VAPOR INTRUSION STUDY

BARTHELMES MANUFACTURING COMPANY, INC.
15 CAIRN STREET
CITY OF ROCHESTER, NEW YORK
BCP SITE NO. C828122
INDEX B8-0607-02-01

Prepared For:

Barthelmes Manufacturing Company, Inc.
15 Cairn Street
Rochester, New York 14611

Prepared By:

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271 Marsh Road, Suite 2
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555.001

January 2007

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1.0 Introduction

This report was prepared to present the results of a vapor intrusion study completed at the Barthelmes Manufacturing Company, Inc. property located in Rochester, Monroe County, New York ("Site"). The site is located at 15 Cairn Street (See Figure 1) and used for the fabrication of sheet metal.

This project was completed following an approved Work Plan prepared by LaBella Associates, on the behalf of Barthelmes Manufacturing Company ("Barthelmes"). Barthelmes was required to complete this study by the New York State Department of Environmental Conservation ("NYSDEC") and the New York State Department of Health ("NYSDOH"), as a part of their entry into the Brownfield Cleanup Program ("BCP").

1.1 Background

The Barthelmes property has been used for commercial or industrial purposes since at least 1900. In 1911, American Fruit Products Company ("AFPC") used the property for their canning and vinegar production. At this time the site had two buildings, a foundation for a three-story building under construction, a vinegar tank farm, and a reservoir. The Barthelmes plant operates in one of the two former AFPC buildings (see Figure 2).

In 1921, Barthelmes began operating from the southern-most AFPC building and started removing the northern-most building, the unfinished building foundation, and the vinegar tank farm (see Figures 3). Figure 4 shows a 2006 aerial photograph of the site area and shows that little has changed since 1935. Barthelmes originally manufactured aluminum products, but it is now in the sheet metal fabrication business.

In the early 1980s, a fire engulfed the shipping department of the building and storage yard, both areas are located on the south side of the building. The City of Rochester Fire Department responded and put out the fire. The fire investigation found that water used to put out the fire also entered the Trichloroethylene ("TCE") vapor degreaser tank and displaced the TCE onto the building floor, floor drains and soil. As a result, the fire and water used to extinguish the fire influenced the migration of contaminants in the subsurface more than the typical migration mechanisms in the unsaturated and saturated zones of the environment.

1.2 Previous Investigations

In 2004 Barthelmes entered into the New York State BCP. A Phase II Environmental Site Assessment completed in October 2001 and subsequent sampling completed in 2005 and 2006 found volatile organic compounds, semivolatile organic compounds and metals in the soil and groundwater. The analytical results are summarized on Figures 2 and 3.

The location of former processes, the location of underground utilities, drains and pipes, soil type, and the direction of groundwater flow have all influenced the pattern of contamination. Monitoring wells installed for the project and the interpreted direction of groundwater flow is shown on Figures 4 and 5. The bedrock was encountered at a depth ranging from 23 to 26 feet below the ground surface.

2.0 Purpose

The purpose of this sampling is to evaluate the potential for worker exposure to vapors produced from contaminated soil and groundwater.

3.0 Building Inventory, Building Review and Property Owner Questionnaire

3.1 Building Inventory

On December 20, 2006, Leader completed an inventory of the Barthelmes manufacturing area. Table 1 provides a list of the materials and the products found during the inventory. In general, Barthelmes uses many products containing volatile organic compounds, which will also be identified by the TO-15 analytical method for Target Compound List volatile organic compounds.

An inventory of the office areas was not completed because these areas are located on the building's second floor where sampling was not done. All manufacturing is conducted on the building's main floor.

3.2 Building Review

Leader also inspected the building for the location of drains, underground utilities, heating and ventilation units, and the building's foundations and load bearing walls. Figure 9 shows the interior of the building with significant activities shown such as welding, parts fabrication (including grinding, punch presses, and shearing), metal treating, painting, and shipping. Figure 9 also shows areas of the plant where load-bearing walls are located and where building construction may enhance vapor intrusion. The depth of the building foundations is not known.

Areas of the plant where building construction may enhance vapor intrusion pathways are located in the vicinity of the plant's basement mechanical room and the plating rinse tanks. Metal plates and an office area cover the plant's basement. The plating rinse tanks are located above a recessed (below the level of the adjacent concrete floor) dirt floor in the center of the building.

3.3 Property Owner Questionnaire

Mr. Larry Lehning, Vice President and General Manager for Barthelmes, and Peter von Schondorf, from Leader, completed the NYSDOH's standard property owner questionnaire form. The completed questionnaire is presented as Appendix A.

4.0 Sampling

Sampling was completed on December 20, 2006. Figures 10 and 11 present the sample locations. Sampling was done in general agreement with the project Work Plan, which was approved by NYSDEC and NYSDOH. The sampling was completed to provide data on the presence of volatile organic compounds present in the sub-slab soil and in the indoor and outdoor ambient air.

Three types of samples were collected: outdoor ambient air samples, indoor ambient air samples and sub-slab soil vapor.

Each sample, regardless of type was collected in a stainless steel 6-Liter capacity Summa canister. Ambient air samples (both indoor and outdoor samples) and sub-slab samples were collected over an 8-hour time period.

The ambient air samples were collected using a Summa canister that was placed on a platform or using an intake tube, which elevated the sample collection point into the breathing zone, approximately 3 to 5 feet above the ground surface. The outdoor ambient air sample was collected at an upwind location from the Barthelmes building.

Sub-slab samples were collected through food-grade PVC tubing, which was implanted into the aggregate beneath the concrete floor slab. The tube was partially backfilled with clean quartz sand to form a filter to exclude silt size material and to keep an open hole for sampling. After the sand was placed, a Bentonite clay seal was placed over the sand to form an airtight seal at the surface. The sample tubing was then connected directly to the Summa canister's flow valve for sampling.

Once the sample location was prepared, all samples were collected following the same procedure, with the exception of sample time. The sampling technician then recorded the identification number of each canister and assigned a canister to each sampling location. The sampling technician collected basic information before sampling: start time of sampling, weather conditions, temperature, barometric pressure, and wind direction and approximate velocity. Once sampling started the collection ran uninterrupted for the sampling period. During the sample collection period, the sampling technician inspected the sampling train and gauges several times to ensure the regulator and sampling train was operating properly. When sampling was completed, the regulator was closed and the time, weather conditions, temperature, barometric pressure, and wind direction and velocity were noted. The sample chain of custody was then completed and the canister placed into a shipping container for next day delivery.

During the collection of indoor ambient air samples no problems were experienced; however, when the samples were received at the laboratory two Summa canisters were found not containing a sample. The impacted samples are indoor ambient air samples #7 and #9.

5.0 Results

All samples were analyzed for volatile organic compounds using USEPA Method TO-15. The sample results are shown on Table 2 (Ambient Air and Sub-Slab Vapor Results). Appendix B provides a complete set of laboratory results, chain of custody and weather and gauge monitoring results.

5.1 Data Usability

The analytical data was reviewed for adherence to sample handling and analytical protocols. To do this, the sample chain of custody documents were reviewed as well as laboratory quality assurance documents.

The samples were collected on December 20, 2006 and received by the laboratory on December 21, 2006. All samples, including laboratory control samples were analyzed on December 21, 2006 and December 22, 2006. The Summa canisters were certified clean on December 11, 2006. Three groups of quality control samples were analyzed with the site samples: a laboratory control sample and laboratory control duplicate sample, and a laboratory blank sample. The laboratory control sample is a sample spiked with each of the targeted compounds and the analytical instrument detected each of the compounds within the control limits (percent recovery) specified by the analytical method. During the completion of the laboratory control sample spike and duplicate analysis n-Hexane was found not to be incompliance with expected values. This problem was not identified by the laboratory, but during this review. The analysis of the blank sample found none of the targeted compounds above the method's practical quantitation limits ("PQLs'). These PQL's are also within those limits required by the NYSDOH for this project. The laboratory also provided canister certification results, which demonstrate the Summa canisters used for the sampling did not contain any contaminants.

The laboratory analysis was completed without the need to qualify any of the results. Sample dilutions were required because some compounds were detected at elevated levels. As a result of this review, the data is valid and can be used for the intended purpose of this project, with the exception of n-Hexane which was failed quality assurance review.

5.2 Ambient Air Sample Results

In the outdoor ambient air sample, 7 compounds were found out of the 61 compounds analyzed by Method TO-15. Trichloroethylene ("TCE") was not identified in the outdoor ambient air sample. The following compounds were also found: Acetone, Benzene,

Chloromethane, Ethanol, Methylene Chloride, Toluene, and m&p-Xylene. In general, these compounds were found at low concentrations ranging from 0.7 to 6.6 µg/M^3, with the exception of Acetone, which was found at a concentration of 22 µg/M^3.

In four out of six indoor ambient air samples, a sample was collected that could be analyzed. Many of the compounds found in the indoor ambient air were found consistently in all samples. Those compounds common to every indoor ambient air sample included:

- Trichloroethylene
- Acetone
- Benzene
- Chloromethane
- Cyclohexane
- Ethanol
- Ethylbenzene
- Methyl Ethyl Ketone
- 2-Propanol
- Toluene
- 1,2,4-Trimethylbenzene
- m&p Xylene
- o-Xylene

Compounds found in two to three indoor ambient air samples included the following:

- 1,4-Dichlorobenzene
- 4-Ethyltoluene
- Freon 12
- Heptane
- n-Hexane
- Methylene Chloride
- Styrene
- 1,3,5-Trimethylbenzene

Compounds found in only one indoor ambient air sample included the following:

- 1,2-Dichloropropane
- Methyl Isobutyl Ketone
- Naphthalene
- Tetrachloroethylene
- Vinyl acetate

In general, many of the compounds were found at similar concentrations regardless of the sample location, but there were also locations where individual compounds were found at

relatively higher concentrations. The following compounds, concentrations and locations are noteworthy:

- TCE at a concentration of 33 µg/M^3 at sample location 3.
- Acetone at a concentration of 69 µg/M^3 at sample location 11.
- Benzene at a concentration of 19 µg/M^3 at sample location 5.
- Cyclohexane at a concentration of 160 µg/M^3 at sample location 3.
- Ethanol at a concentration of 58 µg/M^3 at sample location 2.
- Methyl Ethyl Ketone at a concentration of 110 µg/M^3 at sample location 2.
- Toluene at a concentration of 110 µg/M^3 at sample location 2.

