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September 8, 1998

Mr. John Okesson
New York State Department of Environmental Conservation
Region 7 - Sub Office
1679 New York Route 11
Kirkwood, New York 13795-1602

Re: Progress Parkway Enterprises, Inc. (formerly known as Systems Manufacturing Corporation)
Broad Street Facilities - Binghamton, New York
Phase II Investigation
Project #: 1673.07360 #2

Dear Mr. Okesson:

Pursuant to our August 4, 1998 telephone conversation, this letter summarizes the Phase II Investigation activities conducted at facilities of Progress Parkway Enterprises, Inc. (formerly known as Systems Manufacturing Corporation) (PPEI) located at 13 Broad Street and 17½ Broad Street in Binghamton, New York. Until August 25, 1998, Systems Manufacturing Corporation manufactured data processing furniture and accessories. The Phase II Investigations were performed by DPRA Environmental (DPRA) between June 25, 1998 and July 8, 1998, on behalf of the purchaser of the operating assets of Systems Manufacturing Corporation, other than the Broad Street facilities. Representatives from Blasland, Bouck & Lee, Inc. (BBL), PPEI's environmental consultant, were also at each of these facilities during this time to observe the Phase II Investigation activities.

The results of the Phase II Investigation at the 13 Broad Street facility indicated the presence of methylene chloride in a ground water sample collected from an on-site monitoring well at a concentration of 3,980 parts per billion (ppb). On August 3, 1998, PPEI contacted the New York State Department of Environmental Conservation (NYSDEC) spill hotline to report the detection of methylene chloride in ground water. The reported detection was assigned a spill number (#9805515) by the NYSDEC. During my August 4, 1998 telephone conversation with you, I reported the results of the Phase II Investigation and agreed on behalf of PPEI to prepare this letter to provide the NYSDEC with a description of the Phase II Investigation activities and associated results.

Sections 1.0 and 2.0 of this letter present the following information associated with the 13 Broad Street and 17½ Broad Street facilities, respectively:

- Relevant background information obtained from the June 11, 1998 and November 23, 1992 Phase I Environmental Property Site Assessment Reports, prepared by A&A Consulting and Inspection Services, Inc., for the 13 Broad Street and 17½ Broad Street facilities, respectively, and from information provided by the Broome County Health Department (BCHD) in letters responding to requests for an Area Record Search for each of these facilities;

- A description of the recent Phase II activities conducted at each facility; and

- A discussion and summary of the Phase II analytical results obtained for each facility.

Section 3.0 of this letter presents conclusions and recommendations regarding the environmental conditions at the subject facilities located at 13 and 17½ Broad Street.

1.0 13 Broad Street

1.1 Background Information

The facility located at 13 Broad Street is currently used for storage. There are three buildings present at the facility: a main office/manufacturing building, a storage/maintenance building, and an office/sales building. A loading dock area is located adjacent to the storage/maintenance building. The remaining portion of the property is largely covered with asphalt.

The facility is bounded to the north by a storage and transmission facility owned by Columbia Gas of New York, and to the west by the Delaware & Hudson main rail road line. To the east of the facility is a New York State Electric & Gas (NYSEG) maintenance and storage facility, an asphalt production facility (Acadame Paving), and a residential property. The facility is bounded to the south by Ashland Chemical Company.

The Ashland Chemical facility is a warehouse/transfer facility for chemical products and a NYSDEC Resource Conservation and Recovery Act (RCRA) Corrective Action site. According to BCHD files, a State Pollutant Discharge Elimination System (SPDES) permit was in effect for the Ashland facility, however, the period of discharge is not known. The permit application (1976) indicated that wastewater generated during drum washing operations would be discharged to ground water. The Ashland Chemical facility is currently the subject of NYSDEC remediation activities and has known solvent contamination of soils and ground water.

1.2 Phase II Investigation Activities at 13 Broad Street

The following activities were conducted as part of the Phase II Investigation:

- The installation and sampling of four soil borings;
- The installation and sampling of three monitoring wells; and
- The collection and laboratory analysis of soil and ground water samples.

A description of each of the Phase II Investigation activities specific to the 13 Broad Street facility is presented below.

Soil Boring Installation and Sampling

Four soil borings (SP-1 through SP-4) were installed by DPRA's subcontractor, Parratt Wolff, Inc. (Parratt Wolff) at the locations shown on Figure 1. The borings were installed through floor drains located inside the manufacturing building. The borings were advanced to depths ranging from approximately 5.3 feet to 12.2 feet below ground surface (bgs) using a geoprobe.

Soil samples were collected at 2-foot intervals from each soil boring. The soils were visually characterized, observed for the presence of staining and odors, and screened for the presence of

organic vapors with a photoionization detector (PID). The following table summarizes the visual characterization and PID readings of soil samples collected from each of the soil borings for laboratory analysis.

Soil Boring	Total Depth (bgs)	Sampling Interval (bgs)	PID Reading (ppm)	Soil Characteristics/Observations
SP-1	12.2'	3.5-5.5'	0.7	Black staining on surface. Brown/grey, very fine sand, little silt, loose, moist. No staining in subsurface. No odors.
		9.5-11.5'	3.0	Brown/grey fine sand, some gravel, loose, moist. No staining or odors.
SP-2	5.8'	2-4'	0.5	Grey silt and sand, fine brown sand, loose, moist. No staining or odors.
SP-3	5.6'	2-4'	0.5	Brown fine-medium sand, some silt and coarse sand, loose, moist. No staining or odors.
SP-4	5.3'	0.5-2.5'	1.2	Brown fine-medium sand, little silt and coarse sand, gravel, loose, moist. No staining or odors.

Soil samples were collected from each of the sampling intervals listed in the above table and submitted to Buck Environmental Laboratories (Buck) to be analyzed for the following parameters:

- volatile organic compounds (VOCs) by USEPA Method 8240;
- semi-volatile organic compounds (SVOCs) by USEPA Method 8270;
- RCRA metals by USEPA 6000/7000 Series Methods; and
- total petroleum hydrocarbons (TPH) by New York State Department of Health (NYSDOH) Method 310.13.

Soil samples SP-2 (2-4') and SP-3 (2-4') were also submitted for polychlorinated biphenyls (PCBs) analysis.

