Dvirka and Bartilucci
CONSULTING ENGINEERS

330 Crossways Park Drive, Woodbury, New York, 11797-2015
516-364-9890 ▪ 718-460-3634 ▪ Fax: 516-364-9045
e-mail: findingsolutions@db-eng.com

February 14, 2007

Mr. Patrick J. Van Rossem
Senior Environmental Engineer
KeySpan Corporation
175 East Old Country Road
Hicksville, NY 11801

Re: Glenwood Landing Former Gas Plant Site
Upgradient Investigation Work Scope for
Glen Head Groundwater Plume

Dear Mr. Van Rossem:

Provided for your review is the proposed scope of work for the investigation of the Glen Head groundwater plume near the upgradient property line of the Glenwood Landing former Gas Plant Site. This scope of work is based on:

- The findings of the investigation completed in the summer of 2006 and summarized in the report entitled "Upgradient Groundwater Contamination Sources, Investigation Findings Report," dated August 2006;
- Discussions with the New York State Department of Environmental Conservation (NYSDEC) during the November 15, 2006 meeting between representatives of the NYSDEC, KeySpan Corporation (KeySpan) and Dvirka and Bartilucci Consulting Engineers (D&B);
- Our review of the NYSDEC's January 10, 2007 letter; and
- Our experience with completing similar projects.

The objective of this investigation is to identify the chlorinated volatile organic compounds (CVOCs) associated with the Glen Head groundwater plume near the eastern boundary of the Glenwood Landing former Gas Plant Site.

BACKGROUND

Several sources of CVOCs have been identified approximately one mile upgradient of the former Gas Plant site including at least three dry cleaning businesses and an electronics manufacturer. In 2000, the NYSDEC completed a groundwater investigation in the vicinity of these sources and detected total CVOC concentrations of over 18,000 ug/l in shallow groundwater. The NYSDEC collectively refers to this multiple source chlorinated groundwater contamination as the Glen Head groundwater plume. Based on regional groundwater flow, the Glenwood Landing former Gas Plant facility is within the projected path of the plume.

Based on the groundwater investigation documented in the August 2006 report from D&B, the data clearly indicates that the Glen Head groundwater plume is impacting groundwater at the Glenwood Landing former Gas Plant site. The groundwater investigation confirmed the presence of CVOCs in deep groundwater within the vicinity of the former Gas Plant site. The investigation identified the highest CVOC concentrations within deep groundwater, whereas shallow groundwater samples from this investigation consistently showed low concentrations of these same compounds. In addition, the collected data identified a deep and wide groundwater plume a minimum of 600 feet wide and extending at least 300 feet south and side gradient of the former Gas Plant site. All of the CVOCs detected in groundwater at the former Gas Plant site have also been detected in the Glen Head groundwater plume. However, the CVOC concentrations detected in the vicinity of the former Gas Plant site are significantly lower than those detected in the Glen Head groundwater plume at the source area located 1 mile upgradient of the KeySpan site. Table 4-1 of the August 2006 report presents a comparison of CVOC concentration ranges, and is provided as Attachment A to this letter.

The defined depth and width of the detected groundwater plume indicates that the contamination is not originating from the former Gas Plant site, but the plume source or sources are located well upgradient of the site area. Based on the existing data, it is apparent that the CVOCs detected in groundwater near the site are associated with the Glen Head groundwater plume.

While D&B is confident that the detected CVOCs are associated with the Glen Head groundwater plume, depth limitations associated with the direct-push sampling technologies prevented the interception of the CVOC plume within the most upgradient portion of the KeySpan site. Therefore, this scope of work is designed to attain the necessary depths in this portion of the site (with higher ground level elevation) to address the comments in the NYSDEC's January 10, 2007 letter.

SCOPE OF WORK

D&B will perform the scope of work described below.

