New York State Department of Environmental Conservation
Division of Environmental Remediation

BEEKMAN HIGHWAY GARAGE
INACTIVE HAZARDOUS WASTE SITE #314094
TOWN OF BEEKMAN, DUTCHESS COUNTY
FACT SHEET: PROPOSED REMEDIAL ACTION PLAN
FEBRUARY 1999

INTRODUCTION

The Beekman Highway Garage (the Site) is located on Town of Beekman property at the intersection of County Road 7 and Gardner Hollow Road in the Hamlet of Poughquag in Dutchess County (**Fig. 1**). The site is approximately 0.75 acre in area, and is situated in the north-central part of the 10-acre Town of Beekman Highway Dept. and Town Hall property. The site is in a fairly hilly rural area of central Dutchess County. Approximately 2000 feet to the north-west of the site is a regulated wetland. A stream flowing south from this wetland forms a tributary to the Whaley Creek, 1500 feet to the south of the site. Whaley Creek supports trout propagation and fishing. The area immediately to the west of the site was mined for gravel for the Town Highway Dept.

SITE HISTORY

In 1991 and 1992, nine residential drinking water wells in the hamlet of Poughquag, Town of Beekman, New York were found to contain elevated concentrations of salt and of these nine wells, seven had 1,1,1 trichloroethane (TCA) concentrations exceeding NYS drinking water standards. There were also lower concentrations of other volatile organic compounds (VOCs), such as perchloroethylene (PCE) and 1,1 dichloroethylene (DCE) in these seven wells.

In 1994 and 1995, consultants to the New York State Department of Environmental Conservation (NYSDEC), the Town of Beekman and the citizens of Poughquag conducted separate investigations to determine the source of VOCs in the hamlet drinking water. These investigations revealed that TCA, PCE and related compounds are present in soil and groundwater on the Site.

In May 1995, the Site was placed on the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites as a Class 2 site. A Class 2 designation means that hazardous wastes are known to have been disposed on-site, and that the wastes constitute a significant threat to human health and/or the environment.

In May 1996, the NYSDEC collated the data collected by the various consultants in 1994 and 1995 in the form of a Preliminary Site Assessment (PSA) report. The report recommended that a focused Remedial Investigation and Feasibility Study (RI/FS) be conducted to: 1) more fully delineate the sources of groundwater contamination at the Highway Garage; 2) determine the extent of subsurface contamination emanating from these sources; and 3) evaluate remedial alternatives.

In July 1997, the Town entered into an Order on Consent with the NYSDEC, under which the Town would voluntarily conduct a focused Remedial Investigation (RI). The RI Field Investigation was completed in March 1998 and included a geophysical survey, a soil-gas survey, and the installation and sampling of

groundwater monitoring wells. The FS was completed in December 1998.

Operational/Disposal History

While the period during which the releases of wastes into the environment occurred is unknown, three operational activities are presumed to have caused the releases.

- Use of PCE in the Block Maintenance Building, and its release into the service pit inside the building (**Fig.2**).

- Use of TCA in the Pole Barn (referred to as the Steel Building in the PSA) and its suspected release into the floor drain and injection wells west of the building.

- Disposal of surplus road sealer in the Tar Pit Area at the north-east corner of the Steel Building.

Two underground storage tanks (USTs) containing petroleum related products were removed in 1989 and 1993. The soil and groundwater have also been contaminated by releases from these tanks. The cleanup of these releases is included in this PRAP.

Remedial History

In April 1996, the Town entered into a Memorandum of Understanding (MOU) with the NYSDEC, which obligated the Town to construct a central water system to provide potable water to affected residences. This system was constructed and brought on line in February 1997.

In November, 1994, the contaminated soil from the service bay pit was excavated and disposed off at a permitted disposal facility. Soils were removed to a depth of 6 feet below the floor of the pit (11 feet below the garage floor).

An area to the north of the steel building and west of the block building was formerly used to dispose of excess road sealer. In May, 1994, during excavation work for the footings of the addition to the steel building, a dark tar-like substance was encountered and the soil around it was contaminated with PCE. On July 28, 1994, the road sealer was excavated and removed. The material was generally located in a layer approximately 2.5 feet below the ground surface. The depth of the excavation to remove all of the affected soil was 4.5 feet.