Monitoring Well Installation and Sampling

Three additional soil borings were installed by Parratt-Wolff at the locations shown on Figure 1. These borings were subsequently converted to monitoring wells (MW-1 through MW-3). One monitoring well (MW-1) is located near the northeast corner of the property, one is located close to the south-central property boundary (MW-2), and one is located along the west-central property boundary (MW-3). All borings were advanced to the depth of ground water (ranging from 37 feet to 42 feet bgs) using a hollow stem auger.

Soil samples were collected at 2-foot intervals from each auger boring. The soils were visually characterized, observed for the presence of staining and odors, and screened for the presence of

organic vapors with a PID. The following table summarizes the visual characterization and PID readings of soil samples collected from each boring for laboratory analysis and the depth and screened intervals of each monitoring well.

Boring/ Monitoring Well	Total Depth of Boring (bgs)	Depth of Screened Interval (bgs)	Soil Sampling Interval (bgs)	PID Reading (ppm)	Soil Characteristics/ Observations
MW-1	37'	27-37'	25-27'	0.0	Brown gravel with silty sand. No staining or odors.
MW-2	42'	22-32'	25-27'	0.0	Brown, very fine sand. No staining or odors.
MW-3	42'	32-42'	29.5-31.5'	0.0	Red/brown fine sand, little silt, moist. No staining or odors.

One soil sample was collected from each auger boring from the soil sampling intervals listed in the above table and submitted to Buck for laboratory analysis for VOCs, SVOCs, RCRA metals, and TPH.

All the hollow stem auger borings were converted to two-inch polyvinyl chloride (PVC) temporary monitoring wells with screened intervals that extend upward 10 feet from the bottom of the wells. Upon completion of the well installation activities, each well was developed. Prior to ground water sampling, three well volumes were purged from each monitoring well. Unfiltered ground water samples were collected from each monitoring well and submitted to Buck for laboratory analysis for VOCs, RCRA metals, SVOCs, and TPH.

Ground water elevation measurements were obtained from each of the three monitoring wells on July 8, 1998. The table below summarizes the ground water elevation data.

Monitoring Well	Top of Casing Elevation (feet)[1]	Depth to Water (feet)[2]	Ground Water Elevation (feet)[1]
MW-1	97.39	28.80	68.59
MW-2	94.34	23.69	70.65
MW-3	98.69	34.32	64.37

Notes:
1. Top of casing elevations and ground water elevations were referenced to a benchmark elevation of 100.00 feet on the top nut of the fire hydrant located on-site.
2. Depth to water was measured from the top of the inner casing of each monitoring well.

Based on the ground water elevation measurements obtained from the three monitoring wells, ground water in the vicinity of the 13 Broad Street facility appears to be moving in a northwest direction.

All drill cuttings, well development/purge water, and associated debris (e.g., used PPE and dedicated sampling equipment) generated during the Phase II Investigation activities were containerized in 55-gallon drums and are temporarily being stored on site pending characterization and subsequent disposal off site.

1.3 Analytical Results

Laboratory analytical results of soil samples and ground water samples are summarized in Table 1 and Table 2, respectively, and discussed below. Soil analytical results obtained during the Phase II Investigations have been compared to the Recommended Soil Cleanup Objectives presented in the NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) #4046, dated January 1994. The ground water analytical results obtained during the Phase II Investigations have been compared to the Class GA Water Quality Standards and Guidance Values presented in the New York State Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1., dated June 1998.

In most cases, TAGM #4046 indicates that the recommended soil cleanup objective for a particular metal in soil is dependent on site background concentrations for that metal. Because no background soil samples were collected during the Phase II Investigation, detected concentrations of some metals in soil samples have been compared to ranges of metal soil concentrations presented in a document entitled "Background Concentrations of 20 Elements in Soils with Special Regard for New York State," dated 1988 and prepared by E. Carol McGovern of the NYSDEC Wildlife Pathology Unit. Several references from this document are cited in the paragraphs below. These references are provided in Attachment 1.

Soil Analytical Results

No VOCs were detected in soil samples at concentrations greater than the recommended soil cleanup objectives. One VOC, tetrachloroethene, was detected in one soil sample at a concentration of 0.0091 ppm, which is less than the recommended soil cleanup objective of 1.4 ppm. No other VOCs were detected in soil samples at concentrations greater than the laboratory detection limits.

No SVOCs were detected in any of the soil samples at concentrations greater than the recommended soil cleanup objectives. Two SVOCs, bis(2-ethylhexyl)phthalate and di-n-octyl phthalate, were detected in soil samples at concentrations that are below the recommended soil cleanup objectives of 50 ppm [bis(2-ethylhexyl)phthalate was detected in soil samples at concentrations ranging from 1.028 to 17.3 ppm, and di-n-octyl phthalate was detected in one soil sample at a concentration of 1.05 ppm]. No other SVOCs were detected at concentrations greater than the laboratory detection limits.

No PCBs were detected in either of the two soil samples analyzed for PCBs at concentrations greater than the recommended soil cleanup objective of 10 ppm for subsurface soils. (In one of the soil samples, PCBs were detected at a concentration of 4.269 ppm, and PCBs were not detected in the remaining soil sample at a concentration greater than the laboratory detection limit.)

TPH was detected in soil samples at concentrations ranging from 1.1 ppm to 1,270 ppm. The TPH was identified by the analytical laboratory as lubrication oil in each of the detections. Because there is no NYSDEC recommended soil cleanup objective for TPH, the soil analytical results were compared to the NYSDEC Spill Technology and Remediation Series (STARS) Memo #1- Petroleum-Contaminated Soil Guidance Policy, dated August 1992. This document presents guidance values for fuel oil contaminated soil. The STARS memo provides no guidance value for TPH, but provides several guidance values for VOCs and SVOCs. No VOCs or SVOCs were detected in soil samples

at concentrations which exceed the STARS guidance values. In addition, none of the soil samples in which TPH was detected exhibited petroleum-type odors.

Several RCRA metals were detected in soil samples at varying concentrations. Each of the RCRA metals detected is discussed below.