Temporary Vertical Profile Well

In order to confirm that the Glen Head groundwater plume is migrating under the KeySpan former Gas Plant site, one temporary vertical profile well will be completed along the easternmost property boundary of the former Gas Plant site, where the ground elevation is approximately 85 feet above mean sea level (msl). A proposed sample location map (Figure 1) is provided as Attachment B. Figure 1 shows the location of the proposed temporary vertical profile well, along with the location and CVOC analytical results of the groundwater probes completed previously during the summer of 2006 investigation.

Note that the proposed vertical profile well sampling method has been successfully used by D&B to define the vertical extent of deep groundwater plumes similar to the Glen Head groundwater plume and has been found to be an acceptable investigative tool for other sites in New York by the NYSDEC and the New York State Department of Health (NYSDOH). For example, the NYSDEC and NYSDOH approved this sample method in 2001 as part of the Remedial Investigation of the KeySpan Hempstead Intersection Street former Manufactured Gas Plant Site, also located in Nassau County, New York.

The vertical profile well will consist of a soil boring completed by hollow stem auger (HSA) drilling method. Based on United States Geological Survey (USGS) Water Resources Investigations Report 03-4288, it is approximately 320 feet from the ground surface to the top of the Raritan Clay confining unit at the location of the proposed well. According to the USGS report, the Magothy aquifer has been completely eroded away at this location and, as a result, the Upper Glacial aquifer is expected to directly overlie the Raritan Clay in this area (see Figure 1-3 of the August 2006 report, provided as Attachment C). However, because stratigraphic information is limited in the vicinity of the site, and the location of the proposed well is close to the USGS's estimated furthest extent of the Magothy aquifer, it is possible that the Magothy aquifer may be present at this location and at a depth significantly shallower than 320 feet.

Based on this stratigraphic information, the vertical profile well will be completed to a maximum depth of approximately 320 feet below grade, and it is not expected to penetrate any substantial confining unit. Therefore, split spoon soil samples will be collected at 10-foot intervals during the completion of the borehole in order to determine stratigraphy. Based on D&B's assessment of the stratigraphic information obtained from the split spoon soil samples, the boring may be terminated at a depth shallower than 320 feet if a substantial confining unit is encountered.

After completing the boring, the drilling contractor will complete downhole gamma logging to provide additional information on site stratigraphy. After completing the downhole logging, a temporary well will be placed into the borehole so that groundwater samples can be collected at

various intervals starting at the bottom of the borehole and working up to shallower intervals. The temporary well will consist of a 1.5 to 2-inch diameter, 4 to 5-foot length of stainless steel well screen or well point connected to 2-inch diameter steel riser pipe.

Sample intervals will be selected in the field by D&B (in consultation with KeySpan) based on the stratigraphic information obtained from the split spoon soil samples and downhole gamma logging as well as the anticipated vertical distribution of the Glen Head groundwater plume from the previous data. Based on a 320-foot boring and the water table located approximately 70 feet below grade along the easternmost property boundary, up to approximately 12 sample intervals will be selected. After selection of the sample intervals, the temporary well will be installed starting with the deepest sample interval. All groundwater samples will be collected sequentially with decreasing depth.

After placement of the well screen at the proper interval, the temporary well will be purged using a submersible pump at between 2 and 4 gallons per minute (gpm). All purge water will be containerized for off-site disposal. D&B will monitor pumped groundwater during the purging process for the following parameters: pH, conductivity, turbidity and temperature. After stabilization of field parameters (i.e., measurements have stabilized to within 10 percent of two consecutive readings), the flow will be reduced to approximately 0.25 gpm and a groundwater sample will be collected from the pump discharge tubing. Each groundwater sample will be analyzed for VOCs by EPA Method 8260.

After successful collection of each sample, the pump and associated tubing will be removed from the temporary well and decontaminated. The temporary well will then be pulled back by the driller to the next sample interval and the sampling process will be repeated. The temporary well will be removed from the borehole after collecting all groundwater samples and the borehole will then be abandoned by tremie tube method using cement-bentonite slurry.