RESIDUAL SITE CONTAMINATION

Nature of Contamination:

The main categories of contaminants which exceed their SCGs are VOCs, specifically PCE, toluene, ethylbenzene and xylenes, and a semi-volatile organic compound (SVOC) called napthalene. Salient features are described below:

Extent of Contamination

Soil

In the former refueling UST area, soils contained VOCs at concentrations above the allowable NYSDEC cleanup guidance objectives for soil. A 4,000 gallon gasoline UST and a 2,000 gallon diesel UST were situated in this area until their removal in 1989 and 1993, respectively. The approximate UST and pump island locations are shown on **Fig. 3**. The contamination is localized within the fluctuation range of the groundwater table elevation between 10 to 16 feet below grade. The most common VOCs present in this area are toluene, ethylbenzene, and xylenes, which are the primary constituents of gasoline and diesel fuel, and indicate probable leakage from one or both of the USTs prior to their removal.

Groundwater

Of the 18 monitoring wells sampled, the most significant analytical result was obtained from well MW-18S, situated in the north-west corner of the Steel Building, which in 1997 had PCE concentration of 440 ppb, and in December 1998 had a concentration of 337 ppb. This well will require continued monitoring to determine if the decrease in concentration is due to the past remedial actions at the site or to seasonal fluctuations.

SUMMARY OF THE PROPOSED REMEDY

The goal of the proposed remedy is to, at a minimum, eliminate or mitigate all significant threats to the public health or the environment presented by the hazardous waste present at the Site.

The elements of the proposed remedy are as follows:

1. Excavate and remove the contaminated soils at the former UST areas to TAGM 4046 guidance objective values. As an alternative to TAGM 4046, cleanup guidance values in the NYSDEC's "Spill Technology and Remediation Series Memo #1" for petroleum related contaminants may be used.

   or

   Install a Soil Vapor Extraction (SVE) system to extract contaminants from the soil in the unsaturated zone at the former UST areas, and operate the system until the NYSDEC determines that its continued use would no longer be productive.

2. Should petroleum related contaminants be encountered on the groundwater surface, an LNAPL recovery system would be installed.

3. Monitor groundwater quality to confirm a decreasing trend in contaminant concentrations. The monitoring program would require that 4 monitoring wells and 5 private wells at residences not supplied with municipal water be sampled annually.

For a complete analysis of the remedy and the alternatives considered, please see the PRAP on file at one of the record repositories.

CITIZEN PARTICIPATION

THE NYSDEC seeks input from the community on all PRAPs. A public comment period has been set from **March 1, 1999 to March 30, 1999** to provide an opportunity for public participation in the remedy selection process for this site. A public meeting is scheduled for **March 15, 1999** at the **Beekman Town Hall** beginning at 7:00 p.m. In case of inclement weather, the meeting will be rescheduled for **March 22, 1999.**

See enclosed "NOTICE OF PUBLIC MEETING."

At the meeting, the results of the RI/FS will be presented along with a summary of the proposed remedy. After the presentation, a question and answer period will be held, during which the public can submit verbal or written comments on the PRAP.

The NYSDEC may modify the preferred alternative or select another of the alternatives presented in the PRAP, based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified in the PRAP.

Public comments will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision. The Record of Decision is the NYSDEC's final selection of the remedy for this site. Written comments, postmarked before March 30, 1999, may be sent to Mr. Keith Browne, Project Manager, NYSDEC, Region 3, 21 S. Putt Corners Road, New Paltz, NY 12561. The PRAP may be reviewed at the Beekman Town Hall or at the NYSDEC Region 3 office.

ADDITIONAL INFORMATION

For additional information regarding the PRAP, contact:

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Project Manager
NYSDEC, Region 3
(914) 256-3152

Michael Knipfing
Citizen Participation Specialist
NYSDEC, Region 3
(914) 256-3154
or
1-800-342-9296 (toll free)

For health related concerns, call or write:

