic Tank Area

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6. TCE Tank (Area of Concern (AOC) 1) and Area East of Building 15/Eastern Loading Dock
7. Fuel Oil Underground Storage Tanks (USTs) (AOC 3)
8. Waste Water Discharge Outfalls (AOC 4)
9. Former Transformer Substation
10. Metal Fabricating Area/Furnace Room (Building 7)
11. Interior DSA (Building 8)
12. Beach Enamel Company/Spellacy and Raff Company Manufacturing Area and Interior DSA (Building 2)
13. Suspected Buried Kiln (Building 4)

1. Hazardous Waste Drum Storage Area (SWMU 1), Raw Material and Empty DSA (AOC 2), Former Gas Holding Tank/Gasometer: SWMU 1, the Hazardous Waste DSA was located at the western exterior wall of Building 2 and was active beginning in 1930. The area consisted of hazardous waste stored in drums, outside, on a sand and gravel parking surface for less the 90 days. The unit had no primary or secondary containment. The potential exists for a past release to have occurred in this area. The unit should undergo proper RCRA closure including soil and groundwater sampling. AOC 2, the Raw Material and Empty DSA, located along the western property boundary, along the fence line bordering the Columbia Gas Service Center, north of the gated site entrance was active from at least 1956 until at least 1994. The area consisted of outside storage of drums of solvents used in painting operations. The drums were stored on a gravel surface. No secondary containment system or berm surrounded the area. The potential exists for a release to have occurred from this area to environmental media. A former gas holding tank was identified to the west of Building 2 in Sanborn Fire Insurance Maps dated 1905 thru 1931. Furthermore, a research of historical city directories indicates the Subject Property was also occupied by the Union 76 Co. bulk plant from the late 1960's thru at least the mid 1970's. Chemicals of Concern (COCs) include Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Priority Pollutant Metals (PP Metals), Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO), and Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO).

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2. Building 10 - Paint Booth SAA (SWMU 2), Xylene Still and SAA (SWMU 3), Former TCE Still and SAA (SWMU 4), and Underground Holding Tank (SWMU 8): SWMU 2, the Paint Booth Satellite SAA, located on a concrete area within Building 10, managed hazardous and nonhazardous waste. No cracks or active drains were found near the unit. Small paint spills were found near the drums during a 1994 Preliminary Assessment/Visual Site Inspection conducted by PRC Environmental Management, Inc. (PRC) under contract with the U.S. EPA. PRC recommended no further action for the SWMU 2 in 1994. SWMU 3, the Xylene Still and SSA were located at the westerly end of the interior Building 10. The unit managed xylene-contaminated paint sludge and plastic bags used in the xylene distillation process. No floor drains were identified nearby. PRC recommended no further action for SWMU 3. SWMU 4, the Former TCE Still and SSA was located at the northerly wall of Building 10, east of center and was identified as a large pit approximately 15ft x 30ft x 7ft in size. The unit was no longer active during the 1994 visual inspection. In December 1993, Steel Ceilings converted the TCE vapor degreaser to a mildly alkaline aqueous degreaser, totally eliminating the use of TCE at the facility. There is a history of release to the City of Coshocton sanitary sewers from this unit. According to PRC, the potential for a release to have occurred in this area was low. PRC recommended no further action for SWMU 4. SWMU 4 is located next to a drain connected to SWMU 8. Ohio EPA suspected that wastes from SWMU 4 or SWMU 8 could have been released to groundwater and on-site soils. SWMU 8, the Underground Holding Tank, located approximately at the front of the property, south of Building 10 was active from about 1954 until 1990. The facility used the 8,000 gallon underground holding tank to collect discharge from solvent and paint sludge containing waste water. In 1990, the Ohio EPA recommended that the waste water be rerouted and the tank eliminated from the waste stream because of the potential for soil and groundwater contamination from the tank or piping. Steel Ceilings eliminated the tank from the waste stream in July of 1990. COCs for the areas identified within Building 10 include VOCs and PP Metals.

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3. Scrap Metal Storage Area (SWMU 5) – SWMU 5, the Scrap Metal Storage Area located to the north of Building 7 and west of Building 2 was active beginning in approximately 1930. Nonhazardous steel and aluminum metal scrap were managed in drums and a roll off box on a concrete pad. No releases from the unit were documented. PRC recommended no further action for SWMU 5. COCs include PP Metals and PCBs.
4. Inactive DSA 1 (SWMU 6) - SWMU 6, DSA 1, located at the northern exterior wall of Building 2 was active from about 1930 until 1983. The unit stored hazardous waste outdoors, in drums on sand and gravel for greater than 90 days. The unit was closed in 1983 and approximately 20 cubic yards of TCE contaminated soil and 100 drums were removed. There were no sampling details of the unit's closure documented and according to PRC, the EPA stated it was just beginning to develop closure policy at that time. COCs include VOCs, PAHs, and PP Metals.
5. Inactive DSA 2 (SWMU 7) and Suspected Buried Drums and Septic Tank Area - SWMU 7, DSA 2, located to the northeast of Building 6 was active from about 1930 until 1983. The unit stored hazardous waste outdoors, in drums on sand and gravel for greater than 90 days. The unit was closed in 1983 and approximately 20 cubic yards of TCE contaminated soil were removed. There were no sampling details of the unit's closure documented and according to PRC; the EPA stated it was just beginning to develop closure policy at that time. The potential exists for a release to have occurred from this unit to environmental media. The unit should undergo soil sampling. In addition, vegetation in the area north of the northern loading dock (Building 6) appeared to be stressed. According to an interview with Mr. David Lear, former Maintenance Person with Steel Ceilings, this area to the north of Building 6, beyond the loading dock area may contain buried drums containing paint sludge, spent trichloroethylene and spent ethylene chloride. Other waste including enamel signs may also be buried in that area. According to Mr. Lear, a septic tank is located underground to the east of Building 6. COCs include VOCs, Polycyclic Aromatic Hydrocarbons (PAHs), PP Metals and PCBs.

