

**Remedial Action Plan
20 Station Road
Brookfield, Connecticut**

Prepared For:

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1.0 INTRODUCTION

The site is located at 20 Station Road in Brookfield, Connecticut. The layout of the site is shown on Figure 1, Site Layout Map. The site has been used for residential and commercial purposes since its development in 1945. Prior to that the site was used as farmland. A dry cleaner was located on-site during the 1960s and 1970s and was located in the northwest portion of the site building. Virgin dry cleaning solvent, tetrachloroethylene (PCE) was stored in unknown quantities and waste PCE was reportedly stored in two 55-gallon subgrade steel drums that were installed at an unknown date. These steel drums were piped together and reportedly tied into the dry cleaning machine.

The site building is heated by liquefied propane (LP) and electricity. The building was formerly heated by fuel oil. The heating oil was formerly stored in a 275-gallon aboveground storage tank (AST) and 550-gallon AST located on the north side of the building. The 275-gallon AST was removed in March 1997 and the 550-gallon AST is still located on-site and not used. Heating oil was also formerly stored in a 550-gallon underground storage tank (UST) located on the west side of the building. In November 1998 the UST was removed from the subject site. Soil samples were collected from the UST grave and submitted for analysis of total petroleum hydrocarbons (TPH) by EPA Method 418.1 and volatile organic compounds (VOC) by EPA Method 8260. The results of the analysis showed elevated levels of benzene, toluene, ethyl benzene and xylenes (BTEX) constituents above applicable soil standards. In addition, a sample of liquid was collected from within the UST which contained BTEX constituents. Duplicate samples collected by the CTDEP indicated the presence of PCE in the soil above the Pollutant Mobility Criteria (PMC).

The site previously used an on-site septic system for sewage disposal which is located on the northeastern side of the building. The leaching fields were reportedly located on the northeast side of the building. In 1997, the septic tank and four associated dry wells were removed with a subsequent connection to the sanitary sewer system. The on-site septic system had been used for sewage disposal from the date of construction until the connection to the sanitary sewer system.

In June 1998, the CTDEP collected a water sample from a tap at the site. Laboratory analysis showed a concentration of PCE of 150 micrograms per liter (ug/l) and trichloroethylene (TCE) of 10 ug/l. A granular activated carbon (GAC) filtration system was subsequently installed at the site and water samples were collected by the CTDEP after water passed through the filtration system and were submitted for laboratory testing of VOCs. The results indicated non-detectable concentrations of halogenated VOCs after passing through the treatment system.

In addition to the 20 Station Road property, water samples collected from approximately 27 residences and businesses located to the west have been collected since March 1998 to monitor the presence of VOCs in the drinking water. Approximately ten of these properties have had elevated levels of halogenated and/or aromatic VOCs in their drinking water supply. GAC filtration systems have been installed at these residences.

In April 1998, the CTDEP Water Management Bureau installed a total of eight borings on the subject site using its Geoprobe SES. Bedrock was encountered at depths of 8 to 11 feet below ground surface (fbgs). The borings were finished with 0.75" piezometers ranging in depth from 8

to 11 fbs. Groundwater samples were collected from the piezometers and field screened with a Photovac GC PID. Results of the field screening indicated levels of chlorinated solvents ranging from 1.4 parts per billion (ppb) to 140,000 ppb (GP- 7) in the groundwater samples and 120 ug/l to 1,700 ug/l (GP- 7) in the soil samples. In addition, water samples were collected from the potable wells, sumps, tanks and sludge seeps and soil samples were collected from a tank grave and floor sump. The samples were submitted to the State of Connecticut Department of Health laboratory for analysis of VOCs by EPA Method 624. The results of the analysis indicated the highest concentrations of PCE were in the groundwater collected from GP-8 (48,000 ug/l), located just to the north of the former dry cleaning tenant space, and in the PCE UST (1,617,500,000 ug/l). The PCE UST is one of the subgrade 55 gallon drums located in the northwestern portion of the building that was used to collect waste PCE.

On September 20, 1999 the CTDEP issued Order No. SRD-113 to Edward and Monique McCarty who are the co-owners of the subject site. The order was issued by the CTDEP as a result of a historic release(s) from an on-site dry cleaning operation. The CTDEP Order No. SRD-113 requires that:

- A Scope of Study be prepared for investigating the degree and extent of soil, groundwater and surface water contamination at the property located at 20 Station Road in Brookfield, Connecticut and its impact on the environment; and
- An investigation into the potential impact on the environment to areas off-site and surrounding 20 Station Road in Brookfield, Connecticut.

The order also detailed that the Scope of Study include at a minimum; proposed locations and depths of groundwater monitoring wells, proposed soil sampling locations and depth of collection, proposed surface water sampling locations, a proposed sampling and analytical program including parameters to be tested, proposed sampling and analytical methods to be used, quality assurance and quality control (QA/QC) procedures that will be followed, and proposed time schedule for conducting the investigation. The Scope of Study was approved on November 7, 2000.

In November 2000, DES performed a subsurface investigation that consisted of the installation of twenty-two soil borings, seven of which were finished with groundwater monitoring wells and sixteen shallow borings beneath the former dry cleaning tenant space. A total of 120 soil samples, two surface water samples, two potable well samples and seven groundwater samples were collected during the investigation. Thirty of the soil samples were submitted to a laboratory for analysis of VOCs by EPA Method 8260 and two for ETPH. All of the surface water and groundwater samples were submitted for analysis of VOCs by EPA Method 8260, with one groundwater sample for ETPH. The two potable well samples were submitted for analysis of VOCs by EPA Method 524.2. The results of the soil analysis indicated three of the soil samples collected from beneath the former dry cleaning tenant space, contained concentrations of PCE above the PMC of 0.1 mg/kg for PCE but below the RDEC of 12 mg/kg for PCE. PCE was detected in 3 of the other sub floor samples (SB-6 (2-4), SB-10 (2-4) and SB-16 (0-2)) below the RDEC and PMC. The remaining sub floor soil samples contained concentrations of VOCs below laboratory detection limits. Two soil samples collected immediately to the north of the dry

cleaning tenant space contained concentrations of PCE which were above the PMC but below the RDEC. The remaining soil samples collected from the exterior of the property contained concentrations of VOCs below laboratory detection limits or applicable standards. The results of the groundwater analysis showed concentrations of PCE in monitoring wells MW-4 and MW-5, located to the west and northwest of the former dry cleaning tenant space, of 4,800 ug/l and 5,900 ug/l, respectively which are above the GPC (5 ug/l), RVC (1500 ug/l) and SWPC (88 ug/l). PCE was also detected in MW-6 and MW-7, located to the north and northwest of the former dry cleaning tenant space, at concentrations of 23 ug/l and 6 ug/l which are above the GPC but below the RVC and SWPC. The remainder of the groundwater samples contained concentrations of PCE below applicable groundwater standards or laboratory detection limits. Monitoring wells MW-2, and MW-4 through MW-7 contained concentrations of other chlorinated solvents commonly seen in the dechlorination process of PCE above the respective groundwater standards (GPC and RVC). The analytes included trichloroethylene, 1,1,1-trichloroethane, 1,2-dichloroethylene, 1,1-dichloroethane, chloroethane and vinyl chloride. The two water samples collected from the on-site potable wells contained concentrations of PCE and TCE that exceeded the respective MCL and GPC for those compounds. Four other VOCs were detected below the laboratory detection limits or the MCL and GPC. No VOCs were detected in either of the surface water samples collected from the wetlands on the northern portion of the property.

In October 2001, DES installed a total of six soil borings, finished with groundwater monitoring wells and collected a total of ten soil samples to delineate the extent of PCE contamination identified on the property. Ten soil samples were collected. Four of the soil samples and all of the groundwater samples were submitted to a laboratory for analysis of VOCs by EPA Method 8260 with MTBE. The concentration of PCE in soil sample MW-11 (0'-2') exceeded the PMC of 0.1 mg/kg for PCE but was well below the RDEC for PCE of 12 mg/kg. This soil sample was collected to the west of the former dry cleaning tenant space. None of the other soil samples contained concentrations of PCE or other VOCs above applicable soil standards. The results of the groundwater analysis showed concentrations of PCE in all of the groundwater samples collected from the monitoring wells, with the exception of MW-2 and MW-3a, ranging from 2 ug/l to 8500 ug/l. Six of the wells (MW-5, MW-6 and MW-8 through MW-11) contained concentration of PCE above the GPC of 5 ug/l for PCE. Four of the wells (MW-5, MW-6, MW-10 and MW-11) contained concentrations of PCE above the SWPC for PCE of 88 ug/l. Two of the wells (MW-5 and MW-11) contained concentrations of PCE above the RVC of 1,500 ug/l for PCE. TCE was detected in MW-5, MW-6, MW-9, MW-10 and MW-11 at concentrations of 530 ug/l, 240 ug/l, 7 ug/l, 42 ug/l and 230 ug/l, respectively, which are all above the GWPC of 5 ug/l for TCE. The concentrations of TCE in MW-5, MW-6 and MW-11 exceeded the RVC of 219 ug/l. Cis 1,2-dichloroethylene was detected in all of the groundwater monitoring wells, with the exception of MW-1a, MW-2 and MW-3a ranging from 1 ug/l to 270 ug/l. The concentrations of cis 1,2-dichloroethylene in MW-5, MW-6 and MW-11 exceeded the GPC of 70 ug/l. Monitoring well MW-5 contained 130 ug/l of chloroform which is above the GPC of 6 ug/l for chloroform but below the RVC (14,100 ug/l) and SWPC (287 ug/l) for chloroform. The highest HVOC concentrations in the groundwater are located immediately to the west and northwest, downgradient, of the former dry cleaning tenant space. Groundwater was determined to be flowing in a northwesterly direction with northerly and westerly flow components. The areal

