

REMEDIAL INVESTIGATION ADDENDUM REPORT

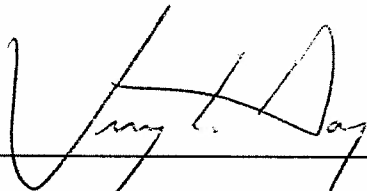
Prepared for:

**Allied Building Supply Company
101 West Elizabeth Avenue
Linden, New Jersey 07083
Case # 93-06-24-1425**

February 1994

Prepared By:

**Vectre Corporation
P. O. Box 930
Lafayette, New Jersey 07848-9941**

A handwritten signature in black ink, appearing to read "Jerry L. Haug", is written over a horizontal line.

Jerry L. Haug, CPG
NJ UST Certification No. 0001777



REMEDIAL INVESTIGATION ADDENDUM REPORT

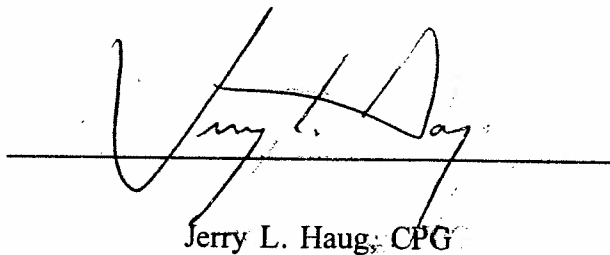
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1.0 INTRODUCTION

This Remedial Investigation Addendum Report summarizes the following activities which have taken place at the Allied Building Supply Company site at 101 West Elizabeth Avenue, Linden, New Jersey:

- Gasoline UST removal in June 1993.
- Gasoline UST excavation site assessment conducted in July 1993.
- Soil boring investigation and installation of one monitoring well in August 1993.
- Installation of three additional monitoring wells for contaminant delineation, soil boring sample collection from former gasoline tank excavation, post excavation soil sampling from heating oil UST excavation, and collection of soil samples from the soil pile associated with the gasoline tank excavation, to evaluate soil quality for disposal or reuse options in November 1993.
- A well search for potable wells within a one-mile radius of the site.

The well search has been ordered but not yet received, and will be forwarded to the agency when it has been received. Due to extreme weather conditions and snow cover, the elevation of the well casings have not yet been surveyed; this activity should be completed the week of 2/18/94 and the Form Bs will be submitted under separate cover.



2.0 PREVIOUS INVESTIGATIONS

2.1 Tank Closure Activities

The gasoline tank was removed on June 24, 1993 in accordance with an approved closure plan submitted by **Tri-State Environmental Consultants, Inc.** in Fort Lee, New Jersey in May 1993. The tank was removed by **JCB Environmental Contractors** of Greenbrook, New Jersey. A few small holes were noted in one side of the tank and small streaks of visibly impacted soil were noted. The Environmental Hotline was called and a discharge reported (Case No. 93-06-24-1425-2).

Approximately 70 tons of soil was removed during the tank removal and stockpiled onsite. A confirmation report was sent by **Bressler, Amery & Ross**, attorneys for the owner.

2.2 Investigation of Tank Grave

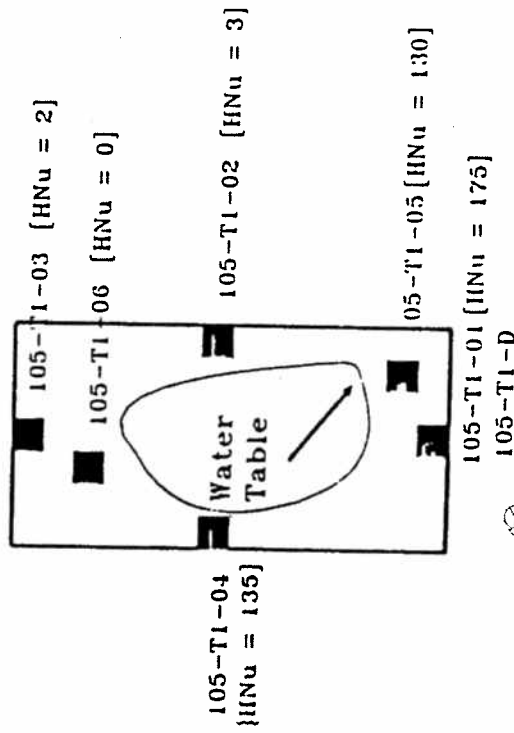
On July 26, 1993 soil samples were collected from the tank grave by **Sailer Environmental Incorporated** of Madison, Connecticut. Four side wall samples, two floor samples, and one duplicate sample were collected from the tank grave. Sample results are presented in Table 1, and sample locations are shown on Figure 1.

TABLE 1. Post Excavation Soil VOC Analytical Results (mg/kg)
From Report Dated 8-11-93 by Sailer Environmental, Inc.

Sample Number	Toluene	Ethylbenzene	Total xylenes
105-T1-01	0.33	U	47
105-T1-02	U	U	U
105-T1-03	U	U	U
105-T1-04	U	U	U
105-T1-05	32	4.7	48
105-T1-D	6.2	7.5	194
105-T1-TB1	U	U	U



Warehouse



LEGEND

Sample Locations ■

HNU Readings [HNU =]

TITLE

SOIL SAMPLE LOCATIONS
2,000 Gallon UST

PREPARED FOR

ALLIED BUILDING SUPPLY CORP.

**SAILER
ENVIRONMENTAL
INCORPORATED**
724 BOSTON POST ROAD, P.O. BOX 21
MADISON, CONNECTICUT 06433

DRAWN BY	ENS	DATE	8/10/93
CHECKED BY	ESK	SCALE	NTS
PROJECT NO.	105-01	DRAWING NO.	1-1

Based upon the analytical results from the soil samples, only two samples exceeded soil cleanup criteria for only one parameter, total xylenes, by a marginal amount. The report recommended installation of a ground water monitoring well.