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6. TCE Tank (AOC 1) and Area East of Building 15/Eastern Loading Dock- AOC 1, the TCE aboveground storage tank (AST) located between Buildings 1 and 15 on a concrete pad was active from 1946 until 1994 and held 1,500 gallons of TCE. Access to the tank was on the east side. The concrete pad was unbermed and the area to the east of the AST was gravel covered. The eastern loading dock is located at the eastern wall of Building 15, just south of the TCE AST. This loading dock may have been used for the delivery of hazardous materials as Building 15 adjoins Building 10 where solvents and paint were utilized in the operations of Steel Ceilings. COCs include VOCs and PP Metals.
7. Fuel Oil USTs (AOC 3) - AOC 3, the Fuel Oil USTs located approximately 15 feet east of Building 1 were active from approximately 1931 until 1962. The area consisted of three (3) abandoned fuel oil USTs with a total capacity of 20,000 gallons. The tanks were first identified on a 1931 Sanborn Fire Insurance Map. The age and composition of the tanks are unknown. It was unknown whether the tanks had any release control systems. COCs include VOCs, PAHs, TPH-GRO, and TPH-DRO.
8. Waste Water Discharge Outfalls (AOC 4) - AOC 4, the Tuscarawas River Waste Water Discharge Outfalls consisted of two (2) waste water outfalls located extending out of the embankment north of the Subject Property site building. The outfalls were connected to floor drains throughout the facility until 1990. The outfalls were not identified during site reconnaissance, however, according to a previous environmental report; in 1994 one of the outfalls was still active discharging cooling water from an air compressor. The other outfall appeared to be covered with brush and rubble from fill that had been placed along the bank. Aerial photos indicated a white colored waste water discharge from these areas. Wastewater from floor drains and a vapor degreaser may have discharged to soil and sediments of an unnamed creek which leads to the Tuscarawas River approximately 400 feet to the west of the Subject Property. The outfalls were used from 1906 until wastewater lines were rerouted in 1990. COCs include VOCs, PAHs, PP Metals, and PCBs.

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9. Former Transformer Substation - A former transformer substation was identified to the east of Building 7 and north of Building 1. The substation was identified as a fenced in area with a concrete pad. Large electrical wires protrude from Building 1 and would have connected to the electrical transformers. Based on interviews with Mr. Dave Lear, former Maintenance Person with Steel Ceilings, the transformers were originally installed in approximately 1948. One (1) transformer was replaced in the 1950s. The potential exists for a release to have occurred from this area to environmental media. COCs include VOCs, PAHs, TPH-DRO, TPH-ERO, and PCBs.
10. Metal Fabricating Area/Former Beach Enamel Furnace Room (Building 7) – The area within the interior of Building 7 was used for metal cutting, stamping and fabricating. Three (3) pits, approximately 10ft x 10ft x 6ft were identified and previously were the locations of metal fabricating machines. The floor surrounding the metal fabricating machines was constructed of wooden brick. The westerly most pit is full of water with an oily sheen at the surface. Building 7 was used by the Beach Enamel Company as a furnace room. COCs include VOCs, PAHs, PP Metals and PCBs.
11. Interior DSA (Building 8) – Several material containers were identified at the eastern portion of Building 8 during site reconnaissance including the following: one (1) drum of heavy duty metal drawing or stamping fluid, one (1) drum of hydraulic fluid, one (1) drum of solvent degreaser, one (1) drum of lubricant, one (1) drum of used oil, six (6) unlabeled drums, and three (3) 5 gallon buckets, contents unknown. The drums were stored on wooden crates on a concrete surface. COCs include VOCs, PAHs, and PP Metals.
12. Beach Enamel Company/Spellacy and Raff Company Manufacturing Area and DSA (Building 2) – The Beach Enamel and Spellacy and Raff Companies manufactured enamel ware at the Subject Property from at least the early 1900's through the 1930's. The main factory area for these operations was located in the area of Building 2. In addition, several containers of material were identified within Building 2 during site reconnaissance including the following: One (1) drum of isopropyl

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alcohol, one (1) drum of mineral spirits, one (1) drum of metal working fluid, one (1) drum of lithion soap grease containing none lead additives, one (1) drum of recycled solvent, two (2) 1 gallon containers of denatured solvent alcohol, one (1) approximately 25 gallon container of natural degreaser/deodorizer and approximately two (2) pallets and several additional 1 gallon containers of paint. Several light bulbs were also observed in this area. COCs include VOCs, PAHs, and PP Metals.

13. Suspected Buried Kiln (Building 4) – In an interview on May 17, 2010 Mr. David Lear, Former Maintenance Person with Steel Ceilings stated that during his time with the company, a large underground brick kiln was discovered in Building 4 when a portion of the floor collapsed under the weight of a tow motor. Pipes were found extending west from the brick kiln in Building 4 toward and beneath Building 2. The kiln was likely used in the manufacturing of enameled products produced by the Beach Enamel Company and/or Spellacy Raff Company from the early 1900's through at least the 1930's. COCs include VOCs and PP Metals.

The following potential off site area of concern (AOC) has been identified in connection with the adjoining property and could be impacting the Subject Property.

1. The property adjoining to the east of the Subject Property, Smurfit-Stone Container Division is listed on the Toxic Chemical Release Inventory System database and discharges liquid waste including lead compounds, acetaldehyde, dioxin and dioxin like compounds, and methanol to an unnamed creek which traverses the Subject Property approximately 170 feet north of the Subject Property site building. The creek flows to the west toward the Tuscarawas River located approximately 400 feet from the Subject Property. The waste stream outflow is located along the eastern Subject Property boundary.

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2.0 PHASE II SUBSURFACE INVESTIGATION – SCOPE OF WORK

The scope of work for the Phase II Subsurface Investigation will be to evaluate for the potential presence of environmental contamination in soil and ground water at the Subject Property and, if applicable, determine if contaminant concentrations exceed Ohio VAP Generic Direct Contact Soil Standards (GDCSS) for commercial/industrial properties and/or Unrestricted Potable Use Standards (UPUS) as codified in the Ohio Administrative Code (OAC) 3745-300-08. The Phase II Subsurface Investigation will be completed in general accordance with Ohio EPA VAP requirements for a Phase II Property Assessment as codified in the OAC 3745-300-07. Samples will be collected in accordance with the Quality Assurance Project Plan (QAPP) which was approved by the U.S. EPA on June 9, 2010.

BJAAM has established the following scope of work to evaluate the IAs/RECs identified in connection with the Subject Property:

- A ground penetrating radar (GPR) survey will be conducted at the Subject Property in order to identify subsurface structures and subsurface hazards prior to the installation of soil borings and groundwater monitoring wells. In addition, GPR will used to identify potential buried drums or other items in the area of IA/REC 5.