extent of the groundwater contamination was determined to flow off of the western property line. The report concluded, PCE impacted soil exists under the northwest portion of the building in the former dry cleaning tenant space and appear to be a continuing source of contamination, PCE impacted soil is also located immediately to the north and west of the former dry cleaning tenant space, and the groundwater in the shallow aquifer (MW-5, MW-6 and MW-8 through MW-11 located to the west and northwest of the former dry cleaning tenant space) contains concentrations of PCE that exceeds applicable groundwater standards by orders of magnitude. Other halogenated compounds commonly seen in the dechlorination process of PCE were detected above standards. The plume extends to the western property boundary and migrates off-site. The sample locations for the November 2000 and October 2001 investigation are shown on Figure 2, Sample Location Map.

The site is located in an area that has been assigned a "GA" groundwater classification by the CTDEP. GA classification groundwaters are described as within the area of influence of private and potential public water supply wells. The water is presumed suitable for direct human consumption without the need for treatment.

2.0 SOIL AND GROUNDWATER ANALYTICAL DATA

2.1 Soil Analytical Data

The soil analytical data indicates that the greatest concentration of soil contamination is around the former dry cleaning tenant space and subgrade drums. The contaminated soil exists beneath the northwest portion of the building in the former dry cleaning tenant space and just to the north of that area. Another area of PCE impacted soil is located just to the west of the building (near MW-11). The concentrations of PCE in these areas range from ND to 12 mg/kg as detected in the Phase II and Phase III investigations.

Approximately 115 tons of soil contains concentrations of PCE above the standards and needs to be remediated to comply with the RSRs. The soil analytical data for the November 2000 investigation is shown on Table 1 and the soil analytical data for the October 2001 investigation is shown on Table 2. The PCE impacted soil is shown on Figure 3, PCE Impacted Soil Map. This soil has already been removed as discussed in Section 3.0.

2.2 Groundwater Analytical Data

The groundwater on the site is contaminated with PCE and typical daughter products. The concentrations detected in the shallow portion of the aquifer during the last investigation (November 2001) indicate concentrations of PCE ranging from 2 ug/l to 8,500 ug/l. Other analytes detected above the standard include trichloroethylene, cis 1,2 dichloroethylene, 1,1 dichloroethylene and vinyl chloride. The highest concentrations of halogenated volatile organic compounds are located on the northwest portion of the property and extend off the western portion of the property boundary.

The plume migrates with the natural flow of groundwater. The November 6, 2001 groundwater analytical data is shown on Table 3. The PCE plume is shown on Figure 4, PCE Impacted Groundwater.

3.0 SOIL REMEDIATION

DES provided oversight for excavation of the contaminated soils from three locations on-site. The field work was performed from December 2001 through May 2002. The areas that were excavated included the interior northwestern portion of the building, the area to the north of the building and an area to the west of the building. The soil was excavated in order to remove the source(s) of contamination and reduce the potential for migration to the groundwater. This will assist in expediting the groundwater remediation of the site and surrounding area.

Excavated soils and all confirmatory soil samples were screened with a field-calibrated photo-ionization detector (PID) fitted with a 11.7 e.V. lamp to evaluate for the presence of organic compounds.

3.1 Interior Portion of Building (Former Dry Cleaning Tenant Space)

Two separate areas of contamination under the slab were excavated from the northwestern portion of the building. The areas were saw cut and the concrete floor was removed. Two subgrade rusted 55 gallon drums were removed from the northeastern corner of that area. Excavation activities were initiated on the northern-most side of the building and extended in southerly and westerly direction. The soils encountered consisted of gray-brown fine sand and gravel and contained a mild solvent odor. Groundwater was not encountered in the excavation. The size of the completed excavation was 20.5' wide x 10' long x 5' deep. Five soil confirmation soil samples were collected from the excavation.

The southern interior excavation was saw-cut and the concrete was removed. Excavation activities were initiated on the northern portion of the location and extended in a southerly direction. The soils encountered consisted of gray-brown fine sand and gravel and contained a mild solvent odor. Groundwater was not encountered in the excavation. The size of the completed excavation was 5' wide x 6.5' long x 6' deep. Five soil confirmation soil samples were collected from the excavation.

3.2 North Side of the Building

Excavation activities were initiated in the eastern portion of the proposed excavation and extended in a westerly direction. The soils encountered consisted of brown fine sand and contained a mild solvent odor. Excavation continued until no visual evidence of contamination, odor or PID response was encountered in any of the soils that remained in the excavation. Groundwater was encountered in the excavation at a depth of 4 fbg.

The size of the completed excavation was 22' wide x 20' long x 5' deep. Six confirmation soil samples were collected from the excavation. One groundwater sample was collected after groundwater seeped into the excavation.

3.3 West Side of the Building

Excavation activities were initiated in the central portion of the proposed excavation and extended in a northerly and southerly direction. Bedrock was encountered in the northern portion

of the excavation at approximately 4.5 fbs. The soils encountered consisted of gray-brown fine sand and contained a mild solvent odor. Excavation continued until no visual evidence of contamination, odor or PID response was encountered in any of the soils that remained in the excavation. Groundwater was not encountered in the excavation.

The size of the completed excavation was 17' wide x 10' long x 4.5' deep in the northern portion of the excavation and 8' deep in the southern portion of the excavation. Five confirmation soil samples were collected from the excavation. The excavation locations are shown on Figure 5.

All of the soils exhumed from the excavations, along with the 55 gallon drum were stockpiled on and covered by 6 mil polyethylene sheeting pending off-site disposal. Three characterization samples, collected from the three different stockpiled areas, were collected directly from the stockpile for disposal purposes. The soil was approved and disposed of at the Holyoke Sanitary Landfill in Granby, Massachusetts in May 2002. No additional soil is planned to be excavated for off-site disposal. All of the soil samples were collected directly into new glass jars with teflon septa, logged on a chain of custody document and maintained in a chilled environment until delivery to a Connecticut certified laboratory for analysis of volatile organic compounds by EPA Method 8260. The results of the analysis from the confirmatory soil samples showed slightly elevated concentrations of PCE remain under the building footing and slab as well as the floor of the excavation to the north of the building that were not able to be removed due to groundwater entering the excavation.

A passive venting system was installed under the northwest portion of the building and in the excavation to the north of the building to remove residual contamination from the soil that remains under the building footing. Two venting system legs were installed under the building and one just outside the northwest portion of the building. The interior and exterior configuration were manifolded together and vented above the roof line of the building. The venting system consisted of four inch perforated PVC slotted pipe buried approximately 4 feet below the ground surface. The pipe was laid in and covered by gravel followed by filter fabric. Groundwater monitoring events will determine the need for active venting. The detail of the venting system is shown on Figure 6.

DES will perform PID screening of the venting system on a monthly basis. Should active venting be required, DES will prepare a detailed plan for the system to the CTDEP for approval.

4.0 GROUNDWATER REMEDIATION

The site groundwater has been impacted from the former dry cleaning tenant. The plume extends from the northwest corner of the building in a northwesterly direction with the natural flow of groundwater. Groundwater remediation is required to bring the concentrations of PCE and daughter products below RSR criteria.

The proposed groundwater remediation method consists of a groundwater pump and treat system. The groundwater will be pumped from a proposed horizontal recovery well located to the west of the building and two existing on-site bedrock water supply wells to hydraulically contain the plume. The horizontal installed recovery well will extend in a north to south direction approximately 15 feet to the west of MW-5 and MW-11. The well will be installed with a

backhoe and will be approximately 40 feet in length. Well materials will consist of a 4 inch slotted PVC horizontal well laid in gravel and covered with filter fabric. One riser will be installed in the center of the horizontal leg of the recovery well to the ground surface. The pump will be located in this riser.

