



November 15, 2007

Michelle Tipple
NYSDEC Region 3
21 South Putt Corners Road
New Paltz, New York 12561

Re: Interim Remedial Measure Work Plan – UST Removal,
Excavation/Disposal of Contaminated Soil; Cornerstone Enterprises, Inc.;
33 East Main Street, Pawling, Dutchess County, New York;
Conrad Geoscience File #RP060080
NYSDEC Spill #90-12530
NYSDEC BCA #C314116

Dear Ms. Tipple:

Conrad Geoscience has completed a portion of the State-approved Remedial Investigation (RI) Work Plan. Based on the RI data assembled to date, we are proposing to excavate all on-site tanks and associated contaminated soil as an Interim Remedial Measure (IRM). This work will remove an immediate threat to the environment and improve soil and groundwater quality. Below is a summary of the RI data collected to date, and a work plan to excavate and dispose of the USTs and contaminated soil identified.

1.0 SITE DESCRIPTION

The subject property is located at 33 East Main Street in the Village of Pawling, New York (Figure 1). The property was operated as an automotive maintenance facility and retail gasoline station until 1985 (Riley's Garage). The 0.19-acre property situated on the south side of East Main Street includes a 10,000 ft² building (two-story plus basement), and a parking lot in the western part of the property. A tributary to the East Branch Croton River borders the eastern property boundary, and flows to the south (Figure 2). Two USTs are currently present, including one 1,000-gallon gasoline UST and one 550-gallon waste oil UST. The contents of these tanks were evacuated in July 2007. A Remedial Investigation is currently on-going at the site.

2.0 REMEDIAL INVESTIGATION PRELIMINARY RI RESULTS

2.1 Sampling

2.1.1 *Subsurface Soil Sampling*

NYSDEC approved the Remedial Investigation Work Plan and supporting documents, in July 2007. The objectives of the Remedial Investigation (RI) were to assemble information regarding the distribution and extent of subsurface contaminants and contaminant sources. This work has included subsurface soil and groundwater sampling; and floor drain tracing and sampling, as summarized below.

On August 14 and 15, 2007, 24 subsurface soil samples were collected from 24 soil boring locations (GB-1 through GB-24) (Figure 3). On September 24, 2007, three additional subsurface soil samples were collected from three soil boring locations (GBSH-1 through GBSH-3) (Figure 3).

In accordance with NYSDEC Technical Guidance Document DER-10, soil borings were placed in the vicinity of the tanks and associated piping, and in other potential areas of petroleum discharge. Borings were also completed along the southern and eastern property boundaries to determine if site-related contaminants were migrating off-site. Sampling was also conducted along the western property boundary to determine if contaminants from up-gradient sources have impacted the subject property.

Soil borings around the exterior of the building (GB-1 through GB-24) were completed using a track-mounted Geoprobe™ unit equipped with 4-foot long, 1 3/4-inch diameter core barrels (macro-cores) fitted with acetate liners. All soil borings were conducted in accordance with NYSDEC/USEPA protocols. Borings were sampled continuously from the ground surface to a maximum depth of 17.7 feet below grade, to groundwater, or to refusal, whichever was encountered first.

Soil borings from beneath the basement floor (GBSH-1 through GBSH-3) were completed using a Geoprobe™ slide hammer. Borings were sampled continuously from the ground surface to a maximum depth of 9 feet below grade, to groundwater, or to refusal, whichever was encountered first.

The project geologist kept a detailed log of each core: lithology, grain size, stratigraphic changes, color, and occurrence of groundwater were recorded. Conrad Geoscience screened soil samples in the field for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID) and headspace techniques. At each location, the soil sample with the highest PID reading was submitted to a NYSDOH-approved laboratory for analysis of the STARS lists of VOCs and semi-volatile organic compounds (SVOCs) via USEPA Methods 8260 and 8270, respectively, and the eight RCRA metals.

2.1.2 Groundwater Sampling

Groundwater samples were collected from 10 soil borings using temporary well screens and a peristaltic pump (GW-1 through GW-10). Sampling locations were along property boundaries and down-gradient of suspected contaminant sources Figure 3.