5.3 Sub-Slab Sample Results

The sub-slab samples contained up to 22 of the 61 compounds analyzed and 13 of these compounds were found at their highest concentration in the sub-slab samples. Most notable of these 22 compounds is TCE. The concentration of TCE in the samples ranged from 23 µg/M^3 to 64,000 µg/M^3. Compounds commonly found in the sub-slab samples include:

- TCE
- Acetone
- Benzene
- Cyclohexane
- 1,4-Dichlorobenzene
- Ethanol
- Ethylbenzene
- Heptane
- N-Hexane
- 2-Propanol
- Toluene
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- m&p-Xylene
- o-Xylene

Compounds found exclusively in the sub-slab samples include: Carbon Disulfide, Chloroform, cis 1,2-Dichloroethene, and trans 1,2-Dichloroethene. The presence of cis and trans 1,2-Dichloroethene suggests that TCE is either breaking down in the unsaturated zone or vaporization of these compounds is occurring from the contaminated groundwater. The absence of these four compounds in the indoor air samples could suggest that infiltration of the sub-slab vapor into the building envelop is not as great as the results may imply and that other factors may be contributing TCE to the indoor ambient air.

6.0 Conclusions

The sample data obtained identified the presence of TCE and other volatile organic compounds in the sub-slab and indoor ambient air samples. A review of Barthelmes Material Safety Data Sheets for the products currently being used in the plant, indicates that many of these volatile organic compounds are also present in the products being used. TCE is no longer used in the plant.

The presence of TCE in the sub-slab samples is not surprising, since TCE was found in the site's groundwater. The concentrations of TCE in the indoor ambient air was not anticipated, given the size and age of the building, relatively poor condition of building insulation in the manufacturing area, and the amount of infiltration of outdoor air into the building. The presence of TCE in the indoor air is likely caused by the infiltration of vapors from groundwater collecting in the basement or the infiltration of vapors through the basement and the soil beneath the plating rinse tanks.

Following Matrix 1 of the NYDOH guidance for vapor intrusion, the presence of TCE in the sub-slab vapor and the indoor air requires mitigation. Since Barthelmes is a manufacturing property with an OSHA compliant Hazard Communication Program, the need for immediate mitigation is not required at this time, because the levels of TCE found in the indoor ambient air do not exceed OSHA's action level of 268.7 milligrams per cubic meter. Leader recommends that a mitigation of the TCE vapor problem be addressed as a part of the overall site cleanup program. As interim protective measures, Leader also recommends (1) quarterly monitoring of selected workers for exposure to TCE using OSHA action levels; (2) venting the air space within the basement; and (3) covering the dirt floor beneath the rinse tanks.

FIGURES

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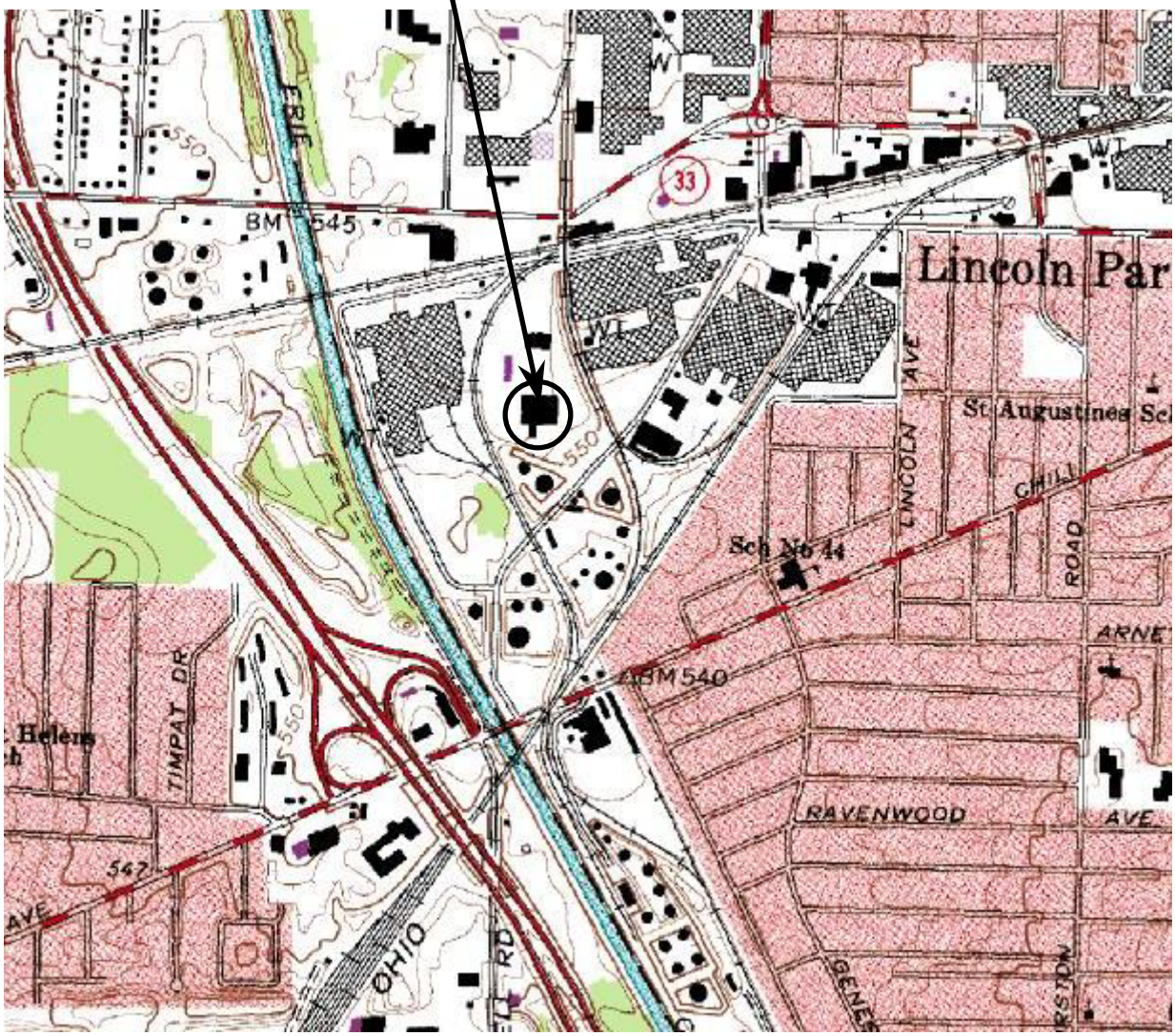
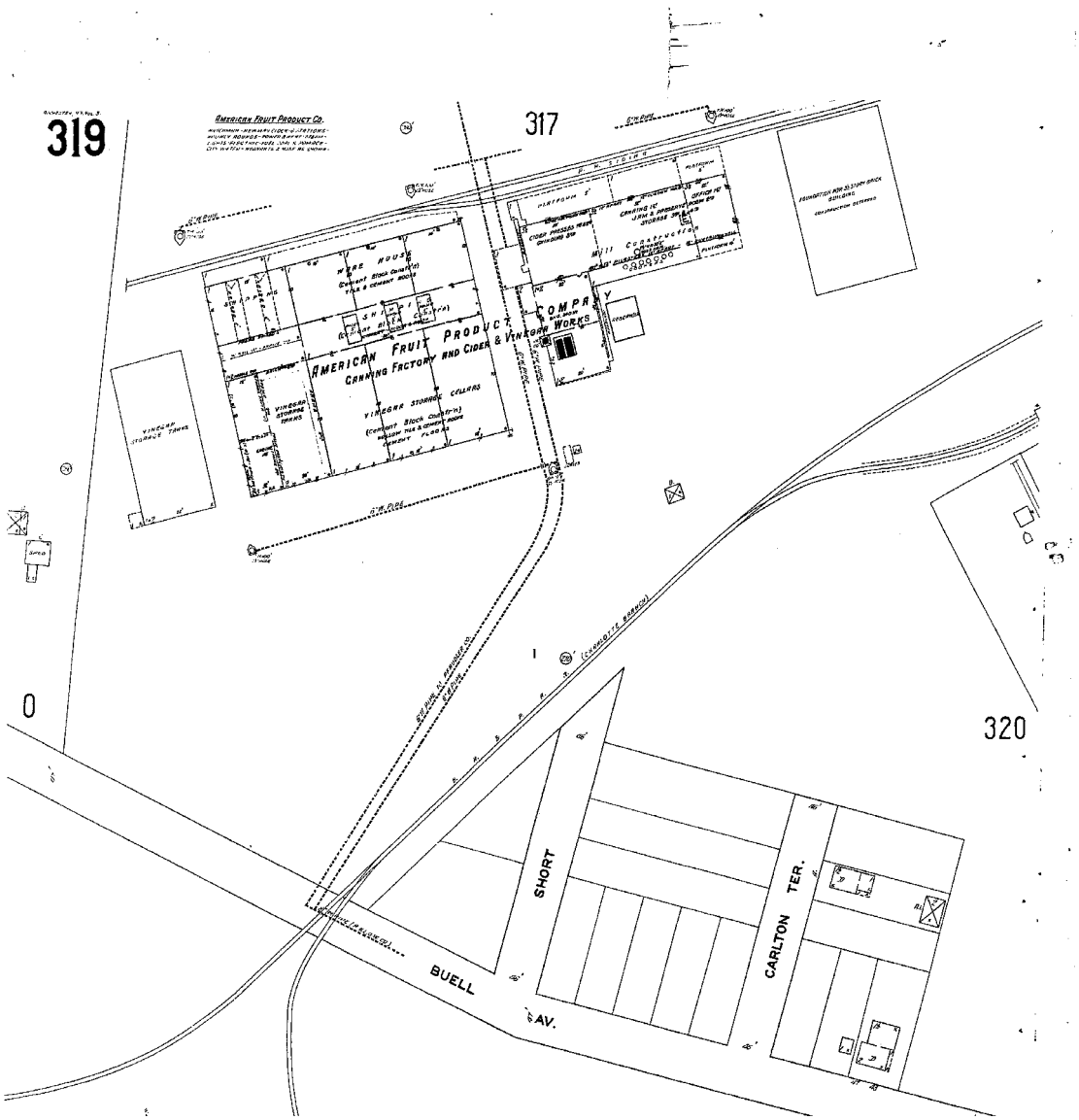
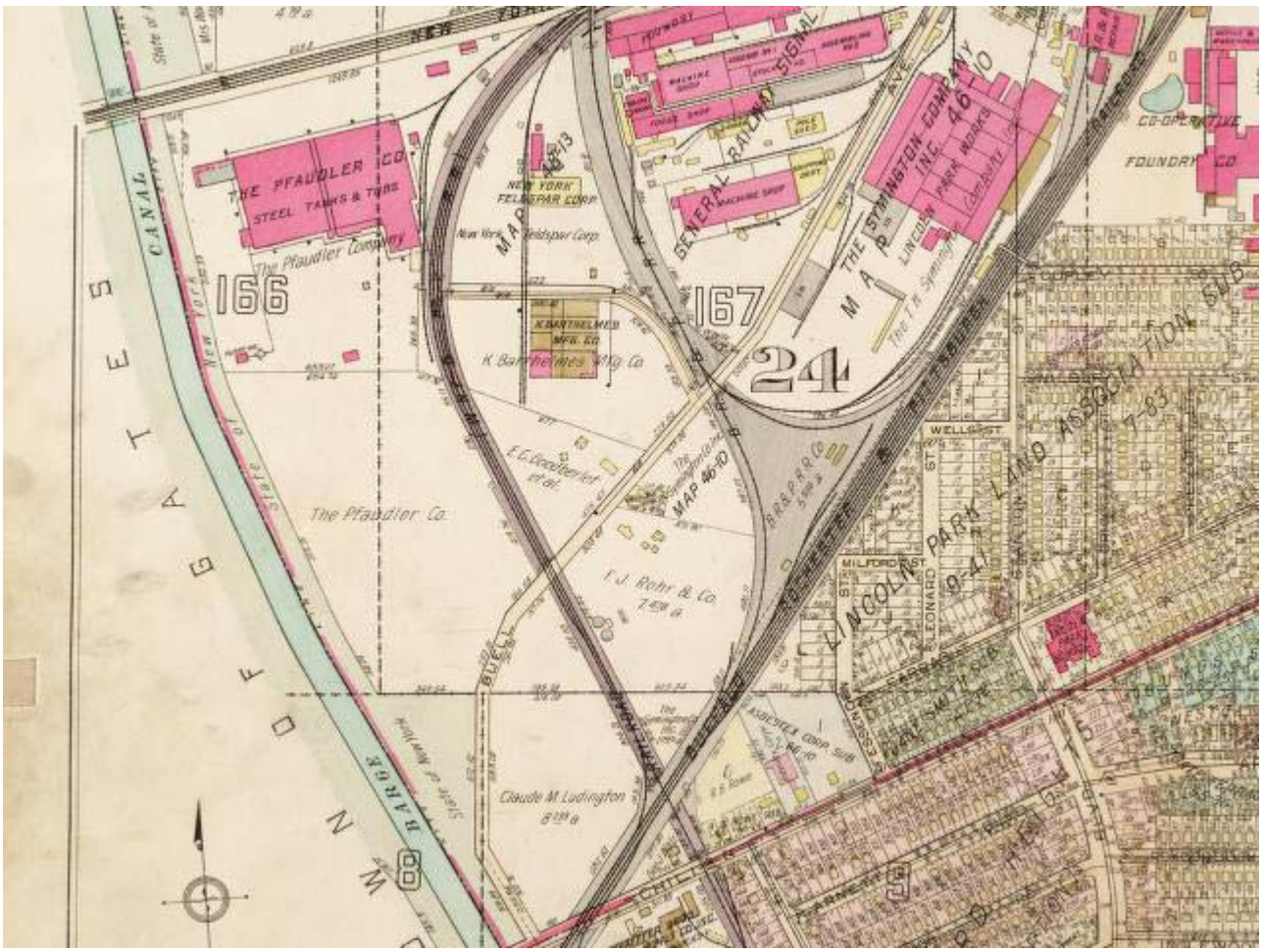
Site Location