- Advance twenty-five (25) soil borings in the thirteen (13) IAs/RECs to an approximate maximum depth of 26-feet below ground surface (bgs) to evaluate subsurface conditions at the Subject Property. Proposed boring depths may be field determined based on observations associated with ground water depth and/or a confining geologic layer. This soil boring depth was selected as ground water is expected to be encountered at depths of approximately 26-feet bgs. Soil sample intervals will be collected at 2-foot intervals, continuously logged by a field geologist, and photoionization detector (PID) measurements will be recorded. Proposed soil boring locations are based upon the IAs/RECs identified

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in the Phase I ESA and represent portions of the Subject Property with the highest likelihood of potential impact. A minimum of one (1) and maximum of two (2) soil samples will be obtained for laboratory analysis during the installation of each boring.

- Based upon the IAs/RECs identified in the Phase I ESA, ten (10) permanent ground water monitoring wells will be installed to evaluate groundwater conditions. The monitoring wells will be installed as 2-inch diameter wells with ten feet of 0.01-inch slotted schedule PVC screen using hollow stem auguring and/or direct push drilling techniques. A minimum of one (1) and maximum of two (2) soil samples will be obtained for laboratory analysis during the installation of each monitoring well.

- Three (3) sediment samples and three (3) surface water samples will be collected in the areas of the Waste Water Discharge Outfalls (IA/REC 8) and the off property waste discharge point located within an unnamed creek approximately 170 feet north of the Subject Property site building. Samples will be collected in accordance with the QAPP from a downstream location, with the most downstream location being sampled first in order to avoid contamination from disturbance of upstream sediments. PID measurements will be recorded. All stones, shells, and foreign materials will be removed from the sample and place into the correct sample container. TerraCore® sampling kits will be provided by Belmont Labs and utilized for the collection of sediment samples to be analyzed for the presence of VOCs as outlined in the QAPP. Surface water samples will be collected in according with the QAPP in a clean, un-preserved container. The opening of the container will be directed upstream during sample collection. If sample preservation is necessary depending on the COC, once the sample is collected, it will then be gently transferred from the un-preserved container to a laboratory pre-preserved sample bottle.

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- A maximum total of fifty five (55) soil samples (a minimum of one (1) and maximum of two (2) from each soil boring), ten (10) ground water samples, three (3) sediment samples, three (3) surface water samples and applicable Quality Assurance/Quality Control (QA/QC) samples will be collected in accordance with the QAPP. For this property the point of compliance under the VAP is 0-2 feet for direct contact, therefore one (1) soil sample will be submitted from each soil boring from the 0-2 foot interval. A second soil sample may be chosen from each soil boring based on field screening with a PID meter, visual and olfactory conditions (i.e. discoloring and/or obvious odors) and/or the depth of saturation.

- Samples will be submitted to a laboratory for analyses of the following Chemicals of Concern (COCs), which are area dependent: Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Total Petroleum Hydrocarbons (TPH) C_6-C_{34}, Priority Pollutant Metals (PP Metals) and Polychlorinated Biphenyls (PCBs).

- The buildings on the Subject Property were constructed before 1986. Suspect asbestos containing materials were observed throughout the site building including roof flashing, window caulking, insulation, and ceiling tiles. A formal asbestos survey will be conducted as described in the QAPP prior to any demolition of these potential asbestos containing materials (PACM) materials in accordance to the OSHA standards, the National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations, and state or local regulations. ACM and presumed ACM that is intact and in good condition can, in general, be managed safely in-place under the Asbestos Hazard Emergency Response Act (AHERA) Operations and Maintenance (O&M) Program, until removal is dictated by renovation, demolition or deteriorating material condition.

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- Based on the soil and groundwater sample results, soil gas and/or indoor air sampling may be warranted. Should analytical results indicate soil gas and/or indoor air sampling be required, an addendum to the SAP will be issued.

- Potential impact from the adjoining property waste stream outflow located along the eastern Subject Property boundary to the north of IA/REC-5 will be evaluated using sediment and surface water samples closest to the potential off site source of contamination. Samples will not be collected outside of the boundaries of the Subject Property.

- Prepare a Phase II Subsurface Investigation Report.

Proposed soil boring and monitoring well locations are illustrated on Figure 2 – Proposed Sample Location Map.

2.1 Methodologies and Quality Assurance

All field samples will be collected following requirements outlined in the QAPP which was approved by the US EPA on June 9, 2010. Soil borings will be continuously sampled at 2-foot intervals utilizing the following equipment: hollow-stem auger(HSA)/split spoon techniques, a track-mounted Geoprobe® 6620DT unit with a 2.25" DT sampling device and associated Geoprobe® tooling, or a hand auger.

Hand augers will be utilized to reach a depth of at least six (6) feet bgs at all subsurface sampling locations in order to more safely avoid damaging any potential subsurface utilities that could potentially be undetected by the Ohio Utilities Protection Service and/or private utility locators. Based on local groundwater and lithology as described on Oho Department of Natural Resources well logs from the area, it is expected that all soil borings and monitoring wells will be installed using a Geoprobe® system. However, it may be necessary to install groundwater monitoring wells and collect soil samples utilizing HSA/split spoon techniques. HSA/split spoon methods would be necessary if

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saturation is encountered deeper than expected, requiring groundwater monitoring wells to be set at depths greater than achievable using the Geoprobe® system (usually greater than 40 feet bgs). HSA/split spoon methods would also be necessary if subsurface lithology is encountered such that the Geoprobe® system proves ineffective (i.e. tight sand and gravel or cobbles). Soil samples will be collected in continuous 2-foot foot intervals beginning at the ground surface and ending at the termination depth, depending on whether a soil boring or monitoring well is being installed.

Decontamination of all sampling equipment will be performed to reduce the possibility of cross-contamination. Between each soil boring location, the down-hole probing equipment (e.g., augers, rods and sampling equipment) will be decontaminated using a Liquinox/distilled water solution and then rinsed with potable distilled water. Non-dedicated sampling equipment (e.g., probe sleeves and disposable bailers) will be discarded after each use. All ground water level meters will be decontaminated between monitoring wells using an Alconox/distilled water mixture.

Field screening of soil samples for VOCs will be performed in the field using a PID meter equipped with a 10.6 electron volt (eV) probe. The PID meter will be calibrated prior to mobilization by introducing a known concentration of isobutylene gas through the detector for quality assurance and to minimize error. All soil samples will be screened in a 2-foot interval. TerraCore® sampling kits will be provided by Belmont Labs and utilized for the collection of soil samples to be analyzed for the presence of VOCs as outlined in the QAPP. Soil containers for VOCs will be pre-preserved with methanol (5mLs for 5g soil) for high level samples and sodium bisulfate (5mL for 5g soil) for low level samples. The remaining soils will be logged by a field geologist and placed in laboratory supplied 4-ounce glass jars with *Teflon*-lined lids.

