GROUNDWATER TECHNOLOGY

Groundwater Technology, Inc.
80 Holtz Drive, Suite 107, Cheektowaga, NY 14225
Tel: (716) 634-1291

February 1, 1994

Mr. Kevin Schroeder
Mobil Oil Corporation
187 Wolf Road
Albany, New York 12205

Subject: Environmental Site Assessment
Parcels north of Elk Street
Buffalo, New York

Dear Glen,

Groundwater Technology, Inc. is pleased to present the results of the surface and subsurface environmental site assessment of the several parcels of land north of Elk Street. Field work for this project took place between October 6 and 12, 1993.

## OBJECTIVE

Approximately fifteen to twenty years ago, an incident involving former tank 60 caused an undetermined amount of fugitive petroleum to be released and spilled upon the subject properties. As a result of considerations for future real estate transactions, the current investigation was formulated to establish the current surface and subsurface soil and groundwater conditions of the subject properties with respect to the historic spill. In addition to this investigation, a natural gas well located on an adjacent property was to be evaluated for possible environmental impacts to the subject properties.

## WORK SCOPE

The objective of this project was met in a phased approach by implementing the following work scope:

- Installation of shallow soil borings to characterize surface conditions by collecting soil samples from the upper two feet of each boring,
- installation of temporary well points (TWPs) to collect groundwater samples by advancing five of the soil borings to intercept the local groundwater table and
- performing a record search regarding the nearby natural gas well.

Soil borings were installed using a one-inch diameter steel drive point advanced into the subsurface by an electric, hand-held, hammer drill. Composite soil samples (per boring) were obtained from 12 to approximately 24 inches below grade using a clean open spoon sampler attached to the end of the steel drive rods.

A total of 15 borings were installed to an approximate depth of 24 inches while five additional borings were advanced, subsequent to soil sampling, to approximately ~~12~~ feet. These borings were converted into temporary wells (TWPs) consisting of a four-inch slotted aluminum shield point connected to the surface via

Teflon tubing to permit groundwater sampling. All borings and TWPs are depicted in Figure 1, Soil Boring and Temporary Well Locations.

## RESULTS OF THE INVESTIGATION

As Figure 1 indicates, the subject property under investigation was divided into four areas within which five soil borings were installed. These surface soil samples collected from each boring were composited on a per area basis. Both soil and groundwater samples were sent to Groundwater Technology Environmental Laboratories (GTEL) in Milford, New Hampshire for analysis. Based upon historical reports and the contents of former tank 60, the soil and groundwater samples were screened for Hydrocarbons by Gas Chromatograph (GC), RCRA Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by EPA Method 6010 and for Chloride by EPA Method 325.2. These methods were chosen to closely define the presence, or lack thereof, of specific hydrocarbon and chemical constituents. Sufficient quantities of groundwater were collected from four of the five TWPs (-02, -03, -04 and -05) to permit full analysis of groundwater from these TWPs. TWP-01 yielded quantities of groundwater sufficient only to permit Chloride analysis.

Based upon the laboratory results (Appendix B), hydrocarbons were present in the form of Lubricating oil in all the surface soil samples and in groundwater in TWP-03. Concentrations in soils ranged from 180 to 7,200 ppm while groundwater concentration of Lubricating Oil in TWP-03 was 5,700 ppb. Figures 2 and 3 show the distribution of Lubricating Oil in soils (by area) and groundwater, respectfully.

Metals analysis revealed significant concentrations of lead in surface soils (Figure 4) ranging from 530 to 1,300 ppm exceeding the New York State maximum concentration guideline of 100 ppm (STARS Memo 1, August 1992). All other metals were below stated guidelines for the soil samples.

With respect to the groundwater samples, state guidelines (Ambient Water Quality Standards and Guidance Values, November 1991) were exceeded for arsenic at 50 ppb (TWP-05), chromium at 50 ppb (TWP-02, -03, -04 and -05), lead at 50 ppb (TWP-02, -03, -04 and -05) and selenium at 10 ppb (TWP-02, -04 and -05). Figure 5 shows the concentrations of the metals in groundwater.

All soil samples were non-detect for chloride. Figure 6 shows the distribution of chloride in groundwater as represented by TWPs -01 through -05. Concentrations range from non-detect to 370 ppm. Only one sample, TWP-01 (370 ppm) was in exceedance of New York State guidelines for chloride at 250 ppm (Ambient Water Quality Standards and Guidance Values, November 1991).

An inactive natural gas well exists on the property adjacent to and west of Mobil's property. This well was drilled in 1980 by Berea Oil and Gas Corporation for Trico Products Corporation on Trico Corporation property. The well was installed to supply natural gas to the neighboring Trico facility, but is currently inactive. A concern exists over whether or not Mobil, as a potential mineral rights lessor to Trico, would be liable for environmental impacts caused by the Trico well. According to Chris Miller of the New York State Department of Environmental Conservation in Olean, New York, the state has never involved a lessor in an issue of this nature. A review of NYSDEC records for this well failed to find the operator in violation of any of the state's production regulations.

## CONCLUSIONS

Field screening of the soils during this investigation revealed no visual staining or notable odors, however laboratory analysis of the soils revealed TPH as lubricating oil in the concentration of 7,200 ppm. Lubricating oil was detected in groundwater at only one sample point at 5.7 ppm. In addition, concentrations of several metals appear to be elevated in groundwater samples at the site. However, since groundwater in the vicinity of the site is not used for public consumption, overall environmental impacts related to these metals can be considered minimal.

As a result of the investigation of the subject property, environmental concerns related to Mobil Oil Corporation's operating process appear to be limited to lubricating oil impacts in surficial soils only.

## LIMITATION ON WORK PRODUCT

Groundwater Technology has performed the preliminary assessment contained in this Report in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Groundwater Technology shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld or not fully disclosed to it at the time the investigation was performed. The conclusions presented in this Report were based solely upon the serviced described, which were performed within the time and budgetary constraints imposed by the customer.

This Report shall not be construed to create any warranty or representation that the real property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements, or that the property is fit for any particular purpose. No third party is entitled to rely upon any information or opinions contained in this Report.

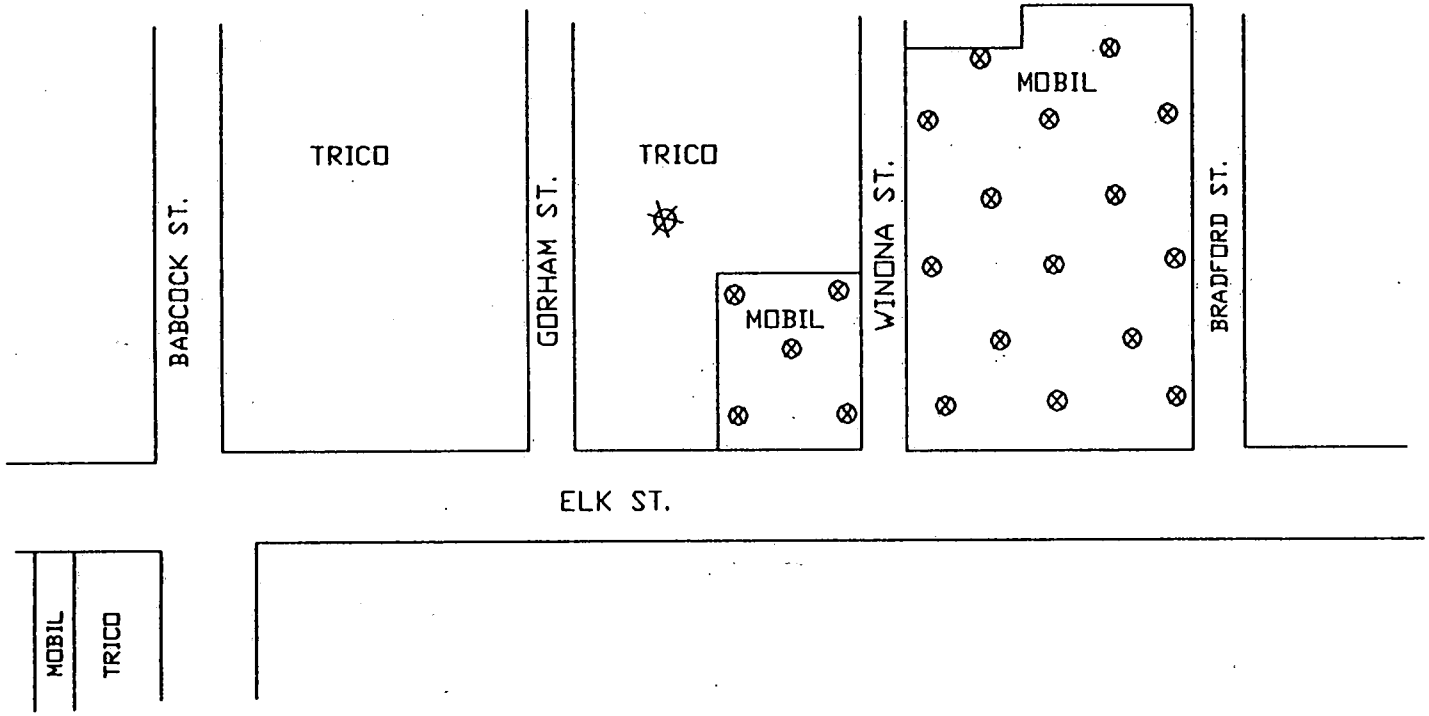
If you have any questions, please contact either Tom Antonoff or myself at (716) 634-1291.

Sincerely,
GROUNDWATER TECHNOLOGY, INC.