After the horizontal well is installed, DES will perform a pump test to appropriately size the groundwater remediation system. The pump test will consist of pumping groundwater from the shallow portion of the aquifer and two of the water supply wells located on the western portion of the property (potable well # 1 and #2 as depicted on Figure 2). The wells will be initially pumped at varying flows until an equilibrium can be maintained in the well. That is, the maximum drawdown without pumping the well dry. Then the wells will be pumped for an 8 hour period to determine the transmissivity of the formation which will allow calculations to be made for appropriate sizing of the system. Depth to water measurements will be collected at strategic on-site wells at 10 minute intervals for the 8 hour period to determine the zone of influence of the pumping wells. Groundwater samples will be collected from each recovery well at least two times during the test in order to determine an accurate feed concentration for the proposed remediation system. All groundwater generated during the pump tests will be treated and discharged to the sanitary sewer.

The currently proposed remediation system will include a submersible pump in each of the "recovery" wells to be controlled using level switches. These pumps will pump to a 500 gallon collection tank, which in turn will pump through sediment filters and through an air stripper (type and size to be determined). The intent of the air stripper is to treat to GPC or below for direct discharge to the sanitary sewer. In the event it is found that the air stripper cannot meet the discharge requirements, a granular activated carbon filter system will be installed to polish the discharge water. The exact sizing of the stripping tower and filters will be determined by the results of the pump test. See Figure 7, Proposed Groundwater Remediation System. The details of the pump test and remediation system, will be prepared under separate cover and submitted to the CTDEP for approval.

DES will acquire the appropriate permits for the pump test discharge and the full scale remediation system. System monitoring and sampling will be performed in accordance with the permit requirements.

5.0 GROUNDWATER MONITORING

Groundwater will be sampled on a quarterly basis to determine the effectiveness of soil and groundwater remediation, compliance with the RSRs and the concentrations of VOCs in groundwater.

A quarterly groundwater monitoring program will be implemented utilizing the existing groundwater monitoring network. All of the on-site wells will be measured for depth to water and depth to bottom during every sampling event. Monitoring wells MW-1, MW-4, MW-6, MW-8, MW-9, MW-10 and MW-11 will then be purged a minimum of three well volumes with dedicated bailers or a peristaltic pump fitted with dedicated tubing. Groundwater samples will be collected directly from these wells into new dedicated glass jars with teflon lined septa, labeled with an indelible ink and maintained in a chilled environment until delivery to a Connecticut

certified laboratory.

DES will perform sampling of the recovery wells and all of the on-site groundwater monitoring wells on an annual basis per the above criteria.

The groundwater samples will be analyzed for volatile organic compounds by EPA Method 8260 with MTBE. A trip blank will be prepared and sent to the lab as part of DES QA/QC protocol.

The results of the groundwater monitoring will be detailed in a groundwater monitoring report to be issued following each sampling event. The quarterly report will have a groundwater contour map and PCE concentration map indicating the position of the plume.

6.0 CONCLUSIONS

The following conclusions are based upon a review of the existing reports and data provided to DES, as well as the site inspection.

On September 20, 1999 the CTDEP issued Order No. SRD-113. to Edward and Monique McCarty who are the co-owners of the subject site. The order was issued by the Connecticut DEP as a result of a historic release(s) from an on-site dry cleaning operation. The Connecticut DEP Order No. SRD-113 requires that:

- A Scope of Study be prepared for investigating the degree and extent of soil, groundwater and surface water contamination at the property located at 20 Station Road in Brookfield, Connecticut and its impact on the environment; and
- An investigation into the potential impact on the environment to areas off-site and surrounding 20 Station Road in Brookfield, Connecticut.

The order also detailed that the Scope of Study include at a minimum; proposed locations and depths of groundwater monitoring wells, proposed soil sampling locations and depth of collection, proposed surface water sampling locations, a proposed sampling and analytical program including parameters to be tested, proposed sampling and analytical methods to be used, quality assurance and quality control (QA/QC) procedures that will be followed, and proposed time schedule for conducting the investigation. The Scope of Study was prepared by DES and approved by the CTDEP on November 7, 2000.

The site is located in an area that has been assigned a "GA" groundwater classification by the CTDEP. GA classification groundwaters are described as within the area of influence of private and potential public water supply wells. The water is presumed suitable for direct human consumption without the need for treatment.

The site has been the subject of multiple subsurface investigations. The results of those investigations indicate soil contamination around the former dry cleaning tenant space and subgrade drums. The contaminated soil exists beneath the northwest portion of the building in the former dry cleaning tenant space and just to the north of that area. Another area of PCE impacted soil is located just to the west of the building (near MW-11). DES provided oversight

for excavation of the contaminated soils from three locations on-site. The field work was performed from December 2001 through May 2002. The areas excavated included the interior northwestern portion of the building, the area to the north of the building and an area to the west of the building. Excavating activities were performed by Mr. McCarty. Approximately 115 tons of PCE impacted soil was excavated and transported off-site to Holyoke Sanitary Landfill in Granby, Massachusetts. Twenty-one confirmation soil samples were collected from the excavations and one groundwater sample was collected. The results of the analysis indicated concentrations of PCE remain in the soil under the building above soil standards and in one area (the excavation floor) outside the building. A venting system was installed beneath the building slab and just outside the building which is presently serving as a passive venting system. DES will evaluate the need for modification to an active venting system after one year of quarterly groundwater and vapor monitoring.

The groundwater on the site is contaminated with PCE and its daughter products. The detected concentrations detected in the last investigation (November 2001) indicate concentrations of PCE from 2 ug/l to 8,500 ug/l. Other analytes detected above the standard include trichloroethylene, cis 1,2 dichloroethylene, 1,1 dichloroethylene and vinyl chloride. The plume extends from the northwest corner of the building in a northwesterly direction with the natural flow of groundwater. Groundwater remediation is required to bring the concentrations of PCE and daughter products below RSR criteria. DES proposes to install a groundwater pump and treat system to hydraulically contain the plume and remove VOCs from the groundwater. The proposed groundwater remediation method consists of a groundwater pump and treat system that is pumped from from a recovery trench to be located to the west of the building and two existing on-site water supply wells. The proposed remediation system will consist of the automatically controlled recovery well pumps, a collection/holding tank, re-pressurization pump and sediment filter, air stripper and if needed, a granular activated carbon filter. The exact sizing of the stripping tower and filters will be determined by the results of the proposed pump test.

A quarterly groundwater monitoring program will be implemented with the existing groundwater monitoring network. All of the on-site wells will be measured for depth to water and depth to bottom during every sampling event. Monitoring wells MW-1, MW-4, MW-6, MW-8, MW-9, MW-10 and MW-11 will be purged a minimum of three well volumes with dedicated bailers or a peristaltic pump fitted with dedicated tubing. The groundwater samples will be collected directly into new dedicated glass jars with teflon lined septa, labeled with an indelible ink and maintained in a chilled environment until delivery to a Connecticut certified laboratory for analysis of VOCs by EPA method 8260. DES will perform sampling of the recovery wells and all of the on-site groundwater monitoring wells on an annual basis per the above criteria.

7.0 PROPOSED SCHEDULE

The following is the proposed schedule for the work recommended above. It should be noted that all tasks cannot be accurately scheduled since other work has to be completed and approved prior to proceeding to the next task. However, the schedule will be modified and additions made as the project progresses.

Task	Proposed Completion Date
Drum removal and soil excavation program	May 2002 (completed)
Submittal of Remedial Action Plan (RAP) to CTDEP	6/30/02
Begin quarterly groundwater monitoring	7/31/02
Anticipated Comments on RAP from CTDEP and formal approval	8/30/02
Submittal of horizontal recovery well details and pump test discharge permit application	9/30/02
Horizontal recovery well installation	10/31/02
Pump Test	11/29/02
Final sizing and submittal of groundwater pump and treat specifications to the CTDEP	1/31/03
Approval of groundwater pump and treat system specifications by CTDEP	3/31/03
Installation of groundwater pump and treat system	4/31/03
Begin operation of groundwater pump and treat system	7/31/03

8.0 LIMITATIONS

The author of this report, Diversified Environmental Services, Inc. of Milldale, Connecticut, hereby gives notice that any statement of opinion contained in this report prepared by Diversified Environmental Services shall not be construed to create any warranty or representation that the real property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements; or that the property is fit for any particular purpose. Unless otherwise indicated in this Report, no attempt was made to check on the compliance of present or past owners of the site with Federal, State, or Local laws and regulations. The conclusions presented in this Report were based on the services described, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by client. Any person or entity considering the use, acquisition or

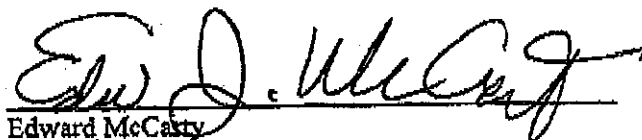
other involvement or activity concerning the property shall be solely responsible for determining the adequacy of the property for any and all uses for which that person or entity shall use the property. Any person or entity considering the use, acquisition or other involvement of activity concerning the property which is the subject of this Report should enter into any use, occupation, acquisitions or the like on sole reliance upon any representation of and on its own personal investigation of such property, and not in reliance upon any representation of Diversified Environmental Services regarding such property, the character, quality of value thereof. Diversified Environmental Services has performed this report in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Diversified Environmental Services shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld or not fully disclosed at the time the report was prepared.