These locations were selected to evaluate the potential for off-site contaminant migration, and to evaluate the possibility of site impacts from adjacent properties.

Soil borings were completed prior to collection of groundwater samples and were screened in the field for the presence of VOCs using a PID and headspace techniques. Soil borings were logged in accordance with the procedures outlined in Section 2.1. Groundwater samples were submitted to a NYSDOH approved laboratory for analysis of the TCL list of VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, and the eight RCRA metals.

Depth-to-water measurements were collected from the ground surface at each sampling location. Depth-to-water measurements were not collected from GW-2 due to borehole collapse. These measurements are as follows:

Temporary Well ID	Depth-to-water August 15, 2007
GW-1	8.08'
GW-2	Not Accessible
GW-3	7.75'
GW-4	7.4'
GW-5	7.02'
GW-6	7.24'
GW-7	6.62'
GW-8	7.33'
GW-9	8.96'
GW-10	8.43'

Groundwater elevations and precise direction of groundwater flow cannot be calculated because only temporary screens were installed for collection of samples. However, based on the site topography, and the above listed depth to water measurements, groundwater appears to flow in a southerly direction.

2.1.3 Floor Drain Tracing

Conrad Geoscience inspected the floor drain in the garage interior and inspected the building for other potential contaminant pathways (cracked concrete, slop sinks, etc.). The floor drain was traced by jetting water into the drain. The drain discharged on to the ground surface behind the southeast corner of the building.

One soil sample was collected in the vicinity of the floor drain inside the building (GBSH-1) (Figure 3). Soil samples were collected using a Geoprobe™ slide hammer. Samples were screened in the field for the presence of VOCs using a PID and headspace techniques and were submitted to a NYSDOH-approved laboratory for analysis of the VOCs via USEPA Method 8260 STARS, SVOCs via USEPA Method 8270 STARS, and the eight RCRA metals.

2.2 Results

2.2.1 Subsurface Soil Quality

Soil sample results are summarized in Tables 1 through 6. Analytical reports are attached. Following is a discussion of these results:

Four of the 27 soil samples contained VOCs at concentrations exceeding NYSDEC 6NYCRR Part 375 *Unrestricted Use Soil Cleanup Objectives* (Tables 1 and 2):

- GB-7: 1,2,4-Trimethylbenzene (13,400 µg/kg); m,p-Xylene (7,080 µg/kg);
- GB-8: 1,2,4-Trimethylbenzene (8,240 µg/kg); m,p-Xylene (2,280 µg/kg);
- GB-23: m,p-Xylene (1,940 µg/kg);
- GB-24: 1,2,4-Trimethylbenzene (15,800 µg/kg); m,p-Xylene (10,000 µg/kg).

Two of the 27 soil samples contained SVOCs at concentrations exceeding NYSDEC 6NYCRR Part 375 *Unrestricted Use Soil Cleanup Objectives* (Tables 3 and 4):

- GB-16: Indeno (1,2,3-cd) pyrene (768 µg/kg);
- GBSH-1: Indeno (1,2,3-cd) pyrene (570 µg/kg).

Three of the 27 soil samples contained concentrations of metals exceeding NYSDEC 6NYCRR Part 375 *Unrestricted Use Soil Cleanup Objectives* (Tables 5 and 6):

- GB-13: Lead (404 mg/kg); Mercury (0.4585 mg/kg);
- GB-16: Cadmium (3.43 mg/kg); Lead (1,670 mg/kg); Mercury (0.2062 mg/kg);
- GBSH-1: Lead (322 mg/kg); Mercury (0.3737 mg/kg).