Michael J. Teeling
Project Geologist

Thomas D. Antonoff
Buffalo Operations Manager

a:\mbt\surf-sb.rpt

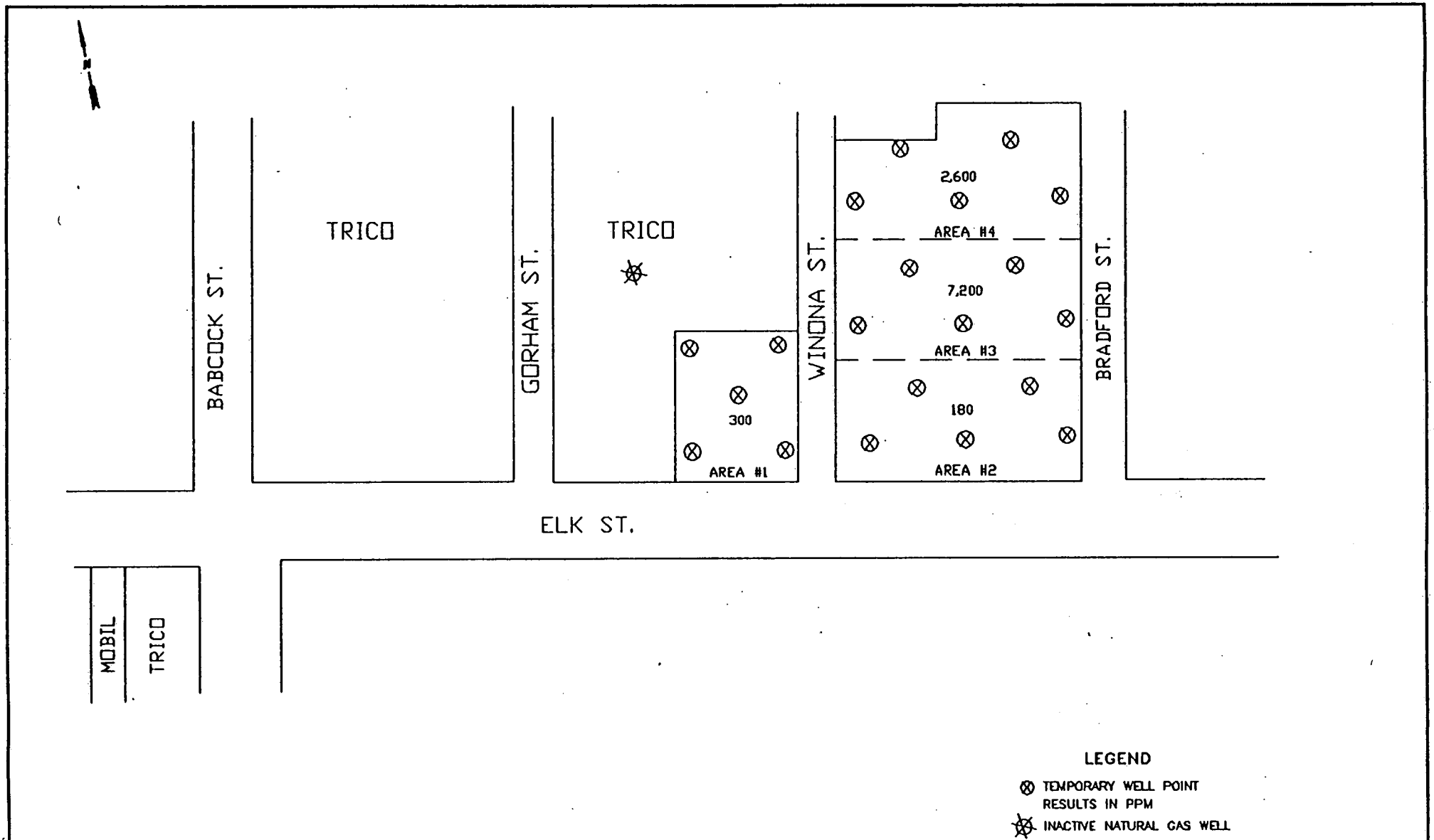



LEGEND

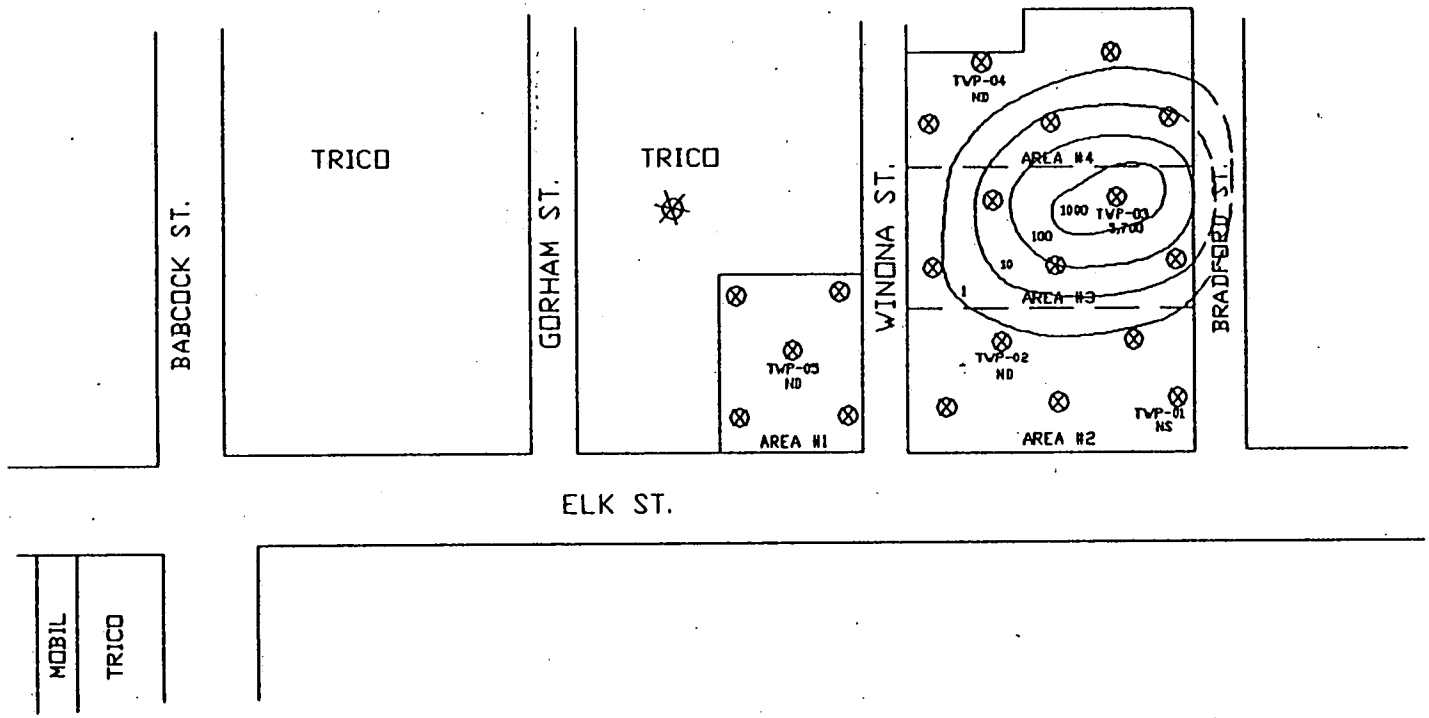
⊗ TEMPORARY WELL POINT

INACTIVE NATURAL GAS WELL

| | | | | | | |
|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY<br>80 HOLTZ DRIVE<br>CHEEKTOWAGA, NY 14225<br>(716) 634-1291 | CLIENT:<br>MOBIL OIL CORPORATION | PROJECT NO.: 01111-9999<br>PM: MJT SM: | DRAWING DATE: 10/1/93<br>ACAD FILE: BORING | **SOIL BORING-INVESTIGATION** | LOCATION: SS #31010<br>ELK STREET<br>BUFFALO, NEW YORK | DETAILED: MLH<br>FIGURE: 1 |




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY | 80 HOLTZ DRIVE CHEEKTOWAGA, NY 14225 (716) 634-1291 | CLIENT: MOBIL OIL CORPORATION | PROJECT NO.: 01111-5311 | DRAWING DATE: 10/1/93 | **LUBRICATING OIL IN SURFACE SOILS** | LOCATION: SS #31010 ELK STREET BUFFALO, NEW YORK | DETAILED: MLH |
| | | | PM: MJT SM: | ACAD FILE: BORING | | | FIGURE: 2 |




LEGEND

⊗ TEMPORARY WELL POINT RESULTS IN PPB

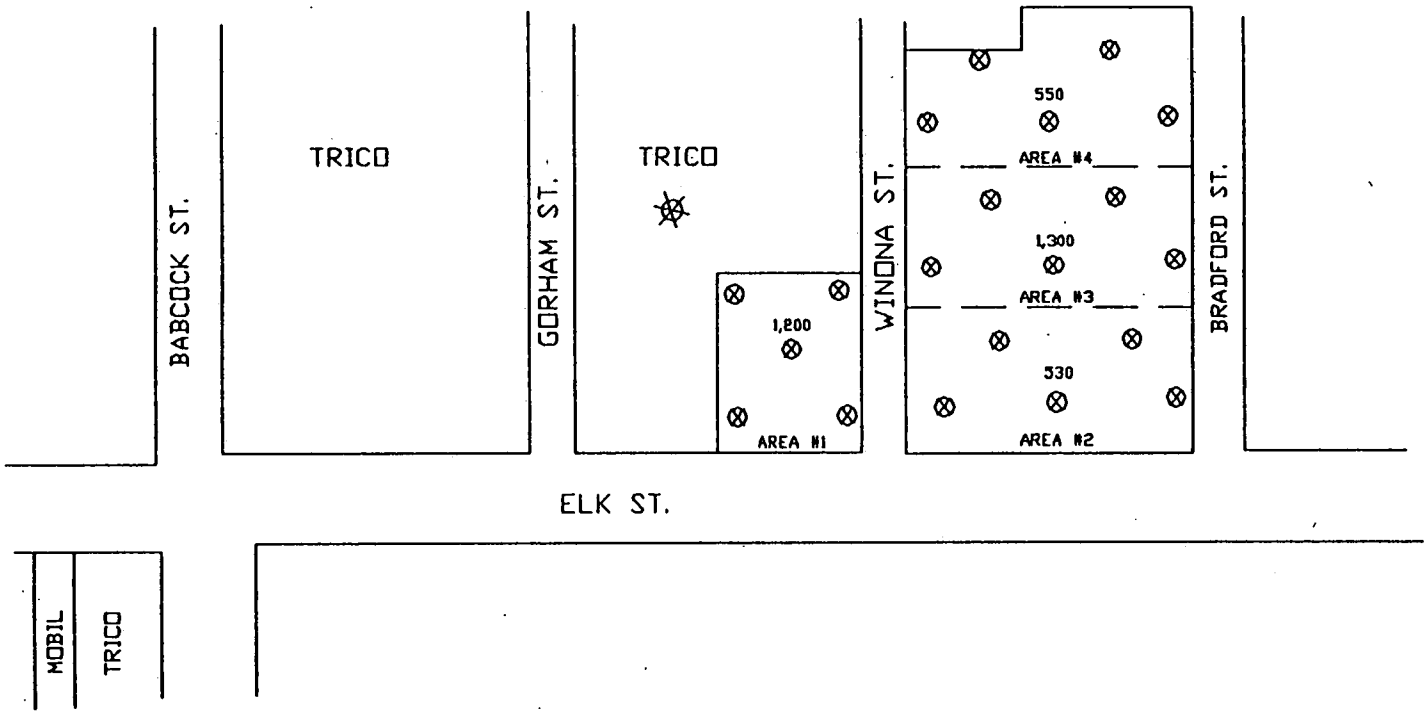
NS - Not Sampled

ND - Non Detect

Lube Oil Isoconcentration Contour (ppb)