Title: Site Location Map Barthelmes Manufacturing Company 15 Cairn Street, Rochester, New York	LEADER Leader Professional Services 271 Marsh Road-Suite 2 Pittsford, New York 14534 (585) 248-2413 Fax (585) 248-2834	Project 555.001 Date 12/06 Scale Unknown	Drawn PVS Checked MPR File Name Site Map	Figure 1
Prepared For: Barthelmes Manufacturing 15 Cairn Street Rochester, New York				



Title: 1911 Site and Vicinity Map 15 Cairn Street, Rochester, New York	Leader Professional Services 271 Marsh Road-Suite 2 Pittsford, New York 14534 (585) 248-2413 Fax (585) 248-2834	Project 555.001 Date 12/06 Scale Unknown	Drawn PVS Checked MPR File Name Site Map	Figure 2
Prepared For: Barthelmes Manufacturing 15 Cairn Street Rochester, New York				



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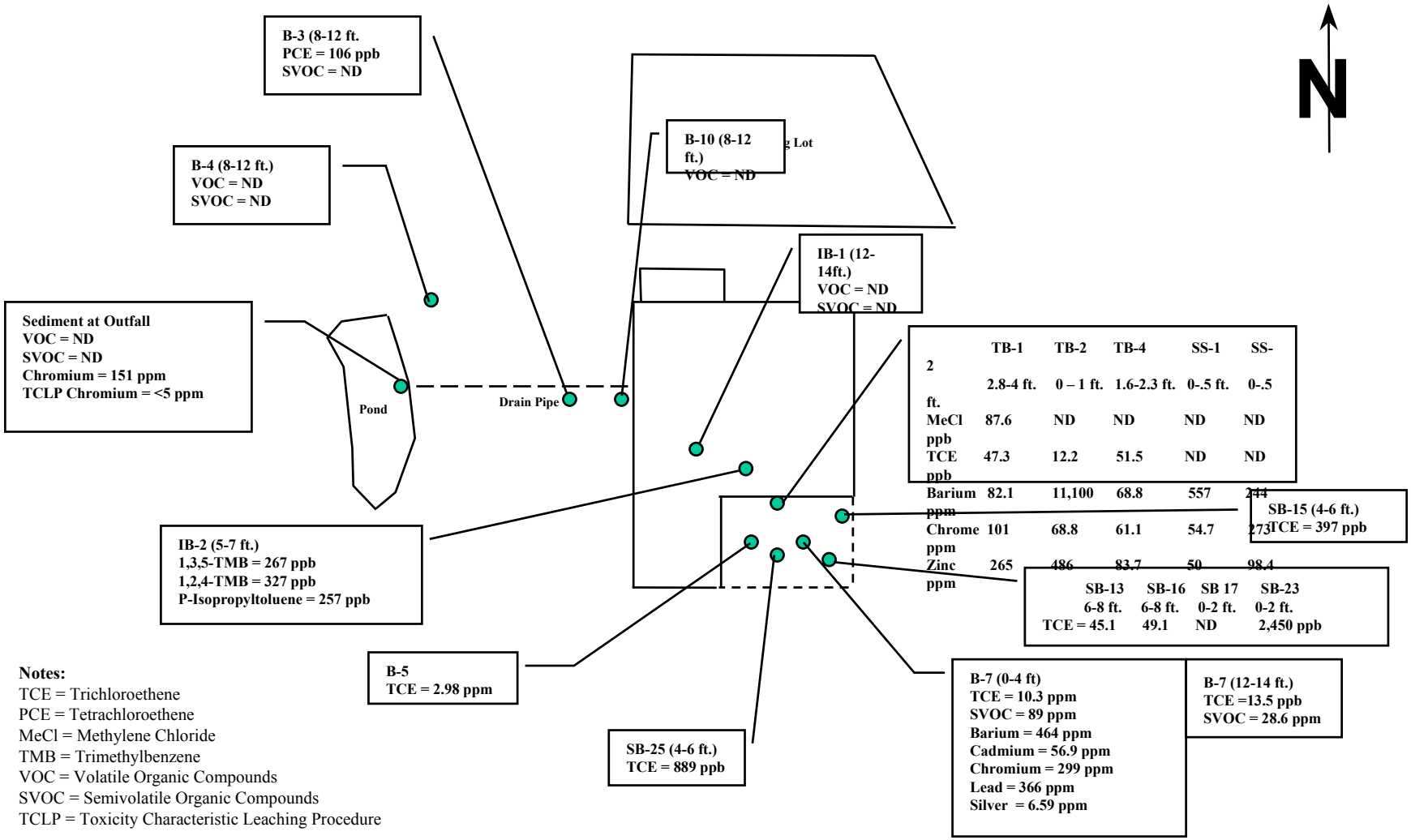
Prepared For: Barthelmes Manufacturing 15 Cairn Street Rochester, New York				

N

Site Building

Title: 2004 Aerial Photograph of Site Barthelmes Manufacturing Company 15 Cairn Street, Rochester, New York	LEADER Leader Professional Services 271 Marsh Road-Suite 2 Pittsford, New York 14534 (585) 248-2413 Fax (585) 248-2834	Project 555.001 Date 12/06 Scale Unknown	Drawn PVS Checked MPR File Name 2004	Figure 4
Prepared For: Barthelmes Manufacturing 15 Cairn Street Rochester, New York				