Geoff J. Laccetti
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Bureau of Environmental Exposure
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2 University Place
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or
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Health Liaison Program
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2 University Place
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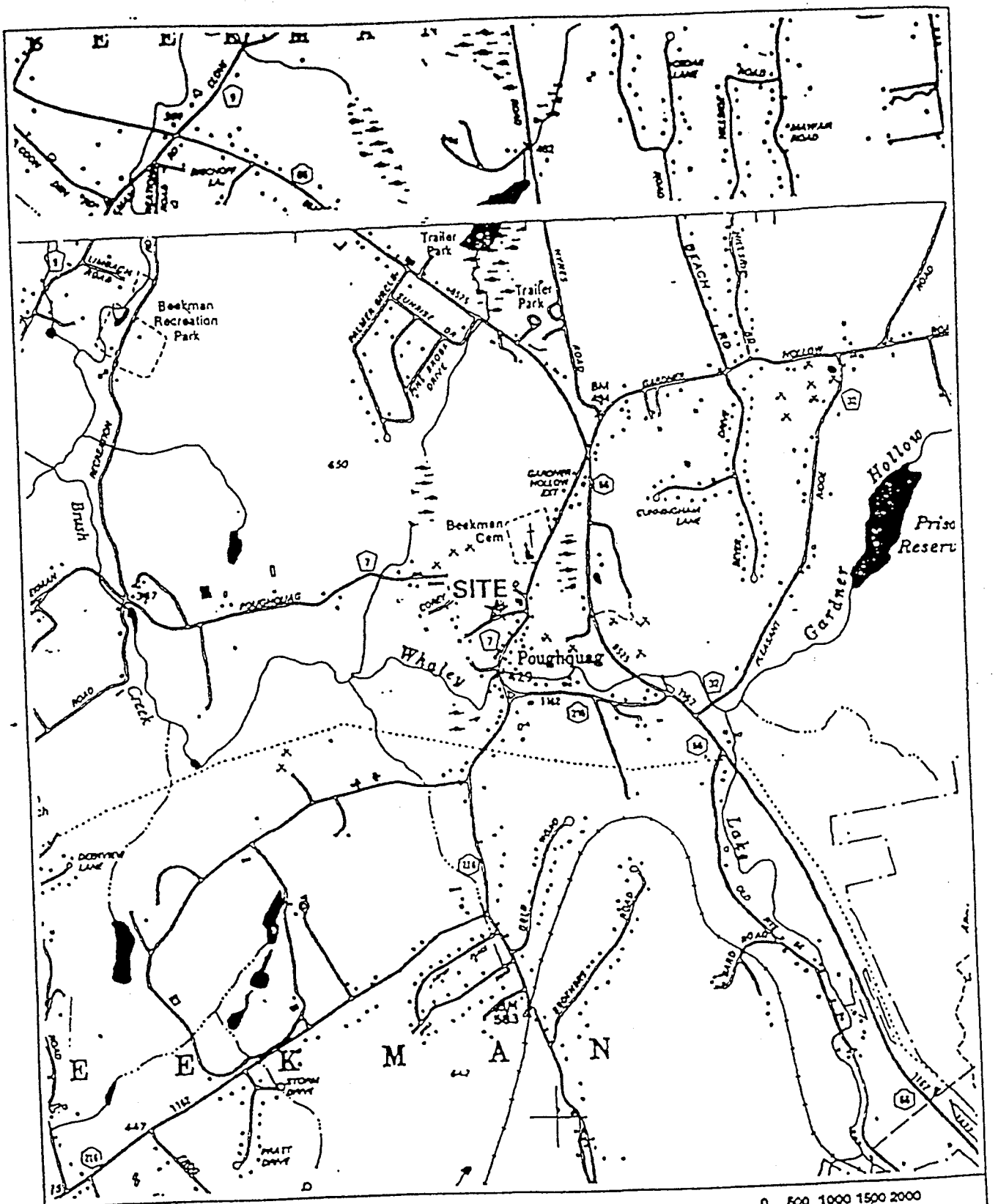