INACTIVE NATURAL GAS WELL

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY | 80 HOLTZ DRIVE CHEEKTOWAGA, NY 14225 (716) 634-1291 | CLIENT: MOBIL OIL CORPORATION | PROJECT NO.: 01111-5311 | DRAWING DATE: 10/1/93 | **LUBRICATING OIL IN GROUNDWATER** | LOCATION: SS #31010 ELK STREET BUFFALO, NEW YORK | DETAILED: MJH |
| | | | PM: MJT SM: | ACAD FILE: BORING | | | FIGURE: 3 |

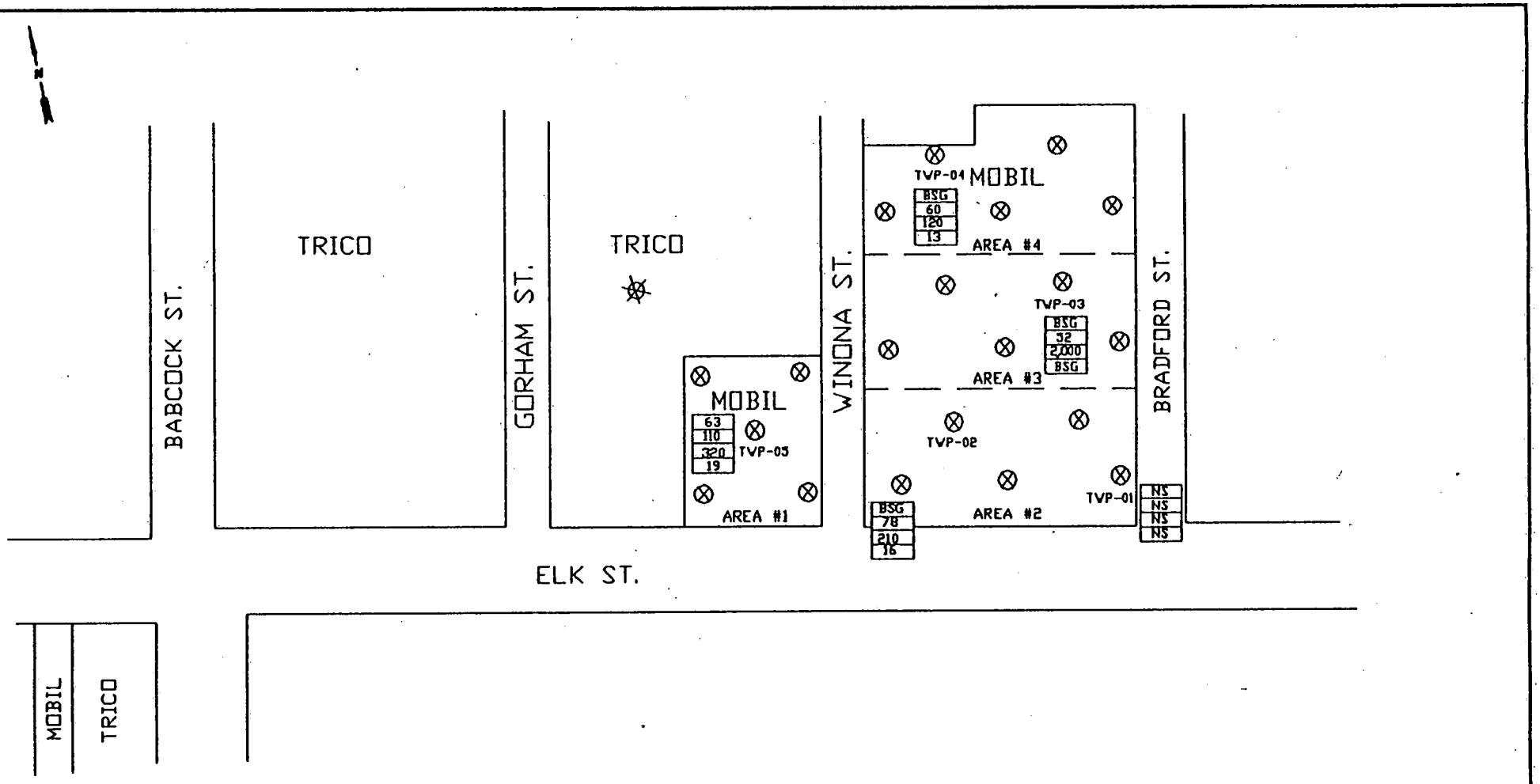



LEGEND

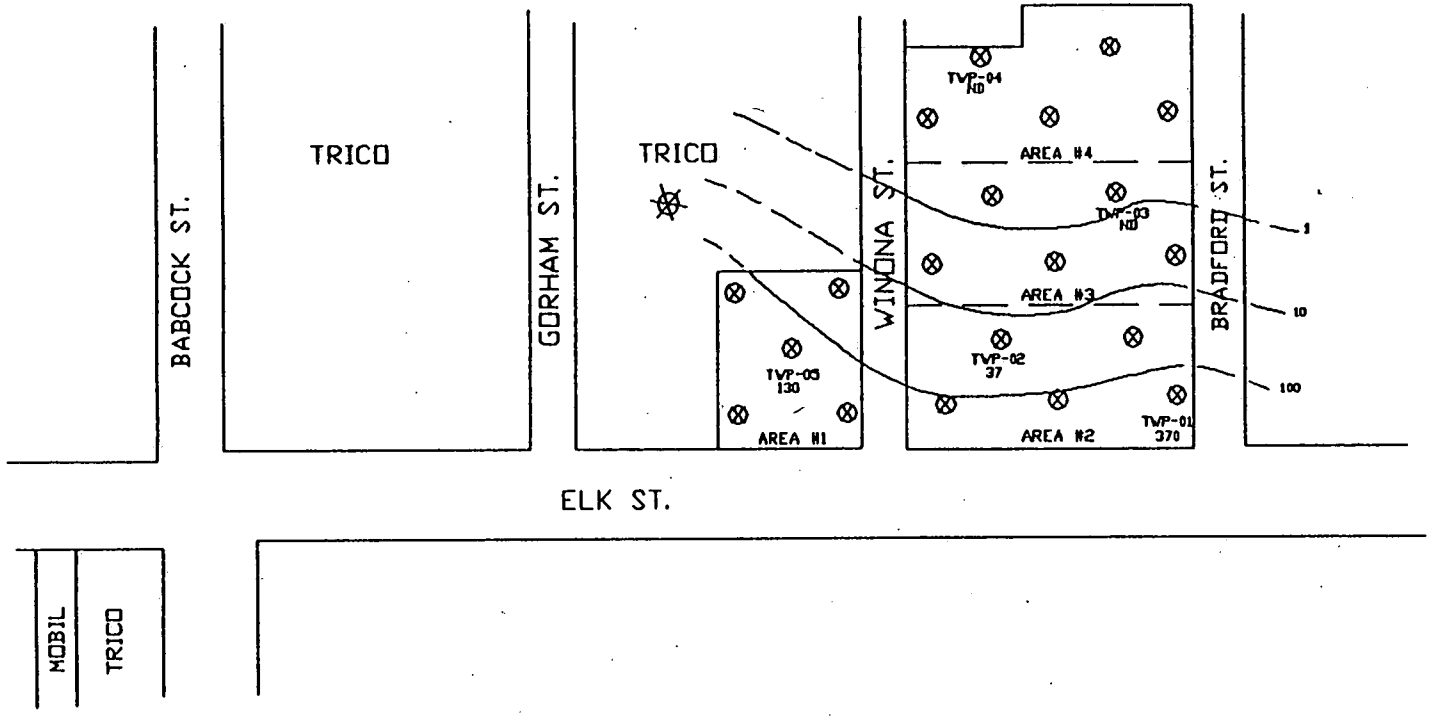
⊗ TEMPORARY WELL POINT
RESULTS IN PPM

INACTIVE NATURAL GAS WELL

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY | 80 HOLTZ DRIVE CHEEKTOWAGA, NY 14225 (716) 634-1291 | CLIENT: MOBIL OIL CORPORATION | PROJECT NO.: 01111-5311 | DRAWING DATE: 10/1/93 | **TOTAL LEAD IN SURFACE SOILS** | LOCATION: SS #31010 ELK STREET BUFFALO, NEW YORK | DETAILED: MLH |
| | | | PM: MJT SM: | ACAD FILE: BORING | | | FIGURE: 4 |




| | | | | | | |
|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY<br>60 HOLTZ DRIVE<br>CHEEKTOWAGA, NY 14225<br>(716) 634-1291 | CLIENT:<br>MOBIL OIL CORPORATION | PROJECT NO.: 01111-5311<br>PM: MJT SM: | DRAWING DATE: 10/1/93<br>ACAD FILE: BORING | **METALS IN GROUNDWATER** | LOCATION: 88 #31010 ELK STREET BUFFALO, NEW YORK | DETAILED: MLH<br>FIGURE: 5 |




**LEGEND**

- ⊗ TEMPORARY WELL POINT RESULTS IN PPM
- ND - NON-DETECT
- CHLORIDE ISOCONCENTRATION CONTOUR (PPM)
- INACTIVE NATURAL GAS WELL

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY | 80 HOLTZ DRIVE CHEEKTOWAGA, NY 14225 (716) 634-1291 | CLIENT: MOBIL OIL CORPORATION | PROJECT NO.: 01111-5311 | DRAWING DATE: 10/1/93 | **CHLORIDE IN GROUNDWATER** | LOCATION: 88 #31010 ELK STREET BUFFALO, NEW YORK | DETAILED: MJH |
| | | | PM: MJT SM: | ACAD FILE: BORING | | | FIGURE: 6 |

NYSDEC INITIAL SPILL RESPONSE FORM

REGION 9 INCOMING LINE: 518 / 800

SPILL NAME Mobil-Lube Oil Bldg.

CALLER'S NAME:

CALLER'S AGENCY:

CALLER'S PHONE: ( )

SPILL NUMBER: 9314015

NOTIFIER'S NAME: G. B. Heffner

NOTIFIER'S AGENCY: Mobil Oil

NOTIFIER'S PHONE: ( )

SPILL DATE: 2/1/94 TIME: 1200 hrs.

CENT OFF DATE: 3/1/94 TIME: 043 hrs.