Permanent Well Installation

KeySpan is currently discussing with the NYSDEC whether the temporary vertical profile well described above will suffice for addressing all of the data needs for this project to support closure of the Voluntary Cleanup Agreement (VCA), without installing a permanent well. However, if it is determined that a permanent well is necessary to support closure of the VCA, it will be installed as part of this work scope in accordance with the following. The permanent well will be screened at the depth interval that exhibited the greatest CVOC concentration during the temporary vertical profile well sampling. The well will be installed using hollow stem augers with a minimum inside diameter of 4 inches. The well will be constructed of 2-inch Schedule 40 PVC with a 10-foot long screen. A well schematic is provided as Attachment D. The well will be completed with a steel stick-up locking protective casing.

Permanent Well Development and Sampling

The permanent well will be developed using a submersible pump combined with periodic surging. Development shall continue until the water discharged from the well has a turbidity of 50 NTUs, or less. The well will be sampled utilizing low flow sampling techniques. The groundwater sample will be analyzed for VOCs by EPA Method 8260. Development and purge water will be containerized for off-site disposal.

Reporting and Schedule

D&B will provide KeySpan with a letter report documenting the sample results in tabular form with a discussion of the findings, including conclusions and recommendations. The plan is to perform this work following NYSDEC approval of this scope of work.

As mentioned above, the NYSDEC has, in the past, approved the investigation methodology described above as acceptable to locate deep groundwater plumes. In addition, D&B has successfully utilized this approach to locate deep VOC groundwater plumes at other sites on Long Island.

If you have any questions, please do not hesitate to contact me at (516) 364-9890.

Very truly yours,

Thomas P. Fox
Senior Associate

PVR/AMC/abl
Attachment
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ATTACHMENT A

COMPARISON
OF
CHLORINATED VOC CONCENTRATION RANGES

TABLE 4-1

KEYSPAN CORPORATION
GLENWOOD LANDING GAS PLANT SITE

COMPARISON OF CHLORINATED VOC CONCENTRATION RANGES

Compound	Upgradient Groundwater Concentration Range - Glen Head Groundwater Plume [1]	Upgradient Groundwater Concentration Range - TransTechnology [2]	Glenwood Landing Former Gas Plant Site Groundwater Concentration Range (2001,2003) [3]	MIP/Groundwater Probe Investigation (2006) [4]
PCE	ND - 18,000	ND - 16,000	ND - 1,700	ND - 680
TCE	ND - 130	ND - 1,800	ND - 270	ND - 430
1,2 - DCE	ND - 130	ND - 310	ND - 180	ND - 74
TCA	ND - 4	ND - 41	ND - 7	ND - 6
1,1 - DCA	ND - 1	ND - 15	ND - 10	ND - 4
Total Chlorinated VOCs	3 - 18,192	ND - 16,252	ND - 2,167	ND - 1,166

Notes:

All concentrations in ug/l.