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9.0 CERTIFICATION

9.1 Respondents

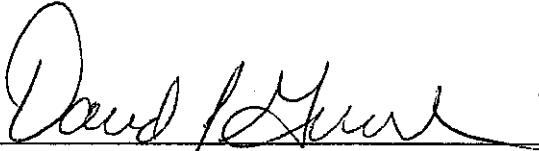
"I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statements made in this document or its attachments may be punishable as a criminal offense."


Edward McCarty

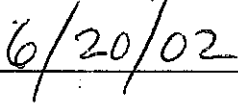

Date

9.2 Consultant

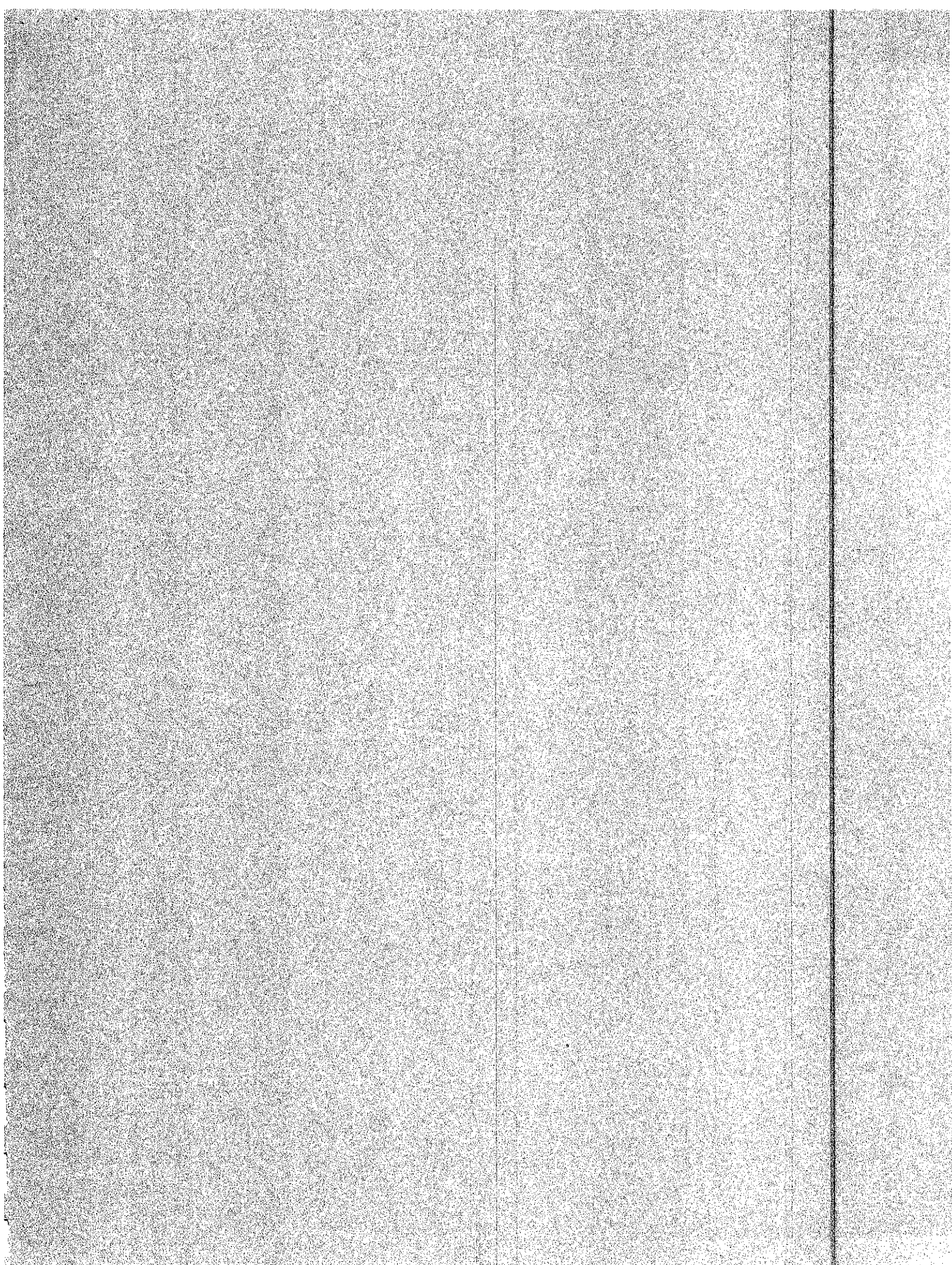
"I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statements made in this document or its attachments may be punishable as a criminal offense."