- Arsenic was detected in each of the soil samples at concentrations ranging from 7.88 to 16.5 ppm. The recommended soil cleanup objective for arsenic is 7.5 ppm or site background. Walsh et al (1977) stated that arsenic in uncontaminated soils is usually found in the range of 0.2 to 40 ppm. Therefore, the detected concentrations of arsenic in the soil samples are likely attributable to background soil arsenic concentrations.

- Barium was detected in soil samples at concentrations ranging from 29.5 to 705 ppm. The recommended soil cleanup objective for barium is 300 ppm or site background. Bowen (1979) stated that 500 ppm is the average barium content in soils, with a range of 100 to 3,000 ppm. Therefore, the detected concentrations of barium in the soil samples are likely attributable to background soil barium concentrations.

- Cadmium was detected in soil samples at concentrations ranging from 1.68 ppm to 13 ppm. The recommended soil cleanup objective for cadmium is 1.0 ppm or site background. Based on previous experience involving other sites in the Binghamton area, the overburden at 13 Broad Street can be characterized as being derived from sedimentary rocks. Page and Bingham (1973) stated that, based on the cadmium levels found in common rocks, it can be concluded that, on the average, soils derived from sedimentary rocks would contain the largest amounts of cadmium. They also stated that soils derived from sedimentary rocks range in cadmium concentrations from 0.3 to 11 ppm. Only one soil sample contains cadmium at a concentration which slightly exceeds the upper limit of Page and Bingham's range of background cadmium concentrations in soil derived from sedimentary rock. Therefore, the detected concentrations of cadmium in the soil samples are likely attributable to background soil cadmium concentrations.

- Chromium was detected in soil samples at concentrations ranging from 9.34 to 230 ppm. The recommended soil cleanup objective for chromium is 10 ppm or site background. Shacklette and Boerngen (1984) gave a range of 1 to 1,000 ppm of chromium in 541 soils east of the 97th meridian, in the U.S. Therefore, the detected concentrations of chromium in the soil samples are likely attributable to background soil chromium concentrations.

- Lead was detected in soil samples at concentrations ranging from 9.87 to 757 ppm. The recommended soil cleanup objective for lead is site background. The 13 Broad Street site is located within the City of Binghamton, in a well developed industrial area. As presented in TAGM #4046, background levels for lead vary widely, and average background levels in metropolitan or suburban areas near highways are much higher and typically range from 200 ppm to 500 ppm. Therefore, only one soil sample, SP-3 (2-4'), contains lead at a concentration which exceeds, though only slightly, this range of background soil lead concentrations.

- Mercury was detected in one soil sample at a concentration of 0.351 ppm. The recommended soil cleanup objective for mercury is 0.1 ppm. Bowen (1979) gave a range of background mercury content in soils of 0.01 to 0.5 ppm. Therefore, the one detected concentration of mercury in the soil sample is likely attributable to background soil mercury concentrations.

- Silver was detected in one soil sample at a concentration of 4.17 ppm. The recommended soil cleanup objective is site background. No range of background silver soil concentrations was presented in TAGM #4046 or the previously mentioned NYSDEC document that provides background soil concentrations. The USEPA Office of Solid Waste and Emergency Response document entitled "Hazardous Waste Land Treatment," SW-874 (April 1983) provides a common range of 0.01 to 5 ppm for silver concentrations in soil (page 273, Table 6.46). Therefore, the one detected concentration of silver in the soil samples is likely attributable to background soil silver concentrations.

Ground Water Analytical Results

No SVOCs or TPH were detected in any of the ground water samples at concentrations greater than the laboratory detection limits.

Barium was detected in a ground water sample collected from monitoring well MW-1 at a concentration of 1,500 ppb, which slightly exceeds the water quality standard of 1,000 ppb. The detected concentration of barium in the ground water sample is likely attributable to the elevated background concentrations of barium in soil. In addition, the ground water samples were unfiltered and most likely contained high amounts of particulates. The elevated concentration of barium is most likely attributable to particulates in the ground water sample and is not representative of the actual ground water quality. No other RCRA metals were detected in ground water samples at concentrations above the relevant ground water quality standards.

One VOC, methylene chloride, was detected in the ground water sample and duplicate sample collected from monitoring well MW-3 at concentrations of 3,980 ppm and 2,720 ppm, respectively. These detected concentrations exceed the ground water quality standard of 5 ppb. No other VOCs were detected in the ground water samples at concentrations greater than the laboratory detection limits.

2.0 17½ Broad Street

2.1 Background Information

The facility located at 17½ Broad Street consists of one building. This building is primarily used as a manufacturing facility, producing laminate products. The building also contains offices, restrooms, and a boiler room. There is a loading dock located in the rear of the building.

The property is accessible from Broad Street, via a right of way across two neighboring parcels. This land is below the grade level of Broad Street, and the property at the northern boundary is approximately 20 feet higher with a deteriorating retaining wall and dirt embankment acting as the northern boundary.

The facility is bounded to the north by the Broome Recycling Co., Inc., and to the west by the Delaware & Hudson main rail road line. The facility is bounded to the east by residential properties and Oak Knoll Distributing Company, a pneumatic equipment production facility. The facility is bounded to the south by a fuel storage and transmission facility owned by Columbia Gas of New York.

2.2 Phase II Investigation Activities at 17½ Broad Street

The following activities were conducted as part of the Phase II Investigation:

- The installation and sampling of three soil borings;
- The installation and sampling of three monitoring wells; and
- The collection and laboratory analysis of soil and ground water samples.

A description of the Phase II Investigation activities specific to 17½ Broad Street is presented below. The above-described installation and sampling procedures used at 13 Broad Street were also used at 17½ Broad Street, and therefore, are not repeated below.

Soil Boring Installation and Sampling

Three soil borings (SP-1 through SP-3) were installed by Parratt Wolff at the locations shown on Figure 2. The borings were installed through former floor drains located inside the warehouse. The borings were advanced to depths ranging from approximately 3.4 feet to 7.9 feet bgs using a geoprobe.

The following table summarizes the visual characterization and PID readings of soil samples collected from each of the soil borings for laboratory analysis.

