

CORAL GRAPHIC SERVICES, INC.

Phase II Environmental Site Assessment

**840 S. Broadway
Hicksville, NY**



**327 New South Road
Hicksville, NY**



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ACRONYMS AND ABBREVIATIONS

1,1,1-TCA	1,1,1-Trichloroethane
1,1-DCA	1,1-Dichloroethane
1,2-DCE	1,2-Dichloroethene
ACM	asbestos containing materials
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
DRO	diesel range organics
EMA	Environmental Management Associates, Inc.
ESA	Environmental Site Assessment
Geoprobe®	direct push techniques
Hooker/Ruco	Hooker Chemical/Ruco Polymer
ID	inner diameter
IDW	investigation derived waste
MDL	method detection limit
MEK	2-Butanone
MTBE	Methyl-tert butyl ether
NASA	National Aeronautics and Space Administration
Northrop/Grumman	Northrop/Grumman Aerospace Corporation
NPL	National Priority List
NWIRP	Naval Weapons Industrial Reserve Plant
NYSDEC	New York State Department of Environmental Conservation
OD	outer diameter
PCE	Tetrachloroethene
PID	photoionization detector
PLM	Polarized Light Microscopy
ppmv	parts per million by volume
PETG	Polyethylene Teraphthalate
QA/QC	quality assurance / quality control
sf	square foot
SVOC	semivolatile organic compound
T.O.G.S 1.1.1	New York State Groundwater Quality Standards
TAGM 4046	New York State Technical and Administrative Guidance Memorandum recommended soil clean-up objectives
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TEM	Transmission Electron Microscopy
TVOC	total volatile organic compound
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
VC	Vinyl chloride
VCM	Vinyl chloride monomer
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WCA&G	Walter, Conston, Alexander & Green, P.C.



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1.0 INTRODUCTION

This report has been prepared by Malcolm Pirnie, Inc. in conjunction with Walter, Conston, Alexander & Green, P.C. (WCA&G), counsel to Bertelsmann AG. The project is being undertaken to support the proposed acquisition of Coral Graphic Services, Inc. by Dynamic Graphic Finishing, Inc., a subsidiary of Bertelsmann AG. The acquisition of Coral Graphic Services, Inc. involves Coral Graphic Services of New York, Coral Graphic Services of Virginia, and Vintage Graphic Arts, LTD. These entities will be referred to as the "Company". Material contained herein represents due diligence efforts addressing environmental issues associated with the proposed transaction.

Malcolm Pirnie, Inc. in conjunction with WCA&G prepared a *Phase I Environmental Site Assessment* (ESA) of the Company dated May 2000. The findings of the Phase I ESA led to the conclusion that a Phase II ESA be conducted at the Company's New York production facility and its warehouse facility located at 840 S. Broadway, Hicksville, NY and 327 New South Road, Hicksville, NY, respectively. This document presents a description of the work completed during the Phase II ESA effort and findings and conclusions of the Phase II ESA. The anticipated environmental remediation cost ranges developed as part of the Phase II ESA are also presented in this report.

Based on the initial Phase I assessment, the objectives of the Phase II investigation included:

- Compile analytical environmental data for the on-site soil and groundwater and compare to New York State Department of Environmental Conservation (NYSDEC) standards and guidance to determine baseline environmental conditions at the subject properties
- Compile analytical data for the possibly asbestos-containing floor tiles (in poor condition) in a storage room of the warehouse facility
- Evaluate the potential impact of properties adjacent to the subject properties
- Estimate the potential liability exposure associated with the Company's operations in Hicksville, NY
- Determine remediation cost ranges for property resale

The Phase II ESA involved a review of investigations conducted at properties adjacent to each site, a focused geophysical survey at each site, the determination of the local groundwater flow direction at each site, and the collection and analysis of subsurface soil and groundwater samples at each site. ESA fieldwork began on June 13, 2000. During the subsurface investigation at the 840 S. Broadway, Hicksville, NY property, a contaminated area was identified. Work at that area was temporarily halted due to high concentrations of volatile compounds in the breathing zone. A soil sample was collected from that area and an expanded Phase II investigation of the "hot area" was authorized. Fieldwork for the expanded investigation began on June 27, 2000. All ESA fieldwork was completed by June 30, 2000.



2.0 SITE BACKGROUND AND DESCRIPTION

The Company's operations involve the use of two production facilities and a warehouse facility. The Phase II ESA includes assessments of the Hicksville, NY production facility and the warehouse facility (also located in Hicksville, NY). The location of each site is illustrated in Figure 1. This section presents a summary of the site backgrounds and descriptions. The information was taken from the *Phase I Environmental Site Assessment*.

2.1 840 South Broadway, Hicksville, NY

The 840 S. Broadway property is the Company's headquarters and its largest production facility. The 4-acre lot houses a 58,100-square foot (sf) single story building with a 3,560-sf second floor office area (Figure 2). The existing building was constructed in 1960 and occupied by Unity Buying Service, a mail-order showroom, from approximately 1960 to 1985. Grumman Industries renovated the building and used it as a training center from 1985 to 1990. The building was vacant from 1990 to 1994 and was purchased for use by the Company in 1994. The property is situated in a primarily industrial area of northeastern Nassau County.

2.2 327 New South Road, Hicksville, NY

The Company's 15,000-sf warehouse facility (Figure 3) is located on a 42,900-sf tract of land ½-mile northwest of the production facility. The exact date of building construction was not determined, however, the building was constructed between 1953 and 1966. Prior occupants of the property include South Nassau Control Corporation, and Busada Manufacturing Corporation. South Nassau Control Corporation is a division of Oceanside Launderers and reportedly occupied the site for seven years. Busada Manufacturing occupied the building for at least 10 years. The property is situated in a primarily industrial area with residential units to the west.

2.3 Regional Hydrogeology

Northeastern Nassau County is underlain by unconsolidated coastal plain deposits of Cretaceous, Tertiary, and Quaternary age. These deposits overlie igneous and

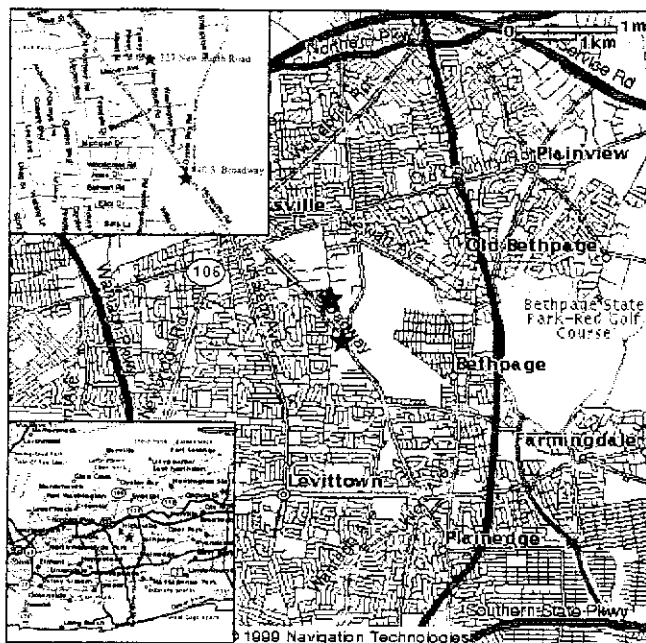


Figure 1: Site Location Map
840 S. Broadway and 327 New South Road



metamorphic rocks of Precambrian age. The Precambrian age bedrock is not a source of water and forms a base of the groundwater reservoir. The Raritan Formation lies upon the bedrock and is divided into the Lloyd Sand Member and a clay member. The Lloyd Sand Member is a productive aquifer in Nassau County and the clay member is a confining unit for most of the Lloyd Sand Member. The Magothy Formation rests upon the Raritan Formation and is also a productive aquifer. The Upper Glacial Aquifer rests upon the Magothy Formation and forms the uppermost hydrogeologic unit over most of Long Island. The Upper Glacial Aquifer is comprised of low permeability till and moderate to highly permeable late Pleistocene outwash deposits consisting of layers of sand and gravel. Groundwater within the Upper Glacial Aquifer occurs under unconfined conditions. The regional direction of groundwater flow is southerly. The average horizontal hydraulic conductivity within the Upper Glacial Aquifer ranges from about 270 ft/day within outwash deposits to approximately 135 ft/day within morainal deposits. Longitudinal to lateral hydrologic anisotropy within the Upper Glacial Aquifer is roughly 10 to 1 with a longitudinal to vertical anisotropy ratio of about 100 to 1.

3.0 POTENTIAL IMPACT OF ADJACENT PROPERTIES

The *Phase I Environmental Site Assessment* included a review of databases and files from federal, state, and local environmental regulatory agencies regarding the subject properties and adjacent properties within a one-mile radius. The results of the review indicated that the subject properties could be adversely impacted by releases to the environment at adjacent properties.

The Phase II ESA effort involved further investigation of adjacent properties to determine if contaminated groundwater may be migrating onto the subject properties. Compounds such as methyl-tert butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylenes are documented to be ubiquitous contaminants in the groundwater in industrial areas of Long Island. These contaminants are likely to be encountered in the groundwater at the subject properties. The major concern identified in the vicinity of the subject properties is commingled downgradient groundwater contamination from three sites: the Hooker Chemical/Ruco Polymer (Hooker/Ruco) U.S. Environmental Protection Agency (USEPA) National Priority List (NPL) site, the Northrop/Grumman Aerospace Corporation (Northrop/Grumman) New York State Department of Environmental Conservation (NYSDEC) inactive hazardous waste site, and the Naval Weapons Industrial Reserve Plant (NWIRP) NYSDCE inactive hazardous waste site.

The USEPA and NYSDCE are working together to evaluate and develop remedial alternatives to address the commingled groundwater plume downgradient of the sites. A 1985 U.S. Geological Survey (USGS) study identified the presence of groundwater contamination plume. The volatile organic compounds (VOCs) most frequently detected in the groundwater by the USGS study were trichloroethene (TCE) and tetrachloroethene (PCE). Vinyl chloride (VC); 1,1,1-trichloroethane (1,1,1-TCA); 1,2-dichloroethene (1,2-DCE); and 1,1-dichloroethane (1,1-DCA) were also detected (G&M 1994). Currently,



the total volatile organic compounds (TVOCs) plume is estimated to be approximately 12,100 feet long, 9,600 feet wide and 580 feet deep (USEPA 2000). A vinyl chloride monomer (VCM) subplume, originating from the Hooker/Ruco site, is estimated to be 2,000 feet long, 1,350 wide and 430 feet deep (USEPA 2000). The plume representations on Figure 4 were taken from the *First Quarter 1999 Hydraulic and Groundwater Quality Monitoring Report* prepared for Northrop/Grumman (AG&M 1999). Figure 4 also illustrates the TVOC/VCM plumes in relation to the Company's properties. The horizontal extent of the TVOC plume is defined by 5 micrograms/liter.

3.1 Description of Sites Contributing to Groundwater Contamination

3.1.1 Hooker Chemical/Ruco Polymer

The Hooker/Ruco site is an active chemical manufacturing facility. Operations at the facility began in 1945 and included natural rubber latex storage, concentrating, and compounding. Activities were later expanded to include production of plasticizers and polyvinyl chloride. During operations between 1951 and 1975, industrial wastewater and storm water from the facility were discharged to on-site recharge basins. The wastewater contained VC, TCE, vinyl acetate, and other organic and inorganic contaminants. Investigations at the site began in 1978. The results of the initial investigations led to the 14-acre site being placed on the NPL in 1986 (USEPA 2000). The site is physically bounded by the Long Island Railroad tracks to the southwest, New South Road to the West, Commerce Street to the north, and Grumman facilities to the east and south.

3.1.2 Northrop/Grumman

The Northrop/Grumman site was established in the early 1930's. The approximately 500-acre facility developed and manufactured naval carrier aircraft, naval amphibious craft, and various National Aeronautics and Space Administration (NASA) satellites (NYSDEC 1995). From 1943 to 1949, Grumman disposed of its chromic acid wastes directly on the ground or in open seepage basins. Starting in the early 1950's, some of the wastes generated by Grumman were taken to the NWIRP property for treatment or storage before being taken off-site by private haulers. The wastes consisted primarily of chlorinated hydrocarbons (NYSDEC 1995). The site is bounded by Stewart Avenue to the north, Central Avenue and Harrison Avenue to the south, NY Route 107 (S. Broadway) to the southwest, South Oyster Bay Road to the west, and NWIRP to the east. The Hooker/Ruco site is located west of the Northrop/Grumman site (NYSDEC 1995).

3.1.3 Naval Weapons Industrial Reserve Plant

The NWIRP was established in 1933 within the Northrop/Grumman complex. The facility is approximately 108 acres and was government-owned and contractor-operated. Its mission was the design engineering, research prototyping, testing, fabrication, and assembly of military aircraft (Halliburton 1994). An Initial Assessment Study of NWIRP was conducted in 1986 and indicated that three areas of concern are present on-site. The three areas include the Former Drum Marshaling Area, the Recharge Basin Area and the Salvage Storage Area. The groundwater at all three areas was found to contain elevated



concentrations of chlorinated hydrocarbons and other organic and inorganic contaminants (Halliburton 1994). The NWIRP site is bordered on the north, west, and south by Grumman facilities and on the east by residences.

3.2 Potential Impact on the 840 S. Broadway Facility

The 840 S. Broadway property is located approximately 500 feet west of the TVOC plume (Figure 4). According to the plume map presented in *First Quarter 1999 Hydraulic and Groundwater Quality Monitoring Report* and used to generate Figure 4, the western boundary of the plume is either non-detect or at very low concentrations for TCE and PCE (AG&M 1999). According to the limits of the plume delineated in Figure 4, the plume does not encroach upon the subject property. However, the western boundary of the plume does not appear to be adequately defined to rule out possible migration of the plume onto the 840 S. Broadway property.