Notes:
TCE = Trichloroethene
PCE = Tetrachloroethene
MeCl = Methylene Chloride
TMB = Trimethylbenzene
VOC = Volatile Organic Compounds
SVOC = Semivolatile Organic Compounds
TCLP = Toxicity Characteristic Leaching Procedure

Title Summary of LaBella Soil Sample Results
Barthelmes Manufacturing Company
Rochester, NY

Prepared For Barthelmes Manufacturing
15 Cairn Street
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Project 555.001

Date 12/06

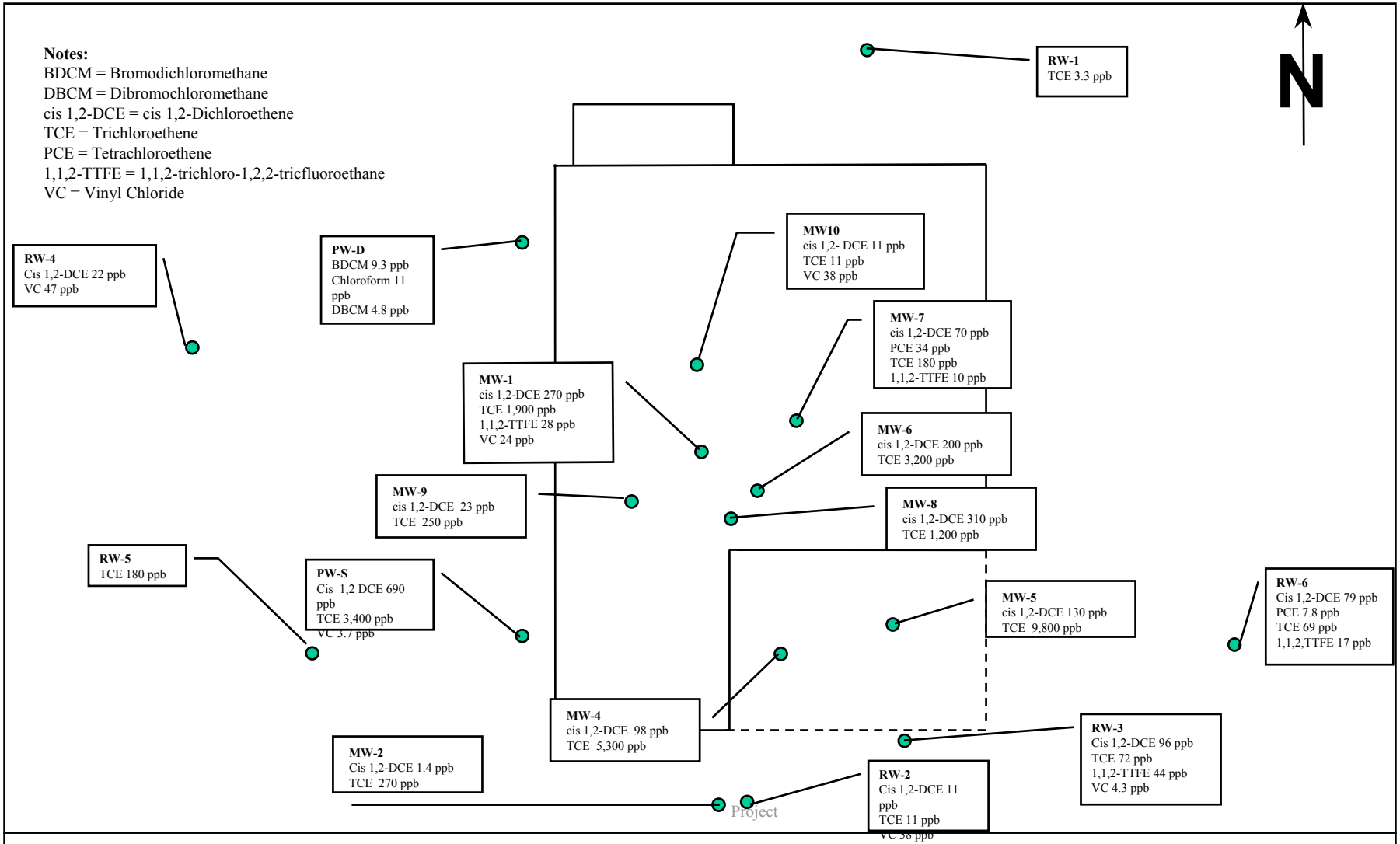
Drawn By PVS

Checked By MPR

File Name

Figure 5

Notes:
BDCM = Bromodichloromethane
DBCM = Dibromochloromethane
cis 1,2-DCE = cis 1,2-Dichloroethene
TCE = Trichloroethene
PCE = Tetrachloroethene
1,1,2-TTFE = 1,1,2-trichloro-1,2,2-tricfluoroethane
VC = Vinyl Chloride



Title: Overburden Groundwater Chlorinate Compounds Results
Barthelmes Manufacturing Company
Rochester, New York

Prepared For: Barthelmes Manufacturing
15 Cairn Street
Rochester, New York

LEADER
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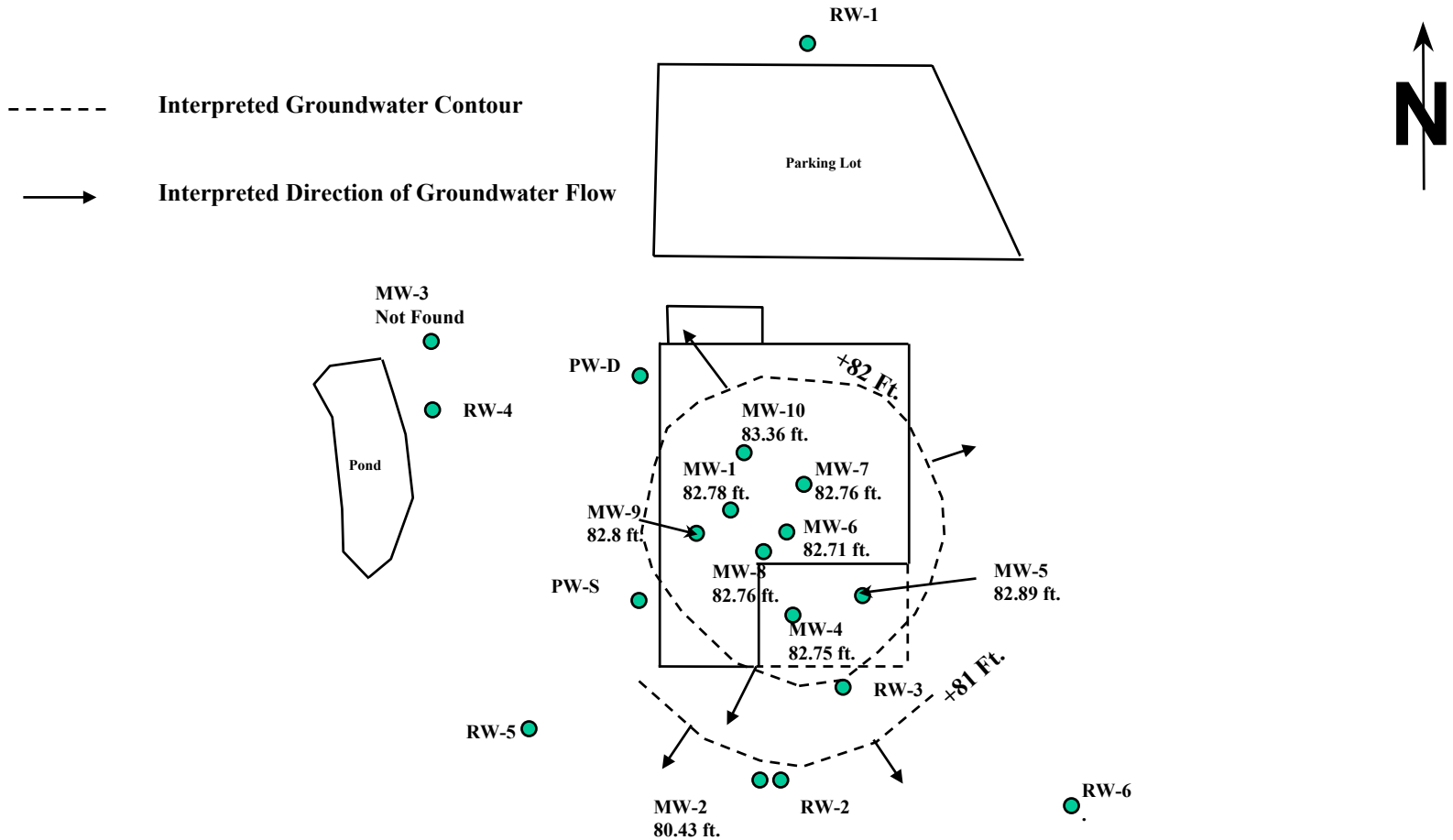
Date: 12/01/06
Project: 555.001
Checked: MPR
File Name: PVS
Site Plan

Figure 6



Title	Overburden Groundwater Contours Barthelmes Manufacturing Company Rochester, NY
Prepared For	Barthelmes Manufacturing Company 15 Cairn Street Rochester, NY