Soil Boring	Total Depth (bgs)	Sampling Interval (bgs)	PID Reading (ppm)	Soil Characteristics/Observations
SP-1	3.4'	2.5-4.4'	1.0	Brown fine-coarse sand and gravel, some silt, loose, moist. Black staining observed from 2.5-2.8'. No odors.
SP-2	7.9'	0-2'	0.0	Brown silt and fine-coarse sand, concrete fragments. Dark brown staining from 0-2'. No odors.
SP-3	6.0'	0-2'	2.0	Brown fine-coarse sand, some gravel, loose, moist. Dark brown staining from 0-0.5'. No odors.
		4-6'	1.0	Brown fine-coarse sand, some gravel, loose, moist. No staining or odors.

Soil samples were collected from each of the sampling intervals listed in the above table and submitted to Buck for laboratory analysis for VOCs, SVOCs, RCRA metals, and TPH. Soil samples SP-1 (2.5-4.4') and SP-2 (0-2') were also submitted for PCBs analysis.

Monitoring Well Installation and Sampling

Three additional soil borings were installed by Parratt Wolff at the locations shown on Figure 2. These borings were subsequently converted to monitoring wells (MW-1 through MW-3). One

monitoring well is located near the southeast corner of the building (MW-1), one is located near the southwest corner of the building (MW-2), and one is located along the northern property boundary (MW-3). All borings were advanced to the depth of ground water (ranging from 37 feet to 42 feet bgs) using a hollow stem auger.

The following table summarizes the visual characterization and PID readings of soil samples collected from each boring for laboratory analysis and the depth and screened intervals of each monitoring well.

Boring/ Monitoring Well	Total Depth of Boring (bgs)	Depth of Screened Interval (bgs)	Soil Sampling Interval (bgs)	PID Reading (ppm)	Soil Characteristics/ Observations
MW-1	37'	27-37'	35-37'	NA	Brown fine-coarse sand and fine gravel, loose, saturated. No staining or odors.
MW-2	42'	30-40'	25-27'	8.0	Brown very fine-fine sand, loose, moist. No staining or odors.
MW-3	42'	32-42'	25-27'	0.0	Brown very fine-fine sand, loose, moist. No staining or odors.

One soil sample was collected from each auger boring from the soil sampling intervals listed in the above table and submitted to Buck for laboratory analysis for VOCs, RCRA metals, SVOCs, and TPH.

All the hollow stem auger borings were converted to 2-inch PVC monitoring wells. Unfiltered ground water samples were collected from each monitoring well and submitted to Buck for laboratory analysis for VOCs, SVOCs, RCRA metals, and TPH. Ground water samples were also collected from each monitoring well and analyzed for pesticides using USEPA Method 8081.

Ground water elevation measurements were obtained from each of the three monitoring wells on July 8, 1998. The table below summarizes the ground water elevation data.

Monitoring Well	Top of Casing Elevation (feet)[1]	Depth to Water (feet)[2]	Ground Water Elevation (feet)[1]
MW-1	97.48	31.90	65.58
MW-2	97.38	35.06	62.32
MW-3	97.24	34.02	63.22

Notes:
1. Top of casing elevations and ground water elevations were referenced to a benchmark elevation of 100.00 feet on the top nut of the fire hydrant located on-site.
2. Depth to water was measured from the top of the inner casing of each monitoring well.

Based on the ground water elevation measurements obtained from the three monitoring wells, ground water in the vicinity of the 17½ Broad Street facility appears to be moving in a northwest direction.

2.3 Analytical Results

Laboratory analytical results of soil samples and ground water samples are summarized in Table 3 and Table 4, respectively, and discussed below. The soil and ground water analytical results were compared to the NYSDEC soil cleanup objectives and ground water quality standards and guidance values referenced in Section 1.3 of this letter.

Soil Analytical Results

No VOCs were detected at concentrations greater than the recommended soil cleanup objectives. One VOC, bromomethane, was detected in one soil sample at a concentration of 0.0267 ppm. There is no soil cleanup objective for bromomethane in the NYSDEC TAGM #4046; however, the detected concentration of bromomethane is orders of magnitude less than the risk-based concentrations and protection of air and ground water concentrations presented in the USEPA's Region III Risk-Based Concentration Table (March 17, 1997).

SVOCs were detected in soil samples SP-1 (2.5-4.4'), SP-2 (0-2') and SP-3 (0-2') at concentrations ranging from 0.187 ppm to 1.210 ppm. Bis(2-ethylhexyl)phthalate was detected in two of these samples at concentrations of 1.070 ppm and 0.485 ppm, which are less than the soil cleanup objective of 50 ppm. The remaining SVOCs detected in soil samples are polycyclic aromatic hydrocarbons (PAHs). PAHs can be formed, for example, during forest fires and the combustion of coal, oil, gasoline (e.g., automobile exhaust), garbage and other organic substances, and can be found throughout the environment (ASTDR 1995, see Attachment 1). Four PAHs [benzo(a)anthracene, benzo(a)pyrene, chrysene, and dibenzo(a,h)anthracene] were detected in soil samples at concentrations slightly exceeding the soil cleanup objectives. Because PAHs are ubiquitous, particularly in industrial areas such as the location of the subject property, and because the concentrations of PAHs detected in these shallow soil samples only slightly exceed soil cleanup objectives, the detected concentrations are likely attributable to background PAH soil concentrations.

No PCBs were detected in either of the two soil samples at concentrations greater then the laboratory detection limit.

TPH was detected in soil samples at concentrations ranging from 13.0 ppm to 85.3 ppm. The TPH was identified by the analytical laboratory as lubrication oil in each of the detections. Because there is no NYSDEC recommended soil cleanup objective for TPH, the soil analytical results were compared to the NYSDEC STARS Memo #1. As previously mentioned, this memo provides guidance for fuel oil contaminated soil. The STARS memo provides no guidance value for TPH, but provides several guidance values for VOCs and SVOCs. No VOCs or SVOCs were detected in soil samples at concentrations exceeding STARS guidance values, with the exception of the certain PAH concentrations detected in soil samples SP-2 (0-2') and SP-3 (0-2'). These PAHs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)flouranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene). The detected concentrations of these PAH compounds (ranging from 0.187 ppm to 0.903 ppm) only slightly exceed the STARS guidance value of 0.04 ppm for these compounds, and are likely attributable to background PAH soil concentrations due to the ubiquitous nature of PAHs in industrial areas.