3.3 Potential Impact on the 327 New South Road Facility

The Company's warehouse facility is located within the area impacted by the VCM subplume originating from the Hooker/Ruco site. According to a phone conversation with William Gilday of NYSDEC, the Company's 327 New South Road facility "is directly over the Hooker/Ruco vinyl chloride plume." The contaminant of concern present in greatest concentrations is VC. Other contaminants present in the groundwater at the Hooker/Ruco site include TCE, PCE, bis(2-ethylhexyl)phthalate, arsenic, and antimony (USEPA 2000). EPA's preferred remedial alternative for the VCM plume is biosparging and supplement nutrient addition. EPA expects that the biosparging treatment will be continued for approximately ten years (USEPA 2000).

The 327 New South Road facility is approximately 1,000 feet west of the TVOC groundwater plume (Figure 4). This plume likely does not impact the property. However, the facility is in the vicinity of an area of contamination discussed in the *Remedial Investigation Report* (G&M 1994) along the Northrop/Grumman and Hooker/Ruco site borders (near Plant 37) (Figure 4). It is likely that the 327 New South Road property is impacted by the contaminants identified in this upgradient area. The contaminants consist of TCE; PCE; 1,1,1-TCA; 1,1-DCE; and VC (G&M 1994).

4.0 PHASE II ESA SITE INVESTIGATION

Site reconnaissance, focused geophysical mapping and subsurface drilling / sampling activities were performed at the 840 South Broadway and 327 New South Road properties between June 13 and June 20, 2000. Subsurface sample locations were selected based on the areas of concern (AOCs) identified in the Phase I ESA Report; the inferred regional direction of groundwater flow in the area; observations made during the June 12, 2000 Phase II site reconnaissance; and the results of geophysical mapping conducted at each property.



Electromagnetic induction and ground penetrating radar geophysical methods were used to provide geophysical mapping of select AOCs at each property. These methods were also used prior to the initiation of intrusive activities at each location to ensure that sample locations were clear of underground utilities

Soil boring installation and temporary monitoring well construction were performed by Land, Air, Water Environmental Services, Inc., of Center Moriches, NY using a truck-mounted Mobile B61 HD drilling rig and a truck-mounted Mobile B61 HDX drilling rig. Applicable notifications and permits were arranged (as necessary) prior to the commencement of intrusive sampling activities.

To minimize the potential for sample cross contamination, all drilling/sampling equipment was decontaminated both prior to the commencement and completion of on-site drilling / sampling activities as well as subsequent to the completion of the construction and sampling of each soil boring / monitoring well. All investigation derived waste (IDW) fluids generated during the sampling, or the decontamination procedures were properly containerized at the decontamination pad for subsequent disposition at an approved landfill facility. IDW manifests were signed by a representative of Coral Graphics Services, Inc. prior to the transport of the IDW offsite.

Soil borings were advanced to a maximum target depth of five (5) feet below the groundwater table at each site using 4 1/4 inch inner diameter (ID) hollow-stem augers. Split-spoon sampling of subsurface soils was performed during soil boring advancement using 2-inch ID split-spoons at five-foot intervals. Visual / lithologic classification and documentation of each split-spoon soil sample collected was performed by Malcolm Pirnie's on-site field geologist during boring advancement. Each split-spoon sample was field screened for VOC concentrations using a MiniRae photoionization detector (PID) equipped with a standard 10.6 eV lamp. Documentation of the PID field screening value observed and the number of split-spoon blow counts required to penetrate each successive 6-inch subsurface interval over each interval sampled were also recorded.

Each soil boring was completed as a temporary monitoring well constructed with a 2-inch ID Schedule 40 PVC riser and a 0.010-inch (10 slot) well screen for subsequent groundwater elevation measurement and groundwater quality sample collection.

Soil and groundwater samples from each soil boring / temporary monitoring well location were collected and placed into laboratory provided glassware by Malcolm Pirnie's field geologist using dedicated nitrile gloves. The sample containers were placed into an ice-filled cooler (for sample preservation), and shipped to Integrated Analytical Laboratories, LLC in Randolph, New Jersey (New York State Department of Health Environmental Laboratory Approval Program Certification No. 106549) for analyses via methods listed in Table 1. Field and laboratory quality assurance / quality control (QA/QC) for the soil and groundwater sampling program was provided via the collection of a requisite number of trip blanks, equipment blanks, and blind duplicate samples.



TABLE 1
Analytical Methods for Soils and Groundwater
Phase II Environmental Site Assessment
Coral Graphic Services
Hicksville, NY

Analysis	Method of Analysis Soil	Method of Analysis Aqueous
Target Compound List (TCL) VOCs +10	EPA Method 8260B	EPA Method 8260B
TCL Semivolatiles Base Neutral / Acid Extractables +20	EPA Method 8270C	EPA Method 8270C
Target Analyte List (TAL) Metals	EPA Method 7000 and 6010A Series	EPA Method 200 and 6010A Series

To insure that groundwater samples collected were representative of groundwater quality conditions the temporary monitoring wells were developed prior to sampling. Well development was conducting using a 2-inch outer diameter (OD) submersible pump and dedicated tygon tubing. All drill cuttings and well development water (IDW) were containerized in DOT-approved 55-gallon drums. The drums were stored at the decontamination pad area for subsequent disposition at an approved facility. The drums were labeled for identification of content and origin.

A topographic survey of the newly constructed temporary monitoring wells and a select number of physical site features was completed by a New York State licensed land surveyor on June 20, 2000 at each site. Malcolm Pirnie, Inc. completed two synoptic rounds of groundwater elevation measurements within temporary monitoring wells at each site on June 19 and 20, 2000.

Each temporary groundwater monitoring well was properly abandoned upon completion of groundwater sampling activities. Upon completion of the Phase II site investigation, each site was returned to the condition that existed prior to commencement of the Phase II site investigation.

4.1 840 South Broadway Facility

The Phase II site investigation conducted at the 840 South Broadway facility involved the installation of four (4) soil borings at sample locations MW-1, MW-2, MW-3 and MW-4 for subsurface characterization of the site. Soil borings installed at sample locations MW-1, MW-2 and MW-3 were converted into temporary monitoring wells for subsequent groundwater elevation measurement and groundwater quality sample collection. The rationale behind the selection of each sample location is presented in Table 2. Focused geophysical mapping of the potential UST AOC was conducted prior to the intrusive investigation in order to locate the potential UST.



TABLE 2
Soil and Groundwater Sample Location Rationale
Phase II Environmental Site Assessment
Coral Graphic Services
840 South Broadway Facility
Hicksville, NY

Sample Location Identification	Location	Sample Matrix	Sample Rationale
MW-1	Along Center Street	Groundwater	Sample to represent upgradient water quality.
MW-2	Along Center Street	Groundwater	Sample to represent upgradient water quality.
MW-3	Along Center Street	Groundwater	Sample to represent groundwater quality adjacent to former UST identified in Phase I ESA.
MW-4	Along Center Street	Soil and Groundwater	Sample location within area of deteriorated asphalt adjacent to Hazardous Waste Storage CONEX box and subsurface leaching field identified during the Phase II ESA site reconnaissance walkover.

One groundwater sample was collected from each temporary monitoring well and submitted for analytical parameters listed in Table 1. The groundwater sample collected from sample location MW-3 was also analyzed for total extractable diesel range organic (DRO) compounds via EPA Method 8015 in order to determine the possible impact to groundwater from the potential UST near that sample location.

During the advancement of the soil boring at sample location MW-4, located within the AOC west of the Hazardous Waste Storage CONEX box where deteriorated asphalt was observed, sustained concentrations of total VOCs were observed in excess of 500 parts per million by volume (ppmv) in vapor within the breathing zone. Due to health and safety considerations, soil boring advancement at this location was terminated at a depth of eight feet below ground surface (bgs). One subsurface soil sample was collected from the 4 to 6 foot depth interval at the sample location and the borehole was backfilled with native materials. This soil sample was submitted for analyses for the analytical parameters listed in Table 1 and PCBs via EPA method 8082.

An open 55-gallon drum was observed to exist in the area immediately south of the Hazardous Waste Storage CONEX. The contents of the 55-gallon drum appeared to be a black, or dark green liquid (possibly ink). One sample of the contents of the 55-gallon drum was collected during the Phase II site investigation and submitted for TCL VOC analyses via the analytical method listed in Table 1.



4.1.1 840 South Broadway Facility Expanded Site Investigation

An expanded site investigation was conducted within the AOC west of the Hazardous Waste Storage CONEX box where deteriorated asphalt and sustained concentrations of total VOC vapors in excess of 500 ppmv were observed during the construction of the soil boring at sample location MW-4. The objective of the expanded site investigation was to:

- Estimate the extent of soil contamination in the vicinity of MW-4
- Determine if groundwater quality was impacted in the vicinity of MW-4
- Compile soil characterization data at the AOC for inclusion into the Phase II ESA

The expanded site investigation consisted of the collection and on-site analyses (via field gas chromatography techniques) of depth-specific soil gas samples using direct push (Geoprobe®) techniques to estimate the most probable source and extent of the soil contamination observed within the AOC. One groundwater sample within the source area and four depth-specific soil samples were then collected within the AOC using direct push techniques. These samples were submitted for off-site analyses via methods listed in Table 1.

Eleven depth-specific soil gas samples were collected at site sample locations GP-1 through GP-10 and MW-4 by TriState Environmental Management Services, Inc. (TriState) on June 28 through 30, 2000. Soil gas samples were collected at these locations at several depths ranging between 4 and 40 feet bgs, except at sample location MW-1 where only one sample was collected at a depth of 32 feet bgs.

Soil gas samples were collected using a Geoprobe® (Model 5400) direct push unit and associated tooling and equipment. At each sample location, the rods were advanced into the subsurface with an expendable drive point. Upon reaching the selected depth, the point was released from the rods, the rods retracted approximately one foot, and the soil gas sample collected into a tedlar sample bag using dedicated tubing through the rods via a Geoprobe® vacuum pump and box. Each soil gas sample was field screened for total VOC concentrations prior to sample collection using a MiniRae PID equipped with a standard 10.6 eV lamp.

The soil gas sample collected from sample location GP-4 was collected using a Geoprobe® Screen Point Sampler rather than from the expendable drive point sampler as used for the collection of all other soil gas samples at the site.

A total of thirty (30) soil gas samples were analyzed in the field immediately after sample collection using an onsite mobile laboratory operated by Environmental Management Associates, Inc. (EMA) under subcontract to TriState. Samples were analyzed by EMA for Benzene, Ethylbenzene, TCE, and PCE. The number of unqualified VOCs detected in each soil gas sample was also determined by EMA.



In addition to the collection of soil gas samples, four (4) depth-specific soil samples were collected (from sample locations SS-1 through SS-4) and one (1) groundwater sample was collected (from sample location GP-4) during the expanded site investigation. Soil samples were collected using a combination of a Geoprobe® Macro Core and Large Bore sampler, each equipped with single-use polyethylene terephthalate (PETG) liners. The groundwater sample from this location was collected using a Geoprobe® Screen Point Sampler and disposable mini-bailer equipped with a foot valve.

4.2 327 New South Road Facility

The Phase II site investigation conducted at the 327 New South Road property involved the installation of four (4) soil borings at sample locations MW-1, MW-2, MW-3 and MW-4 for subsurface characterization of the site. Each soil boring was converted into a temporary monitoring well upon completion for subsequent groundwater elevation measurement and groundwater quality sample collection. These sample locations were based on the results provided in the Phase I ESA and the initial Phase II site reconnaissance walkover conducted on June 12, 2000. The rationale behind the selection of each sample location is presented in Table 3.

TABLE 3
Soil and Groundwater Sample Location Rationale
Phase II Environmental Site Assessment
Coral Graphic Services
327 New South Road Property
Hicksville, NY

Sample Location Identification	Location	Sample Matrix	Sample Rationale
MW-1	Front Parking Lot Area Along New South Road	Groundwater	Sample to represent upgradient water quality
MW-2	Rear Parking Lot Area near AST	Groundwater	Sample to represent upgradient water quality.
MW-3	Driveway South of facility building	Groundwater	Sample to represent groundwater quality adjacent to former UST and leaching field for former septic system identified in Phase I ESA .
MW-4	Driveway South of facility building	Soil and Groundwater	Sample location adjacent to former septic system identified in Phase I ESA where contamination previously detected.

One groundwater sample was collected from each of the temporary monitoring wells installed at the site and one subsurface soil sample was collected from sample location MW-4, located adjacent to the former on-site septic system. In order to determine the potential impact to groundwater from the abandoned UST area, the groundwater sample collected from sample location MW-3 was analyzed for total extractable DRO compounds via EPA Method 8015 in addition to the analytical parameters listed in Table 1.



Continuous split-spoon sampling of subsurface soils was conducted during the advancement of the soil boring at monitoring well MW-4 to a depth of ten feet bgs. Standard five-foot sampling intervals were employed throughout the remainder of the borehole. Field screening of split-spoon soil samples and drill cuttings during the construction of the soil boring at sample location MW-4 did not indicate the presence of soil contamination throughout the unsaturated zone at this sample location. Therefore, based on the field screening results, the soil sample was collected from this sample location within the 55 to 57 foot depth interval, just above the water table surface.

In addition, three (3) floor tile and associated mastic samples were collected on June 19, 2000 from the storage room area within the warehouse facility building. The tan streaked, 9" x 9" vinyl floor tile with black mastic adhesive was noted to be intact and in good condition during sample collection. The samples collected were sent to Scientific Laboratories, Inc. located in New York, New York for analysis by Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM).

5.0 PHASE II ESA SITE INVESTIGATION RESULTS

5.1 840 South Broadway Facility

5.1.1 Former UST

Initial site reconnaissance and focused geophysical mapping of the AOC at the 840 South Broadway property did not reveal the presence of a potential UST in the grass and landscaped area along the eastern wall of the main production facility building. However, a reconnaissance of the basement revealed the presence of oil / fuel lines that were formerly connected to a UST. The fuel /oil lines exited the basement wall located under the main conference room of the facility. Additional geophysical mapping of the interior of the main conference room did reveal the presence of a potential UST beneath the concrete slab underlying the northern portion of the building.