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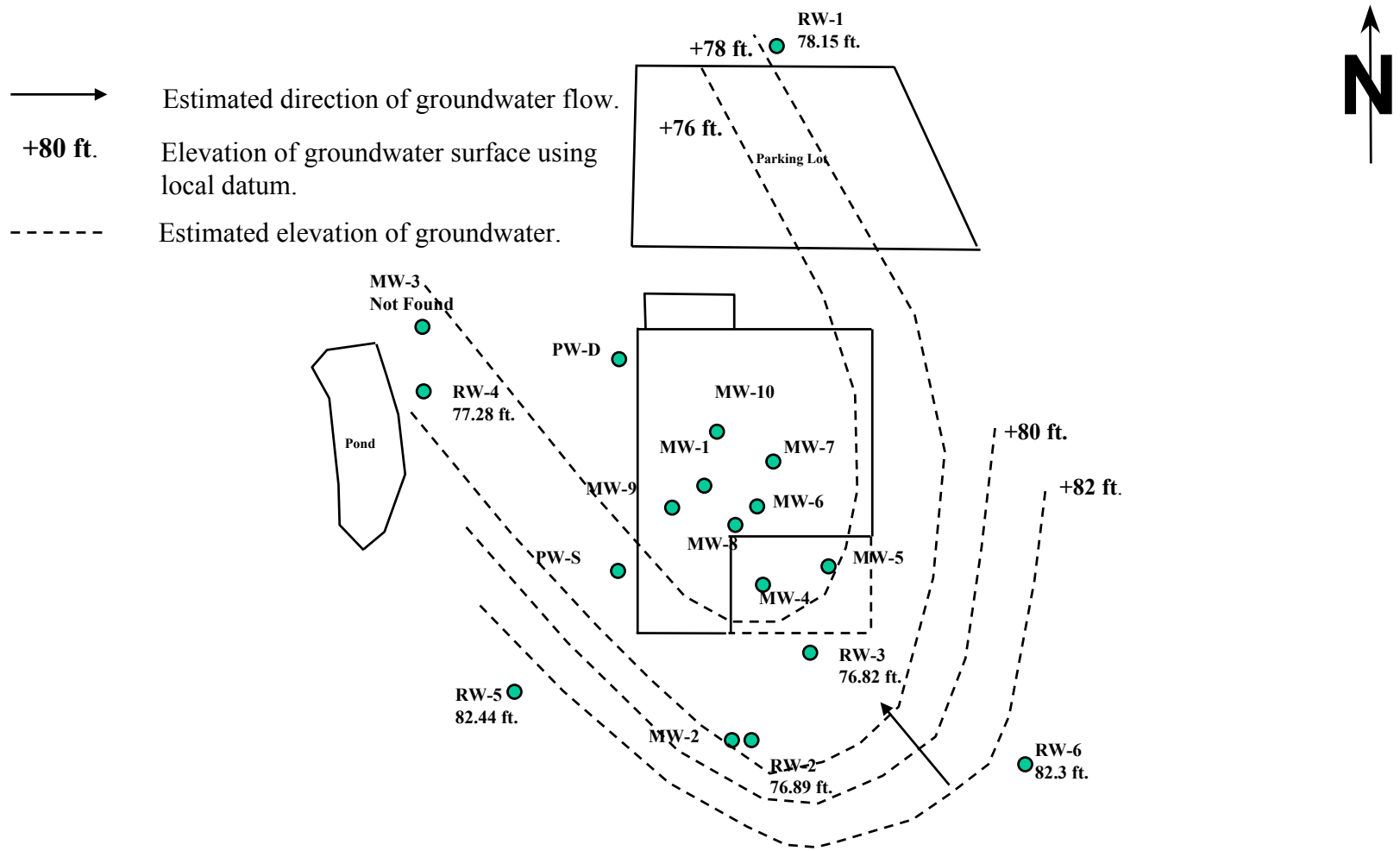
Project	555.001
Date	12/06
Scale	
Drawn	PVS
Checked	MPR
File Name	Site Plan
Figure	7



Title	Interface Groundwater Contours Barthelmes Manufacturing Company Rochester, NY
Prepared For	Barthelmes Manufacturing Company 15 Cairn Street Rochester, NY

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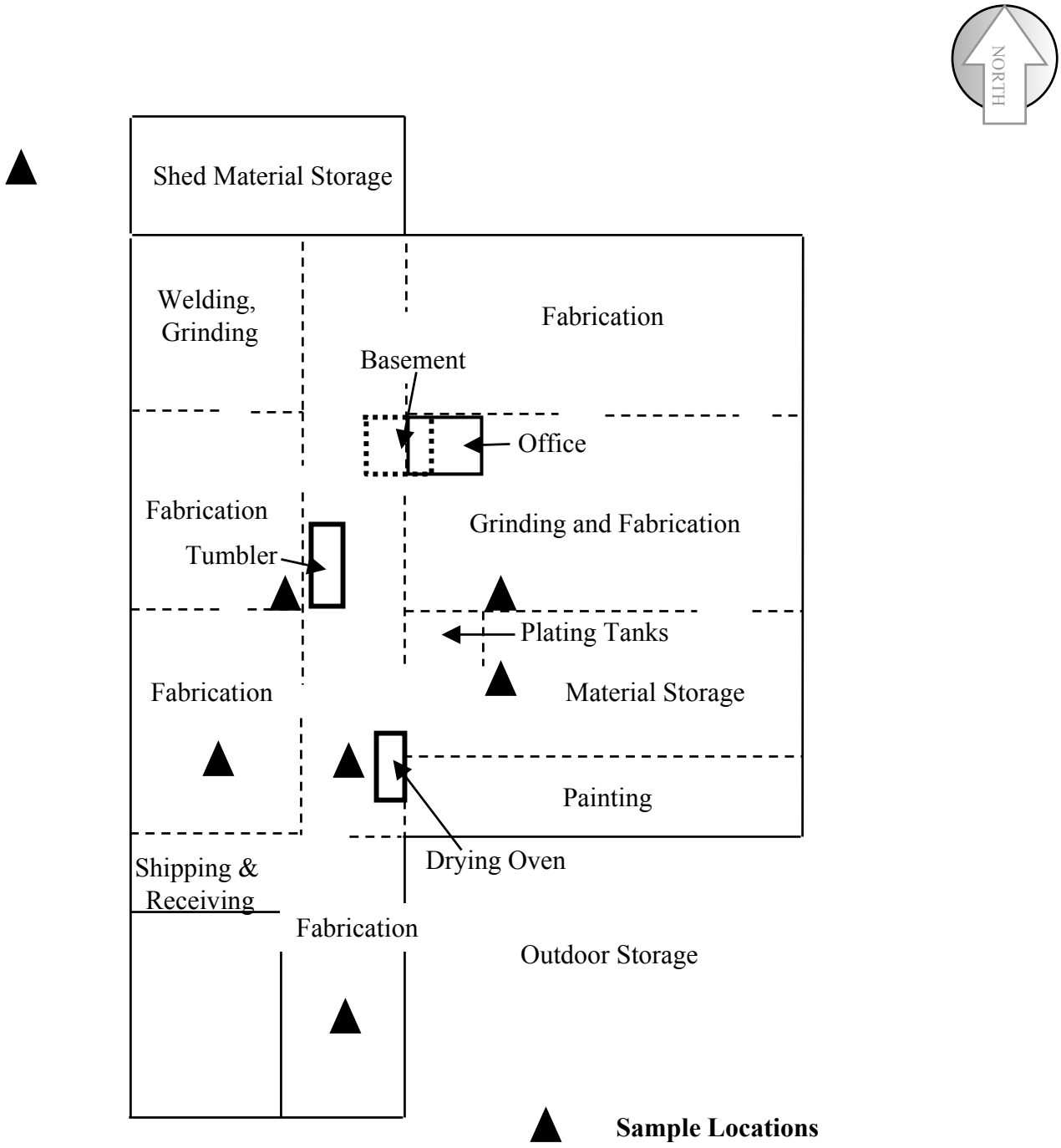
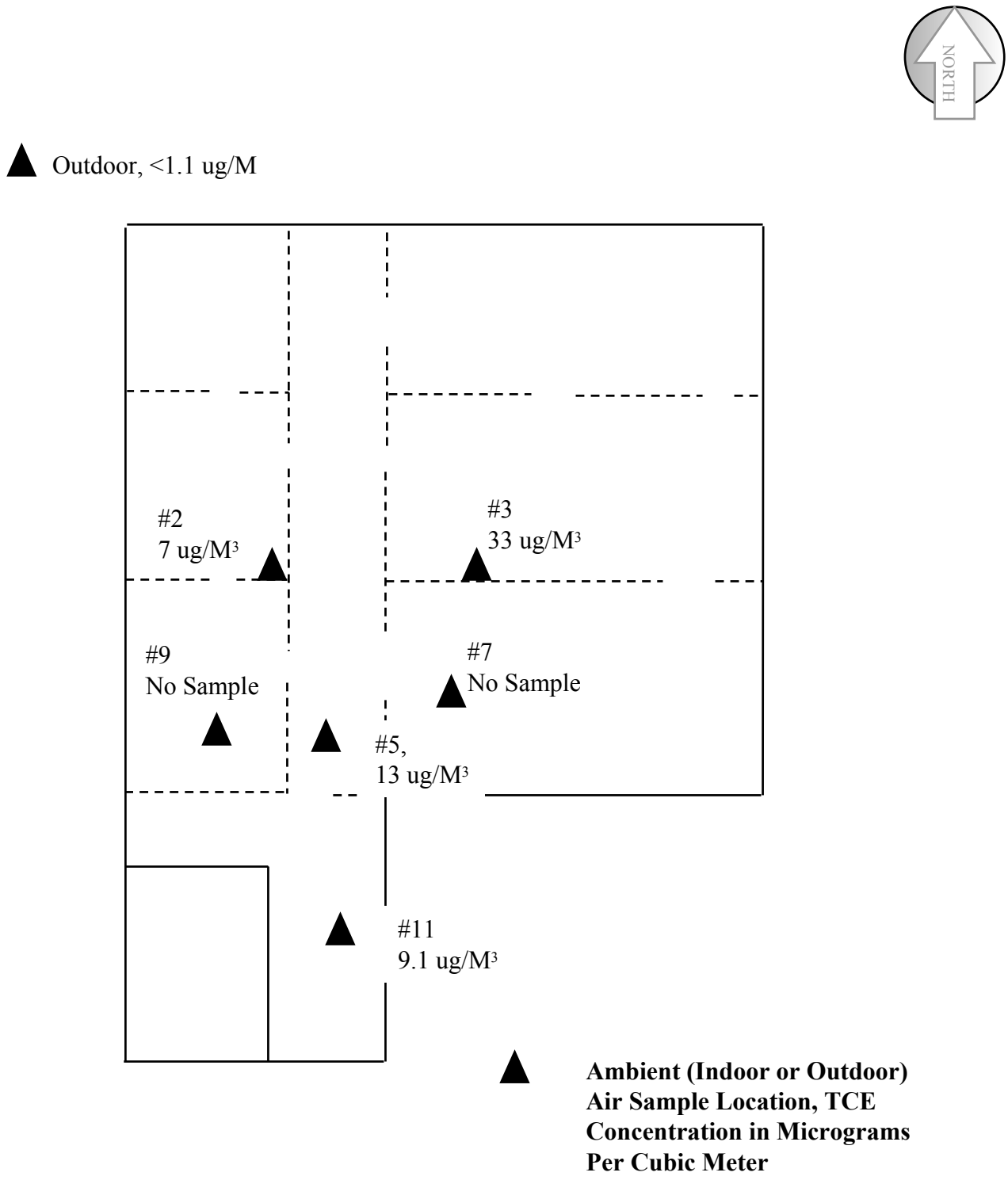
Project	555.001
Date	12/06
Scale	
Drawn	PVS
Checked	MPR
File Name	Site Plan
Figure	8