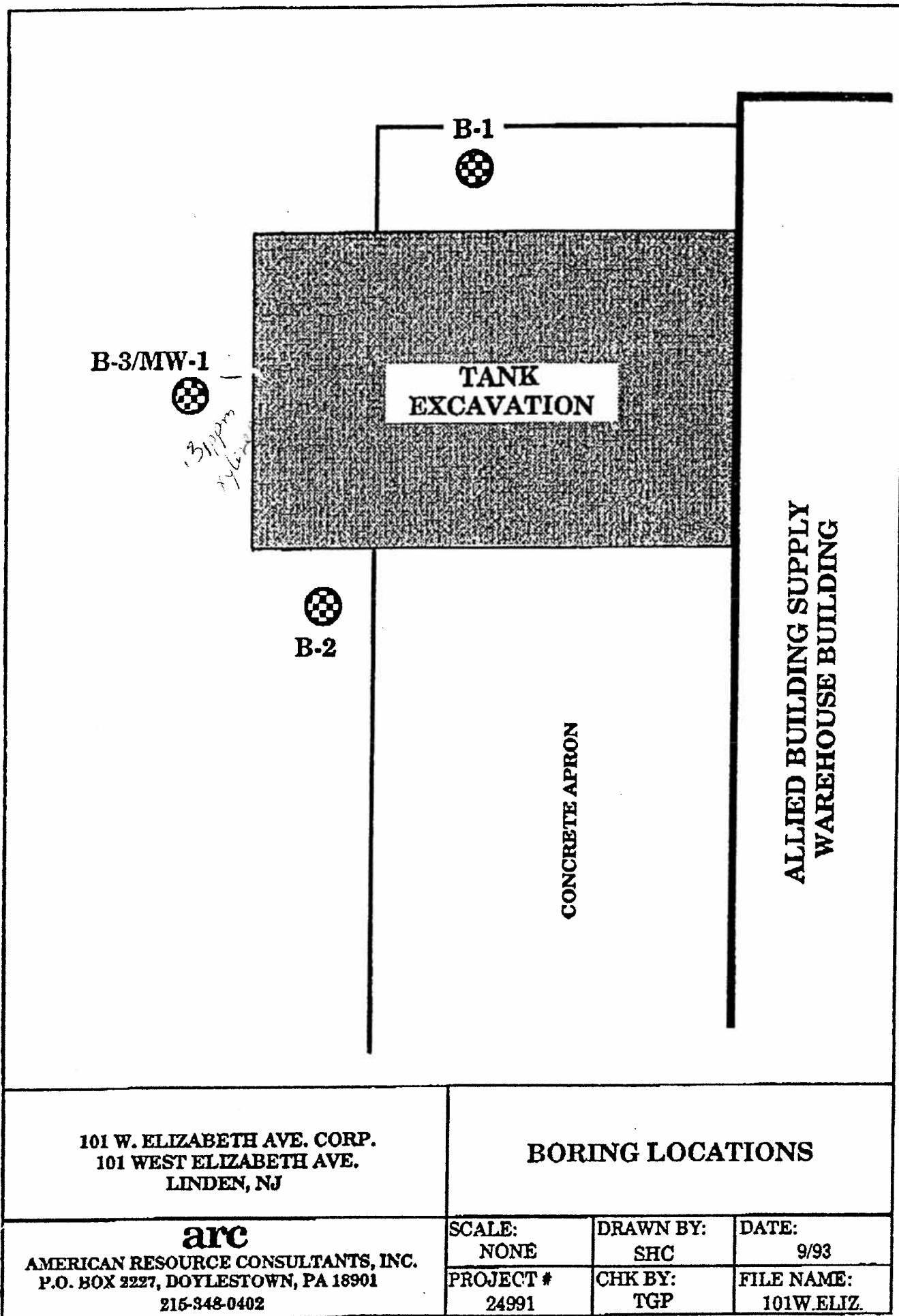
2.3 Soil Boring/Well Installation

Three soil borings and one monitoring well were installed at the site on August 30, 1993 under the direction of **American Resource Consultants** of Doylestown, PA. Soil samples were collected from each soil boring and analyzed for volatile organic compounds. Results are summarized in Table 2, and boring locations are shown on Figure 2. A ground water sample was collected from the well on September 3, 1993.

TABLE 2. Soil Boring and Monitoring Well VOC Analytical Results (mg/kg)
From American Resources Consultants, Inc. Report Dated 9-17-93

Sample Number C-83092	Acetone	Trichloro- fluoro- methane	Benzene	Toluene	Ethyl- benzene	Total xylenes
105-B1-10	0.020	U	U	U	U	U
105-B1-12	U	U	U	U	U	U
105-MW1-9	U	U	U	U	U	U
105-MW1-11	U	U	U	16.0	23.0	131.0
105-B2-09	U	U	U	U	U	U
105-B2-11	0.024	U	U	U	U	U
105-D-02	U	U	U	U	U	U
105-FB-02	U	0.003	U	U	U	U
105-TB-02	U	0.009	U	U	U	U
MW-1 (ground water)	U	U	0.28	3.0	0.62	3.9





The only soil sample exceeding the NJDEPE proposed soil "impact to ground water" cleanup guidelines was at the water table in well MW-1, and only exceeded the cleanup criteria for xylene (10 mg/kg). No other sample in the vicinity of the tank reported any exceedences of cleanup criteria, and the report recommended no further action for soils. The ground water sample reported anomalous levels of gasoline constituents.



3.0 FIELD ACTIVITIES

Field activities for this investigation included the following tasks:

Task 1 - Installation of Ground Water Monitoring Wells

Task 2 - Collection of Soil Samples

Task 3 - Collection of Ground Water Samples

Details of each task are presented in the following sections.