[1] : From September 2000 Glen Head Groundwater Plume PSA Report by LMS

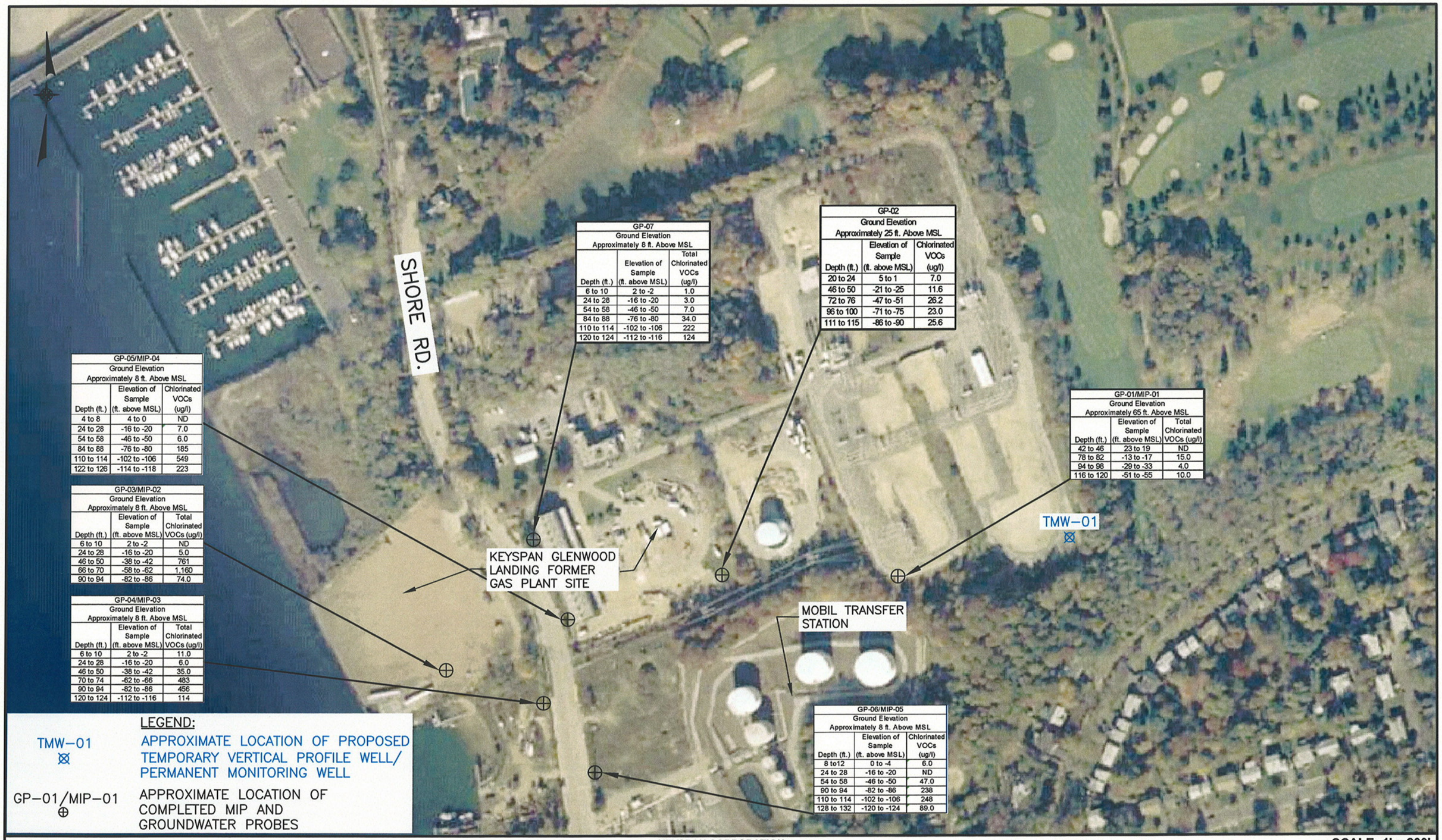
[2] : From May 1997 TransTechnology Subsurface Investigation by CRA

[3] : From September 2001 Supplemental Environmental Site Assessment and October 2003 Supplemental Environmental Sampling Report by VHB

[4] : From 2006 MIP/Groundwater Probe Investigation by D&B

ATTACHMENT B

SAMPLE LOCATION MAP



GP-05/MIP-04 Ground Elevation Approximately 8 ft. Above MSL		
Depth (ft.)	Elevation of Sample (ft. above MSL)	Chlorinated VOCs (ug/l)
4 to 8	4 to 0	ND
24 to 28	-16 to -20	7.0
54 to 58	-46 to -50	6.0
84 to 88	-76 to -80	185
110 to 114	-102 to -106	549
122 to 126	-114 to -118	223