REG OFF DATE: 2/25/94 TIME: 1200 hrs.

ANS SVC DATE: / / TIME: hrs.

FIRST CALL: A. (R) C ANS SVC OPER

SARA Title III/CERCLA Notification Y / N

**PETROLEUM SPILLED**

1 - Gasoline 4 - #6 Fuel (7) Waste Oil 10 - Kerosene
2 - #2 Fuel 5 - Diesel 8 - Non-PCB Oil 11 - Unknown
3 - #4 Fuel 6 - Jet Fuel 9 - PCB Oil

QUANTITY: unk. gals/lbs

**MATERIAL CLASS**

(1) Petroleum 3 - Hazardous Material 5 - Unknown
2 - Non-Petro/Non-Haz 4 - Raw Sewage

Amount Recovered

Other Material Spilled

**SPILL LOCATION**

PLACE: Mobil Lube Oil Bldg.

STREET: North of Elk St.

T/C/V Buffalo CO: Erie

CONTACT:

PHONE: ( )

**SPILLER (If Different)**

NAME: Mobil Oil

STREET: 1 Babcock St.

CITY/ST/ZIP: Buffalo, NY 14210-2250

CONTACT:

PHONE: ( )

OTHER INFO:

**SPILL CAUSE**

1 - Human Error 5 - Tank Test Failure 9 - Tank Failure
2 - Traffic Accident (6) Housekeeping 10 - Tank Overfill
3 - Equipment Failure 7 - Deliberate 11 - Other
4 - Vandalism 8 - Abandoned Drums 12 - Unknown

**SPILL SOURCE**

(1) Comm/Indust 5 - Gas Station 9 - Private Dwelling
2 - Non-Comm/Inst 6 - Passenger Vehicle 10 - Vessel
3 - Major Facility 400,000 gal 7 - Comm Vehicle 11 - Railroad Car
4 - Non-Maj Facility 1,100 gal 8 - Tank Truck 12 - Unknown

**RESOURCE AFFECTED**

(1) On Land (3) Groundwater 5 - Air
2 - In Sewer 4 - Surface Water

Waterbody

Drainage Basin/Sub-Basin 01-03

**DEC NOTIFIED BY:**

(1) Responsible Party 5 - Tank Tester 9 - Local Agency b. Tank Contractor
2 - Affected Persons 6 - DEC 10 - Federal Gov't c. Clean-up Contractor
3 - Police Department 7 - Citizen 11 - Other d. Envir. Consultant
4 - Fire Department 8 - Health Dept. a. Fuel Supplier e.

REMARKS: Received Phase I Site Assessment.

| | | | |
|---|---|---|---|
| PIN # | T&A | Cost Center | |
| Status: Active / Closed | Env. Complete / / | ISR to Central Office / / | |
| Non-PIN Closed / / | Last Inspection / / | Penalty Y / N | Inspector SAC |

Tank Test Failure Y / N Tank Size Gal. Test Method System/Tank/Line

Leak Rate GPH PBS # Tank I.D.#'s Manifold Y / N

| | | |
|---|---|---|
| Cleaner: 1 - State (2) - Spiller 3 - Local 4 - No Action | | History / / : |
| UST Trust Eligible Y / N | Site: A (B) C D E Resp. Party 1 (2) 3 4 5 6 | |

Regional Contact Central Duty Ofcr EDO: Y/N DATA INPUT V. H.

Revised 08/14/92

3-1-94

Logged 2-28-93 #255

GROUNDWATER TECHNOLOGY ®

Groundwater Technology, Inc.
80 Holtz Drive, Suite 107, Cheektowaga, NY 14225 USA
Tel: (716) 634-1291

April 21, 1994

Mr. Glenn Heffner
Mobil Oil Corporation
1 Babcock Street
Buffalo, New York 14210

SUBJECT: Lube Oil Building Site Assessment
Buffalo, New York

Dear Glenn:

Groundwater Technology, Inc. (Groundwater Technology) is pleased to submit this letter report detailing the findings of the site inspection, historical uses research, interviews and recommendations at the above referenced property.

## PROPERTY OVERVIEW

The property is located within the city of Buffalo, New York at One Babcock Street along the Buffalo River (Attachment A). The site is situated at approximately 580 feet above mean sea level. The topography is as a flat-floored or gently sloping plain resulting generally from urban development. The climate of the area is of the humid-continental type and is characterized by warm summers and cold winters. Geologically, the area in the vicinity of the site is underlain by lacustrine silts and clay sediments. These sediments are subsequently underlain by the Onondaga Limestone of Middle Devonian Age. The surficial deposits in the area do not constitute any drinking water aquifers. Based upon historical gauging information, the water table at the subject site is high within 10 feet of surface grade.

## PROPERTY INSPECTION

The site inspection was conducted on March 31, 1994 by Mr. Barry L. Bedaw and Mr. Richard Cordz of Groundwater Technology. The purpose of the site inspection was to identify the potential existence of contamination source areas that could adversely impact the property and pose future liability issues. The lot is mostly paved asphalt with exceptions directly east of the lube building. The building was constructed in 1920 of brick and masonry. In 1944 and 1949, a garage and additional sheds (metal) were added to the primary building.

The visual observations and interviews yielded the following:

- Floor areas below the lube oil kettles within the building on floors 2 and 3. An oily film was noted below several of the kettles. Composite samples for toxicity testing were collected for analysis.

- The flashing located within the wall coverings was visually noted to contain fibrous materials which may be asbestos.

- Stains to the pavement surrounding the building were also noted. These are likely attributed to vehicle leaks and overspills of petroleum products. Their effect upon soils and groundwater was not determined at the time of this investigation.

## HISTORICAL USES

The historical use of the property was researched through the use of aerial photographs. A review of aerial photographs was conducted at the Map Library at the State University of New York at Buffalo. A series of three sets of photographs were reviewed and dated as follows:

- April 30, 1927 - Series # 8226
- June 12, 1966 - Series # ARF-1GG
- October 31, 1978 - Series # 36029-176

The 1927 photos revealed the terminal and refinery operations upon Mobil's property. The lube oil building is evident as were the formerly existent storage tanks immediately east of the building. The truck rack, north of the building was configured as a series of two to three dispenser tanks. With respect to the surrounding area adjacent to the building, no significant discolorations or disturbances were noted in the photographs. The neighboring property to the west was noted as having a significantly organized storage area of mostly closed topped containers of 10 feet by 5 feet. (Contents undetermined). The remainder of the property to the west was noted to contain several areas of soil disturbance which may be attributed to heavy vehicle traffic. The same applies to Mobil's property. South of the subject site is the Buffalo River.

The 1966 photos reveal a similarity to the 1927 photos with the exception of further urban development in the surrounding vicinity. The ground surface near the lube oil building is discolored on several patchy areas of the blacktop. The storage area noted on the property to the west in 1927 was no longer apparent. The area had been extensively reworked and a railroad track had been added. This "reworking" may be related to the removal of the containers that were existent in 1927.

The 1978 photos reveal similar site conditions to the 1966 photos. Discolorations are apparent on the asphalt ground surface surrounding the lube oil building. No other features were noted in respect to the subject site. However five liquid storage ponds or lagoons were noted on the property to the west (contents undetermined). Three of the lagoons contained a dark liquid while the remaining two were light colored. The ground surface on the property to the west along the fence line is also notably discolored.

The affects of features noted during the aerial photo survey upon current site conditions cannot be determined at this time. Further subsequent investigation would be required to make any determinations on environmental impact.

## INTERVIEWS

In an effort to verify the observations of the site inspection and gather additional information, interviews were conducted with the facility manager Glenn Heffner and terminal employee George Minnigh.

Mobil Oil Corporation has owned the property and the building for more than 100 years. The building was used for the blending and storing of lubricating oils. The building was also used for the temporary storage of paints and solvents used for station maintenance. Quantities of these materials were limited and therefore not viewed as an environmental liability. Concern for processes at neighboring properties must be noted for those west and east of the lube oil building.

Buffalo Color and Allied Chemical are located west of the subject site. Noted chemical contaminants and spills are documented at this site and include acids from dry and liquid sulfur production and color dye products. East of the lube building is the remainder of the terminal and former refinery and Grogreen Fertilizer manufacturer. A FOIL search is currently pending with the NYSDEC regarding environmental issues in the vicinity of the subject site. A response from NYSDEC was received regarding the lube oil building and is included in Attachment D (FOIL Request Results). NYSDEC has no outstanding concerns regarding the lube oil building either currently or in the past. Due to the extensive contents of the files NYSDEC holds regarding Buffalo Color and Allied Chemical, the results of the remaining FOIL search will be forwarded upon receipt to your attention under a future report addendum.

As part of continuing environmental testing at Mobil's terminal property, known petroleum impacts have been documented crossgradient to the east of the subject site and are being addressed by a continuing remedial effort. In addition, a previous investigation of groundwater and soil conditions at the subject site has also been completed (Environmental Site Assessment, Lube Oil Building and Surrounding Area, February 1994).

With respect to activities, past and present, at the lube oil building, no air emission or wastewater discharges were involved in any of the processes at the site. In addition, no hazardous wastes were generated at the site. No above or underground storage tanks exist on the subject property (with the exception of the lube oil kettles found on the second and third floors). No other hazardous materials are known to exist within the building including PCBs or equipment containing PCBs. One exception exists for asbestos. The flashing of the sidewalls was noted as a possible source of asbestos.

## SAMPLING RESULTS

Results of groundwater sampling from monitoring well MW-02 and temporary well points (SB-05, SB-06 and SB-07) indicate the presence of lead in groundwater, while PCBs were not detected. Lead was detected

in two of the four sample points (SB-6 at 37 ppb and MW-02 at 130 ppb). The complete analytical data are presented in Attachment C (Laboratory Results).

## CONCLUSIONS

Based upon the current and past investigations, the following points are noted:

- Possible asbestos presence in the flashing of the walls of the building. Without further analytical testing, removal of this material should be handled as if asbestos is a constituent of the material.
- The presence of lead in groundwater. However, for drinking water purposes, NYSDEC has set a limit of 50 ppb which would imply exceedance in MW-02 (130 ppb). In addition, groundwater in the vicinity of the site is not used for drinking water purposes, therefore its effect on human health may be considered minimal. OHwR ? DOW ?
- Ground staining on blacktop surrounding the building, though apparent, may have minimal impact to the environment when the processes of neighboring facilities are considered.
- The floor areas immediately below the kettles within the lube oil building are coated with small quantities of petroleum. Laboratory analyses of these materials will be forwarded upon receipt.