5.1.2 Dry Wells

A series of dry wells were observed in the parking lot located west of the Hazardous Waste Storage CONEX box which is west of the southwest corner of the main production facility building. Dry wells near the building were observed to be covered with steel manhole covers, while those farther to the west of the parking lot were covered with steel grates and are presumably used as recharge basins for drainage of standing water from the parking lot area. Approximately 1 to 2 feet of standing water was observed to completely cover the western third of the parking lot area at the initiation of site investigation activities at the site. This water appeared to have completely drained from the parking lot and infiltrated the subsurface within one week. Further inspection of two of the dry wells during the initial Phase II site reconnaissance and focused geophysical mapping of the site revealed the dry wells to be of circular 'bee-hive' type design and



constructed of concrete. The dry wells were also observed to extend to a depth of about 20 feet bgs with varying amounts of sand and debris existing at the base of each well.

Focused geophysical mapping of a select number of the dry wells did not reveal the presence of subsurface metallic pipes extending between them, but the possibility of their interconnection via non-metallic pipes could not be ruled out.

5.1.3 Hydrogeologic Conditions

Soil boring logs compiled during the advancement of soil borings at sample locations MW-1, MW-2, MW-3 and MW-4 at the site indicate that the site is underlain by poorly sorted, coarse to medium grained tan sand and compact gravel with tightly packed, subrounded cobbles to a depth of about 30 feet bgs. Poorly sorted coarse to medium grained tan sand was encountered from about 30 to 40 feet bgs and well sorted, uniform medium to fine grained sands were encountered below these materials. Temporary monitoring wells MW-1, MW-2 and MW-3 installed at the site were screened in the well sorted materials encountered below depths of about 50 feet bgs.

Based upon two synoptic rounds of groundwater elevation measurements conducted at the site on July 10 and 20, 2000, groundwater beneath the site occurs under unconfined conditions within the Upper Glacial Aquifer and ranges in elevation from 66.43 to 66.25 feet above the Nassau County datum. Based on these measurements, the general direction of groundwater flow beneath the site, is southwesterly (Figure 5) under an average hydraulic gradient of 0.001 ft/ft.

5.1.4 Subsurface Soil Analytical Results

Results of PID field screening of split spoon soil samples collected during the advancement of soil borings at the 840 South Broadway property did not result in the detection of any total VOCs above background within soil borings constructed at sample locations MW-1, MW-2 and MW-3. As previously discussed, PID values in excess of 500 ppmv were observed in the breathing zone during the advancement of the soil boring at sample location MW-4. One subsurface soil sample was obtained at this sample location from a depth of 4 to 6 feet bgs. Four additional soil samples were also obtained from sample locations SS-1, SS-2, SS-3 and SS-4 during the expanded Phase II site investigation of the property. Sample locations and analytical results of the Phase II site investigation are displayed in Figure 6. Sample locations and analytical results of the expanded Phase II site investigation are displayed in Figure 7.

Toluene, PCE and total Xylenes were detected above analytical method detection limits (MDLs) at concentrations of 41300 µg/Kg, 2790 µg/Kg and 9980 µg/Kg respectively within the soil sample collected at sample location MW-4. Concentrations of these VOCs exceed New York State recommended soil clean-up objectives (TAGM 4046) and are displayed in italicized text on Figure 6. Benzo(a)anthracene and Benzo(a)pyrene were also detected above MDLs within the soil sample at concentrations of 725 µg/Kg and 498 µg/Kg, respectively. Concentrations of these semivolatile organic compounds



(SVOCs) exceed New York State recommended soil clean-up objectives (TAGM 4046) and are displayed in italicized text on Figure 6.

Chrysene and Di-n-Butylphthalate were detected at concentrations below MDLs within the soil sample from sample location MW-4 and are, therefore, displayed with a "J" in Figure 6 as estimated concentrations. Although Chrysene was detected at a concentrations lower than the MDL, its estimated concentration in the soil sample exceeds New York State recommended soil clean-up objectives and is also displayed in italicized text on Figure 6.

Naphthalene, Phenanthrene, Fluoranthene, Pyrene, bis-(2-Ethylhexyl)phthalate and Benzo(b)Fluoranthene were also detected at concentrations above MDLs within the soil sample at sample location MW-4 at concentrations of 929 µg/Kg, 1090 µg/Kg, 1390 µg/Kg, 861 µg/Kg, 4000 µg/Kg and 688 µg/Kg, respectively. Concentrations of these SVOCs in the sample do not, however, exceed New York State recommended soil clean-up objectives. The total concentration of tentatively identified SVOCs in this soil sample was 953,490 µg/Kg.

A number of TAL metals were detected above MDLs within the soil sample at sample location MW-4, and within subsurface soil samples collected at sample locations SS-1, SS-2, SS-3 and SS-4 during the expanded Phase II site investigation. Concentrations of these metals were not observed to exceed New York State recommended soil clean-up objectives. PCBs were not detected at concentrations above MDLs within the soil sample collected at sample location MW-4.

Analyses of subsurface soil samples collected during the expanded Phase II site investigation indicated that no compounds or analytes of concern were detected above MDLs within the sample collected at sample location SS-2. Toluene was detected above the MDL at a concentration 16.1 µg/Kg within the soil sample collected at sample location SS-3 and below the MDL at a concentration of 2.69 µg/Kg within the soil sample collected at sample location SS-1. Bis-(2-Ethylhexyl)phthalate was detected above the MDL at concentrations of 218 µg/Kg and 46.7 µg/Kg within the soil samples collected at sample locations SS-3 and SS-4, respectively. Detected concentrations did not exceed New York State recommended soil clean-up objectives.

5.1.5 Drum Contents Analytical Results

Acetone and 2-Butanone (MEK) were detected above MDLs at concentrations of 1380 µg/L and 1990 µg/L, respectively in the sample of the contents from the open 55-gallon drum observed in the area directly south of the Hazardous Waste Storage CONEX Box. Two unknown aliphatic compounds were also tentatively identified in the sample at concentrations of 137 µg/L and 73 µg/L, respectively.



5.1.6 Groundwater Analytical Results

PCE was detected above the MDL at concentrations of 86.2 µg/L and 514 µg/L within groundwater samples collected from sample locations MW-1, and GP-4, respectively. Concentrations of this VOC in these samples were observed to exceed New York State Class GA Groundwater Quality Standards (T.O.G.S 1.1.1 threshold limits) and are displayed in italicized text on Figure 6.

Acetone was detected above the MDL at a concentration of 22.3 µg/L within the groundwater sample collected at sample location MW-1 and below the MDL at concentrations of 5.93 µg/L, 7.72 µg/L and 9.61 µg/L within groundwater samples collected at sample locations MW-2, MW-3 and GP-4, respectively. Ethylbenzene, Toluene and total Xylenes were detected at concentrations below MDLs and Phenanthrene was detected at a concentration above the MDL within the groundwater sample collected at sample location MW-1. Concentrations of these VOCs in these samples do not exceed New York State Class GA T.O.G.S 1.1.1 threshold limits.

Tentatively identified SVOCs in groundwater samples collected from sample locations MW-1 and GP-4 were observed at total concentrations of 28.2 µg/L and 128.9 µg/L, respectively. MTBE was also tentatively identified within the groundwater sample collected at sample location MW-2 at a concentration of 7.8 µg/L.

Diesel range organic compounds were not detected above the MDL within the groundwater sample collected at sample location MW-3.

A number of TAL metals were detected above MDLs within groundwater samples collected from sample locations MW-1, MW-2, MW-3 and GP-4. Concentrations of these metals in groundwater were not, however, observed to exceed New York State T.O.G.S 1.1.1 threshold limits.

5.1.7 Soil Gas Analytical Results

The results of the on-site analyses of depth-specific soil gas samples collected using Geoprobe® techniques during the expanded Phase II site investigation of the AOC west of the Hazardous Waste Storage CONEX box area displayed in Figure 7. Benzene and Ethylbenzene were detected in the soil gas sample collected at a depth of 4 feet bgs at concentrations of 0.06 parts per million by volume (ppmv) and 0.1 ppmv, respectively. TCE was detected in soil gas samples collected at depths of 4, 8 and 20 feet bgs at concentrations ranging from 0.15 to 0.52 ppmv.

PCE was detected in all of the samples at concentrations ranging from 0.21 to 329.66 ppmv, the majority of which are estimated because they were detected at concentrations above the instrument calibration range. Approximate PCE concentration distributions within soil gas at depths of 4 and 20 feet bgs at the site are graphically displayed in Figures 8 and 9, respectively. Since the soil gas samples collected from sample location



GP-4 were collected using a method that differed from that used for the collection of all other samples at the site, sample results for this location were excluded from the depth-specific PCE concentration distribution estimate displayed in these figures.

5.2 327 New South Road Facility

5.2.1 Former Septic System and Abandoned UST

The location of the former septic system and abandoned UST south of the warehouse facility was determined with the use of a focused geophysical survey. The location of these features at the 327 New South Road facility are displayed on Figure 10.

5.2.2 Hydrogeologic Conditions

Soil boring logs completed during the advancement of soil borings at sample locations MW-1, MW-2, MW-3 and MW-4 at the site indicate that site is underlain by poorly sorted, coarse to medium grained tan sand and compact gravel with tightly packed, subrounded cobbles to a depth of about 40 feet bgs. Poorly sorted coarse to medium grained tan sand was encountered from about 40 to 50 feet bgs and well sorted, uniform medium to fine grained sand were encountered below these materials.

Temporary monitoring wells MW-1, MW-3 and MW-4 installed at the site were screened in the well sorted materials encountered below depths of about 50 feet bgs. Temporary monitoring well MW-2 was screened in poorly sorted, fine grained sand which was overlain by stringers of dense, white clay.

Based upon two synoptic rounds of groundwater elevation measurements conducted at the site on July 10 and 20, 2000, groundwater beneath the site occurs under unconfined conditions within the Upper Glacial Aquifer and ranges in elevation from 68.42 to 68.15 feet above the Nassau County datum. Based on these measurements, the general direction of groundwater flow beneath the site, is southwesterly (Figure 11) under an average hydraulic gradient of 0.003 ft/ft.

5.2.3 Subsurface Soil Analytical Results

Results of PID field screening of split spoon soil samples collected during the advancement of soil borings at the 327 New South Road property did not result in the detection of any total VOCs above background. One subsurface soil sample was obtained from sample location MW-4 during the Phase II site investigation. Results of the PID field screening of split spoon samples at sample location MW-4 did not indicate the presence of total VOCs therefore, the sample was collected from a depth of 55 to 57 feet bgs, just above the water table elevation at the sample location (Figure 10).

Analyses of the subsurface soil sample collected at sample location MW-4 indicated that no compounds or analytes of concern were detected above MDLs within the sample.



5.2.4 Groundwater Analytical Results

1,1,1-TCA was detected above the MDL at concentrations of 1.48 µg/L, 67.8 µg/L and 119 µg/L within groundwater samples collected at sample locations MW-1, MW-2 and MW-4, respectively. Concentrations of this VOC were observed to exceed T.O.G.S 1.1.1 threshold limits and are displayed in italicized text on Figure 10.

Acetone was detected below the MDL at concentrations of 5.93 µg/L, 8.03 µg/L, and 8.61 µg/L within groundwater samples collected at sample locations MW-1, MW-2 and MW-4, respectively. Concentrations of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) were detected above MDLs within groundwater samples collected at sample locations MW-1, MW-2 and MW-4. Concentrations of these VOCs were not, however, observed to exceed T.O.G.S 1.1.1 threshold limits.

Phenanthrene was detected above the MDL at concentrations of 0.96 µg/L and 0.66 µg/L within groundwater samples collected at sample locations MW-2 and MW-3, respectively. Concentrations of this SVOC were not, however, observed to exceed T.O.G.S 1.1.1 threshold limits.

Tentatively identified SVOCs in groundwater samples collected from sample locations MW-2 and MW-3 were observed at total concentrations of 31.08 µg/L and 5.7 µg/L, respectively. MTBE was also tentatively identified within the groundwater samples collected at sample locations MW-1 and MW-4 at concentrations of 44.4 µg/L and 9.5 µg/L, respectively.

Diesel range organic compounds were not detected above the MDL within the groundwater sample collected at sample location MW-3.

A number of TAL metals were detected above MDLs within groundwater samples collected from sample locations MW-1, MW-2, MW-3 and GP-4. Concentrations of these metals in groundwater were not, however, observed to exceed New York State T.O.G.S 1.1.1 threshold limits

5.2.5 Asbestos Sampling Results

Results of these analyses indicate that the floor tile and associated mastic in the area sampled within the warehouse facility building on the 327 New South Road property are asbestos containing (i.e., contain greater than 1% asbestos). The floor tiles were noted to be intact.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the Phase II ESA indicate that both of the Company's Hicksville, NY facilities have AOCs that should be further investigated.



6.1 840 S. Broadway Facility

The initial site reconnaissance and geophysical survey at the 840 S. Broadway facility identified a possible UST underlying the concrete slab in the conference room area of the building. This possible UST should be further investigated to ensure that it was properly abandoned and did not release contaminants to the environment.

Subsurface soils and groundwater at this property have been impacted by releases to the environment consisting primarily of PCE. Toluene was also detected. Groundwater contamination is most likely related to the on-site soil contamination. The soil gas survey conducted during the expanded investigation indicates that shallow groundwater contamination impacts a significant portion of the property. The source of contamination is likely near the "hot spot" discovered during the initial Phase II investigation. Groundwater contamination was detected upgradient of this "hot spot" area at sample location MW-1. This may be the result of groundwater mounding caused by surface water recharge into the dry wells discussed in Section 5.1. The mounding may intermittently change the local groundwater flow direction and thereby increase the area of impact.

According to Northrop/Grumman reports, the 840 S. Broadway site is located approximately 500 feet west of the commingled TVOC plume originating from Hooker/Ruco, Northrop/Grumman and NWIRP. It is not likely that the high levels of PCE detected at the production facility are due to the TVOC plume. According to a conversation with William Gilday of NYSDEC, the TVOC plume reported by Arcadis Geraghty & Miller for Northrop/Grumman did not contain PCE levels as high as those detected at the 840 S. Broadway property.