GP-03/MIP-02 Ground Elevation Approximately 8 ft. Above MSL		
Depth (ft.)	Elevation of Sample (ft. above MSL)	Total Chlorinated VOCs (ug/l)
6 to 10	2 to -2	ND
24 to 28	-16 to -20	5.0
46 to 50	-38 to -42	761
66 to 70	-58 to -62	1,160
90 to 94	-82 to -86	74.0

GP-04/MIP-03 Ground Elevation Approximately 8 ft. Above MSL		
Depth (ft.)	Elevation of Sample (ft. above MSL)	Total Chlorinated VOCs (ug/l)
6 to 10	2 to -2	11.0
24 to 28	-16 to -20	6.0
46 to 50	-38 to -42	35.0
70 to 74	-62 to -66	483
90 to 94	-82 to -86	456
120 to 124	-112 to -116	114

GP-07 Ground Elevation Approximately 8 ft. Above MSL		
Depth (ft.)	Elevation of Sample (ft. above MSL)	Total Chlorinated VOCs (ug/l)
6 to 10	2 to -2	1.0
24 to 28	-16 to -20	3.0
54 to 58	-46 to -50	7.0
84 to 88	-76 to -80	34.0
110 to 114	-102 to -106	222
120 to 124	-112 to -116	124

GP-02 Ground Elevation Approximately 25 ft. Above MSL		
Depth (ft.)	Elevation of Sample (ft. above MSL)	Chlorinated VOCs (ug/l)
20 to 24	5 to 1	7.0
46 to 50	-21 to -25	11.6
72 to 76	-47 to -51	26.2
96 to 100	-71 to -75	23.0
111 to 115	-86 to -90	25.6

GP-01/MIP-01 Ground Elevation Approximately 65 ft. Above MSL		
Depth (ft.)	Elevation of Sample (ft. above MSL)	Total Chlorinated VOCs (ug/l)
42 to 46	23 to 19	ND
78 to 82	-13 to -17	15.0
94 to 98	-29 to -33	4.0
116 to 120	-51 to -55	10.0

GP-06/MIP-05 Ground Elevation Approximately 8 ft. Above MSL		
Depth (ft.)	Elevation of Sample (ft. above MSL)	Chlorinated VOCs (ug/l)
8 to12	0 to -4	6.0
24 to 28	-16 to -20	ND
54 to 58	-46 to -50	47.0
90 to 94	-82 to -86	238
110 to 114	-102 to -106	248
128 to 132	-120 to -124	89.0

LEGEND:

TMW–01 ⊠ — APPROXIMATE LOCATION OF PROPOSED TEMPORARY VERTICAL PROFILE WELL/ PERMANENT MONITORING WELL

GP–01/MIP–01 ⊕ — APPROXIMATE LOCATION OF COMPLETED MIP AND GROUNDWATER PROBES

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

KEYSPAN CORPORATION
GLENWOOD LANDING FORMER GAS PLANT SITE

PROPOSED SAMPLE LOCATION

SCALE: 1' = 200'