All monitoring wells will be installed as permanent groundwater monitoring wells. Monitoring wells will be visually inspected for integrity prior to the start of groundwater sampling activities. Monitoring wells will be developed in a manner consistent with the

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Technical Guidance Manual for Hydrogeologic Investigations and Ground Water Monitoring (Ohio EPA, 2006). Each monitoring well will be gauged to determine the ground water level and the presence of immiscible layers and recorded on the field sampling log. Monitoring well development will consist of purging and removing a minimum of 3 to 5 well volumes or bailing until the monitoring wells are completely evacuated, whichever occurs first. The well casing water volume will be determined by subtracting the depth to the water table from the depth to the bottom of the monitoring well. The number of casing volumes to be removed will be determined by monitoring temperature, pH, and specific conductivity. Well development will continue until three consistent readings within ±0.1 pH, ±1°, and ±5% for conductivity are achieved, or the well is completely evacuated prior to reaching three well volumes, whichever occurs first. In cases where the well bails dry, it will be allowed to completely recover prior to sampling. Monitoring well developing will be performed using a non-dedicated polyethylene bailer and ground water will be evacuated from the top of the water column. This criterion will be adhered to during the development of each well. After the parameters are stabilized the samples will be collected using low flow techniques as outlined in the QAPP. All containers will be stored at 4-degrees Celsius, packed in ice, and shipped to the laboratory for analyses. Groundwater monitoring wells will be abandoned (either pulled and filled or over drilled) at the completion of the project or at the completion of remediation (if necessary).

Sediment samples will be collected from the on site creek bed and banks. The sampler will stand downstream of the sample collection point. Samples will be collected in order from the most downstream sample location to the most upstream sample location. The downstream samples will be collected first to avoid contamination from disturbance of sediments upstream. A palm sized amount of the sample will be placed in a sealable bag and field screened. All stones, shells, and foreign materials will be removed from the sample and place into the correct sample container. TerraCore® sampling kits will be provided by Belmont Labs and utilized for the collection of sediment samples to be analyzed for the presence of VOCs as outlined in the QAPP. Samples will be cooled to

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4-degrees Celcius, packed on ice and shipped to the laboratory for analyses. A chain of sample custody will accompany the sediment samples. An equipment blank will be collected to ensure that sampling equipment has not contaminated sampling media.

Surface water will also be collected from the on-site creek. The sampler will stand downstream of the sample collection point. Samples will be collected in order from the most downstream sample location to the most upstream sample location. The downstream samples will be collected first to avoid contamination from disturbance of sediments upstream. A clean un-preserved sample container will be submerged below the water surface. The sample container will be held far enough below the water surface so that the surface film on the water is not incorporated into the sample. If the surface water is flowing, the collection container will be held with the opening upstream. If sample preservation is necessary, depending on the COCs, once the sample is collected it will be gently transferred to a laboratory pre-preserved sampling container if necessary. Samples will be cooled to 4-degrees Celsius, packed on ice and shipped to the laboratory for analyses. A chain of sample custody will accompany the surface water samples. An equipment blank will be collected to ensure that sampling equipment has not contaminated sampling media.

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3.0 LABORATORY ANALYSIS

Soil and ground water samples collected will be submitted under chain-of-custody procedures to Belmont Labs in Englewood, Ohio for requested laboratory analyses. Proposed sample locations were selected based on the IAs/RECs identified in the Phase I ESA. All sampling containers, preservation methods, and hold times will follow requirements outlined in the QAPP approved by the US EPA on June 9, 2010.

Table 1

Proposed Sampling and Laboratory Analyses

Sample Designation	IA/REC	Proposed Laboratory Analytical Parameters	Proposed Matrix	Proposed Number of Samples
MW-1, MW-2, SB-1 - SB-3	IA1/REC1	VOCs/PAHs/TPH-GRO/TPH-DRO	Soil/Water	6 soil/2 water
MW-3, SB-4 - SB-8	IA2/REC2	VOCs/PP Metals	Soil/Water	10 soil/1 water
MW-4, SB-9 and SB-10	IA3/REC3	PP Metals/PCBs	Soil/Water	6 soil/1 water
MW-5, SB-11 and SB-12	IA4/REC4	VOCs/PAHs/PP Metals	Soil/Water	5 soil/1 water
MW-6, SB-13 and SB-14	IA5/REC5	VOCs/PAHs/PP Metals	Soil/Water	6 soil/1 water
MW-7, SB-15 and SB-16	IA6/REC6	VOCs/PP Metals	Soil/Water	4 soil/1 water
MW-8, SB-17	IA7/REC7	VOCs/PAHs/TPH-GRO/TPH-DRO	Soil/Water	3 soil/1 water
SW-1 - SW-3, SD-1 - SD-3	IA8/REC8	VOCs/PAHs/PP Metals/PCBs	Soil/Water	3 sediment/3 surface water
SB-18 and SB-19	IA9/REC9	VOCs/PAHs/TPH-DRO/TPH-ERO/PCBs	Soil	3 soil
MW-9, SB-20	IA10/REC10	VOCs/PAHs/PP Metals/PCBs	Soil/Water	3 soil/1 water
SB-21 and SB-22	IA11/REC11	VOCs/PAHs/PP Metals	Soil	3 soil
MW-10 and SB-23	IA12/REC12	VOCs/PAHs/PP Metals	Soil/Water	3 soil/1 water
SB-24, SB-25	IA13/REC13	VOCs/PP Metals	Soil	3 soil
Equipment Blank	QA/QC	VOCs/PAHs/PP Metals/PCBs	Soil/Water	1 Per 20 Samples
Field Duplicate	QA/QC	VOCs/PAHs/PP Metals/PCBs/TPH	Soil/Water	1 Per 20 Samples
Trip Blank	QA/QC	VOCs	Soil	1 Per Site or Lot of Bottles
Trip Blank	QA/QC	VOCs	Water	1 Per Cooler
Meth Blank	QA/QC	VOCs	Soil/Water	Lab Determined
MS/MSD-1	QA/QC	VOCs/PAHs/PP Metals/PCBs/TPH	Soil/Water	Lab Determined

All soil, ground water, sediment and surface water samples will be labeled, sealed, and recorded on the chain-of-custody at the time of sampling. Sample containers will be preserved with ice during field activities to achieve a temperature of 4-degrees Celsius.