The results indicate that regulatory involvement is likely. It is recommended that the Company approach NYSDEC under the Voluntary Cleanup Program (VCP). Under New York State's VCP, a volunteer can enter into an agreement to investigate a site, remediate a site, or investigate and remediate a site. The volunteer agrees to remediate the site to a level that is protective of public health and the environment for the present or intended use of the property. When the volunteer completes the work, the State provides a release from State liability for the work done and the contaminants addressed, with standard reservations (NYSDEC 2000). It is likely that remedial action will be required. Approaching NYSDEC under the VCP would preclude the site from being placed on the New York State Inactive Hazardous Waste Site List.

6.2 327 New South Road Facility

Shallow groundwater contamination consisting of 1,1,1-TCA was detected at the 327 New South Road facility. Soil contamination was not detected and, therefore, an on-site source of groundwater contamination was not identified; the source of the 1,1,1-TCA is unknown. The groundwater contamination is most likely originating from the area of contamination discussed in the *Remedial Investigation Report* (G&M 1994) along the Northrop/Grumman and Hooker/Ruco site borders (near Plant 37) (Figure 4). This area



is in the vicinity and upgradient of the 327 New South Road facility and the contaminants consist of TCE; PCE; 1,1,1-TCA; 1,1-DCE; and VC (G&M 1994). Further investigations would be necessary to substantiate that the 1,1,1-TCA is originating from the Northrop/Grumman and Hooker/Ruco properties.

The floor tile and associated mastic samples collected from the storage room in the warehouse facility indicate that the 9"x9" vinyl floor tiles and associated mastic are asbestos containing materials (ACM). These tiles, which were also observed in adjoining rooms, were noted to be intact. Due to the non-friable nature of the floor tile in its current condition, no further action is recommended. The floor tiles and other ACM within the building (2'x4' drop tiled ceiling) will present a concern if disturbed during activities, such as renovations, that would release asbestos into the air. Any disturbance must be conducted in accordance with all applicable regulatory requirements.

7.0 POTENTIAL REMEDIAL RESPONSE ACTIONS AND ESTIMATED COSTS

Considering the regulatory uncertainty and our current understanding of the nature and extent of contamination detected at the Company's Hicksville, NY facilities, a range of potential remedial response actions and estimated costs for each property are presented in this section. At this stage of the ESA process there is some degree of uncertainty as to the selection of any particular remedial response and associated costs, therefore, probabilistic modeling using @Risk™ Monte Carlo analysis was used as a tool for analyzing environmental remediation costs considering site-specific and regulatory variables. It is also our understanding that prior to design and implementation of any remedial action, an additional phase of investigation/characterization (Phase III ESA) will be undertaken to delineate the nature and extent of contamination. Therefore, each remedial action scenario is expected to be preceded by an investigation stage.

Probabilistic modeling using Monte Carlo analysis is a powerful and proven tool for analyzing complex environmental scenarios with many site-specific variables. Probabilistic modeling software packages, such as @Risk™, can compile and record the output for several thousand scenarios, each with a random combination of environmental variable values. Each environmental variable can be assigned a distribution of probabilistic values, correlated to various environmental or site specific factors. The assigned values and anticipated probabilities of each occurrence are then programmed into an Excel™ spreadsheet. Probabilistic modeling software processes the spreadsheet, running thousands of permutations, in order to predict the probable range of expected outcomes.

The model's output produces probabilistic values based on the subjective estimations and professional opinions of the project team members. The range of predicted results are only as accurate as the underlying model assumptions and data input. Since the model's results are weighted averages of possible outcomes, specific mean values or other



particular values are unlikely to occur. Accordingly, the predicted costs must be interpreted not as particular values, but as a value within a range of possible outcomes.

An integral component of the probabilistic modeling is the development of a Conceptual Model of the range of remedial alternatives applicable to the Company's sites. Cost ranges for each remedial alternative are based on our knowledge and current understanding of the site-specific conditions (i.e. media of concern, estimated volumes of contaminated media, site constraints), professional experience, and published cost ranges. The costs are broken down into capital costs and annual operation and maintenance costs, if applicable. The likelihood (on a percent basis) and duration (years) that each remedial alternative or combination of alternatives will be operated/maintained before site closure is assigned to each remedial alternative cost module.

7.1 840 S. Broadway Facility

The results of the model were presented in the document entitled *Environmental Site Assessment Briefing* dated July 2000. The results indicated that the future cost for the remediation of the 840 S. Broadway property would range between \$500,000 to \$3,400,000. The probability summary indicated that the cost would most likely be in the medium range near \$1,700,000.

7.2 327 New South Road Facility

The results presented in the *Environmental Site Assessment Briefing* did not include the likely probability of an off-site source of groundwater contamination at the 327 New South Road property. The results indicated that the future cost for the remediation would range between \$20,000 to \$1,200,000. We are in the process of completing the analysis to include the off-site source. The results of that analysis will be presented under separate cover. The costs for an investigation to substantiate that the groundwater contamination is from an off-site source would range between \$50,000 and \$150,000.

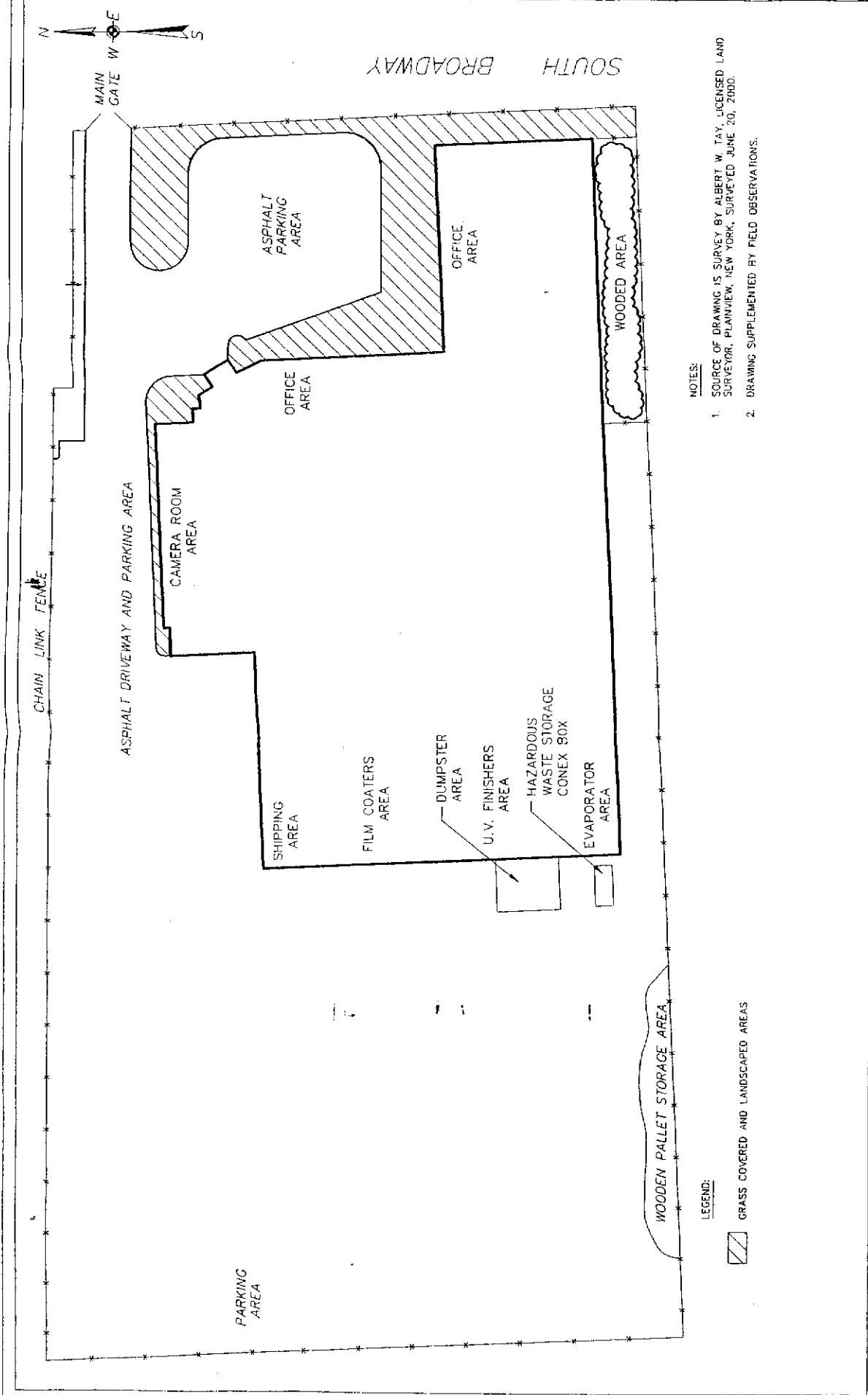


8.0 REFERENCES

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- USEPA, January 1994. Declaration for the Record of Decision, Hooker Chemical / Ruco Polymer Site, Town of Oyster Bay, Hicksville, Nassau County, New York.



FIGURES
(2 - 11)



NEW SOUTH ROAD

ASPHALT
PARKING
AREA

CORAL GRAPHICS SERVICES
327 NEW SOUTH ROAD FACILITY
HICKSVILLE, NY

LOADING RAMP

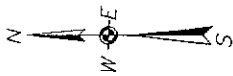
ASPHALT
PAVEMENT

ASPHALT
DRIVEWAY

CHAIN LINK FENCE

NOTES:

1. SOURCE OF DRAWING IS SURVEY BY ALBERT W. TAY, LICENSED LAND SURVEYOR, PLAINVIEW, NEW YORK, SURVEYED JUNE 20, 2000.
2. DRAWING SUPPLEMENTED BY FIELD OBSERVATIONS AND GEOPHYSICAL SURVEY RESULTS.



CORAL GRAPHIC SERVICES FACILITY
327 NEW SOUTH ROAD
HICKSVILLE, TOWN OF OYSTER BAY,
SUFFOLK COUNTY, NEW YORK

**MALCOLM
PIRNIE**

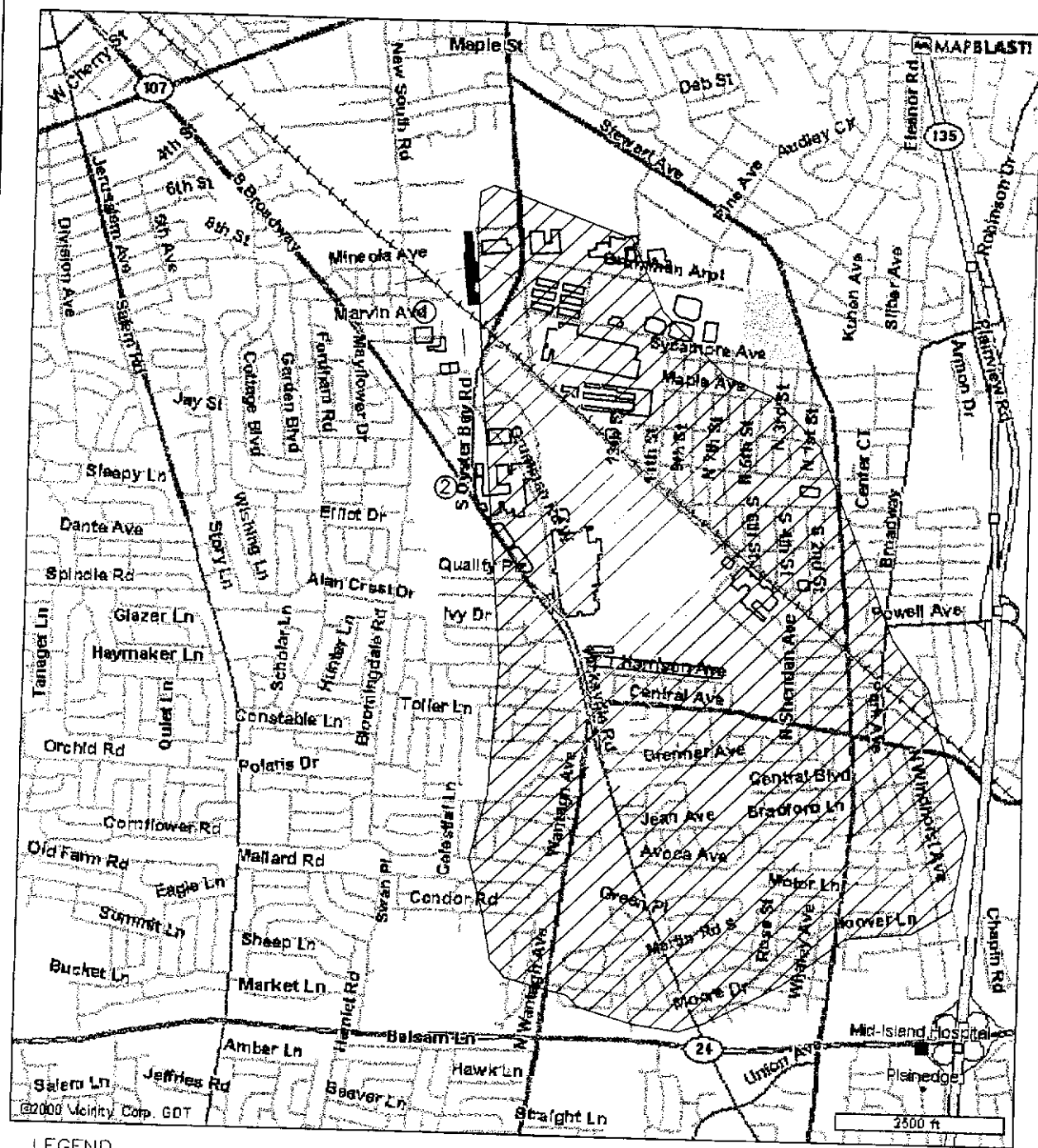
SITE PLAN MAP



MALCOLM PIRNIE, INC.