FIGURE 1

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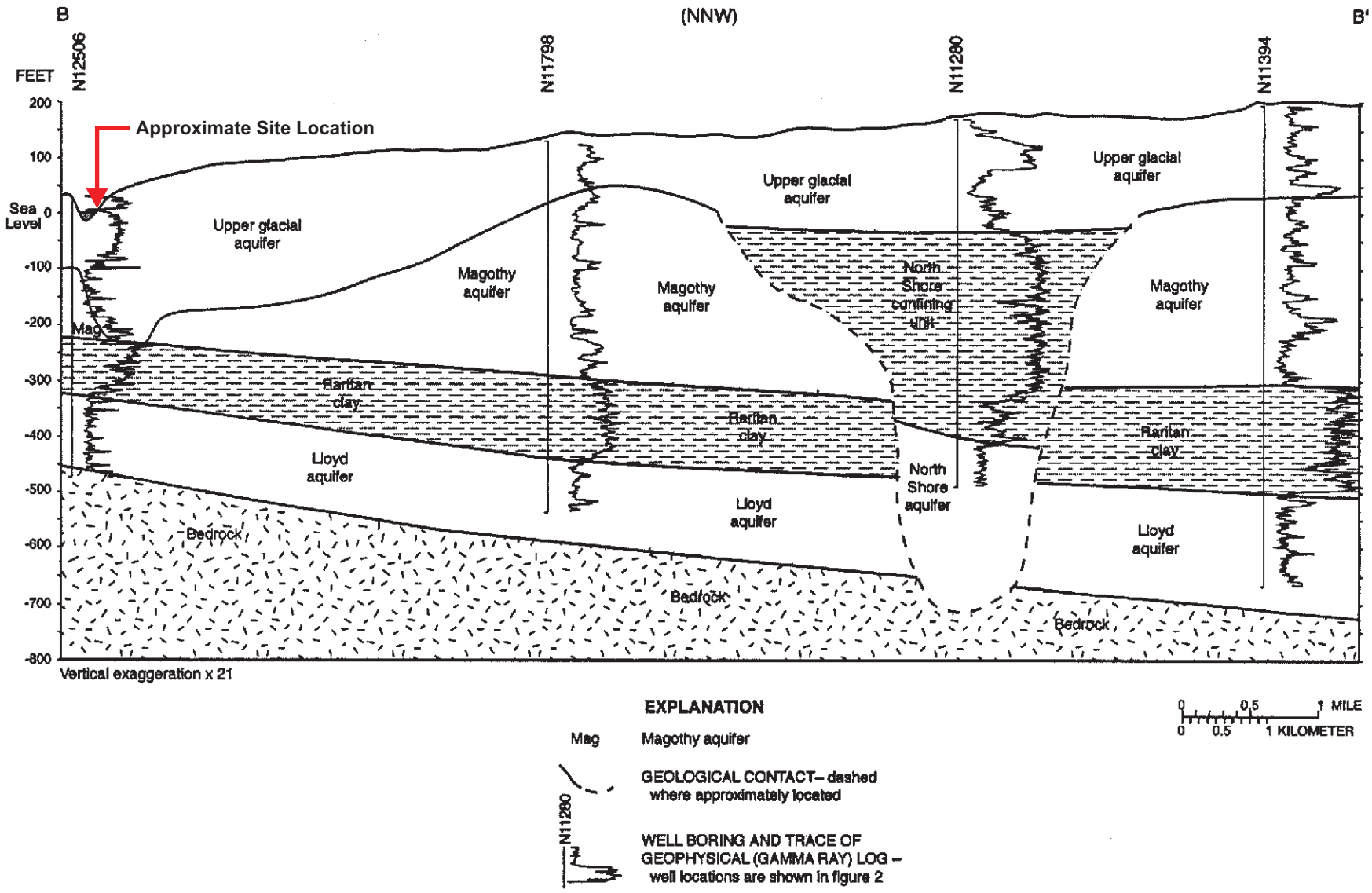
ATTACHMENT C

GEOLOGIC CROSS-SECTION
OF
SITE AND UPGRADIENT AREAS



SOURCE: USGS WATER RESOURCES INVESTIGATIONS REPORT 03-4288

RLA/FIGURE/KEYSPAN1620(04/12/05)

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A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, PC.