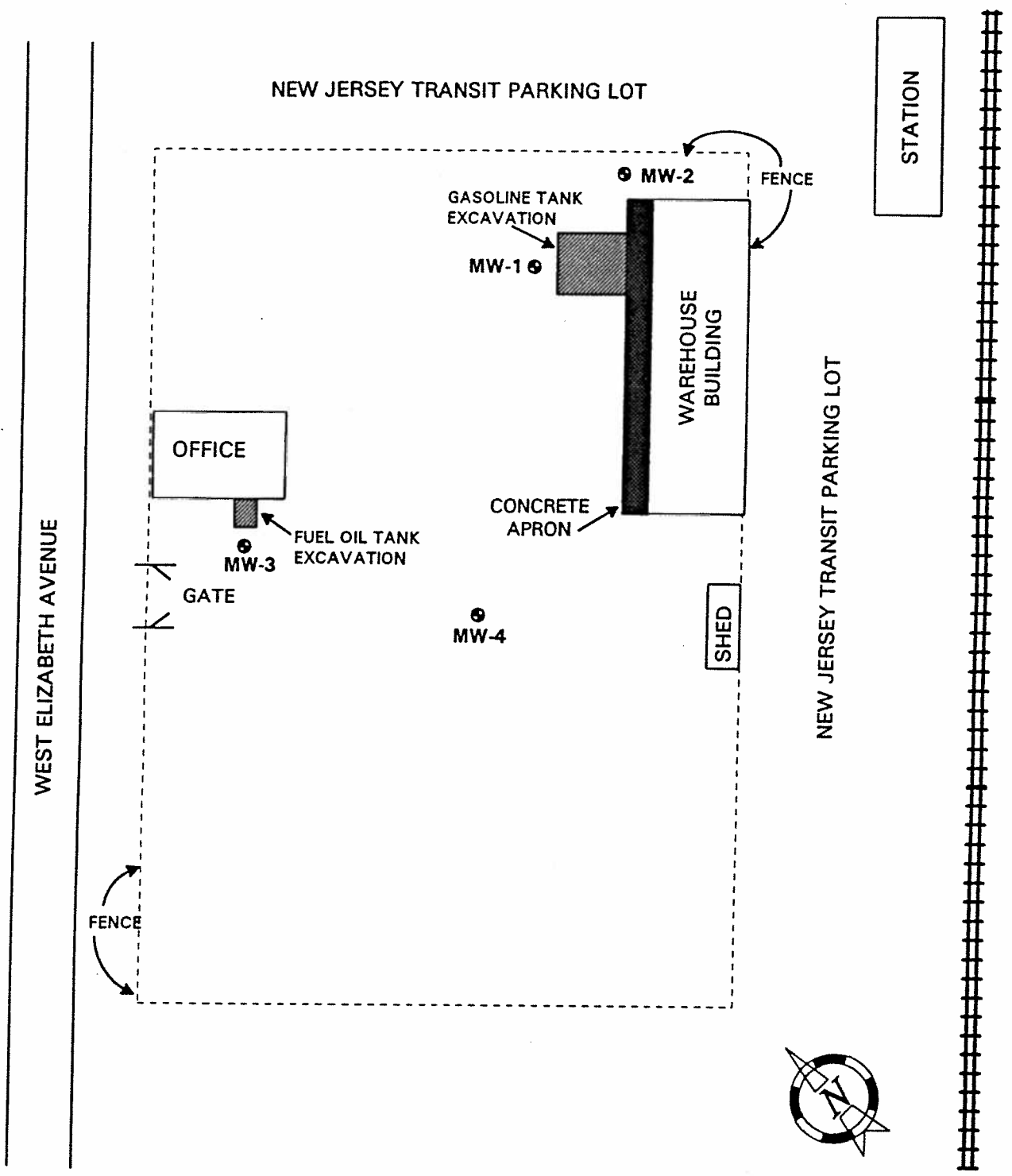
3.1 Task 1 - Installation of Ground Water Monitoring Wells

Three 4" diameter ground water monitoring wells designated as MW-2, MW-3 and MW-4 were installed at the **Allied** site on November 19, 1993. The monitoring wells were installed utilizing a truck mounted air rotary drilling rig operated by **Summit Drilling Company** and supervised by a **Vectre Corporation** hydrogeologist. Figure 3 is a site plan depicting the location of the newly installed wells, as well as existing well MW-1 (installed in August 1993 by a previous consultant). Well logs and copies of the well permits are provided in Appendix A.

Borings for monitoring wells MW-2 and MW-4 were advanced to a depth of 20 feet below grade, and well MW-3 was advanced to a depth of 15 feet below grade. Drill cuttings were field screened with a ThermoEnvironmental Model 580B organic vapor meter (OVM) utilizing a photoionization detector. No OVM readings above zero were noted in any well.

After drilling to the appropriate depth the wells were completed in accordance with **NJDEPE** guidance documents and specifications. Each well was constructed with 4-inch diameter PVC solid casing and 0.020-inch slotted well screen. Each well was developed with a bailer and completed with a flush-mounted manhole and locking cap. Well construction details are presented in Appendix A.





SITE PLAN		
ALLIED BUILDING SUPPLY 101 WEST ELIZABETH AVENUE LINDEN NEW JERSEY		
NOT TO SCALE		 VECTRE Corporation
FIGURE NUMBER	PROJECT NUMBER	
3	SEL-VI	

Subsurface materials consisted of seven to nine feet of red silty clay, overlying a fine to medium-grained sand varying in thickness from three to seven feet, underlain by red silty clay to the bottom of the hole. Well MW-3 was the most productive well, due to the thickest sand unit and shallowest water table. Wells MW-2 and MW-4 exhibited slow recharge characteristics, due to a lack of saturated thickness in the sand unit in MW-2 and a thinner sand unit in MW-4. Based upon purge rates during sampling, well MW-1 also has a relatively slow recharge rate.