Several RCRA metals were detected in soil samples at varying concentrations that, based on the information presented in Section 1.3 of this letter, are likely attributable to background soil concentrations. Each of the RCRA metals detected is discussed below.

- Arsenic was detected in each of the soil samples at concentrations ranging from 4.11 to 10.9 ppm. As discussed in Section 1.3 of this letter, the detected concentrations of arsenic in the soil samples are likely attributable to background soil arsenic concentrations.

- Barium was detected in soil samples at concentrations ranging from 31.4 to 115 ppm. Barium was not detected in any of the soil samples at concentrations greater than the recommended soil cleanup objective of 300 ppm or site background.

- Cadmium was detected in soil samples at concentrations ranging from 1.77 ppm to 5.0 ppm. The recommended soil cleanup objective for cadmium is 1.0 ppm or site background. As discussed in Section 1.3, the detected concentrations of cadmium in the soil samples are likely attributable to background soil cadmium concentrations.

- Chromium was detected in soil samples at concentrations ranging from 9.4 to 17.7 ppm. The recommended soil cleanup objective for chromium is 10 ppm or site background. As discussed in Section 1.3, the detected concentrations of chromium are likely attributable to background soil chromium concentrations.

- Lead was detected in soil samples at concentrations ranging from 4.47 to 163 ppm. The recommended soil cleanup objective for lead is site background. As discussed in Section 1.3, the detected concentrations of lead in soil samples are likely attributable to background soil lead concentrations.

- Mercury was detected in soil samples at concentrations of 0.095 ppm to 0.215 ppm. Although the recommended soil cleanup objective for mercury is 0.1 ppm, as discussed in Section 1.3, the detected concentrations of mercury in the soil sample are likely attributable to background soil mercury concentrations.

Ground Water Analytical Results

No VOCs, SVOCs, TPH, or pesticides were detected in any of the ground water samples at concentrations greater than the laboratory detection limits.

Barium was detected in ground water samples at concentrations ranging from 4,130 to 13,400 ppb. The ground water quality standard for barium is 1,000 ppb. Lead was detected in ground water samples at concentrations ranging from 36 to 216 ppb. The ground water quality standard for lead is 25.0 ppb. The ground water samples were unfiltered and most likely contained high amounts of particulates. The elevated concentrations of barium and lead are most likely attributable to particulates in the ground water sample and are not representative of the actual ground water quality.

3.0 Conclusions and Recommendations

Based on the results of the Phase II Investigations, presented below are conclusions and recommendations regarding environmental conditions at each of the two facilities.

3.1 13 Broad Street

Soil

No VOCs, SVOCs, or PCBs were detected in soil samples at concentrations exceeding the recommended soil cleanup objectives. Therefore, soil sample analytical results indicate that there are no significant environmental concerns associated with the presence of VOCs, SVOCs, or PCBs in soil. Although TPH was detected in soil samples, VOC and SVOC soil concentrations are below guidance values presented in the STARS Memo #1, and therefore do not indicate a significant environmental concern associated with the presence of TPH. The detected concentrations of arsenic, barium, cadmium, chromium, mercury, and silver in soil samples are likely attributable to background soil concentrations. While the detection of lead at a concentration of 757 ppm in soil sample SP-3 (2-4') may present a concern, it is only slightly above the NYSDEC's cited range for average background levels in industrial areas, and is an anomalously high detection relative to the lead concentration detected in each of the remaining soil samples. Lead was detected in this sample at a concentration of 757 ppm, while the concentrations of lead in the remaining soil samples from this facility ranged from 9.87 to 104 ppm.

Ground Water

No SVOCs or TPH were detected in ground water samples at concentrations greater than laboratory detection limits. Therefore, ground water analytical results indicate that there are no significant environmental concerns associated with the presence of SVOCs or TPH in ground water. Barium was detected in a ground water sample collected from monitoring well MW-1 at a concentration which slightly exceeds the ground water quality standard. This elevated barium concentration is likely attributable to the high background barium concentrations in soil and soil particulates present in the ground water samples.

While the detection of methylene chloride in ground water samples collected from monitoring well MW-3 at concentrations of 3,980 and 2,720 ppm may warrant further ground water investigation at the facility, a detailed review of publicly available information regarding the Ashland Chemical facility should be conducted first. As stated earlier, the Ashland Chemical facility is a NYSDEC RCRA Corrective Action site and has known solvent contamination of soils and ground water. Based on ground water elevation measurements obtained by DPRA from each of the Broad Street facilities, ground water in this area appears to be flowing in a northwest direction, indicating that the Ashland Chemical facility is upgradient of the 13 Broad Street facility. Any available information pertaining to previous remedial investigation activities conducted at the Ashland Chemical facility may (i) aid in the development of a more detailed understanding of environmental conditions at the 13 Broad Street facility (e.g., ground water quality and flow direction), and (ii) indicate the source of the contaminants.

Recommendations

Based on the above conclusions regarding environmental conditions at the 13 Broad Street facility, recommendations have been made for future activities associated with this facility. These recommended activities are described below.

- To address the detected lead concentration of 757 ppm in soil sample SP-3 (2-4'), it is recommended that the soil in this location be resampled for lead. To confirm the presence or absence of elevated lead soil concentrations at this location, BBL recommends the collection of another soil sample immediately adjacent to soil boring SP-3 from the 2- to 4-foot depth interval. This sample should be submitted for laboratory analysis for total lead using USEPA Method 200.7/6010.

- To address the elevated concentrations of methylene chloride detected in ground water samples collected from monitoring well MW-3, it is recommended that a detailed review of publicly available information be conducted to facilitate determination of whether further investigation and/or remedial activities may be warranted. Background information to be reviewed would include, in particular, any available information pertaining to previous remedial investigation activities conducted at the Ashland Chemical facility located adjacent to and south of the subject facility.