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4.0 SCHEDULE

Fieldwork is scheduled for October 2010. Once the Phase II Subsurface Investigation SAP is approved, field activities will commence. Laboratory turnaround time at Belmont Labs is ten (10) business days. The Phase II Subsurface Investigation will be completed within 6-8 weeks of receipt of analytical results.

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Figures

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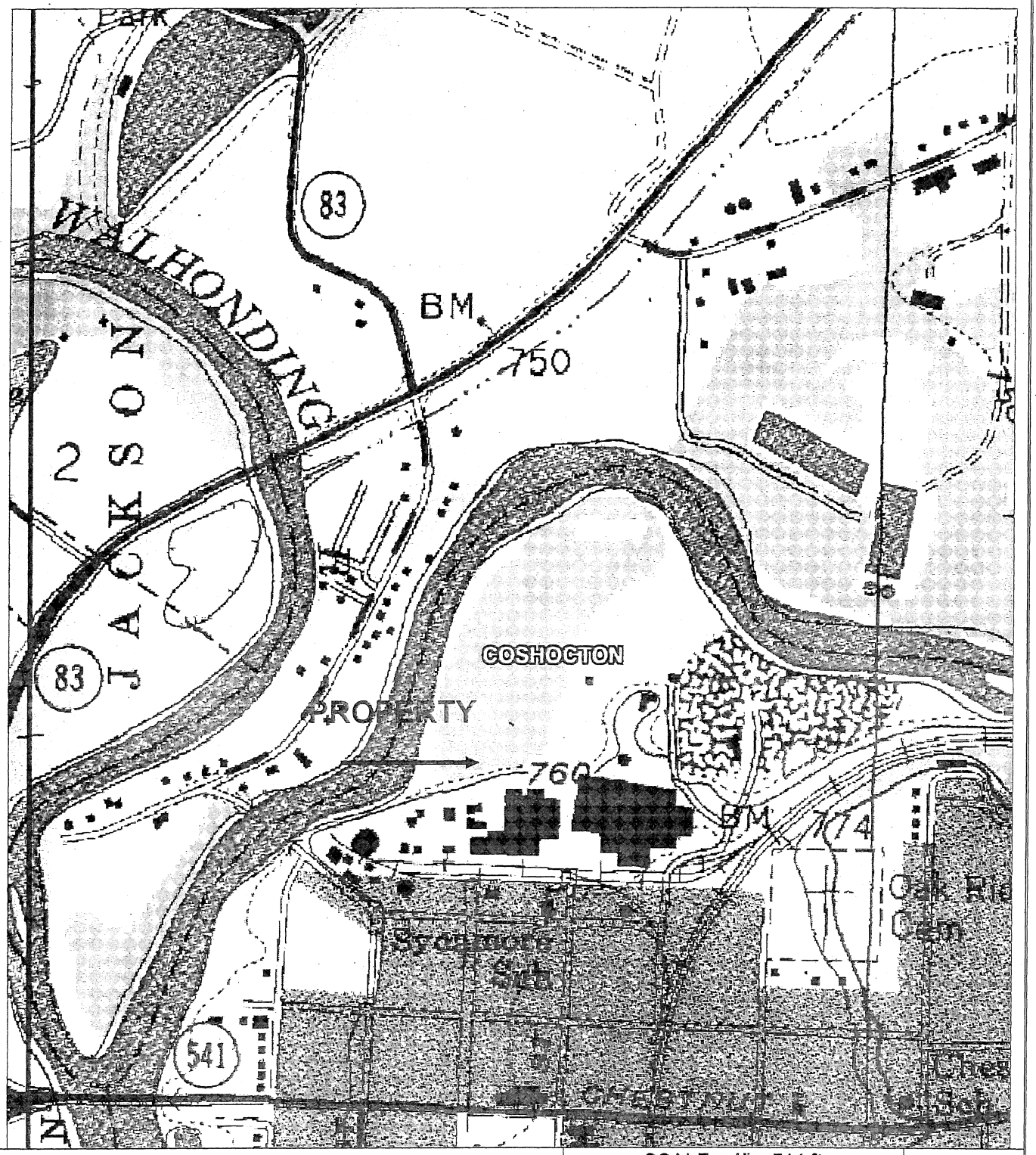
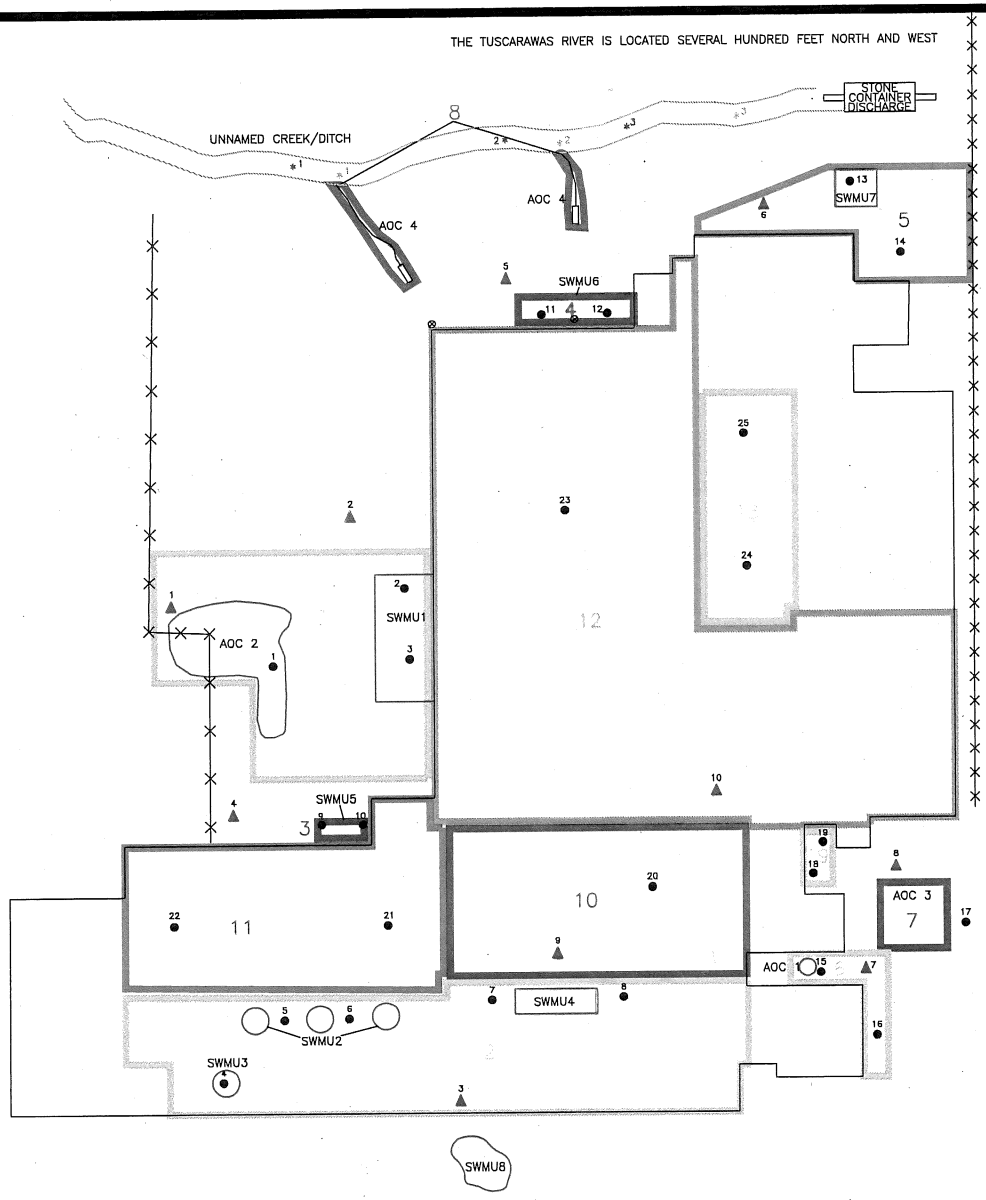
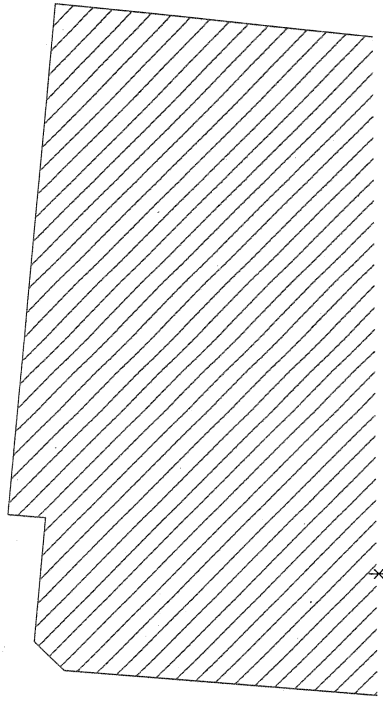
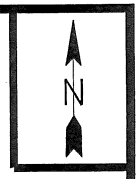