Based upon local topography and surface hydrology, ground water flow is inferred to be southwest, towards Peach Orchard Brook. Well MW-2 was installed upgradient, well MW-3 was installed to assess the heating oil tank, and well MW-4 was installed to assess downgradient ground water conditions.

3.2 Soil Sample Collection

Soil samples were collected on November 24, 1994. A total of seven soil samples plus a field blank were collected. Soil sample locations are shown on Figure 4.

Soil Pile Samples

Soil excavated during removal of the gasoline tank was accumulated in three distinct piles at the Allied site. Location of the piles is shown on Figure 4. Soil pile #1 (sample SP1) is approximately 20 yd³, soil pile #2 (sample SP2) is approximately 10 yd³, and soil pile #3 (sample SP3) is approximately 45 yd³ in volume. Each soil pile is approximately two to three feet high over most of its area, and SP1 is approximately four feet high at its highest point. The excavated material was generally sandy, with some clay, and concrete and asphalt pieces mixed in.

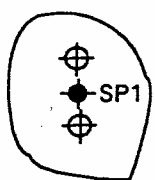
Each pile was screened with an OVM to identify the presence of organic vapors. Holes were dug using a shovel through the depth of the pile at several locations. No OVM readings above zero were recorded, and no odor or discoloration was observed. Screening locations are shown on Figure 4.



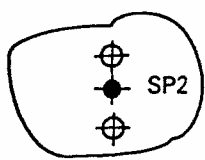


FENCE

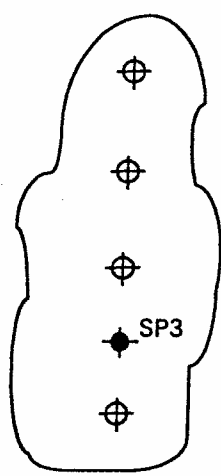
SOIL PILE 1



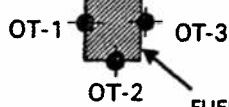
SOIL PILE 2



SOIL PILE 3



OFFICE



FUEL OIL TANK EXCAVATION



GASOLINE TANK EXCAVATION



WAREHOUSE BUILDING

CONCRETE APRON



KEY

⊕ FIELD SCREENED PROFILE

● SAMPLE LOCATION

SOIL SAMPLING LOCATIONS

ALLIED BUILDING SUPPLY
101 WEST ELIZABETH AVENUE
LINDEN NEW JERSEY

NOT TO SCALE

FIGURE
NUMBER

4

PROJECT
NUMBER

SEL-VI



VECTRE
Corporation

Because field screening procedures did not identify contaminated areas and could not be used to bias the sample locations, a soil sample was collected from each pile at a central location in the thickest section of each pile, to minimize the possibility of collecting samples that had been subjected to intensive weathering and volatilization.

Soil samples for laboratory analysis were retrieved directly from the soil pile with a decontaminated stainless steel trowel by a **Vectre** geologist wearing clean disposable latex gloves. Prior to collection of soil samples, the sampling trowel was thoroughly cleaned and decontaminated using the following procedures:

- . Device washed with laboratory cleaner and water
- . Device rinsed 3 times with distilled water
- . Device rinsed with reagent grade methanol and allowed to dry
- . Device rinsed with distilled water
- . Device allowed time to dry

The samples were stored in a cooler at approximately 4° C and transported to the laboratory. Samples from the soil piles were analyzed for volatile organic compounds +10 peaks using EPA Method 8240. Analytical results are presented in Section 4.

Heating Oil Tank Excavation Soil Samples

Three samples were collected from the excavation which formerly contained a 550-gallon heating oil tank for the office building on site. Samples were collected from the sidewalls of the excavation, approximately six inches above the water table. Each sample was collected from approximately six to eight inches into the sidewall, to avoid sampling material that was intensively weathered. The samples were comprised of a reddish silty clay. Each sample was collected with a trowel, labeled, and handled as described above. The samples were analyzed for total petroleum hydrocarbons using EPA Method 418.1. Analytical results are presented in Section 4.



Tank Grave Soil Sample Collection

A soil sample was collected from the location of former sample 105-T1-D. The sample was collected approximately 0.5 feet above the water table, using a long-handled soil trier. The sample submitted for analysis was collected from approximately eight to ten inches in the wall, to mitigate the effect of weathering in the open excavation. The sample was comprised of red silty clay. The sample was labeled GT-1 and submitted to a laboratory for analysis of volatile organics plus 10 peaks using EPA Method 8240.

3.3 Ground Water Sample Collection

Groundwater samples were collected from all four monitoring wells on December 7, 1994. Each well was purged at least 3 well volumes using a centrifugal pump, with the exception of MW-2, which was purged 91% of three volumes due to slow recharge. Depth to water and purging data are presented in Table 3.

After purging, each well was sampled using a new, disposable PVC bailer which was used for that well only. The samples were labelled and stored in a cooler at approximately 4° C for transport to the laboratory. A trip blank and field blank were prepared for quality control/quality assurance and submitted for analysis. All samples were analyzed for volatile organic compounds plus 10 peaks using EPA Method 624. Analytical results are presented in Section 4.



TABLE 3
WELL PURGING DATA

WELL ID	WELL DEPTH (FT)	DEPTH TO WATER (FT)	WATER COLUMN (FT)	THREE WELL VOLUMES (GAL)*	ACTUAL PURGE VOLUME
MW-1	18	8.70	9.30	18.21	26
MW-2	20	11.05	8.95	17.52	16
MW-3	15	8.25	6.75	13.23	25
MW-4	20	8.75	11.25	22.05	23

* One foot of water in a 4-inch well equivalent to 0.653 gal



4.0 ANALYTICAL RESULTS

4.1 Soil Sample Results

Soil sample results are summarized on Table 4. A complete laboratory analytical report including QA/QC procedures is provided in Appendix B.