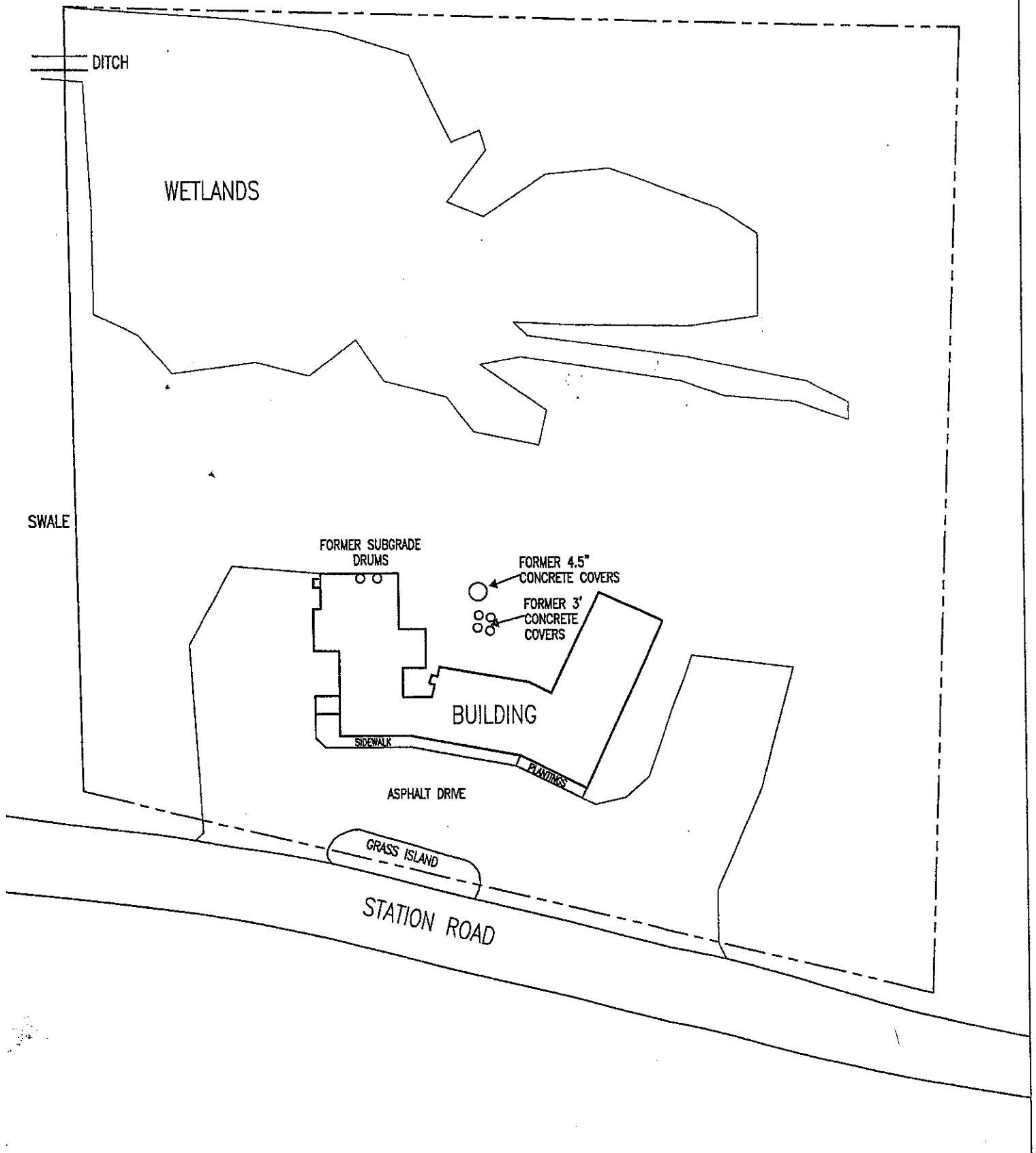


David J. Gworek, P.E., L.E.P



Date





LEGEND

- = SOIL VAPOR GAS POINT
- ⊕ = SOIL BORING
- ⊕ = MONITORING WELL / SOIL BORING
- ◆ = SURFACE WATER SAMPLE

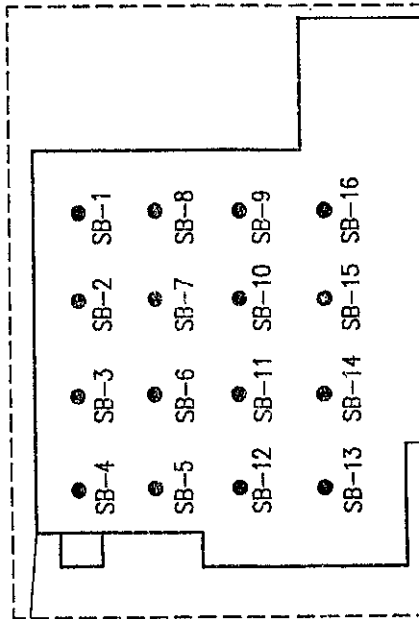


FIGURE A

FIGURE 2: BORING AND MONITORING WELL LOCATION MAP



NOT TO SCALE

McCARTY
20 STATION ROAD
BROOKFIELD, CT

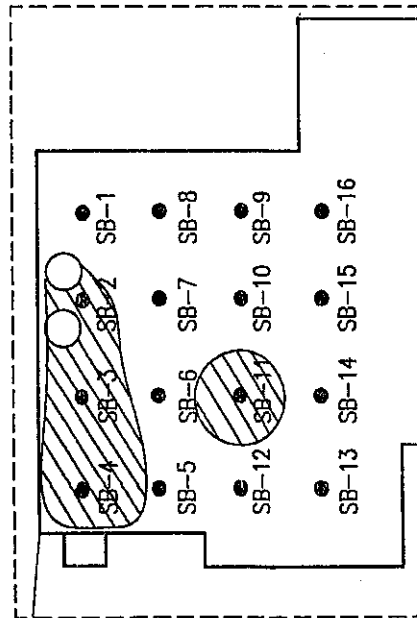
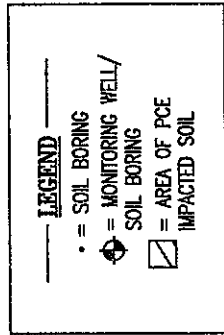
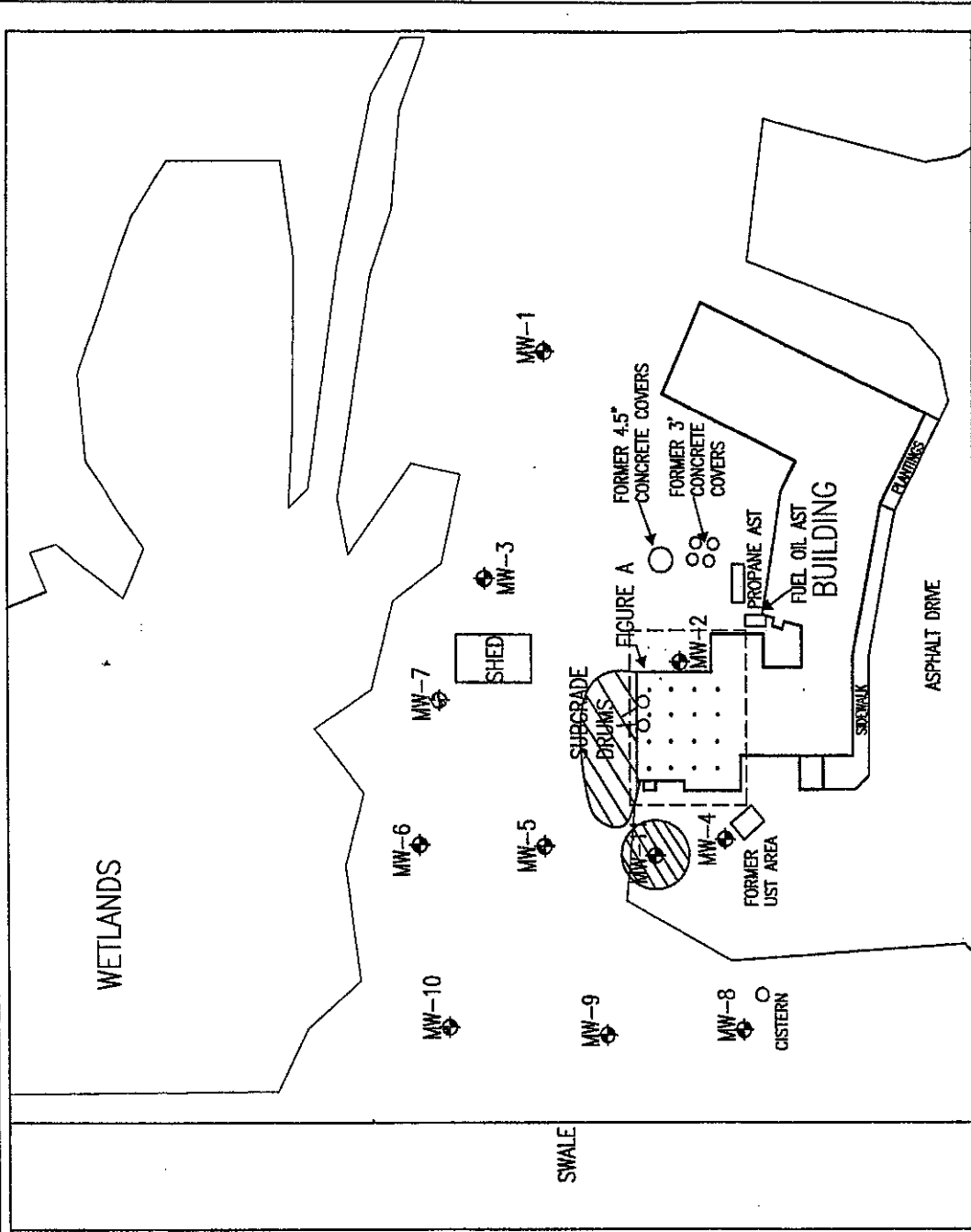


FIGURE 3: PCE IMPACTED SOIL

McCARTY
20 STATION ROAD
BROOKFIELD, CT



NOT TO SCALE

DRW: JDG CHD BY: BCM SHEET: 1:1 6/02

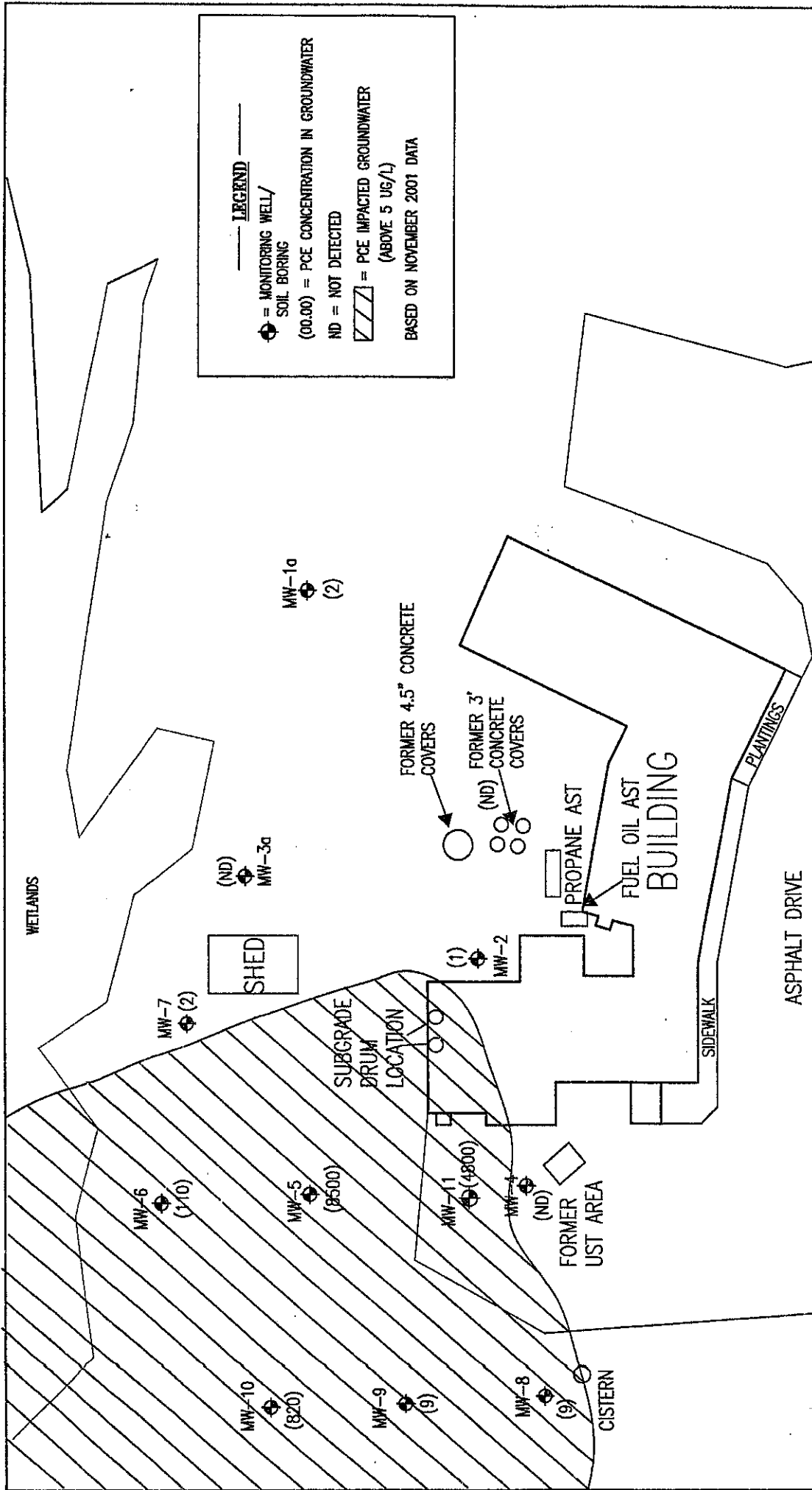
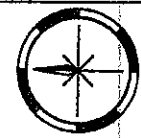