## EXCLUSIONS AND DISCLAIMERS

The work was performed in accordance with standard procedures incorporated by the Groundwater Technology, Incorporated. This review is a minimum environmental assessment which is not intended to be an exhaustive investigation. All information presented in the report is factual based upon the Phase 1 investigation scope of work performed by Groundwater Technology, Inc.

The author of this report, Groundwater Technology, Inc., hereby gives notice that any statement or opinion contained in this Report prepared by Groundwater Technology shall not be construed to create any warranty or representation that the real property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements; or that the property is fit for any particular purpose. Unless otherwise indicated in the Report, no attempt was made to check on the compliance of present or past owners of the site with federal, state, or local laws and regulations.

The conclusions presented in this Report were based upon the services described, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Mobil Oil Corporation.

Any person or entity considering the use, acquisition or other involvement or activity concerning the property shall be solely responsible for determining the adequacy of the property for any and all uses for which that person or entity shall use the property .

Groundwater Technology has performed this limited assessment in a professional manner using the degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Groundwater Technology shall not be responsible for conditions

or consequences arising from relevant facts that were concealed, withheld or not fully disclosed at the time the evaluation was performed.

If you have any questions regarding this investigation, please call either myself or Tom Antonoff at (716) 634-1291. Thank you for the opportunity to assist you.

Sincerely,
**GROUNDWATER TECHNOLOGY, INC.**

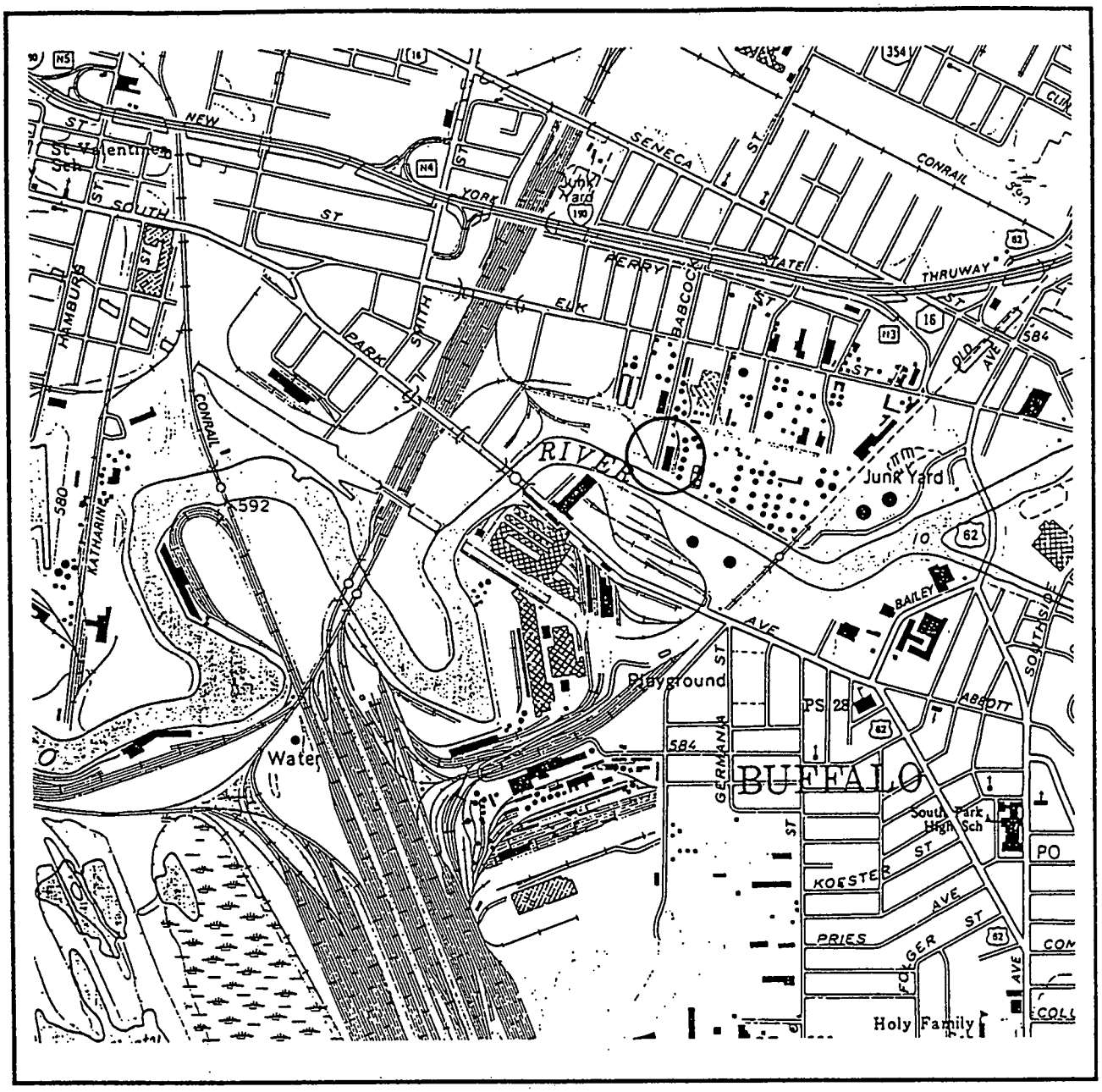
Michael J. Teeling
Project Manager

Thomas D. Antonoff
Operations Manager

Attachments:
A Site Location Map
B Site Map
C Laboratory Results
D Foil Request Results

## ATTACHMENT A

## SITE LOCATION MAP




SOURCE: N.Y.S.D.O.T. TOPOGRAPHIC QUADRANGLE
BUFFALO SE QUADRANGLE
7.5 MINUTE SERIES
DATE: 1989

QUAD LOCATION

SCALE 1:24,000

0 2,000 4,000

SCALE FEET

N

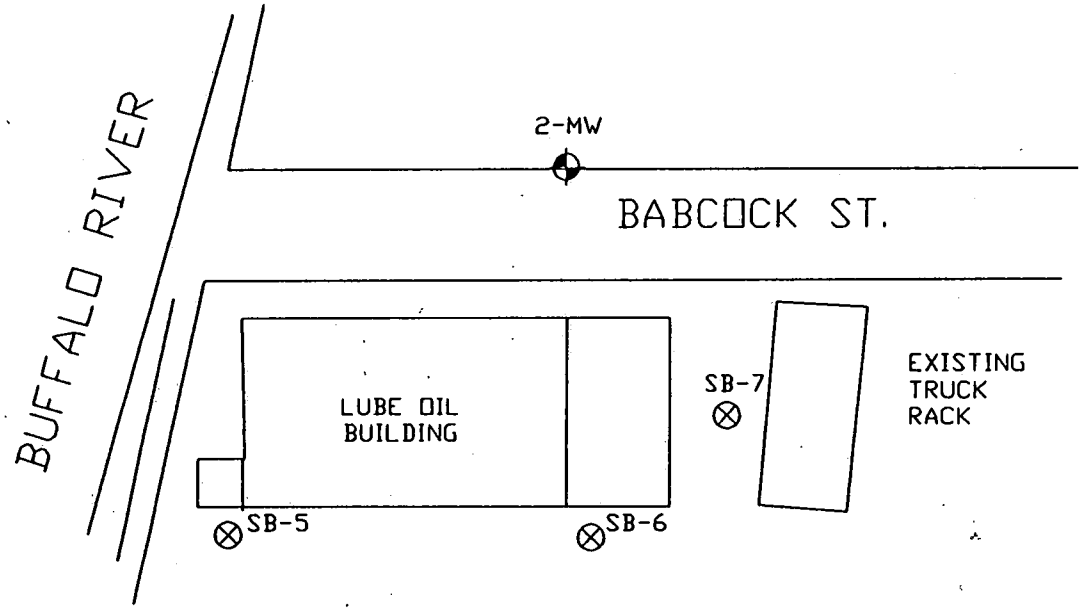
GROUNDWATER TECHNOLOGY

80 HOLTZ DRIVE
CHEEKTOWAGA, NY 14225
(716) 634-1291

| | |
|---|---|
| DESIGNED: MSK | **MOBIL/LUBE OIL BUILDING** |
| DETAILED: MET | CLIENT: MOBIL OIL CORPORATION |
| CHECKED: MSK | LOCATION: 1 BABCOCK STREET BUFFALO, NEW YORK |
| | DRAWING DATE: 4/12/94 |
| | FIGURE: 1 |

**ATTACHMENT B**

**SITE PLAN**




LEGEND

✦ MONITORING WELL

| | | | | | | |
|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY | 80 HOLTZ DRIVE CHEEKTOWAGA, NY 14225 (716) 634-1291 | CLIENT: MOBIL OIL CORPORATION | PROJECT NO.: 01111- / PM: MJT / SM: | DRAWING DATE: 4/12/94 / ACAD FILE: lub-BLDG | **SITE PLAN** | LOCATION: SS #31010 BABCOCK STREET BUFFALO, NEW YORK | DETAILED: MLH / FIGURE: **2** |

# ATTACHMENT C

# LABORATORY RESULTS

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

**Northeast Region**
Meadowbrook Industrial Park
Milford, NH 03055
(603) 672-4835
(603) 673-8105 (FAX)

Client Number: 011115003
Project ID: 31010 BUF. TERM.
BUFFALO, NY
Login Number: M4-03-0648



March 31, 1994

T. Antonoff
Groundwater Technology, Inc.
80 Holtz Drive, Suite 107
Cheektowaga, NY 14225

Dear Mr. Antonoff:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 03/18/94 under chain-of-custody record M8512.

A formal Quality Assurance / Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified (approved) by the State of New York under number 10599.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

GTEL Environmental Laboratories, Inc.