Title: Classification of Building Interior Barthelmes Manufacturing Rochester, New York	LEADER Leader Professional Services, Inc. 271 Marsh Road, Suite 2 Pittsford, NY 14534 (585) 248-2413 FAX (585) 248-2834	Project: 555.001 Date: 12/06 Scale: NTS	Drawn: PVS Checked: MPR File Name: Site Map	Figure: 9
Prepared For: Barthelmes Manufacturing 15 Cairn Street Rochester, New York 14611				



Title	Ambient Air Sampling TCE Results Barthelmes Manufacturing Rochester, New York
Prepared For	Barthelmes Manufacturing 15 Cairn Street Rochester, New York 14611

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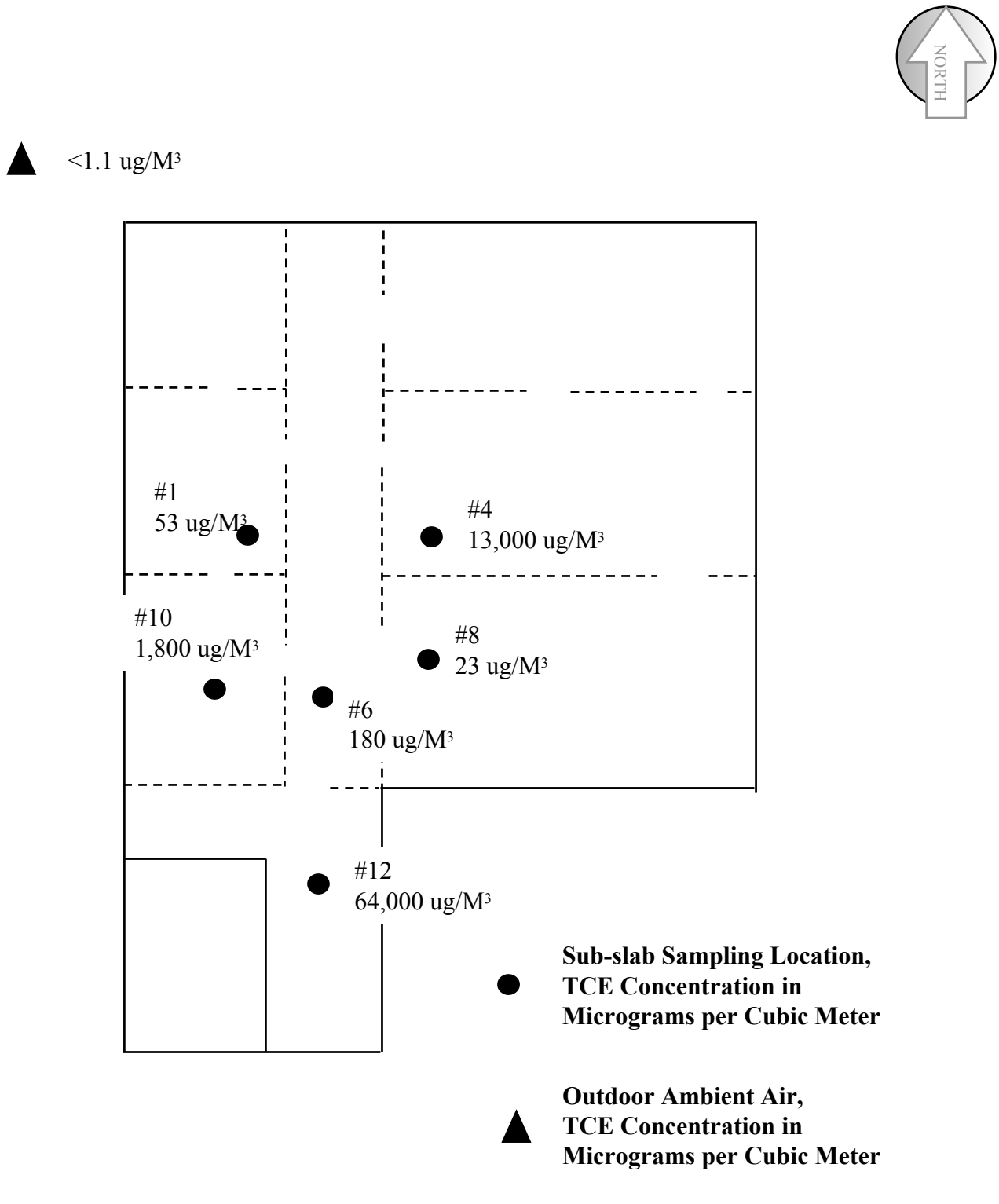
Project	555.001
Date	12/06
Scale	NTS
Drawn	PVS
Checked	MPR
File Name	Site Map
Figure	10



Title	Sub-Slab Vapor Sampling TCE Results Barthelmes Manufacturing Rochester, New York
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Project	555.001
Date	12/06
Scale	NTS
Drawn	PVS
Checked	MPR
File Name	Site Map
Figure	11

TABLES

TABLE 1
BUILDING CHEMICAL INVENTORY
Barthelmes Manufacturing Company
15 Cairn Street
Rochester

Chem # Barthelmes MSDS #	Product Name	Manufacturer	HSL Compounds
1001	Spray Feathering Disc Adhesive 08044	3M	MEK, Acetone, Glycerol Ester of Hydrogenate rosin, Propane, Styrene-butadiene polymer, Toluene
1006	Aroc Supreme SAE 10W-30	Lyondell Petrol. Co.	Petroleum hydrocarbons
1007	NIA Super D50	Niagara Lubricant	Hydrotreated Heavy Parafinic, Hydrotreated Residual Oil
1017	Dispoz Aid 1	Oakite	Sodium metabisulfite
1018	Dispoz Aid 2	Oakite	Calcium hydroxide
1026	Deoxidizer LNC	Oakite	Ferric sulfate, Nitric acid, potassium peroxymonsulfate
1028	Texolite 100 SP	Texo Corp	Triphosphoric acid
1032	Soluble oil	Stirling Industries	Mineral oil
1035	Air Tool Oil #1, 45-0919	DOTCO	Petroleum hydrocarbons
1038	140 Stick Wax	Castrol Metal working	Parafin wax
1040	#3 White Stamp Pad Ink	Phillips Process Co.	Diactone alcohol, Ethylene Glycol Monoethyl Ether, Benzyl Alcohol
1041	90 High Strength Adhesive	3 M	Dimethyl ether, Pentane, Acetone, Cyclohexane
1042	80 Series UV Curable Ink	Nor Cote	Acrylated oligomers, N-Vinyl 2 Pyrrolidone, Acrylated monomers
1043	079 PM Adhesion Modifier	Nor Cote	Acrylales
1044	800 Initiator	Nor Cote	Tertiary Amines
1053	Methyl Ethyl Ketone	Shell (Chemcore)	MEK
1059	Horizon Green Aerosol	Custom Aerosol Products	VM&P Naptha, Xylene, Butyl Alcohol, Aromatic hydrocarbon, Acetone, Mineral spirits, Methyl Iso Butyl Ketone, N Butyl Alcohol, 1,1,1-TCA, Propane, Isobutane
1061	Polane T Polyurethane Coating	Sherwin Williams	Toluene, Xylene, MEK, Cyclohexane, N Butyl Acetate, Talc, Titanium oxide, Carbon black, Lead Chromate, Molybdate Orange, Lead, Chromium
1068	Commerical Propane	Suburban Propane	Ethane, Propane, Propylene, Butanes, Ethyl Mercaptan
1069	Glo San	Rochester Midland	Hydrochloric acid
1072	Starrett Cleaner	Surry Chemicals	Dipropylene glycol, Potassium hydroxide, EDTA
1076	Bronze	Millard Lakes Metal	Lead, Tin, Aluminum, Manganese, Iron, Zinc, Silicon, Phophorus, Antimony, Arsenic, Chromium, Cobalt
1077	Copper	Millard Lakes Metal	Nickel, Beryllium, Cobalt, Cadmium, Aluminum oxide, Chromium, Lead, Silver, Tin, Arsenic
1078	Stainless Steel	Copper & Brass Sales	Iron, Chromium, Nickel
1080	Polane Dead Flat Black	Sherwin Williams	Toluene, Xylene, MEK, MIBK, Methyl n-Amyl Ketone, Cyclohexane, Isopropyl acetate, n-Butyl acetate, 1-Methoxy-2-Propanol acetate, Toluene Diisocyanate polymer, Mexamethylene diisocyanate polymer
1081	Polane T Plus Polyurethane Enamel	Sherwin Williams	Toluene, Xylene, Cyclohexanone, Isopropyl acetate n-Butyl acetate, Silica, Talc, Calcium carbonate, Titanium dioxide, Carbon black
1083	Descale 91 (Texo 91)	Texo Corp	Phosphoric acid
1084	SSR Ultra Coolant	Ingersol Rand	Polyoxyalkylene glycol, pentaerythritol ester
1090	Hot or Cold Carbon Steel	Samuel, Son & Co.	
1091	Galvanized Sheet Electrolytic	Samuel, Son & Co.	
1093	Aluminum Alloys	Samuel, Son & Co.	Aluminum
1094	Galvanized Sheet Carbon Steel	Samuel, Son & Co.	
1095	Stainless Steel	Samuel, Son & Co.	Iron, Chromium, Nickel, Manganese, Silicon, Aluminum
1096	Steel	Samuel, Son & Co.	
1097	Xylene	Interstate Chemical Co.	Xylene, Ethlybenzene, Benzene, Toluene
1099	Texo LP 1659	Texo Corp	Calcium Chloride
1100	Sealtex 1558 DI (Texo LP 1558)	Texo Corp	Ammonium bifluoride, Ammoniun dimolybdate, Sodium nitrate
1105	Protexo 1471	Texo Corp	Petroleum distillates, Naphthenic distillates
1108	Ultra Scrub Citrus Hand Cleaner	Rochester Midland	d-Limonene
1109	ICC 856 Spray/Wipe	Intercont. Chem Corp	None