FIGURE 4: PCE IMPACTED GROUNDWATER



NOT TO SCALE

MCCARTY
20 STATION ROAD
BROOKFIELD, CT

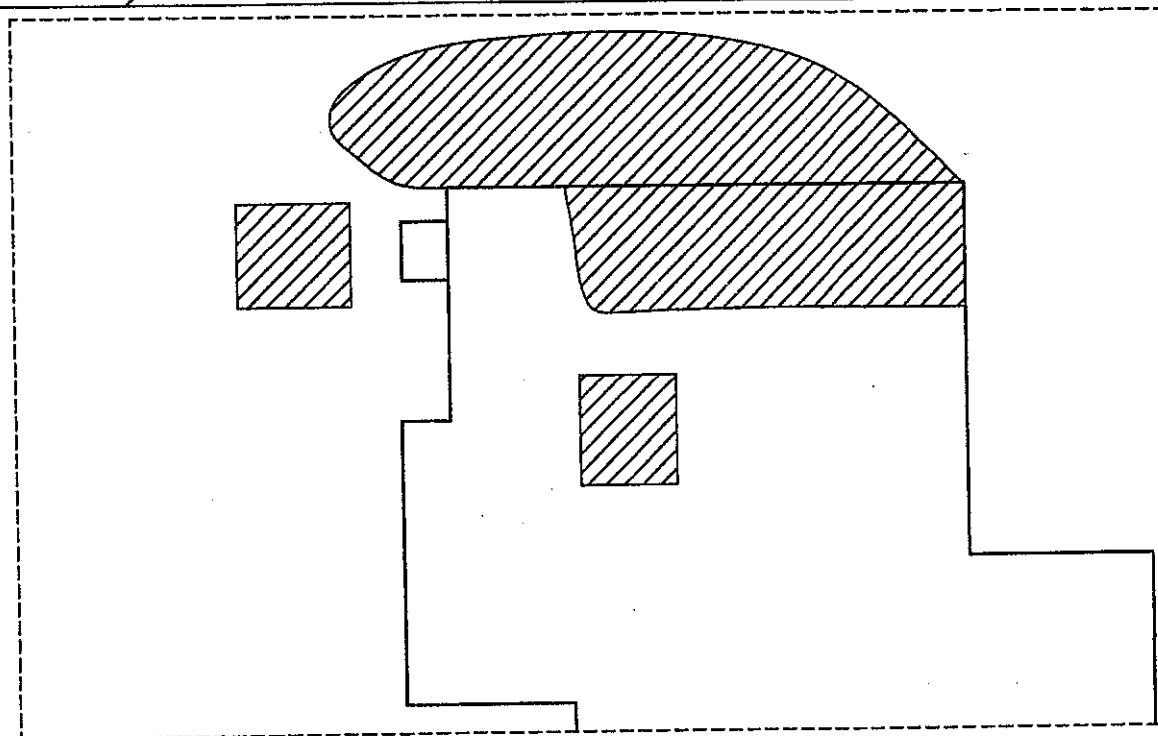
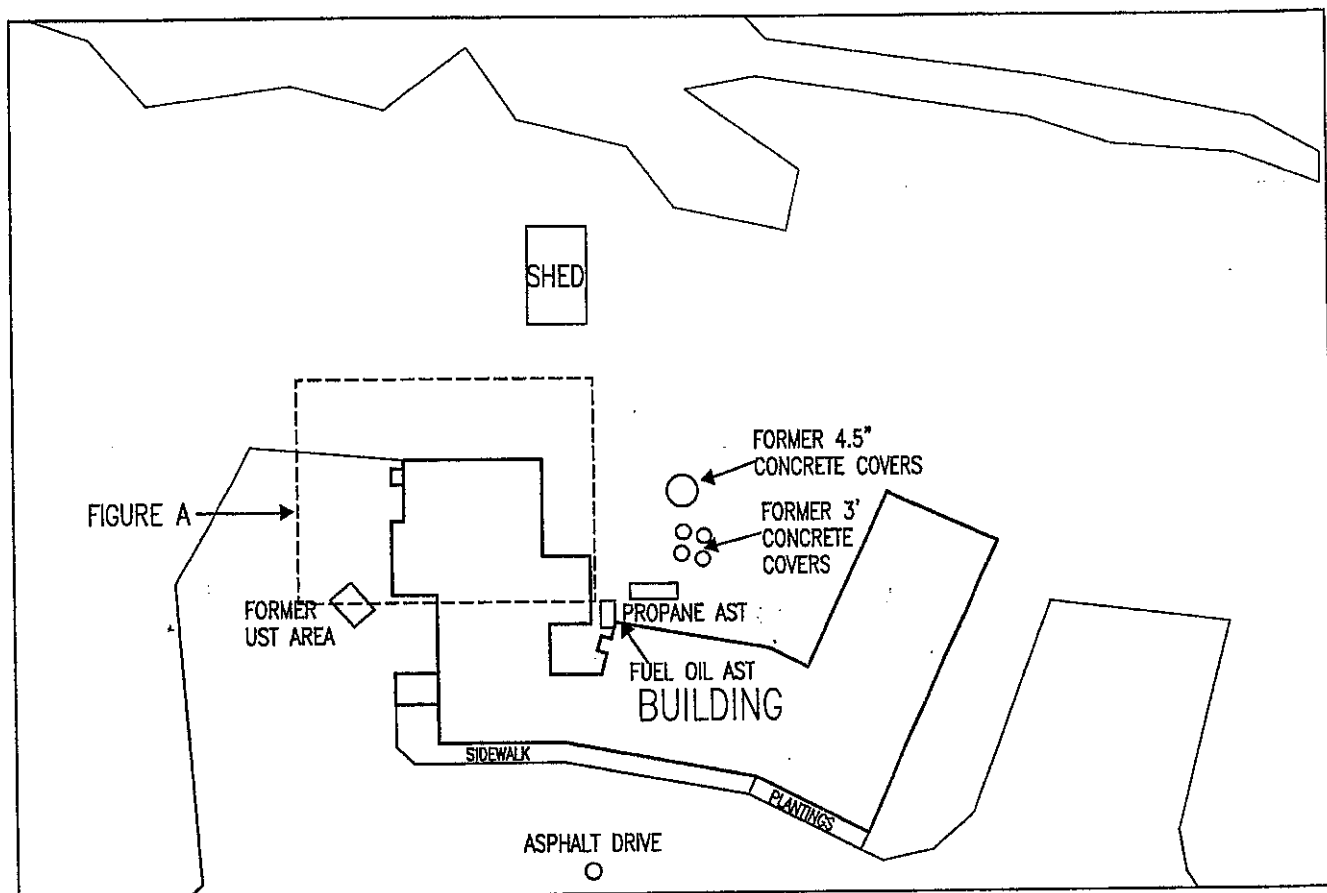



FIGURE A

 AREA OF EXCAVATION



diversified environmental services, inc.
1766 Meriden-Torbury Turnpike, PO Box 327, Middletown, CT 06457
(860) 621-5630 Fax (860) 621-9609