Lynn Sullivan for SCU

Susan C. Uhler
Laboratory Director

Client Number: 011115003
Project ID: 31010 BUF. TERM.
BUFFALO, NY
Login Number: M4-03-0648

ANALYTICAL RESULTS

Polychlorinated Biphenyls in Water
EPA Method 608[a]

| GTEL Sample Number | | 030648-01[c] | 030648-02[c] | 030648-03[c] | 030648-04[d] |
|---|---|---|---|---|---|
| Client Identification | | SB-7 | SB-6 | SB-5 | MW-02 |
| Date Sampled | | 03/16/94 | 03/16/94 | 03/16/94 | 03/16/94 |
| Date Extracted | | 03/23/94 | 03/23/94 | 03/23/94 | 03/23/94 |
| Date Analyzed | | 03/25/94 | 03/25/94 | 03/25/94 | 03/24/94 |
| Analyte | Detection Limit, ug/L | Concentration, ug/L | | | |
| Aroclor-1221 | 1.0 | < 9.6 | < 9.6 | < 9.6 | < 9.7 |
| Aroclor-1232 | 1.0 | < 9.6 | < 9.6 | < 9.6 | < 9.7 |
| Aroclor-1242 (1016) | 0.65 | < 6.3 | < 6.3 | < 6.3 | < 6.3 |
| Aroclor-1248 | 1.0 | < 9.6 | < 9.6 | < 9.6 | < 9.7 |
| Aroclor-1254 | 1.0 | < 9.6 | < 9.6 | < 9.6 | < 9.7 |
| Aroclor-1260 | 1.0 | < 9.6 | < 9.6 | < 9.6 | < 9.7 |
| Detection Limit Multiplier[b] | | 9.62 | 9.62 | 9.62 | 9.71 |

a Federal Register, Vol. 49, October 26, 1984. Sample preparation by liquid/liquid extraction.
b The detection limit multiplier indicates the adjustments made to the data and detection limits for sample dilutions.
c Sample was analyzed diluted due to demonstrated matrix interference.
d Sample was analyzed diluted due to extract viscosity.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115003
Project ID: 31010 BUF. TERM.
BUFFALO, NY
Login Number: M4-03-0648

ANALYTICAL RESULTS

Total Metals in Water

| GTEL Sample Number | | | 030648-01 | 030648-02 | 030648-03 | 030648-04 |
|---|---|---|---|---|---|---|
| Client Identification | | | SB-7 | SB-6 | SB-5 | MW-02 |
| Date Sampled | | | 03/16/94 | 03/16/94 | 03/16/94 | 03/16/94 |
| Date Analyzed (Method 7421) | | | 03/23/94 | 03/23/94 | 03/23/94 | 03/23/94 |
| Analyte | Method[a] | Method Detection Limit, ug/L | Concentration, ug/L | | | |
| Lead | 7421 | 3.0 | < 3.0 | 37 | < 3.0 | 130 |
| Detection Limit Multiplier (7421)[b] | | | 1.00 | 1.00 | 1.00 | 2.01 |

a Test Method for Evaluating Solid Waste, SW-846, Third Edition, Revision 1, USEPA, July 1992; ICP digestion by EPA Method 3010A for 6010A; digestion by EPA Method 3020A for 7000 series methods.

b The detection limit multiplier indicates the adjustments made to the data and the detection limits for sample dilutions.



GTEL ENVIRONMENTAL LABORATORIES, INC.

**GTEL** ENVIRONMENTAL LABORATORIES, INC.
MEADOWBROOK INDUSTRIAL PARK
MILFORD, NH 03055
(603) 672-4835 FAX: (603) 673-8105
(800) 441-4835

**MOBIL**

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

NO. M 8512

Company Name: GTI
Phone #: 716-634-1291
Project Manager: T. Antonoff
Company Address: 80 Hobart Dr. Cheektowaga
Site Location: Buffalo NY
Mobil Env. Eng.: K. Schroder
Client Project ID #: 01111-V135
Mobil SSN: 31010
Project Name: Buf. Term. Phase I
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Dick Cordz

| Field Sample ID | GTEL Lab # (Lab Use only) | # CONTAINERS | Matrix: WATER | SOIL | AIR | SLUDGE | PRODUCT | OTHER | Method Preserved: HCl | $HNO_3$ | $H_2SO_4$ | ICE | UNPRESERVED | OTHER (Specify) | Sampling: DATE | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-7 | 1 | 1 | ✓ | | | | | | | ✓ | | | | | 3/16 | 11:45 |
| SB-7 | | 1 | ✓ | | | | | | | | | | ✓ | | | 12:15 |
| SB-6 | 2 | 1 | ✓ | | | | | | | ✓ | | | | | | 1:45 |
| SB-6 | | 1 | ✓ | | | | | | | | | | ✓ | | | 2:00 |
| SB-5 | 3 | 1 | ✓ | | | | | | | ✓ | | | | | | 3:15 |
| SB-5 | | 1 | ✓ | | | | | | | | | | ✓ | | | 3:30 |
| MW-02 | 4 | 1 | ✓ | | | | | | | ✓ | | | | | | 3:45 |
| MW-02 | | 1 | ✓ | | | | | | | | | | ✓ | | | 4:00 |

**ANALYST REQUEST**

| BTEX/602 ☐ 8020 ☐ with MTBE ☐ GRO ☐ | BTEX/Gas HC 602 ☐ 8020 ☐ with MTBE ☐ | Hydrocarbons GC/FID Gas ☐ Diesel ☐ Screen ☐ | Tennessee Method API DRO ☐ | Oil and Grease 413.1 ☐ 413.2 ☐ SM 503 ☐ | TPH 418.1 ☐ SM 503 ☐ | EDB by 504 ☐ EDC by 504 ☐ | EPA 503.1 ☐ EPA 502.2 ☐ | EPA 601 ☐ EPA 8010 ☐ | EPA 602 ☐ EPA 8020 ☐ | EPA 608 ☒ 8080 ☐ PCB only ☐ | EPA 624/PPL ☐ 8240/TAL ☐ NBS (+___#) ☐ MTBE ☐ | EPA 625/PPL ☐ 8270/TAL ☐ NBS (+___#) BN only ☐ | EPA 610 ☐ 8310 ☐ | EP TOX Metals ☐ Pesticides ☐ Herbicides ☐ | TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐ | EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐ | Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐ | Corrosivity ☐ Flash Point ☐ Reactivity ☐ | OTHER: EPA 7421 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | ✓ |
| | | | | | | | | | | ✓ | | | | | | | | |
| | | | | | | | | | | | | | | | | | | ✓ |
| | | | | | | | | | | ✓ | | | | | | | | |
| | | | | | | | | | | | | | | | | | | ✓ |
| | | | | | | | | | | ✓ | | | | | | | | |
| | | | | | | | | | | | | | | | | | | ✓ |
| | | | | | | | | | | ✓ | | | | | | | | |

**TAT**
Priority (24 hr) ☐
Expedited (48 hr) ☐
3 Business Days ☐
__Business Days ☐
Standard ☑

THIS DOCUMENT SERVES AS AN AUTHORIZATION TO CONDUCT THE ABOVE OUTLINED TESTS IN ACCORDANCE WITH MOBIL CONTRACT # UC90-0619 DATED APRIL 15, 1990.

**PHASE**
L1 L2 L3 L4 L5 L6 L7 L8 L9
(Circle One)

REMARKS: EPA 7421 Lead only
EPA 608 PCB's only

SPECIAL REPORTING REQUIREMENTS
FAX ☐

Lab Use Only
Storage Location
Work Order #: WSL mlc306.48

**Reportable QA/QC Level**
Batch Blue ☐ Blue ☐ CLP ☐ _____ ☐

**CUSTODY RECORD**

| | Date | Time | |
|---|---|---|---|
| Relinquished by Sampler: Dick Cordz | 3/17/94 | 8:30 | Received by: |
| Relinquished by: | | | Received by: |
| Relinquished by: | 3.18.94 | 1315 | Received by Laboratory: |

Way bill #: 047973912495

## ATTACHMENT D

## FOIL REQUEST RESULTS

Mobil Lube Oil Building
Buffalo Color (To be included under separate cover upon receipt)
Allied Chemical (To be included under separate cover upon receipt)

New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, New York 14203-2999



April 12, 1994

Mr. Michael Teeling
Groundwater Technology, Inc.
80 Holtz Drive
Suite 107
Cheektowaga, New York 14225

Dear Mr. Teeling:

Re: FOIL Request
Lube Oil Building
Mobil Oil Corporation

This is in response to your April 5, 1994 Freedom of Information request seeking records for the above captioned facility.

Our Legal Affairs records, which are filed under Respondent's name have been searched. No records were found which pertain to the Lube Oil Building described on the site map. Only one Order on Consent, File No. 85-76, was retrieved pertaining to Mobil Oil Corporation, but was focused on their property at 503 Elk as opposed to the Lube Oil Building. If you are interested in that Order on Consent, please contact me at 851-7190.

Additional records may be kept by other regional staff who will contact you separately.

Very truly yours,

Wendy Marsh

Wendy Marsh
Legal Intern

GROUNDWATER TECHNOLOGY

Groundwater Technology, Inc.
80 Holtz Drive, Suite 107, Cheektowaga, NY 14225
Tel: (716) 634-1291

February 8, 1994

Mr. Glenn Heffner
Mobil Oil Corporation
Mobil Buffalo Terminal
1 Babcock Street
Buffalo, New York 14210

Subject: Environmental Site Assessment
Lube Oil Building and Surrounding Area

Dear Glenn,

Groundwater Technology, Inc. is pleased to present the results of the subsurface environmental site assessment of the Lube Oil Building and vicinity along Babcock Street. Field work for this project took place between October 5 and 8, 1993.

## OBJECTIVE

The objective of the investigation was to establish current subsurface soil and groundwater conditions in the vicinity of the lube oil building. This project was implemented as part of a proposed real estate transfer.

## WORK SCOPE

The objective of this project was met in a phased approach by implementing the following work scope:

- Installation of soil borings to characterize soil conditions and collect soil samples from the base of each boring,
- installation of temporary well points (TWPs) within the soil borings and
- the sampling of groundwater from the TWPs and three nearby monitoring wells (2-MW, B-4MW and B-3MW) subsequent to the receipt of soil analyses.

Soil borings were installed using a one-inch diameter steel drive point advanced into the subsurface by an electric, hand-held, hammer drill. Composite soil samples (per boring) were obtained from 11 to approximately 14 feet below grade using a clean open spoon sampler attached to the end of the steel drive rods. A total of 9 borings were installed to an approximate depth of 14 feet and are depicted in Figure 1, Soil Boring Locations. The composite soil samples collected from each boring were sent to Groundwater Technology Environmental Laboratories (GTEL) in Milford, New Hampshire. Descriptions of the soil conditions from each boring are included in Appendix A (Soil Boring Field Descriptions).

Following the installation and completion of each soil boring a TWP, consisting of a four-inch slotted aluminum shield point connected to the surface via Teflon tubing, was installed in each boring. As indicated in the field descriptions, six of the nine TWPs were set at or near the maximum depth of the soil boring. In the remaining three borings, collapse of the boring sidewalls did not permit installation of the TWPs to

the maximum depth.

## RESULTS OF THE INVESTIGATION

As the descriptions (Appendix A) of the soil borings indicate, six of the nine borings displayed the presence of hydrocarbons as identified by odor, visible sheens or liquid phase product (SBs -04 through -09). These borings surround the former Lube Oil building. In particular, SBs -05, -06 and -07 displayed liquid phase product and are situated on the east and north sides of the Lube Oil building facing the remainder of the terminal.