FIGURE 1 – TOPOGRAPHIC MAP	SCALE = 1" = 714 ft Source: USGS 7.5 Minute Topographic Map Coshocton Quadrangle 1996	N↑
BJAAM ENVIRONMENTAL, INC.	Site Name: Former Steel Ceilings Site 500 North Third Street Coshocton, Ohio 43812 Project Number: 110009 Steel Ceilings	







*NOTE: SWMUs AND AOCs WERE DEFINED IN THE PRELIMINARY ASSESSMENT/VISUAL SITE INSPECTION REPORT COMPLETED BY PRC ENVIRONMENTAL MANAGEMENT INC. (MARCH 29, 1994).

LEGEND

- = ADJACENT BUILDING
- ▲ = PROPOSED WELL
- ● = PROPOSED BORING
- = PROPOSED SEDIMENT SAMPLE
- * = PROPOSED SURFACE WATER SAMPLE
- ⊗ = MANHOLE
- 12 = IDENTIFIED AREA
- = FENCE

0 25' 50'
BAR SCALE IN FEET

FIGURE 2:

PROPOSED SAMPLING LOCATIONS
110009
FORMER STEEL CEILING
500 NORTH 3rd STREET
COSHOCTON, OHIO 43812
FILE NAME= 110009-FORM-STEEL-CEILING-SITE-PR
DATE: AUGUST 17, 2010
APPRX. SCALE: 1"=50'
DRAWN BY: J.P.BREEN

BJAAM ENVIRONMENTAL, INC.

Appendix A - Site Specific Health and Safety Plan

BJAAM ENVIRONMENTAL, INC.

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BJAAM ENVIRONMENTAL, INC.
SITE SPECIFIC HEALTH AND SAFETY PLAN

IN AN EMERGENCY – DIAL 911
Former Steel Ceilings Site
500 North 3rd Street
Coshocton, Ohio

GENERAL INFORMATION (1910.120(c)(4))	
Project Name: Former Steel Ceilings Site (US EPA Assessment Grant)	Project #: 110009
Location: 500 North Third Street, Coshocton, Ohio	
Client: Coshocton Port Authority	
Plan Prepared By: Lauren Glockner	Date:9/13/10
Plan Reviewed By: Zach Pierce	Date: 9/13/10
Plan Approved By: Bernard Nanna	Date: 9/13/10
Project Start Date: 10/2010	

SITE DESCRIPTION (1910.120(c)(4))	
Facility History:	Former Enamel Factory, Former Industrial Location, potential buried drums and other items.
General Site Description:	15.8 acres, drilling at interior and exterior of building, vacant property.

PROJECT OBJECTIVE(S) (1910.120(b)(3)) (Description of work area activities planned)
Advance soil borings to approximate depth of 26-feet below ground surface. Install pre-packed monitoring wells using Geoprobe or HSA. Work to be completed throughout the property, on site only in IAs/RECs.

PROJECT ORGANIZATION (1910.120(b)(2))		
Team Member	**Responsibility**	**Training**
Zach Pierce	Senior Engineer/Scientist	OSHA 40 Hour 8-Hour Refresher
Lauren Glockner	Project Manager	OSHA 40 Hour 8-Hour Refresher
Bernard Nanna	Site Safety Officer (BJAAM)	OSHA 40 Hour 8-Hour Refresher

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CHEMICAL HAZARD ANALYSIS (1910.120(b)(4))