FIGURE 3

User: 5698 Job: 0676112500 File: \\ADMIN\BRASS3.DWG Scale: 1:240 Date: 08/09/2000 Time: 14:02



LEGEND

- ① 327 NEW SOUTH ROAD FACILITY
- ② 840 SOUTH BROADWAY FACILITY
- TVOCs GREATER THAN 5 PARTS PER BILLION
- TVOCs GREATER THAN 1 PART PER MILLION

----- FOOTPRINT OF VCM SUBPLUME

NORTHROP/GRUMMAN PLANT 37

SOURCE: ARCADIS GERAGHTY
& MILLER 1999
MAPBLAST 2000

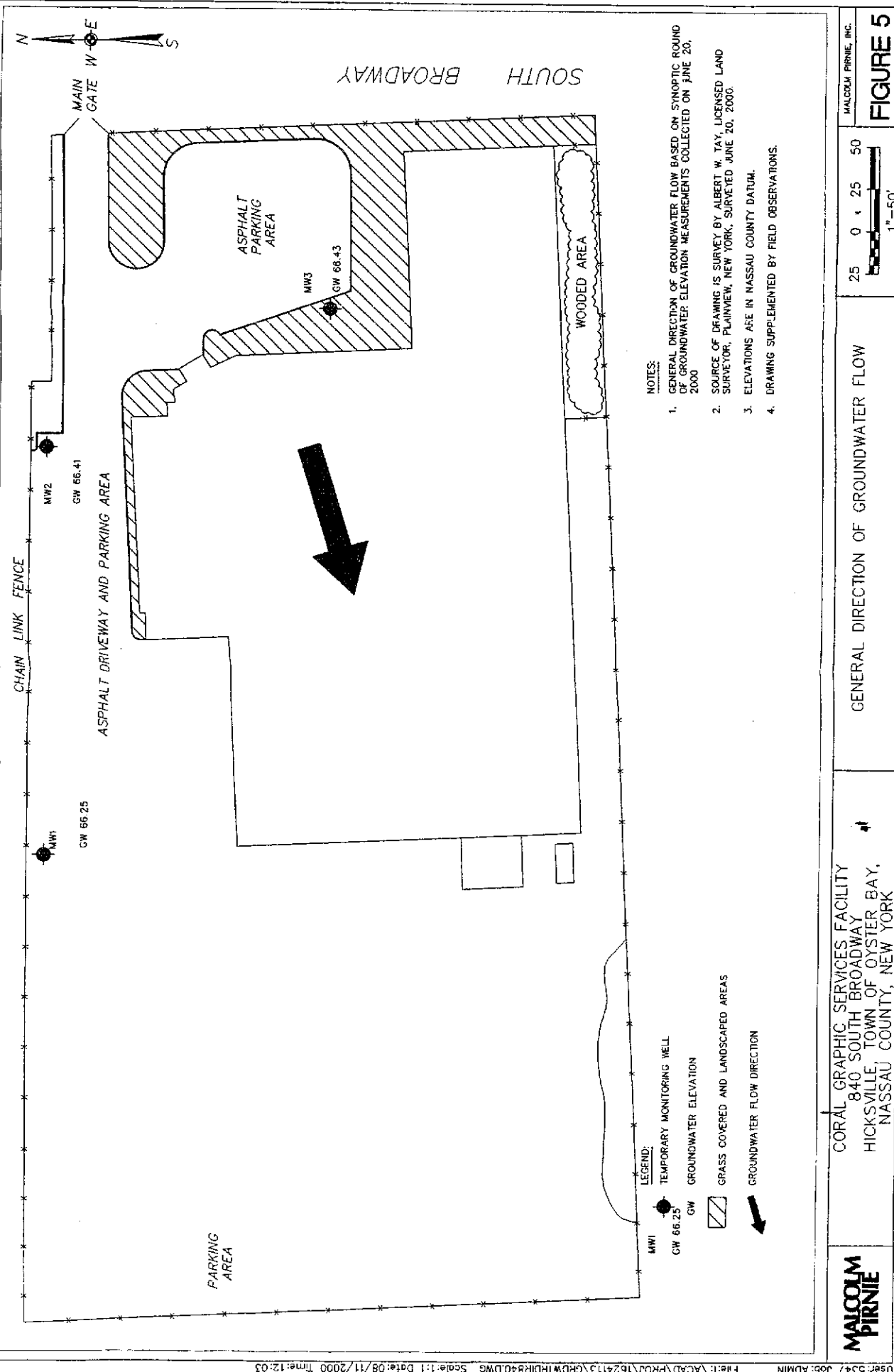
**MALCOLM
PIRNIE**

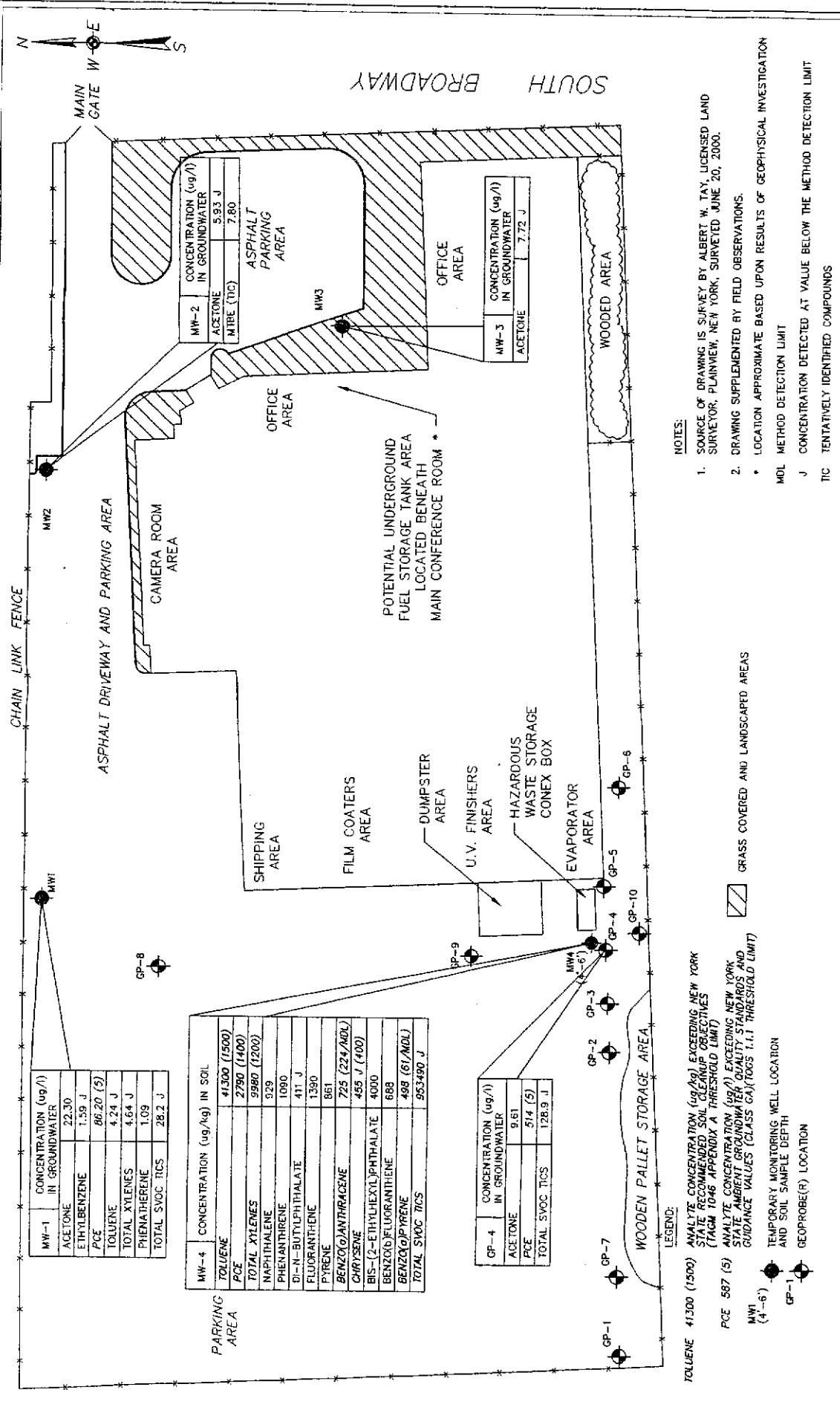
CORAL GRAPHIC SERVICES FACILITIES
HICKSVILLE, TOWN OF OYSTER BAY,
NASSAU COUNTY, NEW YORK

HOOVER/RUCO NORTHROP GRUMMAN
AND NWRP GROUNDWATER
TVOC AND VCM PLUME CONFIGURATION

MALCOLM PIRNIE, INC.

FIGURE 4





CORAL GRAPHIC SERVICES FACILITY
840 SOUTH BROADWAY
HICKSVILLE, TOWN OF OYSTER BAY,
NASSAU COUNTY, NEW YORK

ANALYTE CONCENTRATIONS
WITHIN SOILS AND GROUNDWATER

FIGURE 6

25 0 25 50

1"=50'

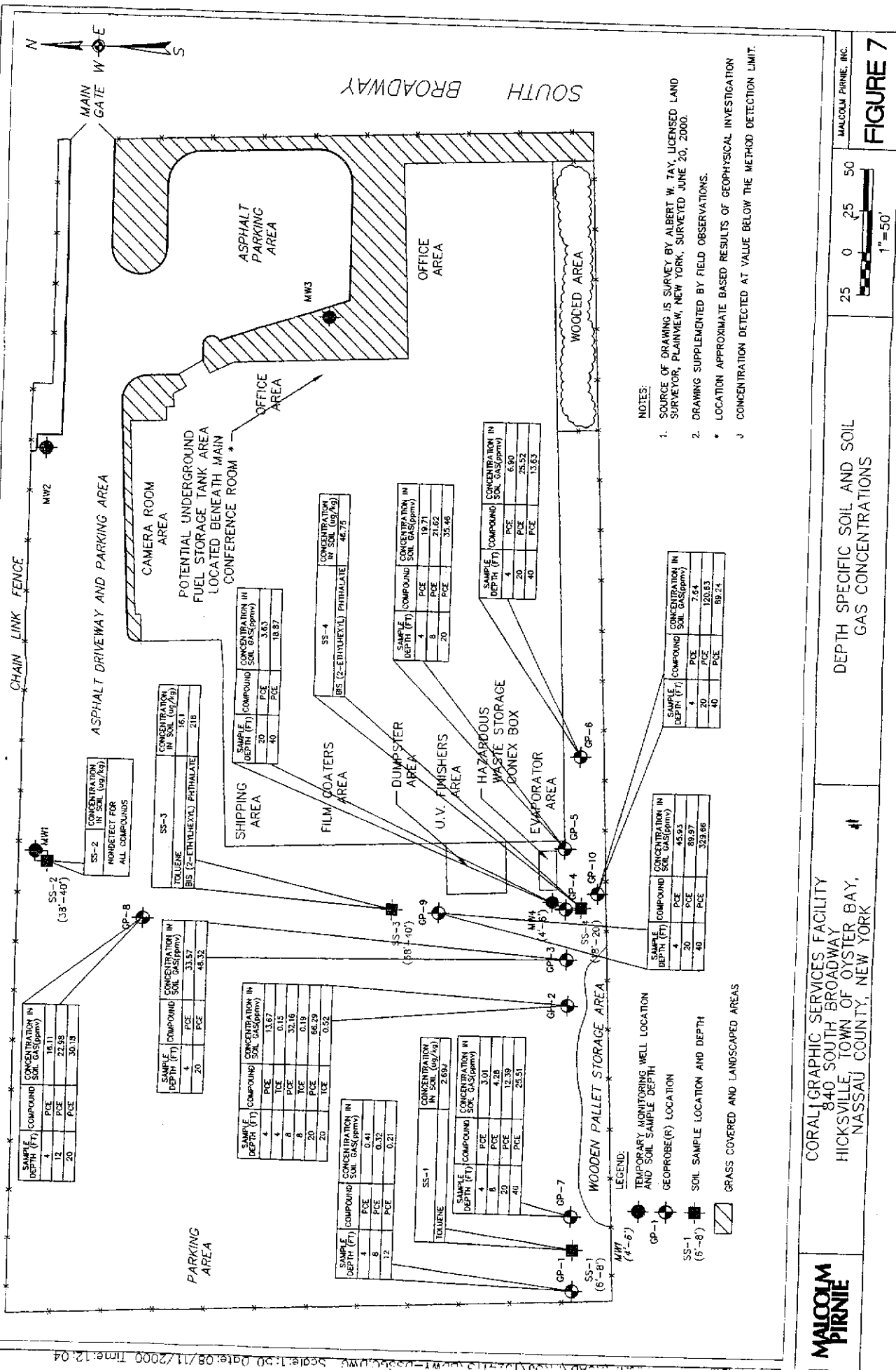
NOTES:

- SOURCE OF DRAWING IS SURVEY BY ALBERT W. TAY, LICENSED LAND SURVEYOR, PLAINVIEW, NEW YORK, SURVEYED JUNE 20, 2000.
- DRAWING SUPPLEMENTED BY FIELD OBSERVATIONS.