Soil Pile Samples

Analytical results for the soil pile samples reported no target compounds above detection limits. No non-target compounds were reported in samples SP-1 and SP-2, and sample SP-3 reported a total of 0.50 mg/kg non-target compounds.

Heating Oil Tank Samples

Analytical results for the samples collected from the heating oil excavation reported concentrations of total petroleum compounds ranging from 29 mg/kg in OT-1 to 45 mg/kg in OT-3.

Former Gasoline Tank Excavation Soil Boring Sample Results

Analytical results for sample GT-1, collected from the location of previous sample 105-T1-D, reported concentrations of 0.015 mg/kg for total xylenes and 3.95 mg/kg for non-target compounds.

4.2 Ground Water Sample Results

Ground water sample results are summarized on Table 5, and a copy of the laboratory data package is included as Appendix C. No target or non-target compounds were reported above detection limits in monitoring wells MW-2, MW-3, and MW-4. Well MW-1 reported detectable concentrations of benzene, toluene, ethylbenzene, and xylene.



table 4



tab 5



5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Soil Piles

Field screening and analytical results for soil samples collected from the soil piles indicate that no volatile organic compounds were identified in any of the soil piles. Because no compounds were identified above levels of regulatory concern, there are no restrictions on further use of the soil.

Heating Oil Tank Excavation

None of the post-excavation samples collected from the heating oil tank excavation reported concentrations of petroleum hydrocarbons above levels of regulatory concern.

Tank Grave Soil Sample

The soil sample collected from the gasoline tank excavation reported no compounds at concentrations above levels of regulatory concern.



Ground Water

Field screening of drill cuttings and analytical results for ground water samples indicate that none of the three wells installed for this investigation are impacted to any degree by volatile organic compounds. Analytical results for the sample collected from MW-1 report similar levels of BTEX as were reported during an earlier sampling round. Borings conducted in the area during previous investigation reported no soil contamination other than in the borehole converted to MW-1. It is apparent that the problem is very localized, because even in the presence of a transmissive sand no contaminants have been identified in the three other wells installed at the site.

5.2 Recommendations

Soil Piles

As there have been no contaminants detected in the soil piles above levels of regulatory concern, no further action is required and it is recommended that the soil be replaced in the excavation and clean backfill used to restore the site to grade.

Oil Tank Samples

As there have been no contaminants above levels of regulatory concern reported in the oil tank excavation, no further action is recommended beyond restoring to grade.



Tank Excavation

As there have been no contaminants above levels of regulatory concern reported in the resampling of the former soil boring 105-MW1-11 location, no further action is recommended.

Ground Water

The presence of gasoline constituents in MW-1 indicates that a very localized zone of contamination may exist in the immediate area. It is recommended that MW-1 be sampled again in approximately three months to document the natural remediation of ground water in its vicinity through biodegradation and attenuation. It is also recommended that all four monitoring wells be sampled within six months to reconfirm the stability of existing ground water conditions. The ground water samples should be analyzed for BTEX using EPA Method 602.



APPENDIX A

MONITORING WELL RECORD

Well Permit No. 26 35296
Atlas Sheet Coordinates 25 : 31 : 321 ☐OWNER IDENTIFICATION - Owner 101 WEST ELIZABETH AVE.
Address 581 RAINWAY AVE.
City UNION State NJ Zip Code _____WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 2
County UNION Municipality LINDEN CITY Lot No. 10 Block No. 254
Address Allied Bldg. Supply, 101 West Elizabeth Ave., Linden, N.J. 07033TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/19/93
Regulatory Program Requiring Well UGT Case I.D. # 93-06-24-1425
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Veritas Corporation Tele. # 201 383-2500

WELL CONSTRUCTION

Total depth drilled 20 ft.Well finished to 20 ft.

Borehole diameter:

Top 5 in.Bottom 8 in.Well was finished: ☐ above grade
☒ flush mountedIf finished above grade, casing
height (stick up) above land
surface — ft.

Was steel protective casing installed?

☐ Yes ☒ NoStatic water level after drilling 13 ft.Water level was measured using TAPEWell was developed for 1 hours at Skidway gpmMethod of development BailWas permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Method AirDrilling Fluid _____ Type of Rig Ford B-80Name of Driller Donald Grotman, Jr.Health and Safety Plan submitted? ☒ Yes ☐ NoLevel of Protection used on site (circle one) None D C B AN.J. License No. M 1212

Name of Drilling Company _____

SUMMIT WELL DRILLING

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Donald Grotman, Jr.Date 12/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	9 1/2"	4"	PVC Sch 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20	4"	PVC 020
Tail Piece				
Gravel Pack	8	20		mon. #1
Annular Seal/Grout	0	8		Portland & pellets
Method of Grouting	Tremie			

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

See attached



489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

WELL: MW2 DATE DRILLED: 11/19/1993 COORD #: 26.31.321 PERMIT #: 26-35296
SITE: Allied Building Supply Co, 101 West Elizabeth Avenue, , Linden, NJ 07083
OWNER: 101 W. Elizabeth Ave Corp, 581 Rahway Avenue, , Union, NJ 07083-0000

COUNTY: Union
XSTREET: Wood Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 9.5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 10'
SLOT SIZE: .020

DRILLING METHOD: Air
SAMPLING METHOD: SS
HOLE DIAMETER: 8"
TOTAL DEPTH: 20'

SET WELL: 20'
GRAVEL PK SZ: Morie #1
DRILLER: D.J.Grahamer, Jr.
SURFACE COMPLETION: M