Substance	COC/ potential COC at this Site?	Permissible Exposure Limit (ppm)	Immediately Dangerous to Life and Health	Lower explosive limit / Upper Explosive Limit	Flash Point	ROUTES OF EXPOSURE
Gasoline	Yes	TWA = 300 STEL = 500	Not Available	1.3%/6.0%	-50 °F	Inhalation, Contact, Ingestion
Diesel Fuel (Fuel Oil #2)	Yes	PEL = 5 mg/m3 oil mist	Not Available	0.4%/6.0%	130 °F	Inhalation, Contact, Ingestion
Kerosene (Fuel Oil #1)	No	PEL = 100	Not Available	0.7%/5.0%	>100 °F	Inhalation, Contact, Ingestion
Jet Fuel (Turbine Fuel)	No	PEL = 300	Not Available	1.0%/6.0%	100 °F	Inhalation, Contact, Ingestion
Heating Oil (Fuel Oil #2)	Yes	Not Available	Not Available	0.4%/6.0%	125 °F	Inhalation, Contact, Ingestion
Crude Oil	No	See MSDS for ingredients	See MSDS for ingredients	See MSDS for ingredients	See MSDS for ingredients	Inhalation, Contact, Ingestion
MTBE	Yes	TLV = 50 ppm	LD50 = 100 mg/kg (rat)	1.6%/8.4%	-17 ° F	Inhalation, Contact, Ingestion
Benzene	Yes	TWA = 0.5 ppm STEL = 2.5 ppm	v. hazardous to eyes Hazardous if ingested	1.2%/7.8%	12 ° F	Dermal Contact, Eye Contact, Inhalation
Toluene	Yes	OSHA PEL = 200 ppm STEL = 150 ppm TLV= 50 ppm	LD 50 = 1.7 gm/kg (rat)	1.0%/7.0%	41 ° F	Inhalation, Contact, Ingestion
Ethylbenzene	Yes	OSHA TWA = 100 ppm OSHA STEL = 125 ppm	LD 50 =3500 mg/kg (rat)	0.8%-1.6%/ 6.7%-7%	59 ° F – 80 ° F	Inhalation, Contact, Ingestion
Xylenes	Yes	100 ppm (OSHA) STEL = 150 ppm	LD 50 = 4300 mg/kg (rat, oral)	1.1 %/ 7%	80.6 °F	Inhalation, Contact, Ingestion
Mineral Spirits	No	Not Available	Not Available	Flammable	100.4 ° F	Inhalation, Eye Contact, Ingestion
Propylene Glycol	No	TWA= 10 mg/m3 (AIHA)	LD 50 = 18500 mg/kg (Rabbit, oral)	2.6%/12.5%	210.2 °F – 224.6 °F	Dermal and Eye Contact
PCB's	Yes	See MSDS	See MSDS	See MSDS	195 C	Inhalation, Contact, Ingestion
Hydrogen Sulfide	NO	PEL = 20 ppm	100 ppm	4%/44%	NA	Inhalation, Contact, Ingestion
Carbon Monoxide	NO	PEL = 50 ppm	1200 ppm	12.5%/74%	NA	Inhalation, Contact, Ingestion
Methane	NO	None	Displacement < 19.5 % Oxygen	5.3%/15%	NA	NONE

Samples at this site will be analyzed for: VOCs/SOVs/TPH/PCBs/PP Metals/Asbestos. SEE MSDS

NOTE: This information is not intended to replace an MSDS for chemicals of concern, however is intended to draw attention to the chemicals of concern at the SITE. MSDSs are present in every drilling support truck. PID ACTION LEVEL FOR SUSTAINED PERIOD = 100 ppm

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OTHER HAZARDS

HEAT STRESS: ☒ **YES** ☐ **NO** If yes, please specify precautions to be taken: monitor all workers for indications of heat stress, including muscle spasms; pain in hands, feet, and abdomen; dizziness; nausea, fainting, changes in skin temperature or sweat production (see attachment).

COLD STRESS: ☒ **YES** ☐ **NO** If yes, please specify precautions to be taken: monitor all workers for indications of cold stress, including whitening (blanching) of the skin; waxy, grayish-yellow or grayish-blue discoloration of the skin; numbness; "wooden" feeling; swelling, itching, burning or deep pain as the area is warmed (see attachment).

EXCESSIVE NOISE: ☒ **YES** ☐ **NO** Always wear approved hearing protection in areas with excessive noise. Be alert for the use of pre-arranged hand signals in areas with excessive noise. Be alert for hazardous conditions that may arise due to excessive noise.

CONFINED SPACE ENTRY: NEVER ENTER A CONFINED SPACE.

OPEN EXCAVATIONS: ☐ **YES** ☒ **NO** Do not stand at the edge of an open excavation. Do not enter an open excavation without approval from the Site Safety Officer. Never enter an open excavation that is not properly shored.

WELDING AND/OR CUTTING: ☐ **YES** ☒ **NO** If yes, please specify precautions to be taken:

HEAVY EQUIPMENT OPERATION: ☒ **YES** ☐ **NO** If yes, specify type of equipment and precautions taken: Be alert for heavy equipment operations, including drill rig operations. Utilize traffic control devices (e.g., orange cones) to alert equipment operators and vehicle drivers to the presence of workers.

SLIP, TRIP, FALL HAZARDS: Be alert for wet, icy, or potentially slippery surfaces, objects and equipment laying on the ground, and holes or open excavations.

FOOT HAZARDS: Steel-toed safety footwear meeting ANSI Z41.1 standards shall be worn at all times.

EYE/FACE HAZARDS: Eye and face protection meeting ANSI Z87.1 standards shall be worn when potential for eye and face injury exists. Safety glasses with side shields, at the minimum, shall be worn at all times.

PRESENCE OF LOCATED UNDERGROUND UTILITIES: ☒ **YES** ☐ **NO**
Name of Contact: Ohio Utility Protection Services (OUPS)
Phone Number: (800) 362-2764
Ohio Utilities Protection Worksheet is attached
Precautions to be taken: Minimum distance of 5 feet between borings and underground utilities. Site Safety Officer shall verify utility clearance.

PRESENCE OF OVERHEAD UTILITIES: ☒ **YES** ☐ **NO**
Specify exact Location: Determined by Drilling Manager once on-site
Precautions to be Taken: Minimum distance of 15 feet between any overhead utility line and operating equipment will be maintained, unless power is shut off or the lines are booted by the operating utility.

OTHER HAZARDS: A ground penetrating radar survey should be conducted to clear sampling locations. Potential buried items including potential drums or enamel signs may be present under IA/REC 5.

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PERSONAL PROTECTIVE EQUIPMENT (1910.120(b)(4))

Required Level "D" protective equipment is listed below. If the project requires greater than Level "D" protection, Form HS 004 must be used.

Level D is required for this project

Boots: Steel-toe
Gloves: Leather (drilling operations); disposable latex (sample collection)
Protective Coverall: coveralls/work uniform
Head protection: Hard Hat
Eye Protection: Safety glasses with side shields
Hearing Protection: Ear plugs or muffs

DECONTAMINATION (1910.120(k))

Please describe the decontamination procedures for personnel and equipment.
If the project requires greater than Level "D" protection, Form HS 004 must be used.