NOT TO SCALE

DRW: JDG

CHD BY: BCM

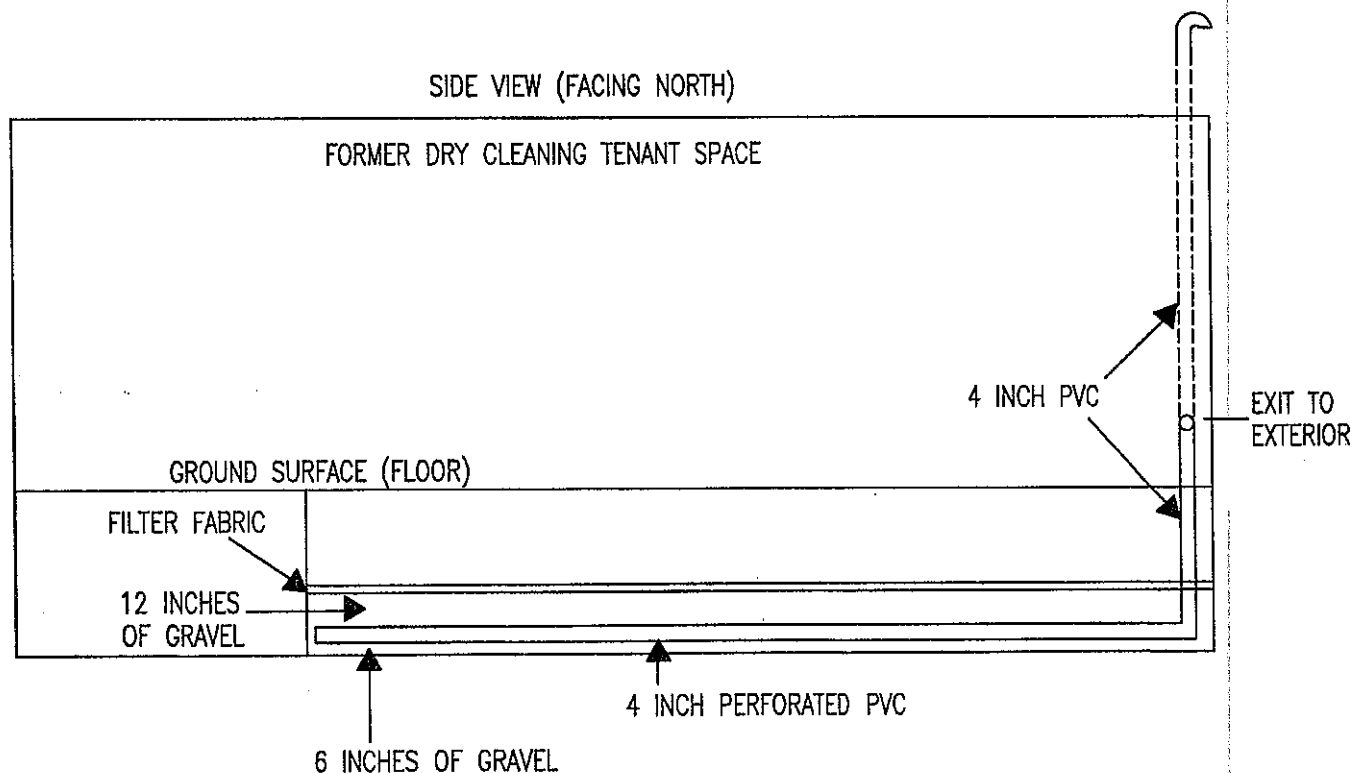
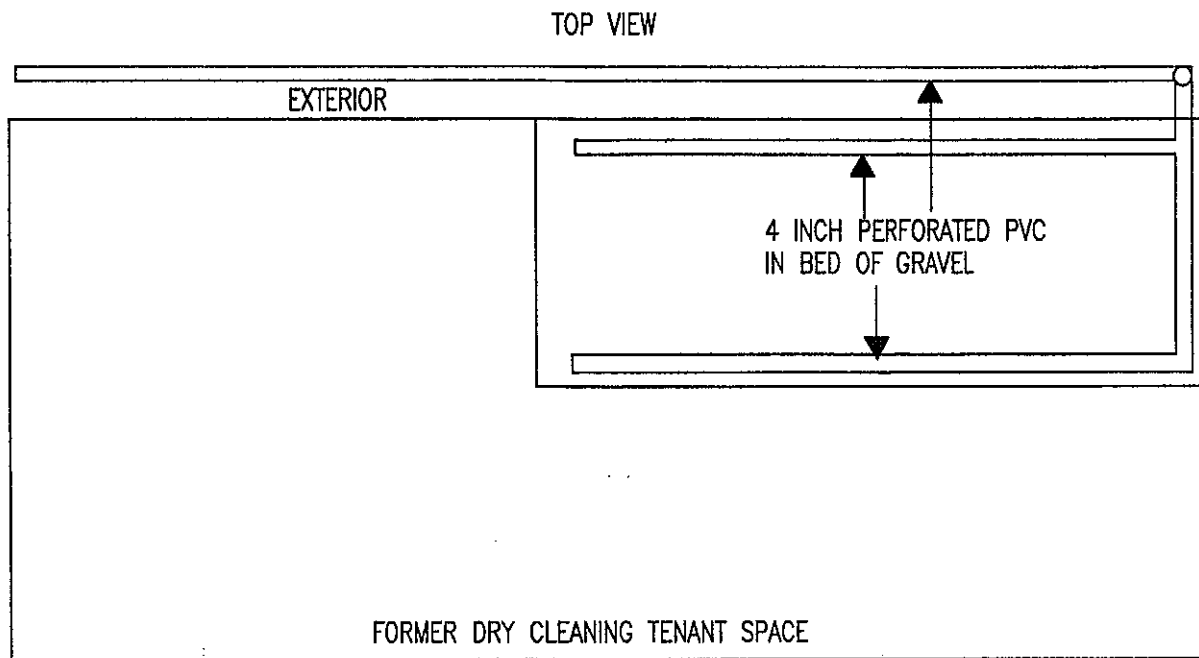
SHEET: 1:1

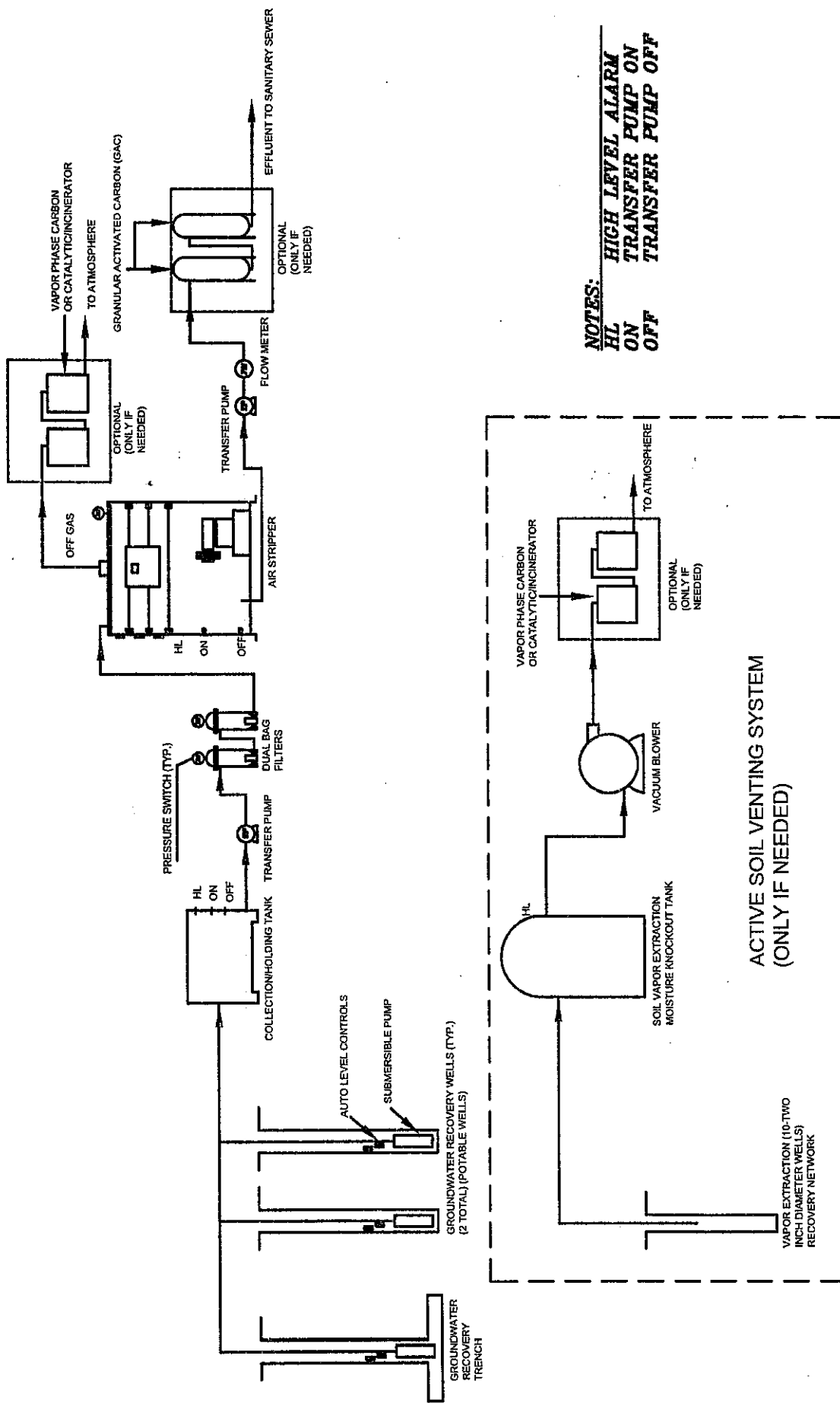
6/02



FIGURE 5: SOIL
EXCAVATION MAP

20 STATION ROAD
BROOKFIELD, CT





**FIGURE 7: PROPOSED GROUNDWATER
 REMEDIATION SYSTEM**

McCARTY
20 STATION ROAD
BROOKFIELD, CT

NOT TO SCALE

diversified environmental services, inc.
 1755 Meriden-Waterbury Turnpike, PO Box 337, Meriden, CT 06467
 (860) 681-3650 Fax (860) 621-9809