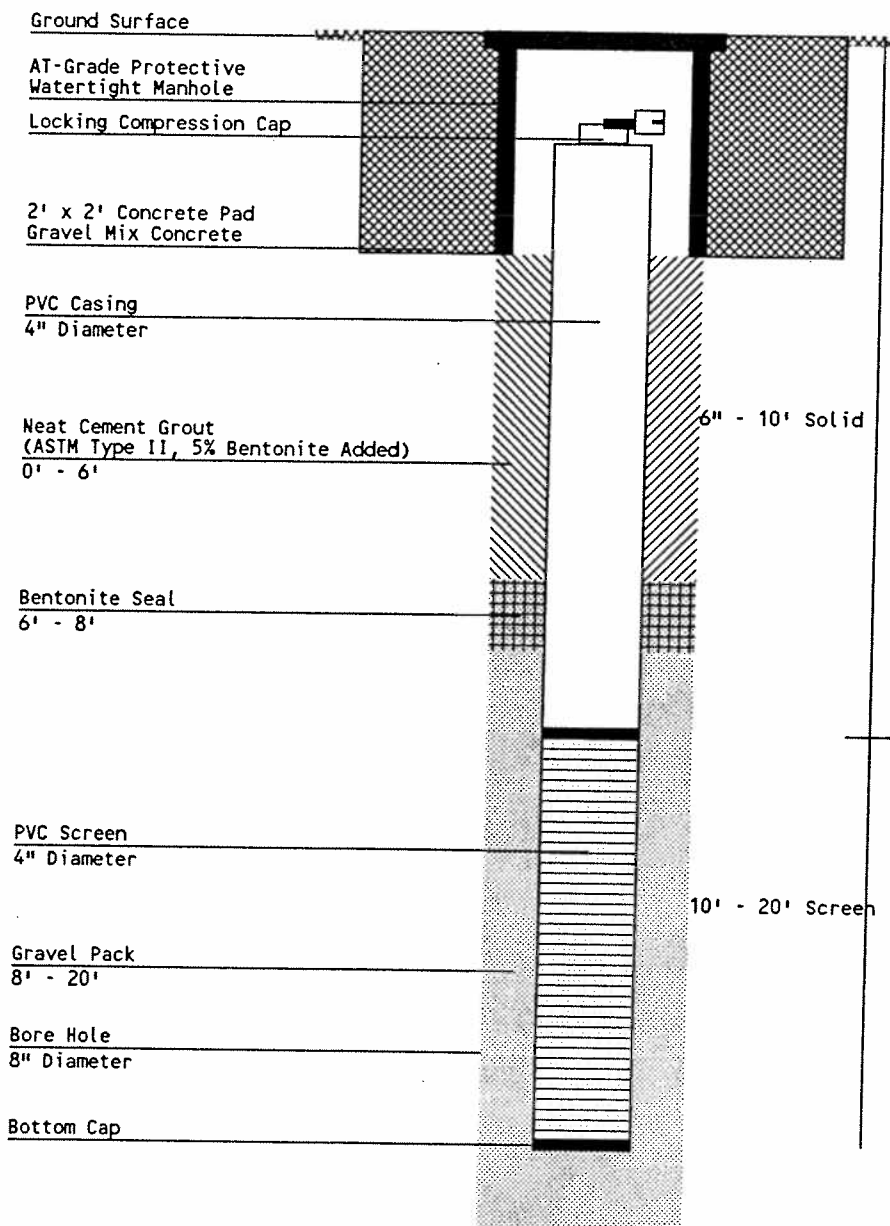
GAL PER MIN: SLOW RECHARGE
STAT H2O LVL: 13'
DEVELOPMENT METHOD: Bail

OPEN HOLE:
CASING SEAL: Portland & Pellets
DEVELOPMENT TIME: 1 hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
5' - 7'	6 - 14, 13 - 18
10' - 12'	12 - 12, 10 - 12

REMARKS / SOILS IDENTIFICATION

0' - 1 1/2' Fill.
1 1/2' - 9 1/2' Red-Brown silty clay, little
M/F sand, trace M/F gravel.
9 1/2' - 14' Red-Brown D/F sand, little silt.
14' - 20' Red-Brown silty clay, little M/F
sand, trace M/F grvl.



MONITORING WELL RECORD

Well Permit No. 26 35297
Atlas Sheet Coordinates 26 : 31 : 321 ☐OWNER IDENTIFICATION - Owner 101 WEST ELIZABETH AVE.
Address 581 RAINWAY AVE.
City UNION State NJ Zip Code WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County UNION Municipality LINDEN CITY Lot No. 10 Block No. 254
Address Alfred Bldg. Supply, 101 West Elizabeth Ave., Union, NJ 07083TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/19/93
Regulatory Program Requiring Well DEP Case I.D. # 93-06-24-1425CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VETER CONSULTATION Tele. # 201 383-2500

WELL CONSTRUCTION

Total depth drilled 15 ft.Well finished to 15 ft.

Borehole diameter:

Top 8 in.Bottom 8 in.Well was finished: ☐ above grade
☒ flush mountedIf finished above grade, casing
height (stick up) above land
surface - ft.

Was steel protective casing installed?

☐ Yes ☒ NoStatic water level after drilling 8 ft.Water level was measured using TapWell was developed for 1 hours at 2 gpmMethod of development BairWas permanent pumping equipment installed? ☐ Yes ☒ NoPump capacity gpmPump type: Drilling Method AirDrilling Fluid Type of Rig Name of Driller Donald G. Graham, Jr.Health and Safety Plan submitted? ☒ Yes ☐ NoLevel of Protection used on site (circle one) None D C B AN.J. License No. 11212Name of Drilling Company SUMMIT WELL DRILLING

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6'	5'	4"	PVC SCH 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5'	15'	4"	PVC. 020
Tail Piece				
Gravel Pack	3'	15'		MATS #1
Annular Seal/Grout	0'	3'		Portland Cement
Method of Grouting	Gravity			