2.2.2 Groundwater Quality

Groundwater sample results are summarized in Tables 7 through 9. Analytical reports are attached. Following is a discussion of these results:

Four of the 10 groundwater samples contained VOCs at concentrations exceeding NYSDEC 6NYCRR Part 700-705 groundwater standards (Table 7):

- GW-6: Ethylbenzene (113 µg/l);
- GW-7: Benzene (1.56 µg/l);
- GW-9: Benzene (7.65 µg/l); Ethylbenzene (809 µg/l); m,p-Xylene (2,900 µg/l); o-Xylene (38.4 µg/l);
- GW-10: Ethylbenzene (662 µg/l); m,p-Xylene (1,830 µg/l); o-Xylene (179 µg/l).

One of the 10 groundwater samples collected contained SVOCs at concentrations exceeding NYSDEC 6NYCRR Part 700-705 groundwater standards (Table 8):

- GW-9: Naphthalene (130 µg/l).

All ten of the groundwater samples collected contained lead at concentrations exceeding NYSDEC 6NYCRR Part 700-705 groundwater standards (Table 9).

Groundwater samples GW-7 and GW-8 contained barium and chromium at concentrations exceeding NYSDEC 6NYCRR Part 700-705 groundwater standards (Table 9).

2.3 Discussion of Preliminary RI Results

Soil borings completed in the vicinity of the two USTs indicate a release from the gasoline tank and associated piping. Soil in the immediate vicinity of the waste oil UST does not appear to be impacted. Based on soil boring data, approximately 260 cubic yards of petroleum-contaminated soil are present surrounding the gasoline UST.

Soil in the vicinity of the floor drain outfall has been adversely impacted from disposal of petroleum related wastes into this drain.

Tasks remaining in the RI are collection and analysis of surface soil samples, sampling of the floor drain outfall, and a private well survey for homes and businesses within a ½-mile radius of the site.



Based on the RI data assembled to date, we are proposing to excavate all on-site tanks and associated contaminated soil as an IRM. This work will remove an immediate threat to the environment and improve soil and groundwater quality.

3.0 IRM SOIL EXCAVATION AND MANAGEMENT PLAN

Summarized below is a work plan to excavate and dispose of the USTs and contaminated soil. All work will conform to the State-approved Site Specific Health and Safety Plan (HASP), as amended below, and the Community Air Monitoring Plan (CAMP).

3.1 Tank Excavation and Removal

Conrad Geoscience will request a utility mark-out to identify underground utilities, and will coordinate excavation activities with an OSHA-trained contractor. Conrad Geoscience personnel will oversee all field activities. Prior to excavation, the top of the gasoline UST will be uncovered and the tank will be vented in accordance with applicable regulations.

USTs will be excavated and brought to the surface and emptied of any remaining sludge. Wastes will be contained in NYSDOT-rated 55-gallon drums and disposed of off-site. During excavation and removal of the tanks, a Conrad Geoscience geologist will inspect and document the condition of the tanks and surrounding soils, and will screen excavated soil for the presence of VOCs using a PID. Cleaned tanks will be disposed of at a local recycling facility.

3.2 Excavation of Petroleum Contaminated Soil

Based on soil borings and analytical data, we estimate that approximately 260 cubic yards of petroleum-contaminated soil are located in the vicinity of the 1,000-gallon gasoline UST (Figure 4). No contaminated soil is anticipated to be encountered in the waste oil UST excavation.

The extent of contaminated soil in the vicinity of the floor drain outfall (Soil Boring GB-23) has not been determined. Upon completion of tank removals, contaminated soil in this area will be excavated and stockpiled on-site in accordance with NYSDEC requirements.

Soil will be removed using an excavator. Excavated soil will be temporarily stockpiled on-site prior to transport to the disposal facility. Stockpile management is discussed below in Section 3.4. Site soils are classified as Type A and Type B in accordance with OSHA standards (29CFR 1926 Subpart A and P). For Type A soils the maximum allowable slope (H:V) of the excavation is ¾:1 or 53° for excavations less than 20 feet. A short term (24 hours or less) slope of 1:2 or 63° is allowed for excavations less



than 12 feet deep. Maximum excavation depth on site will be less than 10 feet. Some soil, especially in the vicinity of the waste oil tank, is classified as Type B soil (sandy with less silt and cohesive strength). OSHA regulations require the slope to be 1:1, or 45° in this area. Slopes in the waste oil excavation will not exceed 1:1, and in other areas will be 1:2.