- LOCATION APPROXIMATE BASED UPON RESULTS OF GEOPHYSICAL INVESTIGATION
- MDL METHOD DETECTION LIMIT
- J CONCENTRATION DETECTED AT VALUE BELOW THE METHOD DETECTION LIMIT
- TIC TENTATIVELY IDENTIFIED COMPOUNDS

LEGEND:

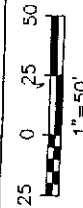
- ANALYTE CONCENTRATION (ug/kg) EXCEEDING NEW YORK STATE RECOMMENDED SOIL CLEANUP OBJECTIVES (FACM 1046 APPENDIX A THRESHOLD LIMIT)
- ANALYTE CONCENTRATION (ug/l) EXCEEDING NEW YORK STATE AMBIENT GROUNDWATER QUALITY STANDARDS AND GUIDANCE VALUES (CLASS GA/TICS 1.1.1 THRESHOLD LIMIT)
- TEMPORARY MONITORING WELL LOCATION AND SOIL SAMPLE DEPTH
- GEOPROBE(R) LOCATION
- GRASS COVERED AND LANDSCAPED AREAS



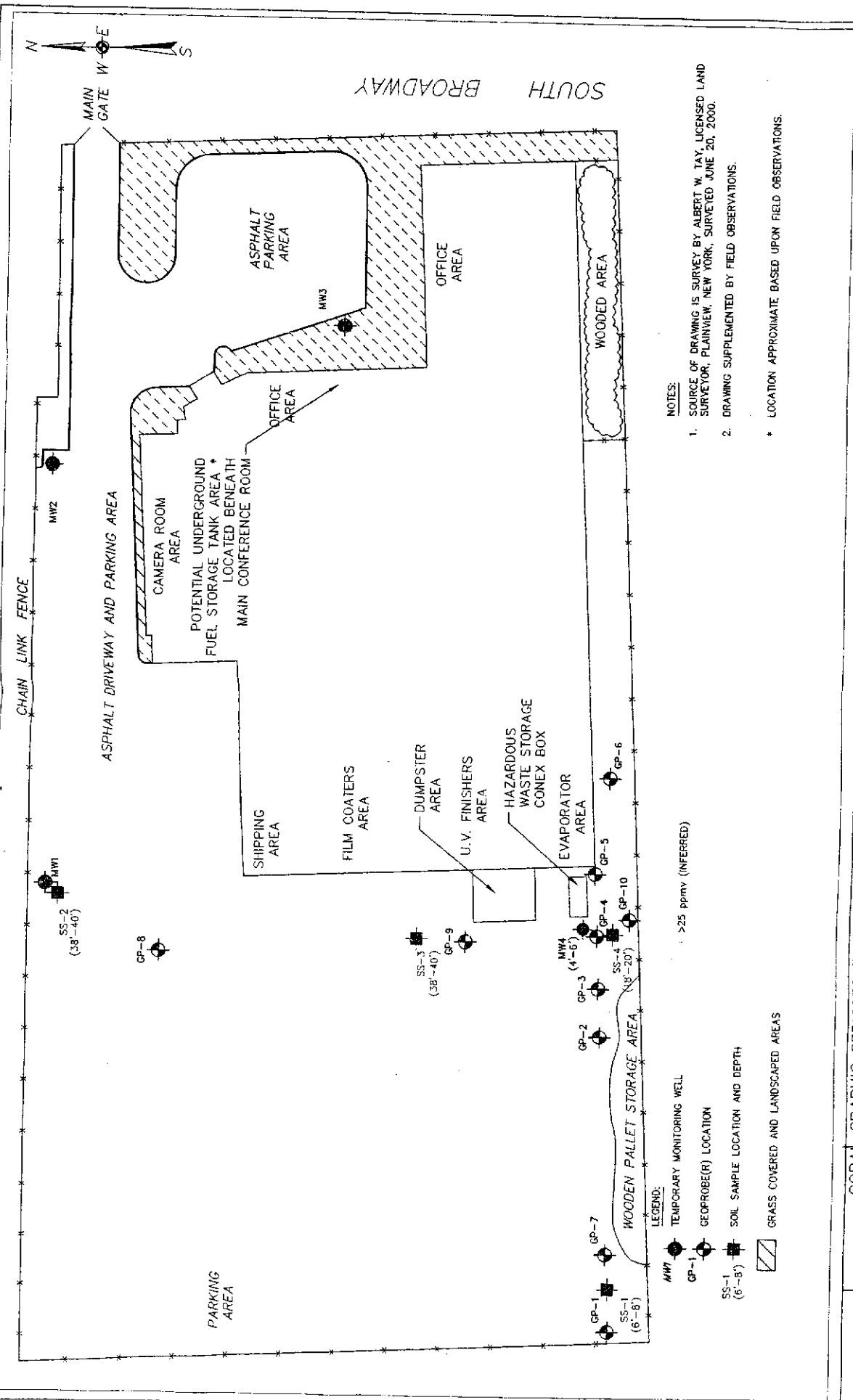
CORAL GRAPHIC SERVICES FACILITY
840 SOUTH BROADWAY
HICKSVILLE, TOWN OF OYSTER BAY,
NASSAU COUNTY, NEW YORK

MALCOLM
PIRNIE

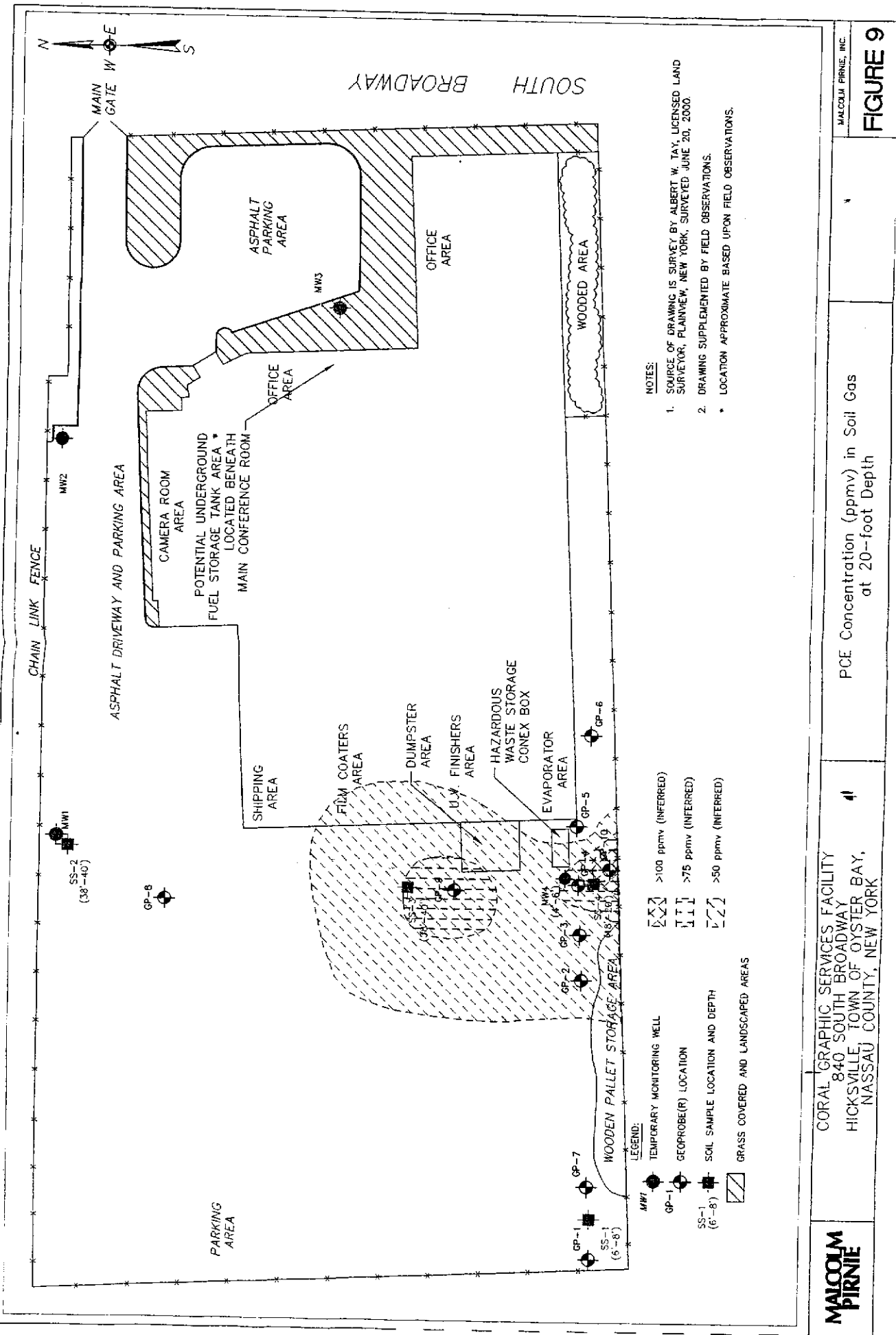
DEPTH SPECIFIC SOIL AND SOIL
GAS CONCENTRATIONS



MALCOLM
PIRNIE, INC.
FIGURE 7



MALCOLM PIRNIE	CORAL GRAPHIC SERVICES FACILITY 840 SOUTH BROADWAY HICKSVILLE, TOWN OF OYSTER BAY, NASSAU COUNTY, NEW YORK	PCE Concentration (ppmv) in Soil Gas at 4-foot Depth	<div> <div>25</div> <div>0</div> <div>25</div> <div>50</div> </div> <div>1"=50'</div>
MALCOLM PIRNIE, INC.		FIGURE 8	



CORAL GRAPHIC SERVICES FACILITY
840 SOUTH BROADWAY
HICKSVILLE, TOWN OF OYSTER BAY,
NASSAU COUNTY, NEW YORK

MALCOLM
PIRNIE

FIGURE 9



MW-1	CONCENTRATION (ug/l)
ACETONE	5.98 J
1,1,1-TCA	1.48 J
TOUENE	1.04
MTBE (TIC)	44.4

MW-2	CONCENTRATION (ug/l)
ACETONE	8.03 J
PHENANTHRENE	0.96
TOTAL SWOC TICS	31.08

ASPHALT
PARKING
AREA

NEW SOUTH ROAD

CORAL GRAPHICS SERVICES
327 NEW SOUTH ROAD FACILITY
HICKSVILLE, NY

SUSPECTED
SANITARY
VAULT

SUSPECTED
SEPTIC TANK
COVER *

ASPHALT
DRIVEWAY

SUSPECTED
LEACH POOL
COVER *

SUSPECTED
LEACH POOL
COVER *

SUSPECTED
LEACH POOL
COVER *

SUSPECTED
LEACH POOL
COVER *

LOADING RAMP

ABOVE GROUND
STORAGE TANK AREA *

ABANDONED UNDERGROUND
STORAGE TANK AREA *

CHAIN LINK FENCE

MW-4	CONCENTRATION (ug/kg) IN SOIL
NON-DETECT FOR ALL COMPOUNDS	

MW-3	CONCENTRATION (ug/l)
1,1,1-TCA	67.8 (S)
TOUENE	2.52 J
ETHYLBENZENE	1.10 J
TOTAL XYLENES	2.16 J
PHENANTHRENE	0.66

LEGEND:

1,1,1-TCA 119.00 (S) ANALYTE CONCENTRATION (ug/l) EXCEEDING NEW YORK STATE AMBIENT GROUNDWATER QUALITY STANDARDS AND GUIDANCE VALUES (CLASS GA) (TICS 1.1.1 THRESHOLD LIMIT)

MW1 (55-57) TEMPORARY MONITORING WELL AND SOIL SAMPLE DEPTH

NOTES:

- SOURCE OF DRAWING IS SURVEY BY ALBERT W. TAY, LICENSED LAND SURVEYOR, PLAINVIEW, NEW YORK, SURVEYED JUNE 20, 2000.
- DRAWING SUPPLEMENTED BY FIELD OBSERVATIONS AND GEOPHYSICAL SURVEY RESULTS.

* Based upon results of Geophysical Investigation

J CONCENTRATION DETECTED AT THE VALUE BELOW THE METHOD DETECTION LIMIT

TIC TENTATIVELY IDENTIFIED COMPOUNDS

MW-4	CONCENTRATION (ug/l) IN GROUNDWATER
ACETONE	8.61 J
1,1,1-TCA	119.00 (S)
BENZENE	2.46 (0.7) J
TOUENE	8.37 (S)
ETHYLBENZENE	2.27 J
TOTAL XYLENES	6.92
MTBE (TIC)	9.50
TOTAL SWOC TICS	5.70

CORAL GRAPHIC SERVICES FACILITY
327 NEW SOUTH ROAD
HICKSVILLE, TOWN OF OYSTER BAY,
NASSAU COUNTY, NEW YORK

ANALYTE CONCENTRATIONS
WITHIN SOILS AND GROUNDWATER

MALCOLM FIRNIE, INC.

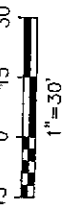
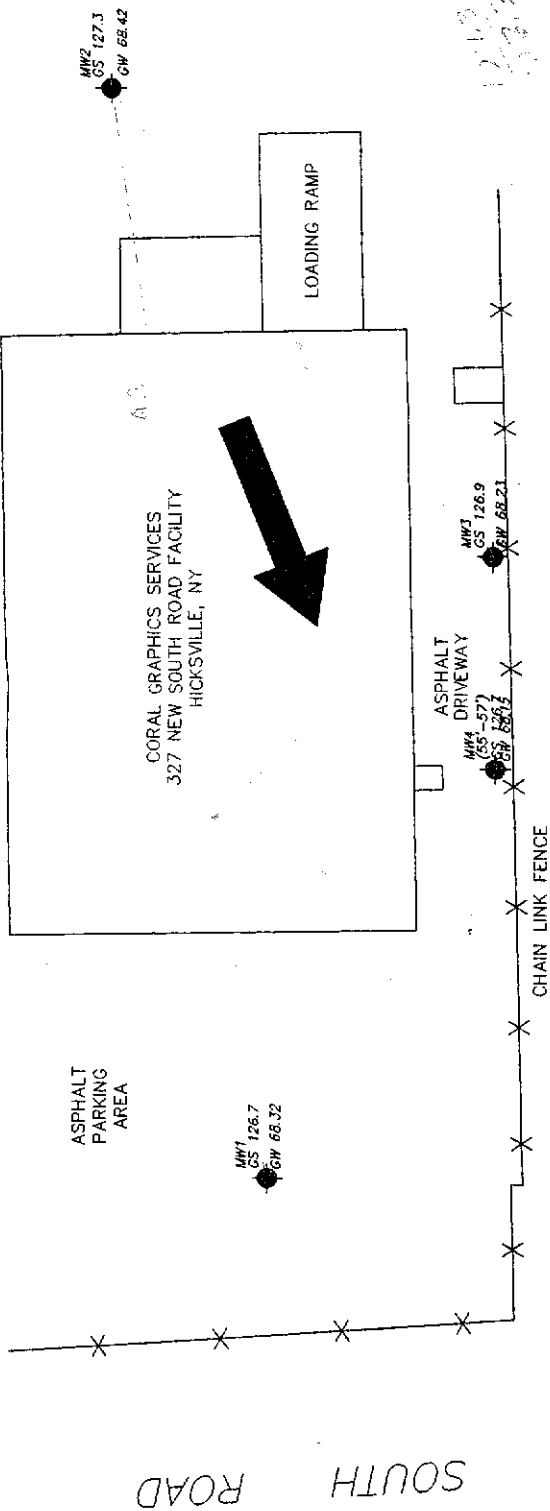
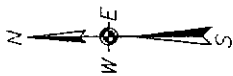
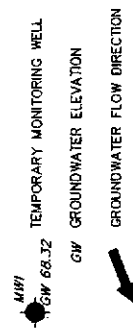


FIGURE 10



LEGEND:



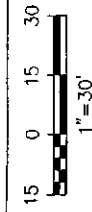
NOTES:

1. GENERAL DIRECTION OF GROUNDWATER FLOW BASED ON SYNOPSIS ROUND OF GROUNDWATER ELEVATION MEASUREMENTS COLLECTED ON JUNE 20, 2000
2. SOURCE OF DRAWING IS SURVEY BY ALBERT W. TAY, LICENSED LAND SURVEYOR, PLAINVIEW, NEW YORK, SURVEYED JUNE 20, 2000.
3. ELEVATIONS ARE IN NASSAU COUNTY DATUM.
4. DRAWING SUPPLEMENTED BY FIELD OBSERVATIONS AND GEOPHYSICAL SURVEY RESULTS.