3.2 17½ Broad Street

Soil

No VOCs or PCBs were detected in soil samples at concentrations exceeding the recommended soil cleanup objectives. Therefore, soil sample analytical results indicate there are no significant environmental concerns associated with the presence of VOCs or PCBs in soil. While SVOCs were detected in soil samples at concentrations slightly above soil cleanup objectives, these SVOCs are PAHs. Because PAHs are ubiquitous, particularly in industrial areas such as the location of this property, and because the concentrations of PAHs detected in these shallow soil samples only slightly exceed soil cleanup objectives, the detected concentrations are likely attributable to background PAH soil concentrations. TPH was detected in the soil samples; however, no VOCs or SVOCs were detected in soil samples at concentrations exceeding STARS guidance values, with the exception of certain detected PAH concentrations which only slightly exceed these values. The detected concentrations of arsenic, barium, cadmium, chromium, lead and mercury in soil samples are likely attributable to background soil concentrations. Therefore, soil sample analytical results indicate that there are no significant environmental concerns associated with the presence of metals in soil.

Ground Water

No VOCs, SVOCs, TPH, or pesticides were detected in ground water samples at concentrations greater than laboratory detection limits. Therefore, ground water analytical results indicate that there are no significant environmental concerns associated with the presence of VOCs, SVOCs, TPH, or pesticides in ground water. Barium and lead were detected in ground water samples at concentrations which exceed the relevant ground water quality standards, but the detected concentrations are likely due to unfiltered particulates present in the ground water and are not representative of actual ground water quality.

Recommendation

Based on the above conclusions regarding environmental conditions at the 17½ Broad Street facility, it is recommended that no further investigation/remedial activities be conducted at the facility.

PPEI anticipates completion of the additional background review for the 13 Broad Street facility within the next two to four weeks, depending upon (for example) accessibility of pertinent, available information regarding the Ashland Chemical facility. If such information has to be obtained through a request(s) under the Freedom of Information Act (FOIA), additional time may be required. A resampling of soil for lead concentrations at SP-3 can be conducted upon approval from the NYSDEC, and laboratory analytical results for this sample can be obtained within three weeks of the sampling date. Upon completion of the background information review and review of the soil sample analytical results, a letter report will be submitted to the NYSDEC which presents the results of the review and soil sampling as well as any recommendations for additional investigation and/or remediation activities. In the interim and consistent with our August 4, 1998 telephone conversation, a site meeting can be scheduled. Please call me at your earliest convenience to arrange a date and time for this meeting.

Please do not hesitate to call me at (315) 446-9120 if you have any questions or require any additional information.

Sincerely,

BLASLAND, BOUCK & LEE, INC.

M. Cathy Geraci
Associate

MAM/mbl
83180842.WPD

cc: Mr. Edward F. Magenheimer, Progress Parkway Enterprises, Inc.
Ms. Lisa J. Sotto, Hunton & Williams
Mr. David J. Ulm, Blasland, Bouck & Lee, Inc.

Table 1

Summary of Detected Constituents in Soil
Progress Parkway Enterprises, Inc. - 13 Broad Street
Binghamton, New York

Parameter	Concentration (ppm)								
	MW-1 (25-27')	**MW-2 (25-27')**	**MW-3 (29.5-31.5')**	**SP-1 (3.5-5.5')**	**SP-1 (9.5-11.5')**	**SP-2 (2-4')**	**SP-3 (2-4')**	**SP-4 (0.5-2.5')**	**Standard***
SVOCs									
Bis (2-ethylhexyl) phthalate	ND	ND	ND	ND	8.02	17.3	1.028	2.23	50
Di-n-octyl phthalate	ND	ND	ND	ND	1.05	ND	ND	ND	50
Metals									
Arsenic, total	9.54	11.6	7.88	12.1	15.3	12.8	16.5	16.4	7.5 or SB
Barium	48	50.6	64.4	29.5	61.4	99.2	705	163	300 or SB
Cadmium, total	2.62	2.26	1.68	2.27	7.12	3.3	7.35	13	1.0 or SB
Chromium, total	13.6	11.4	9.34	13.4	37.9	17.4	230	40.2	10 or SB
Lead, total	16.8	28.3	12.5	9.87	18.5	17.8	757	104	SB
Mercury, total	ND	ND	ND	ND	ND	ND	0.351	ND	0.1
Silver, total	ND	ND	ND	ND	ND	ND	4.17	ND	SB
Total Petroleum Hydrocarbons (TPH)									
Lubrication oil	2.44	1.10	ND	19.5	82.6	1,270	153	ND	NA
VOCs									
Tetrachloroethene	ND	ND	ND	ND	ND	ND	0.0091	ND	1.4
PCBs									
Aroclors, total	--	--	--	--	--	ND	4.269	--	10

Table 1
(Cont'd)
Summary of Detected Constituents in Soil
Progress Parkway Enterprises, Inc. - 13 Broad Street
Binghamton, New York

Notes:

1. * = Standards presented are recommended soil cleanup objectives set forth in the New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) # 4046, dated January 1994.

2. All concentrations are reported in parts per million (ppm).

3. SB = Site background.

4. ND = Constituent was not detected at a concentration greater than the laboratory detection limit.

5. NA = No recommended soil cleanup objective is available for this constituent.

6. -- = Constituent was not analyzed.

Table 2

Summary of Detected Constituents in Ground Water
Progress Parkway Enterprises, Inc. - 13 Broad Street
Binghamton, New York

Parameter	Concentration (ppb)				
	MW-1	**MW-2**	**MW-3**	**MW-3 (Duplicate)**	**Standard[1]**
Metals					
Arsenic	ND	ND	2.0	--	25.0
Barium, total	1,500	360	520	--	1,000
Selenium	2.0	2.0	ND	--	10.0
VOCs					
Methylene Chloride	ND	ND	3,980	2,720	5.0

Notes:

1. Standards presented are New York State Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. (dated June 1998) Class GA Ambient Water Quality Standards and Guidance Values and Ground-Water Effluent Limitations.

2. All concentrations are reported in parts per billion (ppb).

3. ND = Constituent was not detected at a concentration greater than the laboratory detection limit.

4. -- = Constituent was not analyzed.