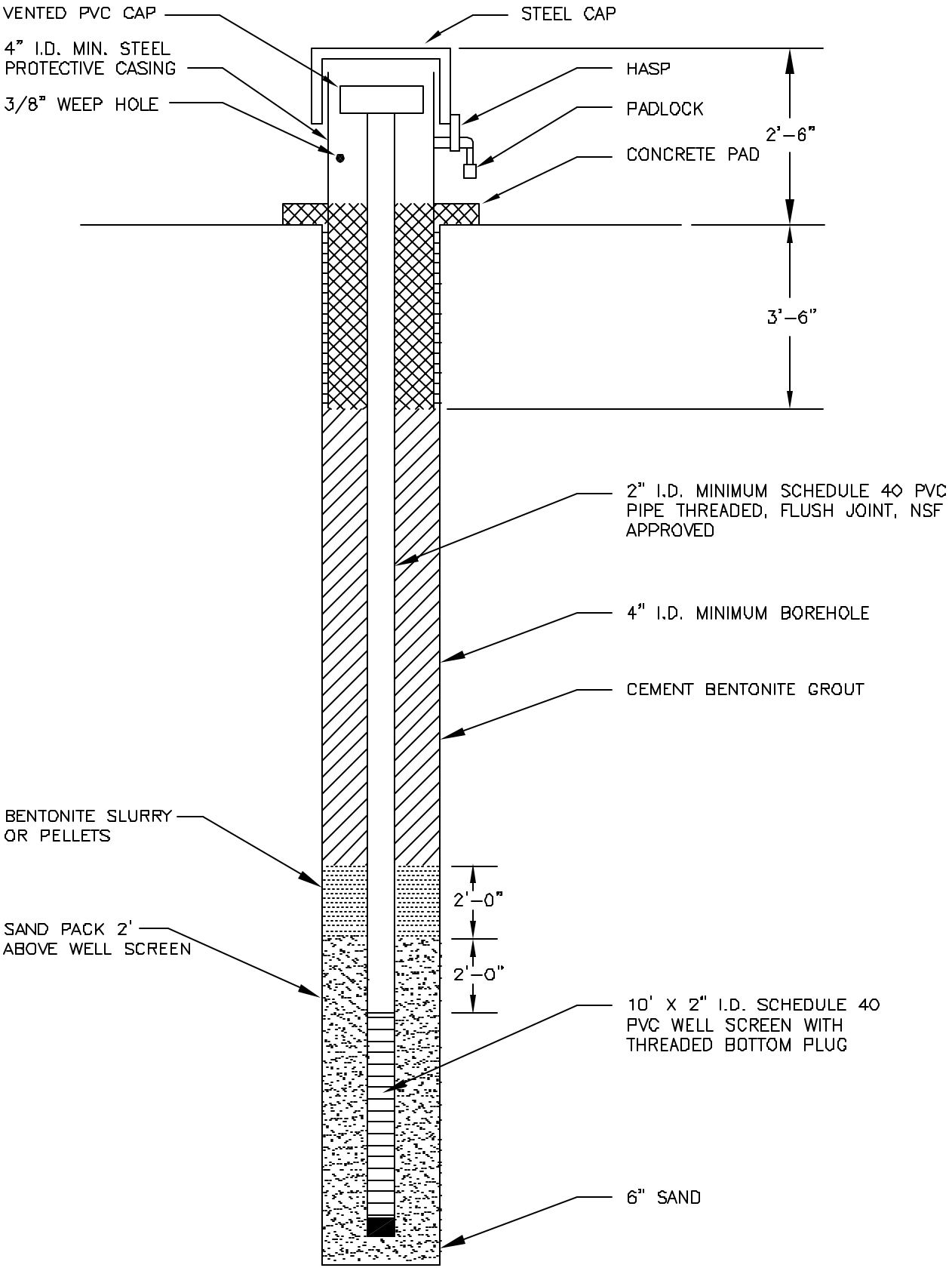
GLENWOOD LANDING FORMER GAS PLANT SITE
GLENWOOD LANDING, NEW YORK

GEOLOGIC CROSS-SECTION OF SITE AND UPGRADIENT AREAS

FIGURE 1-3

ATTACHMENT D

WELL SCHEMATIC



N.T.S.

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KEYSPAN CORPORATION
GLENWOOD LANDING FORMER GAS PLANT SITE

PLAN FOR CONSTRUCTION OF PERMANENT MONITORING WELLS

FIGURE 2