**MALCOLM
PIRRIE**

CORAL GRAPHIC SERVICES FACILITY
327 NEW SOUTH ROAD
HICKSVILLE, TOWN OF OYSTER BAY,
NASSAU COUNTY, NEW YORK

GENERAL DIRECTION OF GROUNDWATER FLOW



MALCOLM PIRRIE, INC.

FIGURE 11

ATTACHMENT 1

**Land, Air, Water Environmental Services, Inc.
Drilling Logs**



***Land, Air, Water
Environmental Services, Inc.***

Driller's Logs

**Coral Graphics
Hicksville, New York**

June 2000

32 Chichester Avenue, Center Moriches, New York 11934
(631) 874-2112 Fax (631) 874-4547



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 1

page: 1 of 2

DATE: June 14, 2000

SITE: 327 New South Road
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 64 feet

DEPTH TO WATER: 58 feet

DRILLING METHOD: Hollow Stem Auger 6 5/8"

CASING INSTALLED: 2" x 53' Sch 40 PVC

DRILLER: C. Pedersen

SCREEN INSTALLED 2" x 10' Sch 40 PVC .010 slot

HELPER: J. Pedersen

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	5 ft	Hand / Auger Cuttings		Brown / gray/ tan coarse to medium to fine sands, 10% gravel
5 ft	20 ft	Auger Cuttings		Tan coarse to medium sands, 20% gravel
20 ft	40 ft	Auger Cuttings		Tan coarse to medium sands, 40% gravel
40 ft	42 ft	13 inches	6-11-17-20	Tan sands, coarse to medium 30% gravel , (SP)
42 ft	45 ft	Auger Cuttings		Tan sands, coarse to medium , 20% gravel
45 ft	47 ft	14 inches	8-17-19-24	Light tan sands, coarse to medium to fine, 10% gravel
47 ft	50 ft	Auger Cuttings		Light sand sands, coarse to medium , 20% gravel



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 1

page: 2 of 2

DATE: June 14, 2000

SITE: 327 New South Road
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
50 ft	52 ft	16 inches	7-10-16-19	Light tan sands, fine , (SW)
52 ft	55 ft	Auger Cuttings		Tan sands, coarse to medium , 10% gravel
55 ft	57 ft	18 inches	9-12-14-22	Light tan sands, fine, (SW)
57 ft	60 ft	Auger Cuttings		Tan sands, coarse to medium to fine, 10% gravel
60 ft	62 ft	22 inches	6-8-10-12	Tan sands, medium to fine , wet , (SP)
62 ft	64 ft	Auger Cuttings		Tan sands, coarse to medium to fine, 10% gravel



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 2

page: 1 of 1

DATE: June 14, 2000

SITE: 327 New South Road
Hiksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 65 feet

DEPTH TO WATER: 59 feet

DRILLING METHOD: Hollow Stem Auger 6 5/8"

CASING INSTALLED: 2" x 54' Sch 40 PVC

DRILLER: C. Pedersen

SCREEN INSTALLED 2" x 10' Sch 40 PVC .010 slot

HELPER: J. Pedersen

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	5 ft	Hand / Auger Cuttings		Light brown/ tan, coarse to medium sands, 10% gravel
5 ft	20 ft	Auger Cuttings		Tan coarse to medium sands, 40% gravel
20 ft	50 ft	Auger Cuttings		Tan coarse to medium sands, 20% gravel
50 ft	52 ft	16 inches	7-14-16-19	Tan & orange fine sands,/ reddish white clay, (SP) / (OC)
52 ft	55 ft	Auger Cuttings		Tan / orange sands, fine, trace gravel
55 ft	57 ft	12 inches	11-18-24-28	Tan / red sands / orange laminations, coarse to medium, 5% gravel, (SW)
57 ft	60 ft	Auger Cuttings		Tan/ orange sands, coarse to medium to fine, trace gravel
60 ft	62 ft	9 inches	8-14-19-16	White fine sands, coarse to medium fine , trace gravel, (SW)
62 ft	65 ft	Auger Cuttings		Tan / orange sands, coarse to medium to fine, trace gravel



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 3

page: 1 of 1

DATE: June 15, 2000

SITE: 327 New South Road
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 54 feet

DEPTH TO WATER: 48.5 feet

DRILLING METHOD: Hollow Stem Auger 6 5/8"

CASING INSTALLED: 2" x 54' Sch 40 PVC

DRILLER: C. Pedersen

SCREEN INSTALLED 2" x 10' Sch 40 PVC .010 slot

HELPER: R. Allegranza

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	5 ft	Hand / Auger Cuttings		Brown / tan, coarse to medium to fine sands, 25% gravel
5 ft	25 ft	Auger Cuttings		Tan coarse to medium sands, 40% gravel
25 ft	55 ft	Auger Cuttings		Tan coarse to medium to fine sands, 10% gravel
55 ft	57 ft	14 inches	8-15-17-20	Brown/ white/ orange coarse to medium to sands/ orange & white laminations, 5% gravel, (SW)
57 ft	60 ft	Auger Cuttings		Orange / tan sands, coarse to medium, 20% gravel
60 ft	62 ft	12 inches	7-13-16-15	Orange / tan sands, coarse to medium , 5% gravel, wet, (SP)
62 ft	65 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

TW# 1

page: 1 of 2

DATE: June 16, 2000

SITE: 327 New South Road
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 65 feet

DEPTH TO WATER: 59 feet

DRILLING METHOD: Hollow Stem Auger 6 5/8"

CASING INSTALLED: 2" x 54' Sch 40 PVC

DRILLER: C.Pedersen

SCREEN INSTALLED 2" x 10' Sch 40 PVC .010 slot

HELPER: R.Allegrezza

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	2 ft	8 inches	6-11-19-28	Brown / tan sands, coarse to medium , 20% gravel , (SP)
2 ft	4 ft	13 inches	13-18-20-24	Tan sands, coarse to medium , 50% gravel , (GP)
4 ft	6 ft	15 inches	14-37-34-38	Tan sands, coarse to medium , 25% gravel , (SP)
6 ft	8 ft	1 inches	16-25-36-38	Crushed rock in spoon
8 ft	10 ft	16 inches	7-12-17-18	Tan sands, coarse to medium 20% gravel , (SP)
10 ft	15 ft	Auger Cuttings		Tan sands, coarse to medium , 20% gravel
15 ft	17 ft	15 inches	9-17-22-26	Tan sands, coarse to medium 20% gravel , (SP)
17 ft	20 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel
20 ft	22 ft	19 inches	7-13-16-19	Tan sands, coarse to medium 25% gravel , (SP)



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

TW# 1

page: 2 of 2

DATE: June 16, 2000

SITE: 327 New South Road
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

22 ft	25 ft	Auger Cuttings		Tan coarse to medium sands, 20% gravel
25 ft	27 ft	17 inches	8-11-13-16	Light tan coarse to medium sands, 5% gravel , (SP)
27 ft	30 ft	Auger Cuttings		Tan coarse to medium sands, 20% gravel
30 ft	32 ft	15 inches	6-8-8-11	Tan coarse to medium sands , 50% gravel (GP)
32 ft	35 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel
35 ft	37 ft	12 inches	5-8-10-11	Tan sands, coarse to medium , 30% gravel , (SP)
37 ft	40 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel
40 ft	42 ft	14 inches	6-11-17-20	Tan sands, coarse to medium (SP)
42 ft	45 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel
42 ft	45 ft	19 inches	7-9-10-11	Orangy tan medium to fine sands, trace gravel, (SW)
45 ft	50 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel
50 ft	52 ft	16 inches	9-14-18-17	Tan sands, coarse to medium , 20% gravel , (SP)
52 ft	55 ft	Auger Cuttings		Tan sands, coarse to medium
55 ft	57 ft	inches	9-14-18-22	Tan / orange sands, coarse to medium, 10% gravel, (SP)
57 ft	60 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel
60 ft	62 ft	13 inches	7-11-13-14	Tan / orange sands, coarse to medium, 20% gravel, wet, (SP)
62 ft	65 ft	Auger Cuttings		Tan sands, coarse to medium, 20% gravel



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 1

page: 1 of 1

DATE: June 15, 2000

SITE: 840 South Broadway
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 53 feet

DEPTH TO WATER: 47 feet

DRILLING METHOD: Hollow Stem Auger 6 5/8"

CASING INSTALLED: 2" x 42' Sch 40 PVC

DRILLER: C. Pedersen

SCREEN INSTALLED 2" x 10' Sch 40 PVC .010 slot

HELPER: R. Allegrezza

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	5 ft	Hand / Auger Cuttings		Brown, coarse to medium sands, 10% gravel
5 ft	25 ft	Auger Cuttings		Tan coarse to medium sands, 40% gravel
25 ft	38 ft	Auger Cuttings		Tan coarse to medium sands, 50% gravel
38 ft	50 ft	Auger Cuttings		Tan coarse to medium to fine sands, 5% gravel
50 ft	52 ft	14 inches	6-10-11-13	Tan & orange coarse to medium sands/ white laminations, wet, 10% gravel, (SP)
52 ft	53 ft	Auger Cuttings		Tan sands, coarse to medium, 10% gravel, wet



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 2

page: 1 of 1

DATE: June 15, 2000

SITE: 840 South Broadway
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 56 feet

DEPTH TO WATER: 50 feet

DRILLING METHOD: Hollow Stem Auger 6 5/8"

CASING INSTALLED: 2" x 45' Sch 40 PVC

DRILLER: K.McGourty

SCREEN INSTALLED 2" x 10' Sch 40 PVC .010 slot

HELPER: J.Pedersen

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	4 ft	Hand / Auger Cuttings		Brown, medium to fine sands & silts, trace gravel, 4" asphalt, fill
4 ft	15 ft	Auger Cuttings		Dark brown, sands/ silts, medium to fine, trace gravel
15 ft	25 ft	Auger Cuttings		Tan coarse to medium sands, 25% gravel
25 ft	30 ft	Auger Cuttings		Tan coarse to medium sands, 40% gravel
30 ft	40 ft	Auger Cuttings		Tan coarse to medium sands, 25% gravel
40 ft	42 ft	12 inches	7-11-22-28	Tan coarse to medium sands, 10% gravel , (SP)
42 ft	45 ft	Auger Cuttings		Tan coarse to medium sands, trace gravel
45 ft	47 ft	12 inches	13-17-25-31	Tan / white medium sands , (SP)
47 ft	50 ft	Auger Cuttings		Tan sands, medium, trace gravel
50 ft	52 ft	- inches	11-15-21-24	Tan / white medium to fine sands & silts, (SM), wet
52 ft	56 ft	Auger Cuttings		Tan sands, medium to fine , wet



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 3

page: 1 of 1

DATE: June 16, 2000

SITE: 840 South Broadway
Hicksville, NYCONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 56 feet

DEPTH TO WATER: 50 feet

DRILLING METHOD: Hollow Stem Auger 6 5/8"

CASING INSTALLED: 2" x 45' Sch 40 PVC

DRILLER: K.McGourty

SCREEN INSTALLED 2" x 10' Sch 40 PVC .010 slot

HELPER: J.Pedersen

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	4 ft	Hand / Auger Cuttings		Brown / brown fine to coarse sand, 10% gravel, top soil
4 ft	10 ft	Auger Cuttings		Brown, sands, coarse to medium, 15% gravel
10 ft	30 ft	Auger Cuttings		Tan coarse to medium sands, 30% gravel
30 ft	35 ft	Auger Cuttings		Tan coarse to medium sands, 20% gravel
35 ft	37 ft	12 inches	8-14-15-19	Tan coarse to medium sands, 15% gravel , (SP)
37 ft	40 ft	Auger Cuttings		Tan coarse to medium sands, trace gravel
40 ft	42 ft	13 inches	9-13-16-21	Tan coarse to medium sands , 5% gravel (SP)
42 ft	45 ft	Auger Cuttings		Tan sands, medium, trace gravel
45 ft	47 ft	0 inches	11-14-15-19	No recovery rock in spoon
47 ft	50 ft	Auger Cuttings		Tan sands, medium, trace gravel
50 ft	52 ft	24 inches	14-16-20-21	Tan sands / silts, coarse to medium to fine, trace gravel , wet, (SM)
52 ft	56 ft	Auger Cuttings		Tan sands, coarse to medium, trace gravel, wet



LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW- 4

page: 1 of 1

DATE: June 16, 2000

SITE: 840 South Broadway
Hicksville, NY

CONSULTANT: Malcolm Pirney
White Plains, NY

DEPTH DRILLED: 8 feet

DEPTH TO WATER: Not encountered

DRILLING METHOD: Hollow Stem Auger 6 5/8"

DRILLER: K.McGourty

HELPER: J.Pedersen

DEPTH FROM TO		Sample Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	2 ft	10 inches	5-7-10-11	6"Brown / 1" black/ 3" dark brown, medium to fine sands, 2.5" asphalt
2 ft	4 ft	11 inches	7-7-8-9	7" Dark brown medium to fine sands, 4" brown sands, coarse to medium sands, 15% gravel, , (SM) / (SP)
4 ft	6 ft	9 inches	4-4-5-7	Dark brown, coarse to medium to sands, 10% gravel , (SP)
6 ft	8 ft	13 inches	5-5-7-7	Tan sands, coarse to medium 5% gravel - 1700 PPM meter reading by client STOP WORK Bentonite added to seal boring

ATTACHMENT 2

**TriState Environmental Management Services, Inc.
Letter Report**

DRAFT

July 24, 2000

Ms. Celeste C. Thomas
Malcolm Pirnie, Inc.
104 Corporate Park Drive
White Plains, NY 10602

Subject: Sampling and Analysis
Coral Graphic Services Facility
840 South Broadway
Hicksville, New York

Dear Ms. Thomas:

This letter presents the results of the subject activities, conducted by TriState Probing/Drilling Services, Inc. (TriState) on behalf of Malcolm Pirnie, Inc. (MPI) in accordance with MPI's Scope of Technical Services for the project.