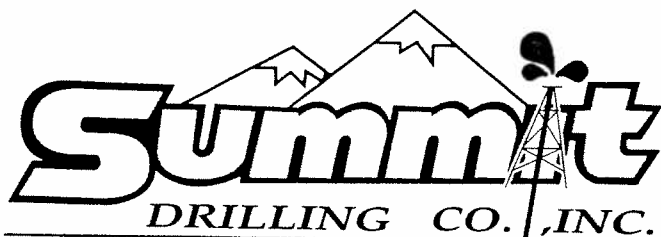
GEOLOGIC LOG

(Copies of other geologic logs and/or
geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable
State rules and regulations.Driller's Signature Donald G. Graham, Jr. Date 12/10/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

WELL: MW3 DATE DRILLED: 11/19/1993 COORD #: 26.31.321 PERMIT #: 26-35297
SITE: Allied Building Supply Co, 101 West Elizabeth Avenue, , Linden, NJ 07083
OWNER: 101 W. Elizabeth Ave Corp, 581 Rahway Avenue, , Union, NJ 07083-0000

COUNTY: Union
XSTREET: Wood Avenue
USE: Monitor

INNER CASING: PVC	OUTER CASING:	SCREEN TYPE: PVC	DRILLING METHOD: Air
DIAMETER: 4"	DIAMETER:	DIAMETER: 4"	SAMPLING METHOD: SS
LENGTH: 4 1/2"	LENGTH:	LENGTH: 10'	HOLE DIAMETER: 8"
		SLOT SIZE: .020	TOTAL DEPTH: 15'

SET WELL: 15'	GAL PER MIN: 2	OPEN HOLE:
GRAVEL PK SZ: Morie #1	STAT H2O LVL: 8'	CASING SEAL: Portland & Pellets
DRILLER: D.J. Grahmer, Jr.	DEVELOPMENT METHOD: Bail	DEVELOPMENT TIME: 1 hour
SURFACE COMPLETION: M		GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-------------------------------------	----------------------------

3' - 5'	10 - 7, 13 - 15
5' - 7'	10 - 13, 15 - 17
7' - 9'	8 - 11, 10 - 8
9' - 11'	8 - 7, 6 - 7
11' - 13'	5 - 5, 8 - 10
13' - 15'	8 - 7, 10 - 15
15' - 17'	6 - 8, 11 - 12

REMARKS / SOILS IDENTIFICATION

1' - 3' Fill.
3' - 7' Red-Brown silty clay, little M/F sand, trace of M/F gravel.
7' - 14' Red-Brown D/F sand, little silt.
14' - 15' Red-Brown silty clay, little M/F sand, trace M/F grvl.

Ground Surface

AT-Grade Protective
Watertight Manhole

Locking Compression Cap

2' x 2' Concrete Pad
Gravel Mix Concrete

PVC Casing
4" Diameter

Neat Cement Grout
(ASTM Type II, 5% Bentonite Added)
0' - 1'

Bentonite Seal
1' - 3'

PVC Screen
4" Diameter

Gravel Pack
3' - 15'

Bore Hole
8" Diameter

Bottom Cap

6" - 5' Solid

5' - 15' Screen

MONITORING WELL RECORD

Well Permit No. 26 35298
Atlas Sheet Coordinates 26 : 31 : 321OWNER IDENTIFICATION - Owner 101 WEST ELIZABETH AVE.
Address 581 RAILWAY AVE.
City UNION State NJ Zip Code _____WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW4
County UNION Municipality LINDEN CITY Lot No. 10 Block No. 254
Address Allied Bldg Supply, 101 West Elizabeth Ave, Linden NJ 07033TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/19/93
Regulatory Program Requiring Well EST Case I.D. # 93-06-24-1425CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vetric Corporation Tele. # 201383-2500

WELL CONSTRUCTION

Total depth drilled 20 ft.Well finished to 20 ft.

Borehole diameter:

Top 8 in.Bottom 8 in.Well was finished: ☐ above grade
☒ flush mountedIf finished above grade, casing
height (stick up) above land
surface — ft.

Was steel protective casing installed?

☐ Yes ☒ NoStatic water level after drilling 13 ft.Water level was measured using TAPEWell was developed for 1 hours at Skidmore gpmMethod of development BAILWas permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Method AirDrilling Fluid _____ Type of Rig Full B-80Name of Driller Donald Graham, JrHealth and Safety Plan submitted? ☒ Yes ☐ NoLevel of Protection used on site (circle one) None (D) C B AN.J. License No. M1712

Name of Drilling Company _____

SUBMIT WELL DRILLING

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Donald Graham, Jr. Date 12/10/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	5'	4"	PVC - Sch 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5'	20'	4"	PVC .020
Tail Piece				
Gravel Pack	3'	20'		more #1
Annular Seal/Grout	0	3'		Portland Cement
Method of Grouting	Grout			

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

See attached



489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9693

WELL LOG

WELL: MW4 DATE DRILLED: 11/19/1993 COORD #: 26.31.321 PERMIT #: 26-35298
SITE: Allied Building Supply Co, 101 West Elizabeth Avenue, , Linden, NJ 07083
OWNER: 101 W. Elizabeth Ave Corp, 581 Rahway Avenue, , Union, NJ 07083-0000

COUNTY: Union
XSTREET: Wood Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 4 1/2"

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

DRILLING METHOD: Air
SAMPLING METHOD: SS
HOLE DIAMETER: 8"
TOTAL DEPTH: 20'

SET WELL: 20'
GRAVEL PK SZ: Morie #1
DRILLER: D.J. Grahamer, Jr.
SURFACE COMPLETION: M

GAL PER MIN: SLOW RECHARGE
STAT H2O LVL: 13'
DEVELOPMENT METHOD: Bail

OPEN HOLE:
CASING SEAL: Portland & Pellets
DEVELOPMENT TIME: 1 hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
3' - 5'	10 - 18, 22 - 35
5' - 7'	18 - 50/5"
7' - 9'	23 - 11, 13 - 13
6' - 11'	22 - 20, 5 - 7
11' - 13'	8 - 9, 12 - 13
13' - 15'	16 - 15, 20 - 21
15' - 17'	20 - 21, 20 - 21

REMARKS / SOILS IDENTIFICATION

1' - 3' Fill.
4' - 8' Red-Brown silty clay.
Little M/F sand, Trace M/F gravel.
8' - 11' Red-Brown M/F sand, little silt.
11' - 20' Red-Brown silty clay, little M/F
sand, trace M/F gravel.