Site Location Map

314094 Beekman Town Garage

NYSDOT Planimetric Quadrangle(s):
VERBANK, POUGHQUAG

Scale 1:24,000
April 18, 1996

FIGURE 1

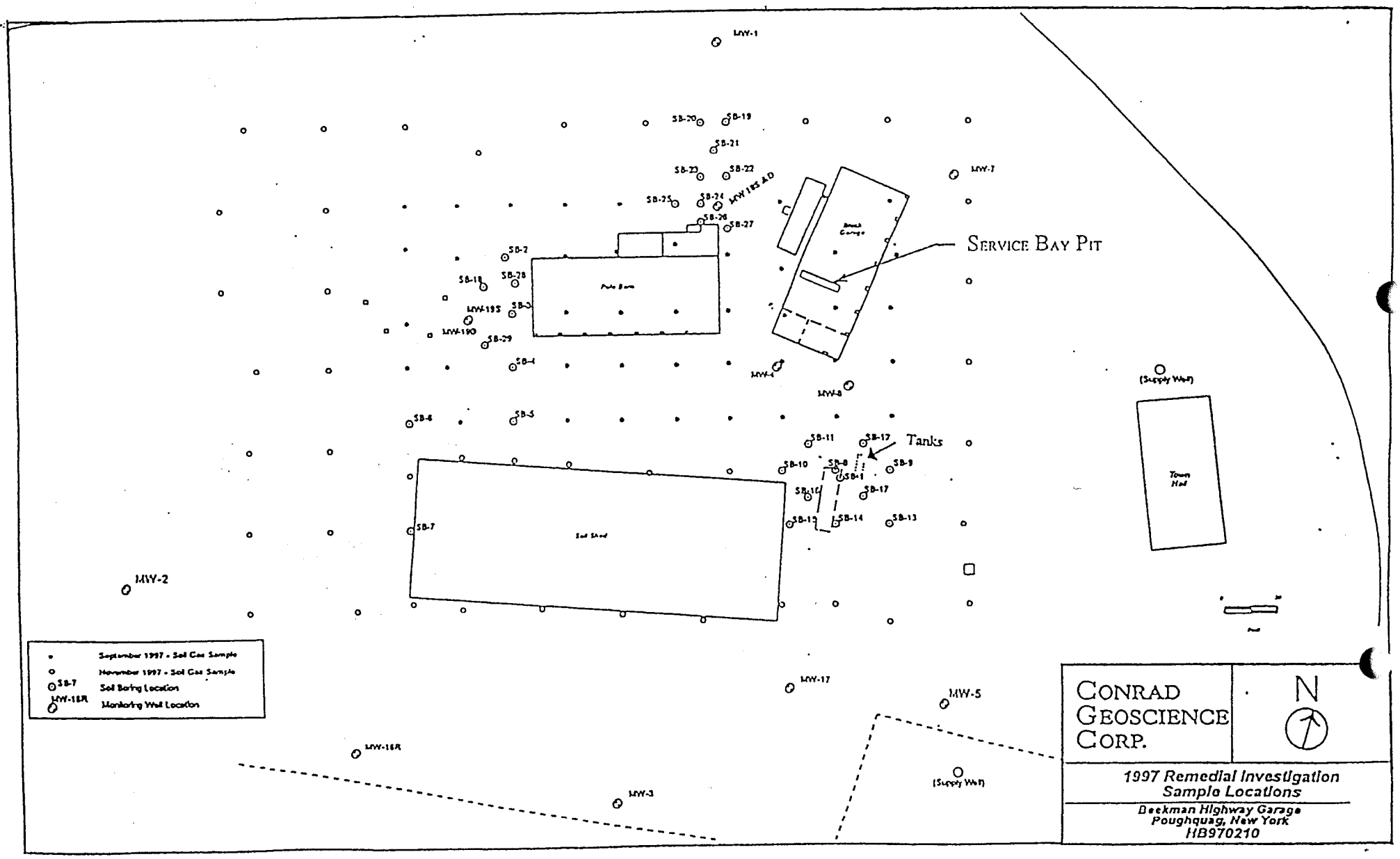
MW-1
MW-7
SB-20
SB-19
SB-21
SB-23
SB-22
SB-25
SB-24
SB-26
SB-27
SERVICE BAY PIT
SB-2
SB-18
SB-28
MW-19S
SB-3
MW-19D
SB-29
SB-4
MW-4
MW-8
(Supply Well)
SB-6
SB-5
SB-11
SB-17
Tanks
SB-10
SB-9
SB-1
SB-16
SB-17
SB-7
SB-12
SB-14
SB-13
Town Hall
MW-2
MW-17
MW-5
MW-16R
MW-3
(Supply Well)
September 1997 - Soil Gas Sample
November 1997 - Soil Gas Sample
SB-7 Soil Boring Location
MW-16R Monitoring Well Location
CONRAD GEOSCIENCE CORP.
N
1997 Remedial Investigation
Sample Locations
Beekman Highway Garage
Poughquag, New York
HB970210