Table 3

Summary of Detected Constituents in Soil
Progress Parkway Enterprises, Inc. - 17½ Broad Street
Binghamton, New York

Parameter	Concentration (ppm)							
	MW-1 (35-37')	**MW-2 (25-27')**	**MW-3 (25-27')**	**SP-1 (2.5-4.4')**	**SP-2 (0-2')**	**SP-3 (0-2')**	**SP-3 (4-6')**	**Standard[1]**
SVOCs								
Benzo(a)anthracene	ND	ND	ND	ND	0.691	0.363	ND	0.224
Benzo(a)pyrene	ND	ND	ND	ND	0.709	0.361	ND	0.061
Benzo(b)fluoranthene	ND	ND	ND	ND	0.903	0.589	ND	1.1
Benzo(g,h,i)perylene	ND	ND	ND	ND	0.334	0.205	ND	50
Benzo(k)fluoranthene	ND	ND	ND	ND	0.860	0.371	ND	1.1
Bis(2-ethylhexyl)phthalate	ND	ND	ND	1.070	ND	0.485	ND	50
Chrysene	ND	ND	ND	ND	0.661	0.403	ND	0.4
Dibenzo(a,h)anthracene	ND	ND	ND	ND	0.187	ND	ND	0.014
Fluoranthene	ND	ND	ND	ND	1.210	0.588	ND	50
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	0.380	0.230	ND	3.2
Pyrene	ND	ND	ND	ND	0.771	0.412	ND	50
Metals								
Arsenic, total	8.65	10.9	8.71	4.33	6.31	4.11	6.43	7.5 or SB
Barium	31.4	41.3	59.2	115	55.6	71.1	39.1	300 or SB
Cadmium, total	1.8	1.92	1.77	5.0	2.52	2.17	2.11	1.0 or SB
Chromium, total	9.52	10.3	9.4	15.7	17.7	17.0	14.0	10 or SB
Lead, total	4.47	11.6	14.3	163	50.7	39.6	13.4	SB
Mercury, total	ND	ND	0.185	0.215	0.095	ND	0.127	0.1

Table 3

Summary of Detected Constituents in Soil
Progress Parkway Enterprises, Inc. - 17½ Broad Street
Binghamton, New York

Parameter	Concentration (ppm)							
	MW-1 (35-37')	**MW-2 (25-27')**	**MW-3 (25-27')**	**SP-1 (2.5-4.4')**	**SP-2 (0-2')**	**SP-3 (0-2')**	**SP-3 (4-6')**	**Standard[1]**
Total Petroleum Hydrocarbons (TPH)								
Lubrication oil	ND	ND	ND	85.3	49.3	19.2	13.0	NA
VOCs								
Bromomethane	ND	0.0267	ND	ND	ND	ND	ND	NA*

Notes:

1. Standards presented are recommended soil cleanup objectives set forth in the New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) # 4046, dated January 1994.

2. All concentrations are reported in parts per million (ppm).

3. SB = Site background.

4. ND = Constituent was not detected at a concentration greater than the laboratory detection limit.

5. NA = No recommended soil cleanup objective is available for this constituent.

6. -- = Constituent was not analyzed.

7. *=Although TAGM#4046 provides no recommended soil cleanup objective for bromomethane, the detected concentration of bromomethane is orders of magnitude less than the risk-based concentrations and protection of air and ground water concentrations presented in the USEPA's Region III Risk-Based Concentration Table (March 17, 1997).

Table 4

Summary of Detected Constituents in Ground Water
Progress Parkway Enterprises, Inc. - 17½ Broad Street
Binghamton, New York

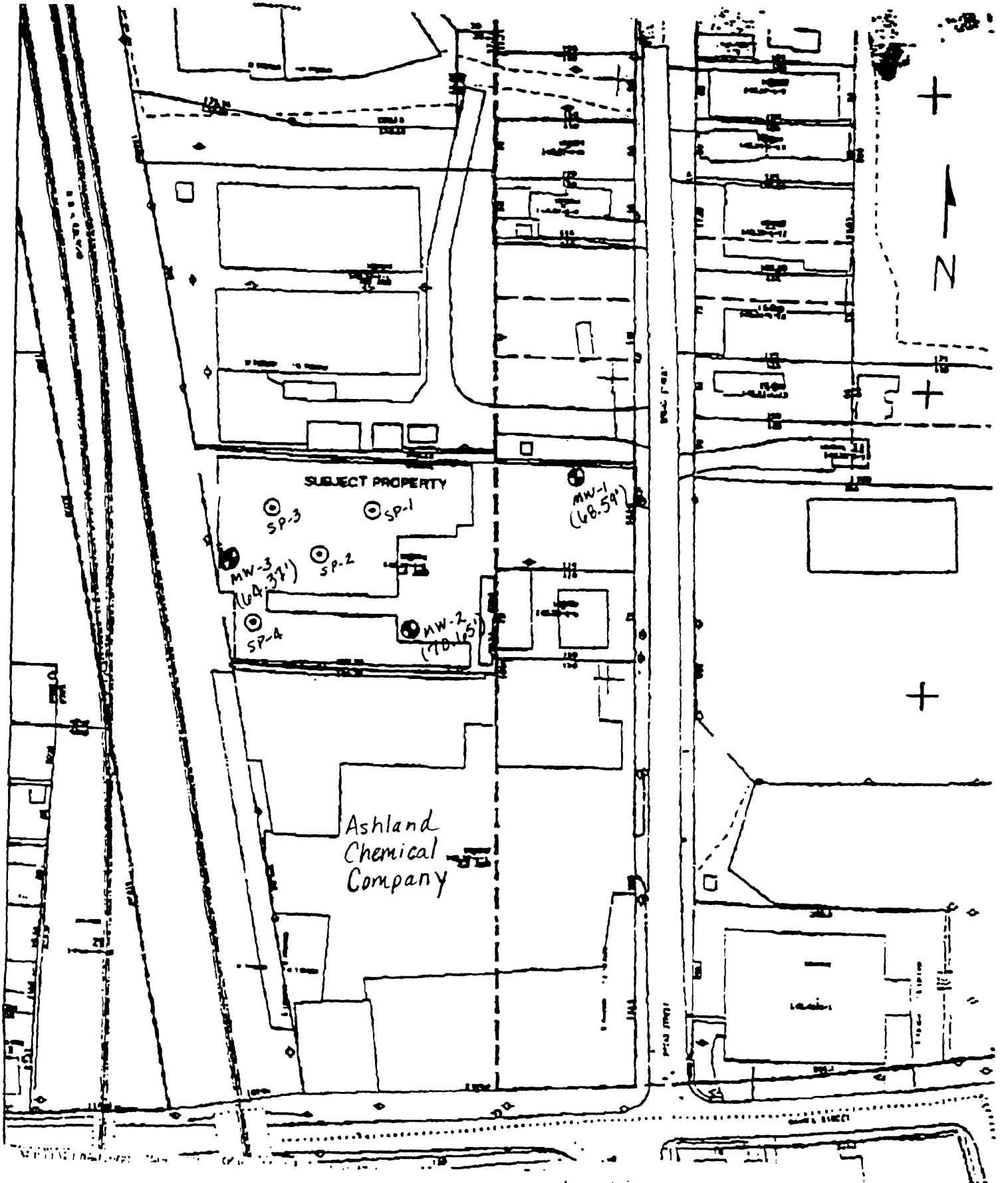
Parameter	Concentration (ppb)			
	MW-1	**MW-2**	**MW-3**	**Standard***
Metals				
Arsenic, total	13.0	16.0	20.0	25.0
Barium, total	13,400	4,130	5,020	1,000
Lead, total	216	36.0	62.0	25.0