A PID will be used to screen soil in the field for VOCs using headspace techniques during excavation. Soil samples will be sealed in plastic bags, and a PID reading for the headspace in each bag will be recorded. Soil exceeding PID readings greater than 50 ppm will be considered contaminated for the purposes of this project, and will be stockpiled on plastic sheeting. Soil exhibiting a PID reading of 50 ppm or less will be stockpiled temporarily and may be re-used on-site. The approximate extent of excavation in the gasoline UST area is depicted in Figure 4.

The excavation in the vicinity of the floor drain outfall will be guided by PID readings and proximity to nearby infrastructure.

Surface water which enters the excavation and becomes contaminated will either be removed by a vacuum truck, and disposed of off site at an approved facility, or a sump pump and contained in 55-gallon drums and be stored on site. Groundwater entering the excavation will not be removed.

3.3 Excavation Safety and Control

All activities will be carried out in accordance with the State-approved HASP. An addendum to the HASP has been prepared (attached) and describes the steps to be taken to ensure site-worker safety pertaining to excavation equipment and excavation safety. This will be appended to the HASP as Section 5.7.

Site personnel will not be entering on-site excavations for any purpose. In the event that entry into the excavation is required, excavation sidewalls will be benched or shored in accordance with OSHA requirements.

While the excavation is open, the perimeter of the excavation will be barricaded using temporary fencing to protect pedestrian traffic. On-site personnel will continuously monitor the excavation and the perimeter barricade to ensure that no pedestrian and on-site personnel enter the excavation. A minimum separation distance of 4 feet will be maintained between the sidewalk and the excavation to prevent collapse of the sidewalk.

A soil berm will be created around the perimeter of each excavation. These berms will be maintained to minimize the amount of surface water runoff entering the excavations.

The excavation will remain open until laboratory results are received and backfilling of the excavation is approved by NYSDEC.



3.4 Stockpile Management and Transport

Contaminated soil will be placed on 6-mil plastic sheeting to prevent contamination of the staging area and will be covered to prevent erosion and to reduce air emissions. The plastic sheeting will be maintained by the site representative.

Contaminated soil will be disposed of off-site in accordance with applicable regulations. Storage of contaminated soil will not exceed 30-days without prior approval of NYSDEC. Soil marked for disposal will be analyzed for waste characterization parameters as per the selected disposal facility. Stockpiled soil will be loaded into trucks and transported to an approved disposal or recycling facility. Disposal receipts from the selected facility will be included in the final report.

Silt fences will be placed on the western side of the stream that flows along the eastern border of the property to protect it from erosion of soil from the excavation.

4.0 POST-EXCAVATION SOIL SAMPLING

Upon completion of excavation activities, post-excavation soil samples will be collected and analyzed as follows:

- Gasoline UST 4 sidewall samples, 1 floor sample VOCs via Method 8021
- Waste Oil UST 1 floor sample VOCs via Method 8021
SVOCs via Method 8270
- Floor Drain Outfall 4 sidewall samples, 1 floor sample VOCs via Method 8021
(assuming excavation is less than 900 square feet) SVOCs via Method 8270

Sampling at the floor-drain outfall is consistent with DER-10. If the excavation in this area exceeds 900 square feet, additional samples will be collected in accordance with this document. Sidewall samples will not be collected from the waste oil UST excavation because subsurface soil samples collected during the remedial investigation surrounding this tank determined that there was no impact.

5.0 SITE RESTORATION

Excavations will be backfilled upon receipt of post-excavation soil sample results, and NYSDEC approval. Clean fill material, or properly characterized fill from the excavation which meets State requirements, will be used. The surface will be completed with crushed stone or other suitable material.