Based upon these field observations by both GTI and Mobil personnel, the soil samples were analyzed for Total Recoverable Petroleum Hydrocarbons (TPH) by Modified EPA Method 418.1 and for Volatile Organics in Soil by Modified EPA Method 8240. These methods were chosen to closely define the presence, or lack thereof, of specific hydrocarbon and chemical constituents. In addition, method 8240 was chosen to determine whether or not chlorinated solvents were present.

The laboratory results (Appendix B) indicate volatile organic compounds were present in only three of the nine soil borings (SB-02, 13 ppb Total BTEX; SB-06, 6,900 ppb Total BTEX and SB-08, 22,300 ppb Total BTEX). Figure 2, Volatile Organic Compounds in Soils, shows the distribution of volatile organic compounds near the lube oil building. In contrast to volatile organic analyses, analyses for TPH revealed significant impacts in the vicinity of the lube oil building. Concentrations ranged from 47 ppm in SB-03 to 6,000 ppm in SB-06. Figure 3, Total Petroleum Hydrocarbons in Soils, shows the distribution of total hydrocarbons from the nine soil borings. No chlorinated solvent compounds were detected in any of the soil borings. However, acetone was identified in borings SB-01 and SB-02 but at estimated concentrations less than the practical quantitation limit. Since both borings showed a similar response, the presence of acetone in these borings may confirm the presence of acetone in the area of the Lakes Division Garage.

Based on the soil sampling results, it was determined that groundwater from these soil borings was to be sampled for semi-volatile analysis by Modified EPA Method 8270. This permitted further delineation of the suspect constituents between the volatile organics and the Total Petroleum Hydrocarbon components. Groundwater was successfully sampled from five of the nine soil borings (SBs -01, -02, -03, -06 and -08). The remaining borings could not be sampled due to the lack of groundwater present in each boring. In addition, groundwater was also collected from monitoring wells 2-MW, B-3MW and B-4MW.

Results of the groundwater sampling determined that impacts to the site based on the target analyte list are minimal. However, laboratory results also suggest the presence of other semi-volatile compounds not on the 8270 target list. In addition, the detection of certain compounds is qualified by the laboratory method as meeting the identification criteria but that the actual results are less than the quantitation limit.

Since several compounds are identified in different borings it is likely that these compounds exist in the groundwater and that the results may not be an artifact of the laboratory process. This is confirmed by the Method Blank results which were non-detect for all target compounds.

## CONCLUSIONS

Based on the phased soil and groundwater sampling program established for this assessment, laboratory results indicate hydrocarbon impacts remain in the vicinity of the Lube Oil building in the form of volatile and semi-volatile organic compounds. In particular, the east and north sides of the vicinity indicate higher concentrations of total petroleum hydrocarbon impacts.

Results of the soil sampling indicate petroleum impacts in both the volatile and semi-volatile range of organics. In particular, since the total volatile concentrations are distinctly exceeded by the TPH

concentrations, it can be assumed that the remainder of the impacts is predominantly semi-volatile based. Based on this, Groundwater Technology chose to sample groundwater for semi-volatile compounds.

Results of the groundwater sampling indicated minor impacts with respect to the target list for EPA Method 8270. This can be expected especially when many semi-volatile compounds are relatively insoluble in water. However, the laboratory also qualified all the water samples based on dilutions as a result of non-target interferences. Further discussions with GTEL have determined that these interferences are not the result of volatile components, but rather other semi-volatile compounds not on the EPA Method 8270 target list. GTEL is currently in the process of reviewing the chromatographic results of water samples from 2-MW, SB-06 and SB-08 for Tentatively Identified Compounds (TIC). Though the results will not indicate specific compounds, they will identify the type of organic species responsible for analytical interferences (e.g., aliphatic, alkane). An addendum to this report will follow upon receipt of results from GTEL.

Since laboratory methods resulted in estimated concentrations of certain compounds based on identification criteria (by mass spectral analysis) less than the practical quantitation limit, reported concentrations for these compounds may not actually represent true concentrations. Therefore, based on estimated concentration only, the following compounds may be in exceedance of New York state guidelines:

- Naphthalene - SB-06 (14 ppb) and SB-08 (38 ppb); NYS Guideline - 10 ppb.
- Acenaphthene - SB-06 (34 ppb); NYS Guideline - 20 ppb.
- Benzo[k]flouranthene - 2-MW (10 ppb); NYS Guideline - 0.002 ppb.

Please note that the guideline for Benzo[k]flouranthene is below current technology limitations of detection. In addition, the sample for 2-MW was diluted by a factor of 10 increasing the practical quantitation limit to 10 ppb. Therefore, the presence of Benzo[k]flouranthene within groundwater can only be postulated and should be considered negligible.

## LIMITATION ON WORK PRODUCT

Groundwater Technology has performed the preliminary assessment contained in this Report in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Groundwater Technology shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld or not fully disclosed to it at the time the investigation was performed. The conclusions presented in this Report were based solely upon the serviced described, which were performed within the time and budgetary constraints imposed by the customer.

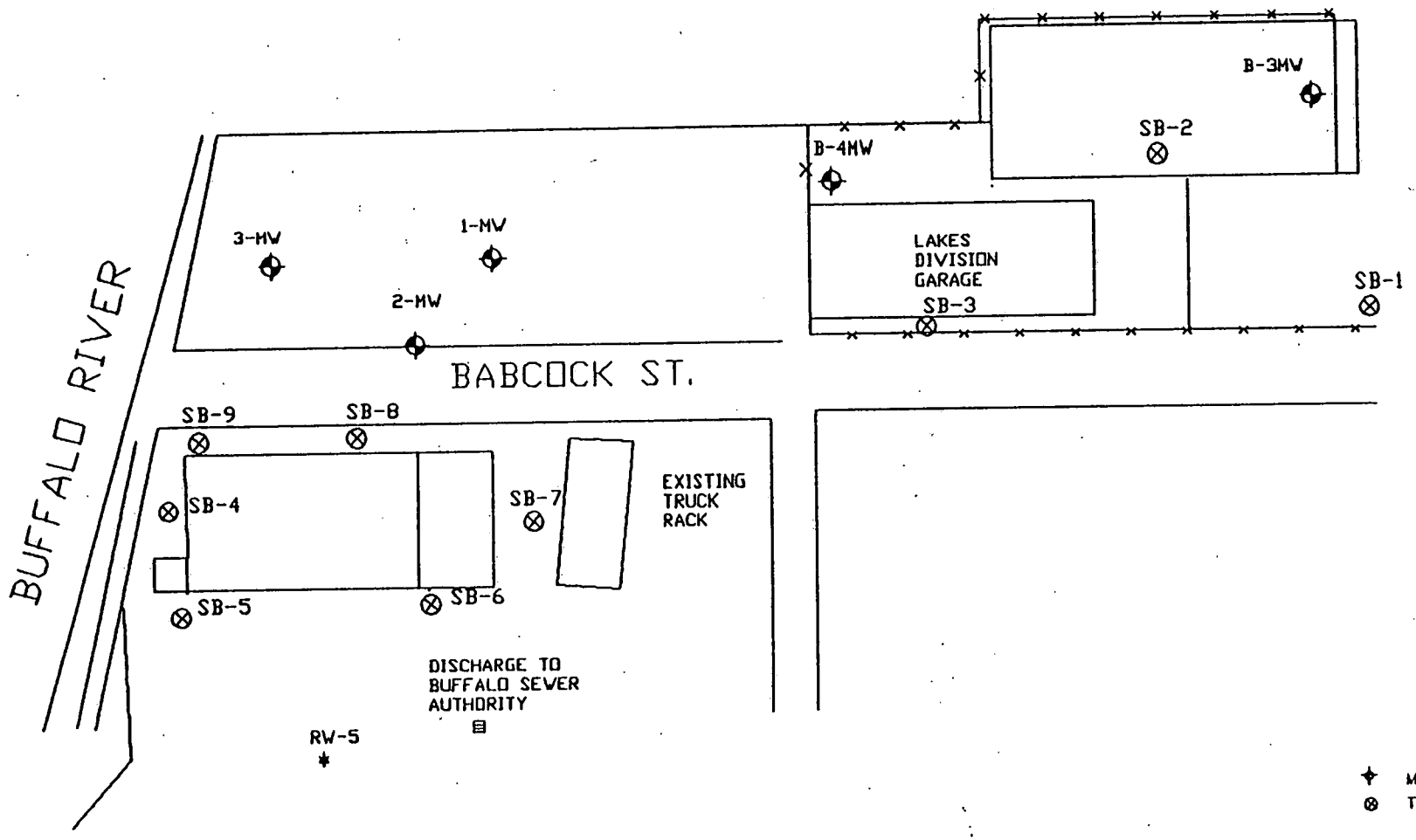
This Report shall not be construed to create any warranty or representation that the real property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements, or that the property is fit for any particular purpose. No third party is entitled to rely upon any information or opinions contained in this Report.

If you have any questions, please call Tom Antonoff or myself at (716) 634-1291.