Figure 2

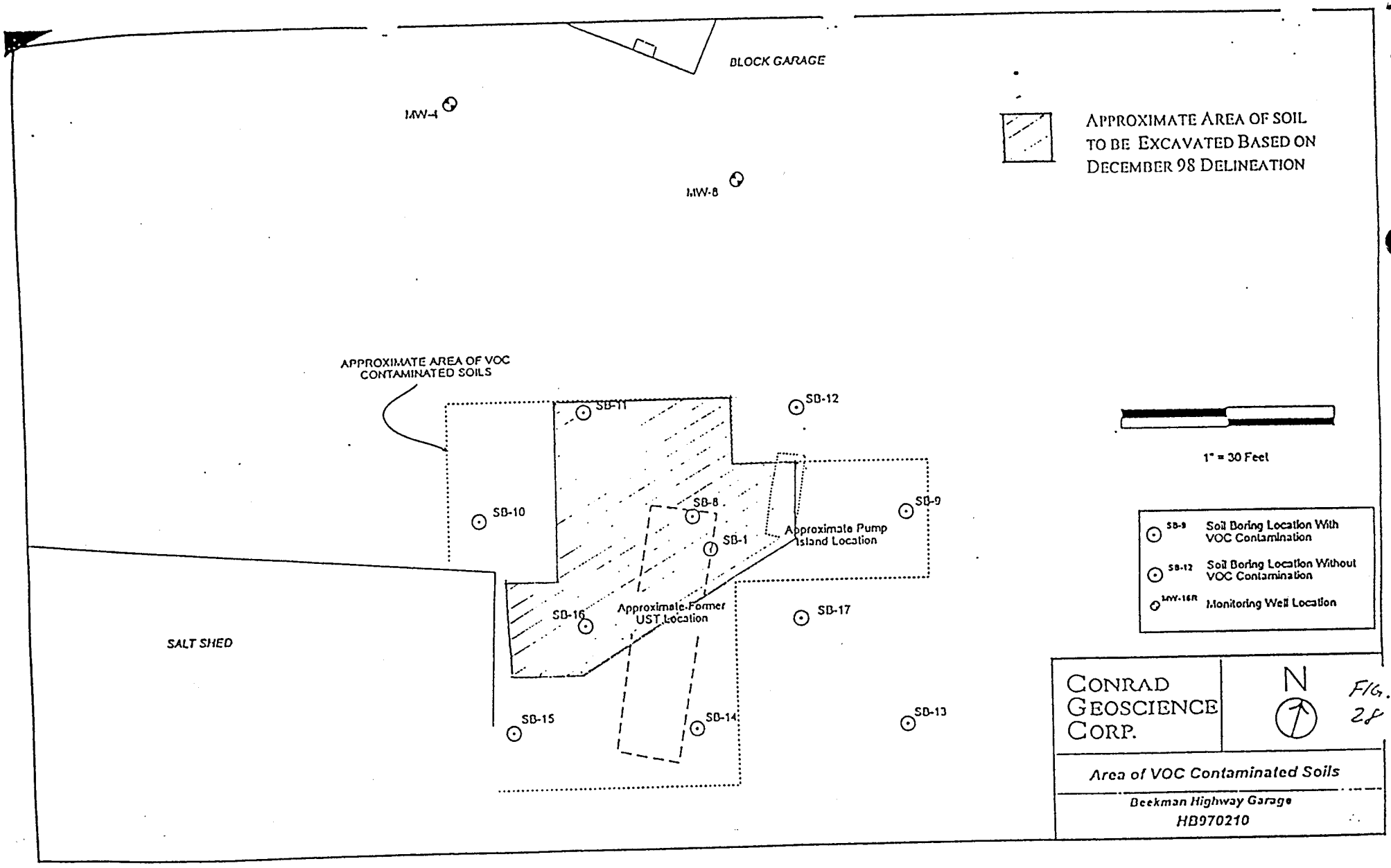
BLOCK GARAGE
MW-4
MW-8
APPROXIMATE AREA OF SOIL TO BE EXCAVATED BASED ON DECEMBER 98 DELINEATION
APPROXIMATE AREA OF VOC CONTAMINATED SOILS
SB-11
SB-12
SB-10
SB-8
SB-9
SB-1
Approximate Pump Island Location
SB-16
Approximate Former UST Location
SB-17
SALT SHED
SB-15
SB-14
SB-13
1" = 30 Feet
SB-9 Soil Boring Location With VOC Contamination
SB-12 Soil Boring Location Without VOC Contamination
MW-16R Monitoring Well Location
CONRAD GEOSCIENCE CORP.
N
FIG. 2
Area of VOC Contaminated Soils
Beekman Highway Garage
HB970210

Figure 3