Technical Overview

Soil gas samples were collected by TriState at 11 locations (designated by MPI as GP-1 through GP-10 and MW-1) in the western portion of the subject facility on June 28 through 30, 2000, as directed by MPI's onsite representative. Soil gas samples for potential analysis were collected at several depths ranging between 4 and 40 feet below grade at each of the above locations, except at location MW-1 where only one sample was collected which was at 32 feet below grade.

Soil gas samples were collected using a Geoprobe (Model 5400) direct-push unit and associated tooling and equipment. At each location, the rods were advanced into the subsurface with an expendable drive point. Upon reaching the selected depth, the point was released from the rods, the rods were retracted approximately one foot, and the soil gas sample was collected into a tedlar sample bag using dedicated tubing through the rods via a vacuum pump and box.

After sample collection, the tedlar bag containing the soil gas sample was immediately taken to the onsite mobile laboratory operated by Environmental Management Associates, Inc. (EMA) under subcontract to TriState. A total of 30 soil gas samples were analyzed by EMA for benzene, ethylbenzene, trichloroethylene (TCE), and tetrachloroethylene (PCE), as directed by MPI. Analytical results were reported to the onsite MPI representative as they became available.

In addition to soil gas samples, TriState collected soil samples and a ground water sample using the Geoprobe unit on the above dates, as directed by MPI, for submittal by MPI to an offsite laboratory for analysis. The four soil sample locations (SS-1 through SS-4) and the single ground water sample location (GP-4-GW) were in proximity to the above soil gas sample locations. Soil samples were collected using a combination of Geoprobe's Macro Core and Large Bore samplers

DRAFT

Ms. Celeste C. Thomas

July 24, 2000

Page 2

each with one-time use plastic (PTEG) liners. The ground water sample was collected using Geoprobe's Screen Point Sampler and a disposable mini-bailer.

Results

Analytical results for the soil gas samples are summarized in the attached EMA report. Benzene and ethylbenzene were only detected at sample location GP-2 at a depth of 4 feet at concentrations of 0.06 parts per million by volume (ppmv) and 0.1 ppmv, respectively. TCE was only detected at GP-2 at 4, 8 and 20 feet below grade at concentrations ranging from 0.15 to 0.52 ppmv. PCE was detected in all of the samples at concentrations ranging from 0.21 to 329.66 ppmv, the majority of which are estimated concentrations because they were detected above the instrument calibration range.

As noted previously, the soil and ground water samples were submitted by MPI to an offsite laboratory for analysis.

Please call me should you have any questions or require additional information.

Sincerely,

Terence A. O'Reilly
Project Manager

cc: Theodore H. Sobieski; TriState

Summarized Results of Soil Gas Sample Analyses
 Midcoast Plastics - Carol Graphic Services Facility
 Middleville, NY
 June 28, 29 & 30, 2000

Sample ID	Benzene (ug)	Benzene (ppmv)	TCE (ug)	TCE (ppmv)	PCE (ug)	PCE (ppmv)	Ethylbenzene (ug)	Ethylbenzene (ppmv)	# of Unknown Peaks	Sample Volume (dilution from 50 cc)
GP-2 (4)	0.01	0.06	0.04	0.15	4.70	13.87 x	0.02	0.10	4	50 cc
GP-2 (8)	ND	ND	0.05	0.18	10.80	32.16 x	ND	ND	2	10 cc / 5 dilution
GP-2 (20)	ND	ND	0.14	0.52	22.47	68.28 x	ND	ND	3	5 cc / 10 dilution
GP-3 (4)	ND	ND	ND	ND	11.38	33.97 x	ND	ND	12	5 cc / 10 dilution
GP-3 (20)	ND	ND	ND	ND	18.36	49.32 x	ND	ND	1	5 cc / 10 dilution
GP-5 (4)	ND	ND	ND	ND	6.68	19.71 x	ND	ND	5	5 cc / 10 dilution
GP-5 (8)	ND	ND	ND	ND	7.33	21.62 x	ND	ND	0	5 cc / 10 dilution
GP-5 (20)	ND	ND	ND	ND	12.02	35.46 x	ND	ND	2	5 cc / 10 dilution
GP-6 (4)	ND	ND	ND	ND	2.34	6.80 x	ND	ND	0	50 cc
GP-6 (20)	ND	ND	ND	ND	8.65	25.52 x	ND	ND	1	10 cc / 5 dilution
GP-1 (8)	ND	ND	ND	ND	0.14	0.41	ND	ND	4	50 cc
GP-1 (12)	ND	ND	ND	ND	0.11	0.32	ND	ND	3	50 cc
GP-7 (4)	ND	ND	ND	ND	0.07	0.21	ND	ND	4	50 cc
GP-7 (8)	ND	ND	ND	ND	1.02	3.01 x	ND	ND	3	50 cc
GP-7 (20)	ND	ND	ND	ND	1.45	4.28 x	ND	ND	5	50 cc
GP-7 (40)	ND	ND	ND	ND	4.20	12.38 x	ND	ND	2	10 cc / 5 dilution
GP-8 (4)	ND	ND	ND	ND	7.63	22.51 x	ND	ND	5	5 cc / 10 dilution
GP-8 (12)	ND	ND	ND	ND	5.48	16.11 x	ND	ND	4	10 cc / 5 dilution
GP-8 (20)	ND	ND	ND	ND	7.79	22.98 x	ND	ND	5	10 cc / 5 dilution
GP-9 (4)	ND	ND	ND	ND	10.23	30.18 x	ND	ND	3	10 cc / 5 dilution
GP-9 (20)	ND	ND	ND	ND	15.57	45.83 x	ND	ND	4	10 cc / 5 dilution
GP-9 (40)	ND	ND	ND	ND	23.72	69.87 x	ND	ND	4	5 cc / 10 dilution
GP-4 (20)	ND	ND	ND	ND	11.75	329.66 x	ND	ND	2	1 cc / 50 dilution
GP-4 (40)	ND	ND	ND	ND	1.23	3.63	ND	ND	4	10 cc / 5 dilution
GP-10 (4)	ND	ND	ND	ND	8.33	18.67 x	ND	ND	3	5 cc / 10 dilution
GP-10 (20)	ND	ND	ND	ND	2.58	7.64	ND	ND	3	5 cc / 10 dilution
GP-10 (40)	ND	ND	ND	ND	40.68	120.63 x	ND	ND	3	5 cc / 10 dilution
GP-8 (40)	ND	ND	ND	ND	30.25	89.24 x	ND	ND	2	5 cc / 10 dilution
MMV-1 (32)	ND	ND	ND	ND	4.82	13.63	ND	ND	1	10 cc / 5 dilution
	ND	ND	ND	ND	5.82	17.17 x	ND	ND	2	10 cc / 5 dilution

Notes:

x - Estimated concentration. The compound was detected at a concentration above the instrument calibration range.

ND - Not detected.

Environmental Management Associates, Inc.
Mobile Laboratory
Sample Log - June 28, 2000

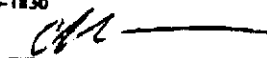
Job Site: Malcolm Pirnie - Coral Graphic Services, Hicksville, NY

Sample No.	Sample ID	Date Collected	Time Collected	Time Analyzed	Description	Notes
1	Blank 1	6/28/00	8:00	8:00	Blank	
2	100 ppb std	6/28/00	8:15	9:30	Calibration Run	
3	50 ppb std	6/28/00	8:15	11:00	Calibration Run	
4	20 ppb std	6/28/00	8:15	12:00	Calibration Run	
5	Blank 2	6/28/00	8:20	12:30	Blank	
6	GP-2 (4')	6/28/00	9:56	13:10	Soil Gas Sample	50 cc
7	GP-2 (8')	6/28/00	10:16	13:44	Soil Gas Sample	10 cc / 5 dil.
8	GP-2 (20')	6/28/00	14:07	14:22	Soil Gas Sample	5 cc / 10 dil.
9	GP-3 (4')	6/28/00	14:38	14:51	Soil Gas Sample	5 cc / 10 dil.
10	GP-3 (20')	6/28/00	15:20	15:36	Soil Gas Sample	5 cc / 10 dil.
11	GP-5 (4')	6/28/00	16:00	16:12	Soil Gas Sample	5cc / 10 dil.
12	GP-5 (8')	6/28/00	16:30	16:43	Soil Gas Sample	5cc / 10 dil.
13	GP-5 (20')	6/28/00	16:55	17:12	Soil Gas Sample	5cc / 10 dil.
14	Purge Blank	6/28/00	17:52	17:52	Purge Blank	
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Time On-site:

0715-1830

Analyst Signature



Client Representative



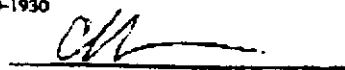
Environmental Management Associates, Inc.
Mobile Laboratory
Sample Log - June 29, 2000

Job Site: Malcolm Pirnie - Coral Graphic Services, Hicksville, NY

Sample No.	Sample ID	Date Collected	Time Collected	Time Analyzed	Description	Notes
1	Blank 1	6/29/00	6:15	6:59	Blank	
2	GP-6 (4')	6/28/00	17:30	7:29	Soil Gas Sample	50 cc
3	GP-6 (20')	6/28/00	17:45	7:58	Soil Gas Sample	10 cc / 5 dil.
4	Blank 2	6/29/00	8:25	8:25	Blank	
5	GP-1 (4')	6/29/00	8:25	8:55	Soil Gas Sample	50 cc
6	GP-1 (8')	6/29/00	8:35	9:23	Soil Gas Sample	50 cc
7	GP-1 (12')	6/29/00	8:53	9:55	Soil Gas Sample	50 cc
8	GP-7 (4')	6/29/00	9:00	10:24	Soil Gas Sample	50 cc
9	GP-7 (8')	6/29/00	9:25	10:52	Soil Gas Sample	50 cc
10	GP-7 (20')	6/29/00	9:55	11:27	Soil Gas Sample	10 cc / 5 dilution
11	GP-7 (40')	6/29/00	11:05	11:56	Soil Gas Sample	5 cc / 10 dilution
12	GP-8 (4')	6/29/00	11:40	12:27	Soil Gas Sample	10 cc / 5 dilution
13	Blank 3	6/29/00	12:55	12:55	Blank	
14	GP-8 (12')	6/29/00	12:20	13:22	Soil Gas Sample	10 cc / 5 dilution
15	GP-8 (20')	6/29/00	12:40	13:51	Soil Gas Sample	10 cc / 5 dilution
16	GP-9 (4')	6/29/00	14:04	14:20	Soil Gas Sample	10 cc / 5 dilution
17	GP-9 (20')	6/29/00	14:30	14:50	Soil Gas Sample	5 cc / 10 dilution
18	GP-9 (40')	6/29/00	15:50	15:33	Soil Gas Sample	1 cc / 50 dilution
19	GP-4-GW	6/29/00	16:40	17:07	GW Sample	5 ml
20	Purge Blank	6/29/00	17:42	17:42	Blank	
21	Purge Blank	6/29/00	18:10	18:10	Blank	
22	Blank 4	6/29/00	18:38	18:38	Blank	
23	0.25 std	6/29/00	19:06	19:06	Check Standard	
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Time On-site: 0700-1930

Analyst Signature



Client Representative

Environmental Management Associates, Inc.
Mobile Laboratory
Sample Log - June 30, 2000

Job Site: Malcolm Pirnie - Coral Graphics Services, Hicksville, NY

Sample No.	Sample ID	Date Collected	Time Collected	Time Analyzed	Description	Notes
1	Blank 1	6/30/00	6:15	7:14	Blank	
2	GP-4 (20')	6/29/00	17:46	7:42	Soil Gas Sample	10 cc / 5 dil.
3	GP-4 (40')	6/29/00	17:36	8:11	Soil Gas Sample	5 cc / 10 dil.
4	GP-10 (4')	6/29/00	18:26	8:40	Soil Gas Sample	5 cc / 10 dil.
5	GP-10 (20')	6/29/00	18:38	9:09	Soil Gas Sample	5 cc / 10 dil.
6	GP-10 (40')	6/29/00	19:26	9:38	Soil Gas Sample	5 cc / 10 dil.
7	GP-6 (40')	6/30/00	9:15	10:07	Soil Gas Sample	10 cc / 5 dil.
8	Blank 2	6/30/00	10:40	10:40	Blank	
9	MW-1 (32')	6/30/00	11:04	11:16	Soil Gas Sample	10 cc / 5 dil.
10	0.25 std	6/30/00	10:00	11:47	Calibration Run	
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Time On-site: 0700-1300

Analyst Signature

Client Representative