DRW: JDG ICHD BY: BCM SHEET: 1:1 6/02

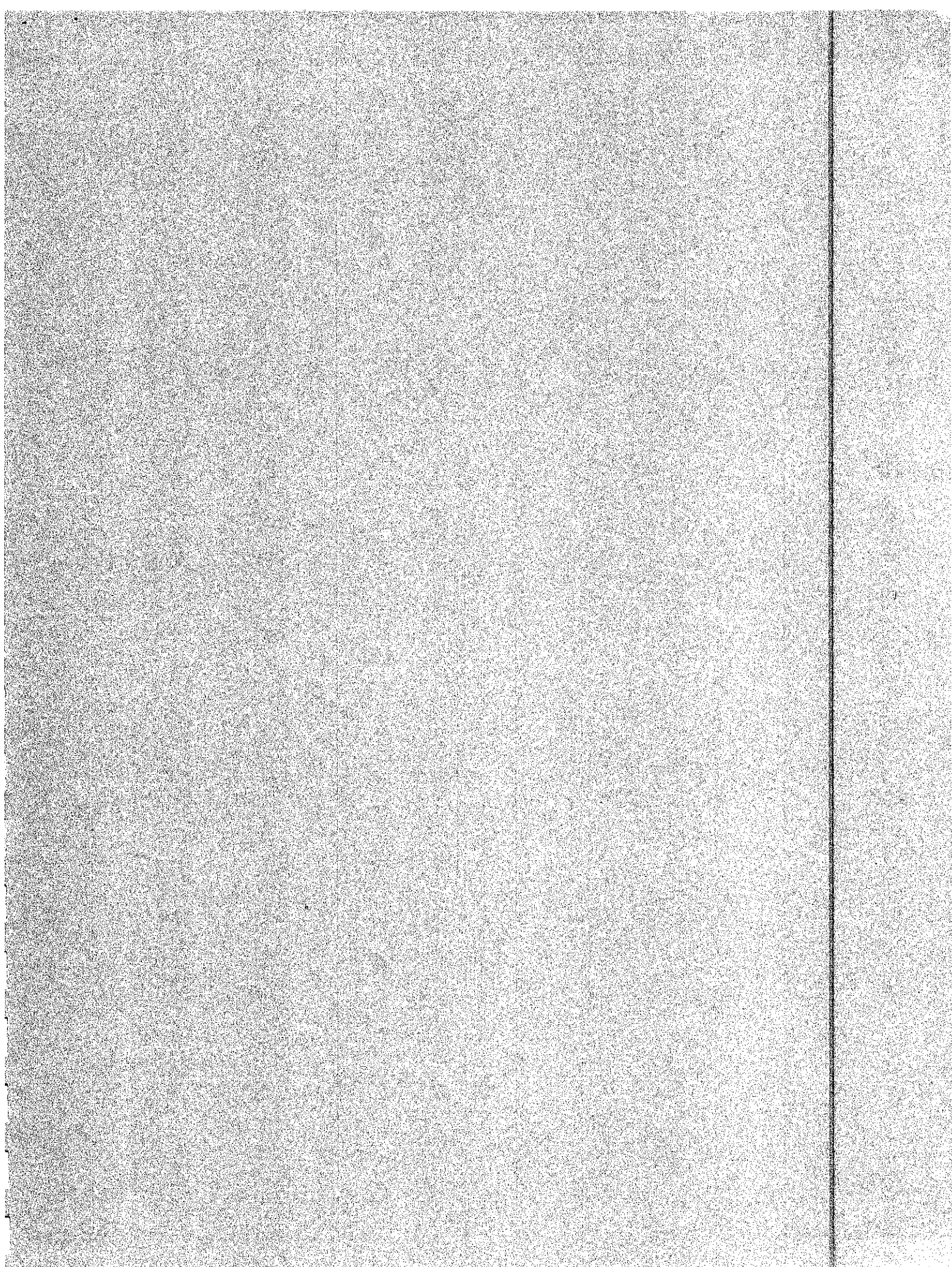


Table 1
November 2000 Summary of Soil Analytical Data
20 Station Road, Brookfield, Connecticut

Parameter	Sample Designation									Standard	
	B-7 (2-4)	B-8 (2-4)	B-9 (2-4)	B-10 (2-4)	B-14 (2-4)	B-15 (2-4)	B-16 (2-4)	MW-4 (0-2)	MW-4 (2-4)	RDEC	PMC
ETPH	NA	75	NA	NA	NA	NA	NA	NA	260	500	500
Tetrachloroethylene	0.068	ND	0.008	0.034	0.005	0.26	0.43	0.015	NA	12	0.1
Trichloroethylene	ND	ND	ND	ND	ND	0.009	ND	ND	NA	56	0.1
cis 1,2-Dichloroethylene	ND	ND	ND	ND	ND	0.009	ND	ND	NA	500	1.4
Isopropylbenzene	ND	ND	ND	ND	ND	0.036	0.05	ND	NA	500	0.6
tert-Butylbenzene	ND	ND	ND	ND	ND	0.017	0.012	ND	NA	500	1.4
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	NA	500	7
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	NA	1000	5.6
p-Isopropyltoluene	ND	ND	ND	ND	ND	0.006	ND	ND	NA	NE	1.4

Table 1 (continued)

Parameter	Sample Designation						RDEC	PMC
	SB-3 (0-2)	SB-4 (2-4)	SB-6 (2-4)	SB-10 (2-4)	SB-11 (2-4)	SB-16 (0-2)		
ETPH	NA	NA	NA	NA	NA	NA	500	500
Tetrachloroethylene	1.6	0.11	0.012	0.024	12.0	0.12	12	0.1
Trichloroethylene	ND	ND	ND	ND	0.018	ND	56	0.1
cis 1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	500	1.4
Isopropylbenzene	ND	ND	ND	ND	ND	ND	500	0.6
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	500	1.4
1,2,4-Trimethylbenzene	0.008	0.008	ND	ND	0.018	ND	500	7
Naphthalene	0.039	0.008	ND	ND	ND	ND	1000	5.6
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	NE	1.4

Table 2
October 2001 Summary of Soil Analytical Data
20 Station Road, Brookfield, Connecticut

Parameter	Sample Designation				Standard	
	MW-8 (5-7)	MW-9 (5-7)	MW-10 (5-7)	MW-11 (0-2)	RDEC	PMC
Tetrachloroethylene	ND	ND	0.005	0.21	12	0.1

NOTE: All Units in Milligrams Per Kilogram (mg/kg) = Parts Per Million (ppm)
RDEC = Residential Direct Exposure Criteria
PMC = Pollutant Mobility Criteria
Bold = Exceedance
ND = Below Laboratory Detection Limits
NA = Not Analyzed for that Parameter
NE = No Established Standard

Table 3
November 2001 Summary of Groundwater Analytical Data
20 Station Road, Brookfield, Connecticut

Parameter	Sample Designation					Standard		
	MW-1	MW-2	MW-5	MW-6	MW-7	GPC	RVC	SWPC
Tetrachloroethylene	2	ND	8500	110	2	5	1500	88
Trichloroethylene	ND	ND	530	240	ND	5	219	2340
c-1,2-Dichloroethylene	ND	ND	270	230	1	70	NE	NE
Chloroform	ND	ND	130	ND	ND	6	14100	287
MTBE	ND	1	ND	ND	ND	70	50000	NE

Table 3 (continued)

Parameter	Sample Designation				Standard		
	MW-8	MW-9	MW-10	MW-11	GPC	RVC	SWPC
Tetrachloroethylene	9	9	820	4800	5	1500	88
Trichloroethylene	ND	7	42	230	5	219	2340
c-1,2-Dichloroethylene	3	6	44	73	70	NE	NE
Chloroform	ND	ND	ND	ND	6	14100	287
MTBE	5	ND	ND	ND	70	50000	NE

NOTE: All Units in Micrograms Per Liter (ug/l) = Parts Per Billion (ppb)
 PMC = Pollutant Mobility Criteria
 RVC = Residential Volatilization Criteria

SWPC = Surface Water Protection Criteria
 Bold = Exceedance
 ND = Below Laboratory Detection Limits