TABLE 1
BUILDING CHEMICAL INVENTORY
Barthelmes Manufacturing Company
15 Cairn Street
Rochester

Chem # Barthelmes MSDS #	Product Name	Manufacturer	HSL Compounds
1110	Meltz It	Rochester Midland	Calcium chloride, Sodium chloride, Potassium chloride, Strontium chloride
1121	Polane Reducer 69	Sherwin Williams	Toluene, Ethylbenzene, Xylene, MEK, MIBK, Cyclohexanone, Isopropyl acetate, N-butyl acetate, 1-Methoxy-2-Propanol acetate, Hexamethylene diisocyanate polymer, Toluene diisocyanate polymer, Talc, Titanium dioxide, Lead chromate, Lead
1122	Polane Reducer 84	Sherwin Williams	Toluene, Ethylbenzene, Xylene, MEK, MIBK, Cyclohexanone, Isopropyl acetate, N-butyl acetate, 1-Methoxy-2-Propanol acetate, Hexamethylene diisocyanate polymer, Toluene diisocyanate polymer, Talc, Titanium dioxide, Lead chromate, Lead
1123	Polane Catayst 500-1318 V66V27	Sherwin Williams	Toluene, Ethylbenzene, Xylene, MEK, MIBK, Cyclohexanone, Isopropyl acetate, N-butyl acetate, 1-Methoxy-2-Propanol acetate, Hexamethylene diisocyanate polymer, Toluene diisocyanate polymer, Talc, Titanium dioxide, Lead chromate, Lead
1124	Globrite 762CS	Texo Corp	Chromium trioxide, Phosphoric acid
1128	127 Flying Insect Killer	Rochester Midland	Isobutane, Propane, Permethrin, d-Trans allethrin
1131	Oaklite 61B	Oakite	Sodium metasilicate, Sodium carbonate, Sodium tripolyphosphate, Tetrasodium pyrophosphate, Sodium silicate, Disodium phosphate, Coco amido sulfonate
1133	Florco, Cal-Flor-Dry	Floridin Co.	Silica
1135	Retarder Thinner Re182	NAZ DAR	Dipropylene glycol methyl ether, Aliphatic glycol ether
1138	042 Silver Paste	Nor Cote	Aluminum, Copper, Zinc, 2-Hydroxy-2-metyl-1-phenyl-1-propanone
1142	Belt Dressing	Krylon	Propane, Xylene, VM&P Naphtha, Tetrahydroabietyl alcohol, Acetone
1143	Cold Galvanizing Spray Zinc Rich Primer 135	Krylon	Propane, MEK, Xylene, VM&P Naphtha
1144	Fluorescent Spray Paint	Krylon	Propane, Isobutane, Toluene, Hexane, Heptane, Aliphatic solvent naphtha
1146	K Lens M Lens Cleaner	Wilkinson	Ethyl alcohol, Isopropyl alcohol, Methyl alcohol, Propylene glycol monomethyl ether
1154	Sweeping Compound	Buffalo Sweeping Compound Co.	Sawdust, Brick sand, Mineral oil, Acid dye #9, Petrolatum
1158	1200-2 Multi Purpose Grease	Lubriplate	None
1160	Tuff Job Remover	BIX	Dichloromethane, Methanol, 2-amino ethanol
1161	Safety Silver 45 White Brazing Alloy	JW Harris Co Inc.	Silver, Copper, Zinc, Nickel, Tin, Manganese, Boric acid, Lithium, Potassium fluoborate, Potassium tetraborate
1162	No. 14 Skin Protective Cream	Rochester Midland	Stearic acid, Triethanolamine, Bentonite, Corn starch, Methyl paraben, Methyl cellulose
1164	Almond Texture	Sherwin Williams	Polytetrafluoroethylene
1167	CLM ADS-71 High Temp/Extreme Pressure (	Equipment Life of California	Petroleum grease, Lead, Copper, Di-2-ethylhexyl dimerate
1169	Black EBS2-3003-H	Sherwin Williams	None
1172	Glid Guard Epoxy Chromate Metal Primer	Glidden	Fatty acids, 4,4-(1-methylethylidene) bis polymer phenol, 2,2-((1-miethylethylidene)bis(4,1-phenylene oxymethylene))bis(oxirane), 2-Propanol, methylbenzene, Ethylbenzene, 1-Methoxy 2-propanol, 2-Butanone, Cristobalite, Benzene, Dimethylbenzene
1173	Oaklite Chromicoat T3	Oakite	Nitric acid, Chromic acid, Hydrogen fluoride
1174	L Tec Spoolarc & Oxyweld Steel Weld Rods	ESAB Group	Aluminum, Carbon, Copper, Chromium, Iron, Manganese, Molybdenum, Nickel, Silicon, Titanium, Vanadium, Zirconium
1177	Multigear Oils	Sterling Industries	Petroleum lubircating oil

TABLE 1
BUILDING CHEMICAL INVENTORY
Barthelmes Manufacturing Company
15 Cairn Street
Rochester

Chem # Barthelmes MSDS #	Product Name	Manufacturer	HSL Compounds
1179	Perma Fil Part A	Trichem Corp	Diglycidyl Ether of Bisphenol-A, Acrylate Monomer
1180	Perma Fil Part B	Trichem Corp	Nonyl Phenol, m-Xylene diamine, Isophorone diamine
1182	Polane Spray Fil, White	Sherwin Williams	Toluene, Xylene, Cyclohexanone, n-Butyl acetate, Talc, Calcium carbonate, Barium sulfate, Titanium dioxide
1185	Polyurethane Matte Black 88-1086	Sherwin Williams	Synthetic paraffin
1186	Strippable Coating White	Sherwin Williams	VM&P Naptha, Toluene, Acetone, MEK, Methyl Iso Butyl Ketone, Calcium carbonate, Titanium dioxide
1196	International Compound #1598	International Chemical Co.	None
1203	Cutter Exp	IPG Industrial Products Group	Distilled hydrotreated naphthenic oil, Polychlorinated alkanes C10-C13
1214	Davison Blue Indicating Gel	WR Grace & Co.	Silca, Cobalt chloride
1223	Pyroboard CS	Rex Roto Corp	Silca, Clay, Alumina, organic binders
1224	Universal Gloss Modifer	Sherwin Williams	VM&P Naphtha, Toluene, Xylene, Isobutyl acetate, Silca, Talc
1228	Polane T Custom Poly Enamel F63BXW450-	Sherwin Williams	Toluene, Xylene, MEK, Cyclohexanone, n-Butyl acetate, Talc, Titanium dioxide
1235	Magic Lens Cleaning Ant Fogging Static Fluic	Silcone Sterling Paper Co.	Isoproply alcohol, Glycerine, Anti-Stat
1236	Gojo Painters Hand Cleaner	GOJO Industries	Dibasic ester, Linear alcohol alkoxylate, tocophery acetate, Triethanolamine
1237	KIWOFILLER 401NV and 402 HV	Kiwo, Inc.	None
1239	Powder Black	DuPont Powder Coatings	Carbon black
1241	Tech Draw 2900	Chemical Technologies Inc	Petroleum oil
1242	Tech Cool 3718	Chemical Technologies Inc	Triethanolamine, Potassium Hydroxide, Ethanol 2-(2-Aminoethaxy)
1243	Tech Draw 9240	Chemical Technologies Inc	Aliphatic hydrocarbon, Petroleum sulfanate
1244	Alpha Grey	DuPont Powder Coatings	Titanium dioxide, calcium carbonate, 1,3,5-Triglycidyl isocyanurate, silica, iron oxide, iron oixde.
1245	Flat Black	DuPont Powder Coatings	Calcium carbonate
1246	Crystal Clear	DuPont Powder Coatings	1,3,5-Triglycidyl Isocyanurate
1247	RB Putty II	DuPont Powder Coatings	Barium sulfate, Titanium doxide, Calcium carbonate
1248	WH Almond	DuPont Powder Coatings	Barium sulfate, Titanium doxide, Silca
1249	Clear Sailing	DuPont Powder Coatings	None
1250	Vision Black	DuPont Powder Coatings	Calcium carbonate
1252	Equipment Gray	DuPont Powder Coatings	Barium sulfate, Titanium dioxide, 1,3,5-Triglycidyl isocyanurate
1253	Buzz Bond No. 600	Bulk Chemicals Inc	Chromic acid, Potassium fluozirconate, Sodium fluoborate
1255	Machine Gray II	DuPont Powder Coatings	Titanium dioxide, calcium carbonate, 1,3,5-Triglycidyl isocyanurate, Barium sulfate
1256	Pasteweld Solder Paint	Harris Welco	Lead, Tin, Zinc chloride, Ammonium chloride
1257	Appliance White	DuPont Powder Coatings	Titanium dioxide, Barium sulfate, Silca, Aluminum hydroxide
1258	Carrier Alpha Grey RB-1698-4	TCI Powder Coatings	1,3,5-Triglycidyl Isocyanurate
1259	Sikaflex 252	SIKA Corp	Methylene Bisphenyl isocyanate, Xylene
1260	SIKA Primer 206 G&P	SIKA Corp	Ethyl acetate, Polyisocyanate prepolymer, Xylene
1261	Beach Gray II	DuPont Powder Coatings	Titanium dioxide, Calcium carbonate
1262	Vulcan Black	DuPont Powder Coatings	1,3.5-Triglycidyl isocyanurate
1264	Semi Off White	DuPont Powder Coatings	Calcium carbonate, Titanium dioxide, Silica
1265	Texo Kleen 1704	Ondeo Nalco Company	Dipropylene glycol monomethyl ether, Sodium tetraborate decahydrate
1266	E70S-2 Metal Alloy	JW Harris Co Inc.	Iron, Aluminum, Carbon, Copper, Manganese, Phosphorus, Sulfur, Molybdenum, Silicon, Titanium, Zirconium
1268	Para Blocks and Crystals	Freash Products Inc.	Paradichlorobenzene
1269	Illusion Amber	DuPont Powder Coatings	1,3,5-Triglycidyl Isocyanurate
1270	Ivory Sand II	DuPont Powder Coatings	1,3,5-Triglycidyl Isocyanurate, Talc, Titanium dioxide