Ground Surface

AT-Grade Protective
Watertight Manhole

Locking Compression Cap

2' x 2' Concrete Pad
Gravel Mix Concrete

PVC Casing
4" Diameter

Neat Cement Grout
(ASTM Type II, 5% Bentonite Added)
0' - 1'

Bentonite Seal
1' - 3'

PVC Screen
4" Diameter

Gravel Pack
3' - 20'

Bore Hole
8" Diameter

Bottom Cap

6" - 5' Solid

5' - 20' Screen

GROUND WATER MONITORING WELL CERTIFICATION
FORM B - LOCATION CERTIFICATION

Name of Permittee: _____
Name of Facility: ALLIED BUILDING SUPPLY
Location: 101 W. ELIZABETH AVE. LINDEN, N.J.
NJPDDES Number: NJ

LAND SURVEYOR'S CERTIFICATION

Well Permit Number (As assigned by NJDEP's Water Allocation Section, 609-984-6831): _____

N/A

This number must be permanently affixed to the well casing.

Longitude (one-tenth of a second): _____
Latitude (one-tenth of a second): _____
Elevation of Top of Casing (cap off) (one-hundredth of a foot): _____
Owners Well Number (As shown on the application or plans): M.W.# 1

West 74°-15'-12.6"
North 40°-37'-45.3"
28.81

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DOMINICK J. VENDITTO, III

PROFESSIONAL LAND SURVEYOR
PROFESSIONAL PLANNER

PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type) 632 ASHWOOD AVENUE
ROSELLE PARK, NJ 07204

*30093

PROFESSIONAL LAND SURVEYOR'S LICENSE #

bev/MJM/form.b

This well was not installed by Vectre.

SEAL

GROUND WATER MONITORING WELL CERTIFICATION
FORM B - LOCATION CERTIFICATION

Name of Permittee: _____
Name of Facility: ALLIED BUILDING SUPPLY
Location: 101 ELIZABETH AVENUE, LINDEN, N.J.
NJPDES Number: NJ

LAND SURVEYOR'S CERTIFICATION

Well Permit Number (As assigned by NJDEP's Water Allocation Section, 609-984-6831): 26-35296

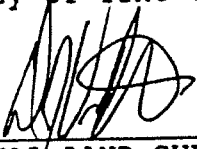
This number must be permanently affixed to the well casing.

Longitude (one-tenth of a second): _____
Latitude (one-tenth of a second): _____
Elevation of Top of Casing (cap off)
(one-hundredth of a foot): _____
Owners Well Number (As shown on the application or plans): M.W. # 2

West 74°-15'-11.8"
North 40°-37'-45.3"
30.29

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.



PROFESSIONAL LAND SURVEYOR'S SIGNATURE
DOMINICK J. VENDITTO, III

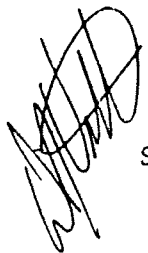
PROFESSIONAL LAND SURVEYOR
PROFESSIONAL PLANNER
632 ASHWOOD AVENUE

PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type)

#30093

PROFESSIONAL LAND SURVEYOR'S LICENSE #

bev/MJM/form.b


SEAL

GROUND WATER MONITORING WELL CERTIFICATION
FORM B - LOCATION CERTIFICATION

Name of Permittee: _____
Name of Facility: ALLIED BUILDING SUPPLY
Location: 101 W. ELIZABETH AVENUE, LINDEN, N.J.
NJPDDES Number: NJ _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number (As assigned by NJDEP's Water Allocation Section, 609-984-6831): 26-35297

This number must be permanently affixed to the well casing.

Longitude (one-tenth of a second): _____ West 74°-15'-13.9"
Latitude (one-tenth of a second): _____ North 40°-37'-44.9"
Elevation of Top of Casing (cap off) (one-hundredth of a foot): _____ 27.98
Owners Well Number (As shown on the application or plans): M.W. #3

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DOMINICK J. VENDITTO, III

PROFESSIONAL LAND SURVEYOR
PROFESSIONAL PLANNER

PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type) 632 ASHWOOD AVENUE
ROSELLE PARK, NJ 07204

30093

PROFESSIONAL LAND SURVEYOR'S LICENSE #

 SEAL

GROUND WATER MONITORING WELL CERTIFICATION
FORM B - LOCATION CERTIFICATION

Name of Permittee: _____
Name of Facility: ALLIED BUILDING SUPPLY
Location: 101 W. ELIZABETH AVE., LINDEN, N.J.
NJDES Number: NJ _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number (As assigned by NJDEP's Water Allocation Section, 609-984-6831):

26-35298

This number must be permanently affixed to the well casing.

Longitude (one-tenth of a second):
Latitude (one-tenth of a second):
Elevation of Top of Casing (cap off)
(one-hundredth of a foot):
Owners Well Number (As shown on the application or plans):

West 74°-15'-13.5"
North 40°-37'-44.3"
28.19

M.W. # 4

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.



PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DOMINICK J. VENDITTO, III

PROFESSIONAL LAND SURVEYOR
PROFESSIONAL PLANNER

PROFESSIONAL LAND SURVEYOR'S ADDRESS NAME
(Please print or type) 692 ASHWOOD AVENUE
ROSELLE PARK, NJ 07204

30093

PROFESSIONAL LAND SURVEYOR'S LICENSE #



SEAL