6.0 REPORTING

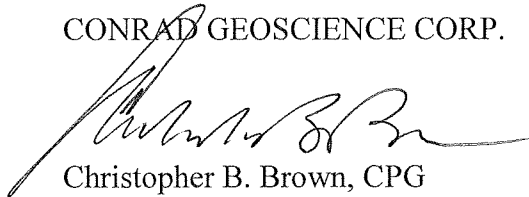
Upon receipt of final laboratory results, Conrad Geoscience will prepare a report summarizing field observations, sampling and analytical methods, and sample results. The report will include an interpretation of all data; comparison to regulatory standards; conclusions and recommendations; and a site features map depicting the excavation areas and sample locations. In accordance with 6NYCRR Part 612-614, Conrad Geoscience will prepare tank registration documents, re-registering these tanks as “Closed - Removed.”

6.0 SCHEDULE and CONDITIONS

We are prepared to commence field work upon authorization from the NYSDEC. All work will be performed in accordance with the State-approved Site Specific Health and Safety Plan, and all other documents and conditions of the RI Work Plan. If you have any questions, please do not hesitate to call.

Sincerely,

CONRAD GEOSCIENCE CORP.



Christopher B. Brown, CPG
Senior Hydrogeologist

CBB/seg

cc: Kelly Liffland
Kimberlea Rea
Nathan Walz - NYSDOH



ADDENDUM TO HASP

5.8 Excavation and Excavation Equipment Hazards

Excavation Equipment Safety and Hazards

Excavation of contaminated soil will require use of standard earth moving equipment, including excavators and loaders. Personnel shall not remain in the vicinity of operating equipment unless it is required for their work responsibilities. Additionally, the following safety requirements must be adhered to:

- Earth moving equipment has exposed moving parts and must be equipped with an operational emergency stop device. Only properly trained employees of the subcontracted excavation company will operate machinery.
- Operators and all site personnel must be aware of the moving portions of machinery and the locations of personnel during operation.
- Equipment operators and site personnel must secure all loose clothing when in the vicinity of excavating operations.
- All equipment will be fitted with back-up alarms; these alarms will be tested daily.
- Proper loading and operation of trucks on-site shall be maintained in accordance with DOT requirements covering such items as grounding, placarding, driver qualifications and the use of wheel locks.
- Operation of heavy equipment shall be in accordance with OSHA regulations 29CFR 1910 and 1926.
- All equipment that is brought on-site will be available for inspection.
- All equipment shall be installed with appropriate equipment guards and engineering controls. These include rollover protective structures.
- At the start of each workday, inspection of breaks, hydraulic lines, light signals, fire extinguishers, fluid levels, steering, and splash protection shall be made by the equipment operators.
- Equipment operators shall report to their supervisor(s) any abnormalities such as equipment failure, oozing liquids, unusual odors, etc.
- Refueling shall be done in safe areas. Rigs and equipment shall be turned off prior to refueling.

Excavation Safety, Hazards, and Protocols

Excavation of contaminated soil is a focus of work being conducted at the site. Sidewalls of the excavation, if not benched properly, have the potential to collapse. The following steps must be taken to ensure safety around the excavations:

- Site personnel will not enter excavations during the proposed field tasks.



- The allowable slope for Type A and Type B soils as described in 29CFR1926 Subpart P Appendix B, is 3/4:1 (53°) and 1:1 (45°), respectively. These guidelines will be adhered to during excavation activities.
- If entry into the excavation is required, a qualified person, as defined by OSHA, will evaluate the site soils and prepare the appropriate plans for benching, sheeting or shoring. These plans must also be reviewed with site personnel.
- Level D PPE will be worn by site personnel, including a hard hat and steel-toed and steel-shanked boots.
- Site personnel must not stand closer than 2 to 3 feet from the edge of an excavation.
- Regardless of personnel entering the excavation, sidewalls of the excavation will be sloped or benched in order to prevent collapse and protect infrastructure, including nearby sidewalks and foundations.
- While near an excavation, site personnel must inspect the edges of the excavation where the sidewall can collapse and undermine the ground surface, especially where it is completed with pavement, or concrete.
- All non-essential people shall be kept out of the work area.