TABLE 1
BUILDING CHEMICAL INVENTORY
Barthelmes Manufacturing Company
15 Cairn Street
Rochester

Chem # Barthelmes MSDS #	Product Name	Manufacturer	HSL Compounds
1272	RAL 9005 Texture	DuPont Powder Coatings	Talc, Calcium Carbonate, 1,3,5-Triglycidyl Isocyanurate
1274	Beige FRTT1	DuPont Powder Coatings	Titanium oxide, Calcium carbonate, Talc, Iron oxide, Iron oxide
1275	VMS3692IY Silver	DuPont Powder Coatings	1,3,5-Triglycidyl Isocyanurate, mica
1276	Hull Blue	DuPont Powder Coatings	1,3,5-Triglycidyl Isocyanurate, Barium sulfate, Titanium dioxide
1277	Bead Blast Silver	DuPont Powder Coatings	Calcium carbonate, Aluminum, 1,3,5-Trigylcidyl isocyanurate
1278	Hinge Black	DuPont Powder Coatings	Calcium carbonate, Talc, Carbon black
1279	Jet Black	DuPont Powder Coatings	Barium sulfate, Carbon black
1280	RAL 9005	DuPont Powder Coatings	Barium sulfate, 1,3,5-Triglycidyl Isocyanurate, Carbon black
1282	Monarch Black II	DuPont Powder Coatings	Barium sulfate
1283	Gray PFHS2	DuPont Powder Coatings	Titanium dioxide, 1,3,5-Triglycidyl isocyanurate, silica
1284	Gray PFHT2	DuPont Powder Coatings	Titanium dioxide, Talc, Calcium carbonate, 1,3,5-Triglycidyl isocyanurate, silica
1285	ML Gray Tex	DuPont Powder Coatings	Iron oxide, Titanium oxide, Talc, Calcium carbonate
1286	DFE Bioblast	Rochester Midland	Aliphatic hydrocarbon, Tripropylene glycol
1287	Everclear	DuPont Powder Coatings	None
1288	Black Ridge III	DuPont Powder Coatings	Calcium carbonate, Barium sulfate, Carbon black
1289	RAL 5015	DuPont Powder Coatings	Barium sulfate, Titanium dioxide, 1,3,5-Triglycidyl isocyanurate
1290	RAL 2002	DuPont Powder Coatings	Barium sulfate, 1,3,5-Triglycidyl Isocyanurate, Titanium dioxide
1291	Tech Cool 5907LF	Nalco Company	Hydrotreated heavy naphthenic distillate, alkylamine, Propylene glycol, Phosphate ester salt
1292	Tech Cool 4010	Chemical Technologies Inc	Petroleum oil, Hexahydrotriazine
1293	Mobil Hydraulic Oil 15	Exxon	None.
1294	Mobilith AW-2	Exxon	Zinc dialkyl dithiophosphate
1295	NOCO Lube AW Series	Noco Energy	Hydrotreated Heavy Paraffinic distillate, Solvent dewaxed residual oil
1296	Davy Blue	DuPont Powder Coatings	Barium sulfate, Titanium dioxide, Cobalt
1297	White Cloud	DuPont Powder Coatings	Titanium dioxide, Barium sulfate, 1,3,5-Triglycidyl isocyanurate, silica, carbon black
1298	Tech Draw 9311	Nalco Company	Hydrotreated Heavy Naphtha, Propoxylate butanol
1299	Skyward Blue	DuPont Powder Coatings	Barium sulfate, Titanium dioxide, 1,3,5-Triglycidyl isocyanurate
1300	Globrite 531 ADD	Nalco Company	None
1301	Silvadillo	DuPont Powder Coatings	1,3,5-Triglycidyl isocyanurate, Aluminum, Benzoin
1302	Tech Bond 38514	Nalco Company	Methanol, Acetic acid
1303	Tech Cool 35300	Nalco Company	Hydrotreated heavy naphthenic distillate, Heterocycle, Aliphatic alcohol, Fatty amine, Inorganic acid salt, Alkylamine salt, Hydrotreated light naphthenic distillate
1304	ASA 70 Gray	DuPont Powder Coatings	Titanium dioxide, Calcium carbonate, 1,3,5-Triglycidyl isocyanurate, silica, Carbon black
1305	4M767 Sealant Silicone Black	Dow Chemical	Methyltricacetoxysilane, Ethyltriactoxysilane
1306	Orelube HA-3	Orelube Corp	Solvent dewaxed heavy paraffinic distillate

TABLE 2
SUMMARY OF AMBIENT AIR AND SUB-SLAB VAPOR ANALYTICAL RESULTS
Barthelmes Manufacturing Company
15 Cairn Street, Rochester, New York

Location	1	2	3	4	5	6	7	8	9	10	11	12	13
Type	Sub-slab	In-door	In-door	Sub-Slab	In-door	Sub-Slab	In-door	Sub-slab	In-door	Sub-Slab	In-door	Sub-Slab	Outdoor
Units	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3	ug/M^3
Trichloroethylene	53.0	7.0	33.0	13000.0	13.0	180.0	No Sample	23.0	No Sample	1800.0	9.1	64000.0	ND
Acetone	24.0	26.0	17.0	ND	13.0	43.0		18.0		24.0	69.0	ND	22.0
Benzene	16.0	3.8	2.8	ND	19.0	7.7		8.0		3.2	6.7	ND	0.7
Carbon Disulfide	ND	ND	ND	ND	ND	2.1		ND		ND	ND	ND	ND
Chloroform	ND	ND	ND	29.0	ND	ND		ND		1.5	ND	58.0	ND
Chloromethane	ND	0.8	1.0	ND	0.9	ND		1.1		0.6	1.4	ND	1.0
Cyclohexane	96.0	96.0	160.0	170.0	76.0	23.0		330.0		38.0	19.0	ND	ND
1,4 Dichlorobenzene	12.0	11.0	21.0	ND	2.1	7.8		13.0		6.0	ND	ND	ND
cis 1,2-Dichloroethene	ND	ND	ND	1200.0	ND	ND		ND		ND	ND	3700.0	ND
trans 1,2-Dichloroethene	ND	ND	ND	52.0	ND	ND		ND		ND	ND	260.0	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND		ND		ND	1.2	ND	ND
Ethanol	45.0	58.0	17.0	ND	12.0	15.0		18.0		17.0	25.0	ND	6.6
Ethylbenzene	17.0	10.0	16.0	87.0	18.0	14.0		150.0		13.0	5.2	ND	ND
4-Ethyltoluene	ND	2.5	ND	ND	2.5	1.7		1.2		1.2	ND	ND	ND
Freon 12	ND	ND	ND	ND	3.4	4.3		ND		ND	3.2	ND	ND
Heptane	16.0	9.0	ND	ND	1.8	4.1		2.9		4.5	3.0	ND	ND
Methylene Chloride	9.7	2.5	ND	ND	8.3	5.9		ND		ND	5.6	ND	2.4
Methyl Ethyl Ketone	140.0	110.0	28.0	ND	17.0	21.0		44.0		ND	38.0	ND	ND
Methyl Isobutyl Ketone	ND	ND	ND	ND	9.8	ND		ND		32.0	ND	ND	ND
Naphthalene	ND	ND	ND	ND	4.2	ND		ND		ND	ND	ND	ND
2-Propanol	19.0	15.0	3.4	ND	4.9	3.4		9.1		4.9	23.0	ND	ND
Styrene	6.8	ND	ND	ND	6.8	13.0		ND		8.9	2.0	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	1.7	8.1		ND		12.0	ND	120.0	ND
Toluene	130.0	110.0	5.3	29.0	27.0	36.0		24.0		27.0	94.0	ND	3.8
1,2,4-Trimethylbenzene	14.0	9.8	1.3	ND	11.0	6.4		4.2		4.6	2.7	ND	ND
1,3,5-Trimethylbenzene	4.3	3.1	ND	ND	3.0	1.6		1.2		1.2	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND		ND		ND	1.1	ND	ND
m&p Xylene	56.0	38.0	61.0	320.0	69.0	42.0		560.0		40.0	18.0	ND	2.2
o-Xylene	11.0	4.0	5.6	26.0	17.0	10.0		41.0		7.4	5.6	ND	ND

Notes:
ug/M^3 = Micrograms per cubic meter
ND = Not detected at a concentration above the analytical method detection limit