Notes:

1. * = Standards presented are New York State Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. (dated June 1998) Class GA Ambient Water Quality Standards and Guidance Values and Ground-Water Effluent Limitations.

2. All concentrations are reported in parts per billion (ppb).

FIGURE 1 13 Broad Street



13 BROAD STREET
BINGHAMTON, NEW YORK

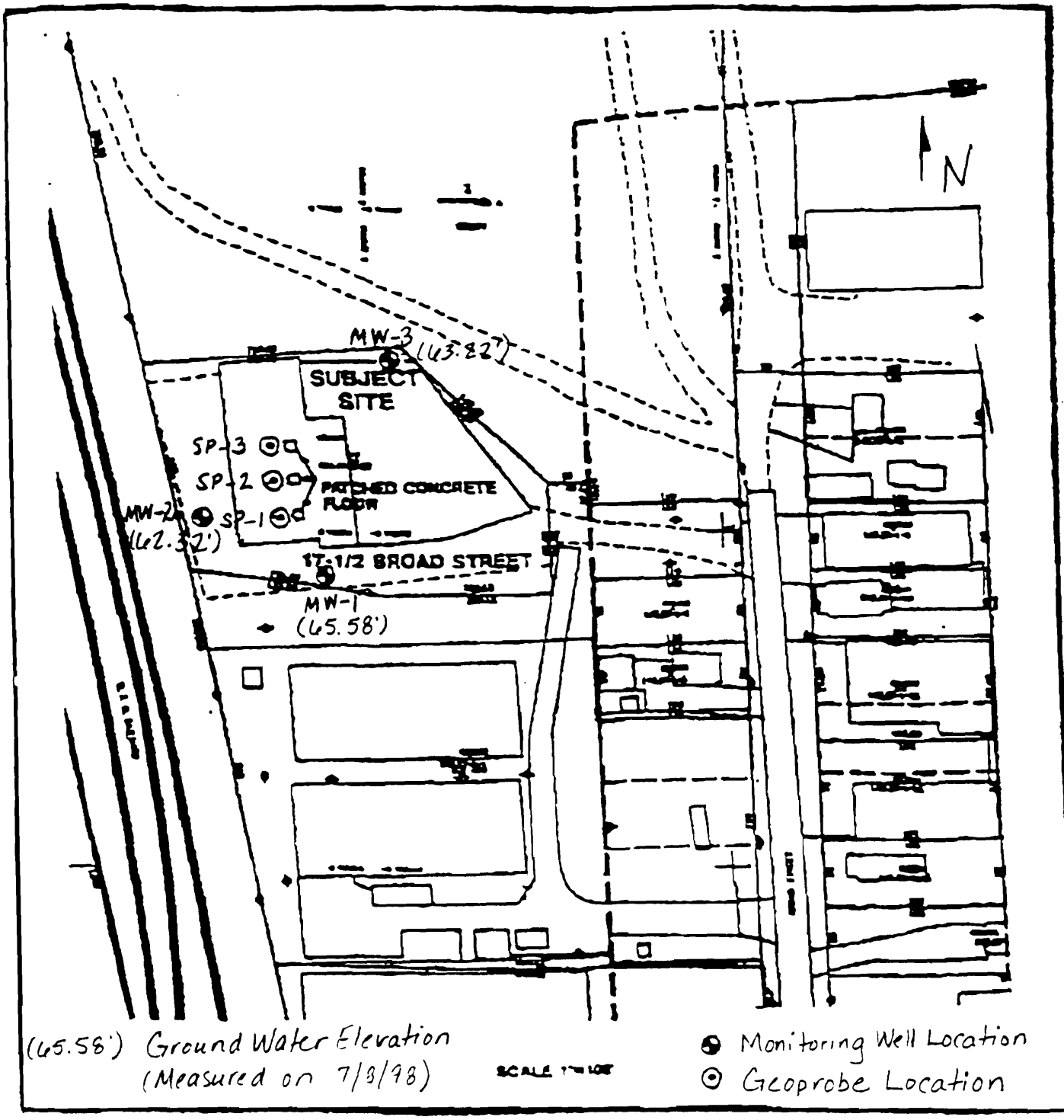
● Monitoring Well Location
⊙ Geoprobe Boring Location
(70.65') Ground Water Elevation (Measured on 7/8/98)

Notes:

All locations are approximate.

Figure taken from DPRA Environmental's June 24, 1998 Proposal for Phase II Subsurface Investigations, Systems Manufacturing Corporation Facilities: Conklin and Binghamton New York

FIGURE 2 17 1/2 Broad Street



CONSULTING · INSPECTION · SERVICE	PHASE II ENVIRONMENTAL SITE ASSESSMENT 17-1/2 BROAD STREET CITY OF BINGHAMTON BROOME COUNTY NEW YORK STATE	FIGURE 1 LOCATION MAP

Notes:

1. All locations are approximate.
2. Figure taken from DPRA Environmental's June 24, 1998 Proposal for Phase Subsurface Investigations, Systems Manufacturing Corporation Facilities: Conklin and Binghamton, New York.

ATTACHMENT 1

References

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