Personnel - gross removal and wash hands and face thoroughly as soon as possible
Equipment - gross removal and pressure wash on-site if evidence of contamination. Rinseate to be collected and left on site with development water.

AMBIENT AIR MONITORING (1910.120(b)(4))

Activity	Instruments	Action Level	Frequency
Drilling	PID	50 ppm – Total Organics in breathing zone	15 minute intervals
	Gas Meter	Described in manual	Continuous
	Indicating Tubes	5 ppm - Benzene	As required

Comments:
PID: All air monitoring results are to be documented. The atmosphere around each boring location and in the breathing zone of employees must be periodically monitored using a photoionization detector for levels of total organic compounds. Total organic concentrations greater than 50 ppm will be further evaluated with indicating tubes to determine the specific concentration of Benzene. **If the PID indicates that the total organic concentrations in the breathing zone are greater than 50 ppm, or indicating tubes indicate that benzene concentrations are greater than 5 ppm: stop work immediately, leave the work area, and inform the Site Safety Officer.**

GAS METER: The Staff Geologist will wear a 5 gas meter to measure LEL, Methane, Hydrogen Sulfide, Methane, Oxygen and Carbon monoxide. The meter works by continuously pulling in ambient air with a vacuum and measuring the parameters listed above. If the meter alarm sounds, shut off the equipment, stop work and monitor the area. Exhaust from drilling equipment may cause the alarm to sound, giving a false positive. Continue monitoring the area. If the area is deemed clear, begin work again.

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DAILY SAFETY MEETING

The BJAAM Site Safety Officer shall discuss the project objectives and contingency plans with all BJAAM personnel and all personnel subcontracted by BJAAM on-site each day before commencement of work. Topics covered shall include:

- Project Objectives
- Chemical Hazards
- Physical Hazards
- Emergency Contingency Plans and Escape Routes
- Location of Emergency Equipment, including first aid kit, eye-wash kit, and fire extinguisher
- Locations of the drill rig emergency shut-off switches
- Emergency communication signals
- Names/locations of personnel with mobile phones
- Location/s of other phones for use in emergency
- Emergency phone numbers and directions to the hospital

The BJAAM Site Safety Officer shall remind each attendee that any BJAAM employee can stop work at any site if that employee observes unsafe conditions.

CONTINGENCY PLAN (1910.120(1))

The BJAAM Site Safety Officer shall discuss the project objectives and contingency plans with all personnel on-site each day before commencement of work.

EMERGENCY COMMUNICATION SIGNAL(S):
Audible or hand signals. Established by Site Safety Officer prior to commencement of work.

EMERGENCY ESCAPE ROUTE(S) (Specify and indicate on site diagram)
Emergency escape routes and designated re-assembly areas for each work location will be determined and communicated by the BJAAM Site Safety Officer to personnel prior to the initiation of activities at each location.

EMERGENCY EQUIPMENT ON SITE: It is the responsibility of the BJAAM Site Safety Officer to insure that the following equipment is on-site and in working condition:
First Aid Kit: In vehicle
Fire Extinguisher: Type A, B, C, rating; present near activity location
Telephone: Pay phone or mobile phone – see Site Safety Officer
Eye Wash/Safety Shower: Portable eye wash; present near activity location
Others (specify):

OTHER REQUIRED INFORMATION

It is the responsibility of the BJAAM Site Safety Officer to maintain the following documents on site:

EMERGENCY ESCAPE ROUTE(S) (Specify and indicate on site diagram)
Emergency escape routes and designated re-assembly areas for each work location will be determined and communicated by the BJAAM Site Safety Officer to personnel prior to the initiation of activities at each location.

EMERGENCY EQUIPMENT ON SITE:
First Aid Kit: In vehicle
Fire Extinguisher: Type A, B, C, rating; present near activity location
Telephone: Pay phone
Eye Wash/Safety Shower: Portable eye wash; present near activity location
Others (specify):

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SIGN-OFF		
All personnel have read the above plan and are familiar with its provisions. All personnel have received training in compliance with the BJAAM Site Specific Health and Safety Policy.		
Printed Name	**Signature**	**Date**

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EMERGENCY PHONE NUMBERS		
POST IN FULL VIEW		
BJAAM Director of Health and Safety (BJAAM Office)		(330) 854-5300
Report a Spill (BJAAM Office)		(330) 854-5300
Chemtrec		(800) 424-9300
Bureau of Explosives		(202) 293-4048
Center for Disease Control (Biological Agents)		(404) 633-5313
National Response Center (Oil/Hazardous Substances)		(800) 424-3802
DOT Office of Hazardous Operations		(202) 426-0656
HOSPITAL	Name	Coshocton County Memorial Hospital
	Address	1460 Orange Street, Coshocton, OH 43812
	Phone	(740) 622-6411
	Travel Time	4 Minutes (1.5 Miles)
	Directions	SEE ATTACHED DIRECTIONS
PARAMEDICS/EMT	Name	911
	Phone	
FIRE DEPARTMENT	Name	Coshocton Fire Department
	Phone	(740) 622-2555
LOCAL POLICE	Name	Coshocton Police Department
	Phone	(740) 622-2411
UTILITIES	Electric	AEP
	Gas	Columbia Gas

IN AN EMERGENCY – DIAL 911
Former Steel Ceilings Site
500 North 3rd Street
Coshocton, Ohio

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DETACH AND RETURN PROMPTLY

BJAAM ENVIRONMENTAL, INC.
SITE SAFETY PLAN

CONTRACTOR AGREEMENT

TO: Brett Urian, President (330) 854-5340 (FAX)

COMPANY: BJAAM Environmental, Inc.
P.O. Box 523
472 Elm Ridge Avenue
Canal Fulton, OH 44614

FROM: _____

COMPANY: _____

_____

_____

TRANSMISSION DATE: _____ TIME: _____ NO. OF PAGES:

Attention:

In compliance with OSHA regulations and BJAAM's policy, any contractor, subcontractor or their representatives involved in activities with potential exposure to health and/or safety hazards are required to be informed of these hazards and emergency response procedures. A copy of the site safety plan is being submitted to you to meet these requirements.

Please acknowledge receipt and acceptance of the provisions of the site safety plan by signing below and returning this page to me. All contractor project managers are requested to sign this agreement prior to the initiation of field activities.

If you have any questions or comments, feel free to contact me or BJAAM's project manager at (330) 854-5300.

PRINTED NAME	SIGNATURE	DATE

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