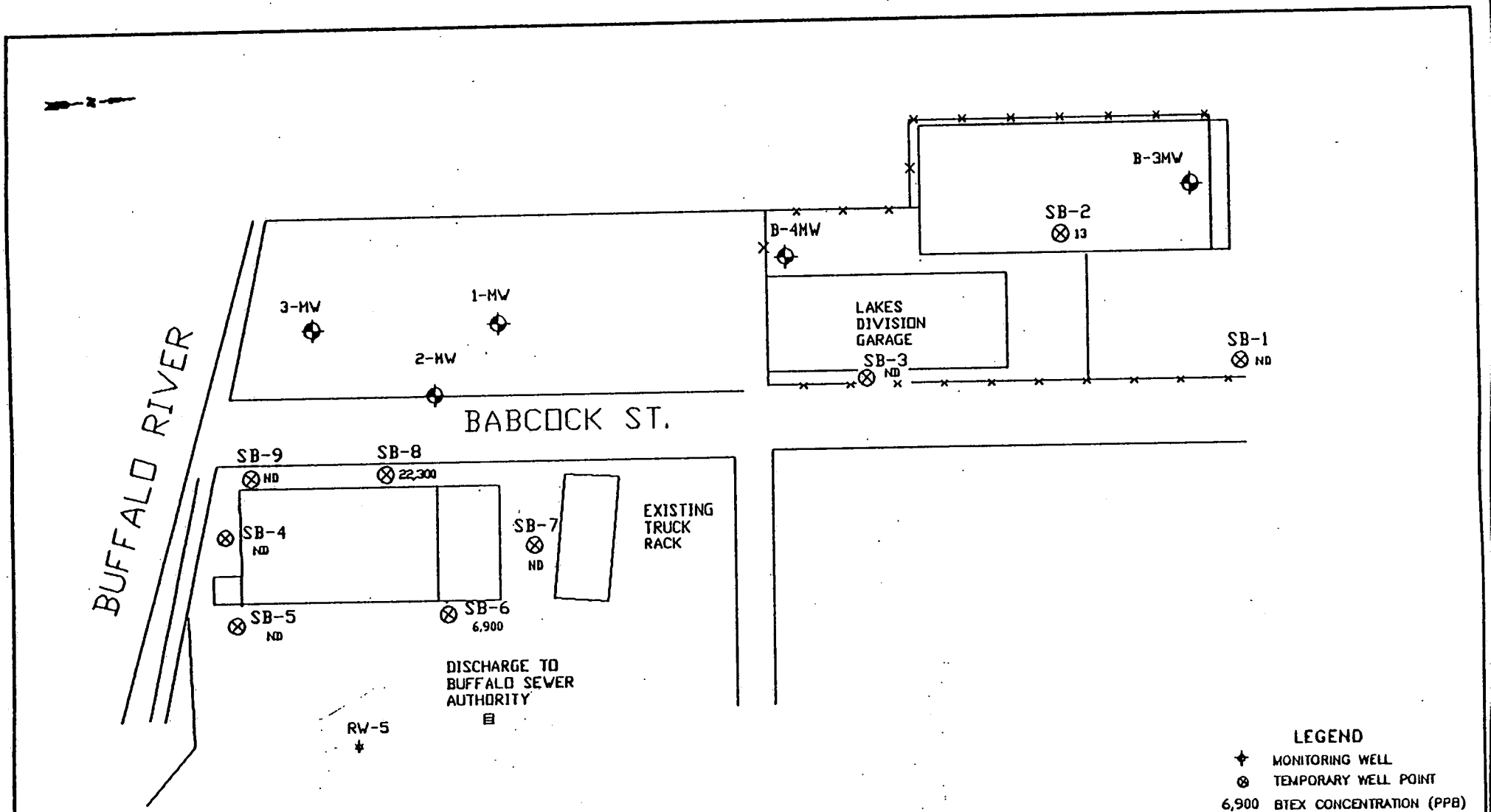
Sincerely,
GROUNDWATER TECHNOLOGY, INC.

Michael J. Teeling
Project Geologist
a:\mbt\lube-sb.rpt

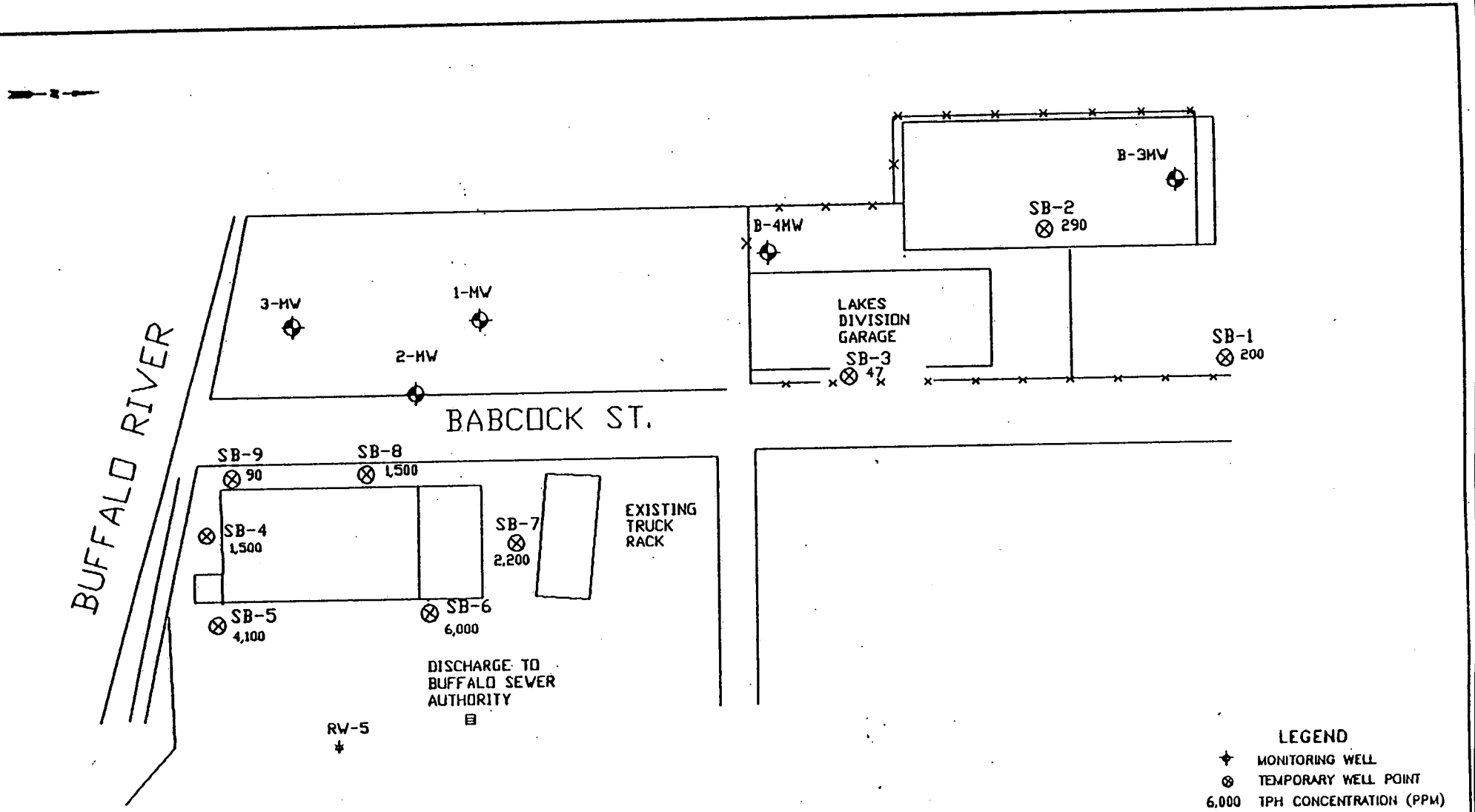
Thomas D. Antonoff
Buffalo Operations Manager




| | | | | | | |
|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY<br>80 HOLTZ DRIVE<br>CHEEKTOWAGA, NY 14225<br>(716) 634-1291 | CLIENT:<br>MOBIL OIL CORPORATION | PROJECT NO.: 01111-5312<br>PM: MJT SM: | DRAWING DATE: 10/1/93<br>ACAD FILE: 5312lub | **SOIL BORING LOCATIONS** | LOCATION: SS #31010<br>BABCOCK STREET<br>BUFFALO, NEW YORK | DETAILED: MLH<br>FIGURE: 1 |




| | | | | | | |
|---|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY<br>80 HOLTZ DRIVE<br>CHEEKTOWAGA, NY 14225<br>(716) 634-1291 | CLIENT:<br>MOBIL OIL CORPORATION | PROJECT NO.:<br>01111-5312<br>PM: MJT SM: | DRAWING DATE:<br>10/1/93<br>ACAD FILE:<br>5312VOC | VOLATILE ORGANICS IN SOILS | LOCATION: SS #31010<br>BABCOCK STREET<br>BUFFALO, NEW YORK | DETAILED: MLH<br>FIGURE: 2 |




| | | | | | |
|---|---|---|---|---|---|
| GROUNDWATER TECHNOLOGY — 80 HOLTZ DRIVE CHEEKTOWAGA, NY 14225 (716) 834-1291 | CLIENT: MOBIL OIL CORPORATION | PROJECT NO.: 01111-5312 | DRAWING DATE: 10/1/93 | TOTAL PETROLEUM HYDRCARBONS IN SOILS | LOCATION: 88 #31010 BABCOCK STREET BUFFALO, NEW YORK |
| | | PM: MJT SM: | ACAD FILE: 5312TPH | | DETAILED: MLH FIGURE: 3 |

# APPENDIX A

## Soil Boring Field Descriptions

## SOIL BORING FIELD DESCRIPTIONS

| | |
|---|---|
| SB-01 | Fill material to 1 foot below grade, then native clay soil to 14 feet depth. Soils did not exhibit any petroleum impacts. Temporary well set at 14 feet depth. Water level was noted at approximately 10 feet below grade. |
| SB-02 | Fill material to 1 foot below grade, then native clay soil to 14 feet depth. Soils did not exhibit any petroleum impacts. Temporary well set at 14 feet depth. Water level was noted at approximately 10 feet below grade. |
| SB-03 | Fill material to 1 foot below grade, then native clay soil to 14 feet depth. Soils did not exhibit any petroleum impacts. Temporary well set at 14 feet depth. Water level was noted at approximately 10 feet below grade. |
| SB-04 | Cement top with fill to bottom of boring. Temporary well set at 10 feet due to refusal. Soil was generally not impacted except between 9 and 10 feet where moist soils exhibited strong petroleum odor. |
| SB-05 | All fill material to 15 feet ranging from gravel to silt. Water was noted at 5 feet. Sample recovery was poor and very wet. In addition, soils samples exhibited strong petroleum odors and heavy sheens. Some separate phase product was evident. Temporary well set at 10 feet due to collapse of fill materials within boring. |
| SB-06 | All fill material to 15 feet ranging from gravel to sand. Water and mud noted at 1 foot (probably perched) which exhibited a heavy sheen and a strong petroleum odor. Separate phase product (dark brown and viscous) and water noted at 11 to 15 feet. Temporary well set at 4 feet due to collapse of fill materials within boring. |
| SB-07 | Fill from grade to 11 feet (former fuel oil tank pit) then native clays from 11 to 13.5 feet. Water encountered at approximately 7 feet. A petroleum odor and sheens were noted on sampled soils. Temporary well set at 9.5 feet due to collapse of fill materials within boring. |
| SB-08 | Fill materials to 12 feet then native clay soil to 14 feet. Water noted at 12 feet. Slight petroleum odor noticed. Temporary well set at 14 feet. |
| SB-09 | Fill from grade to 13 feet primarily sands with water encountered at 12 feet. Temporary well set at approximately 12.5 feet. Slight petroleum odors also noted. |

# APPENDIX B

## Laboratory Analytical Results

GTEL
ENVIRONMENTAL
LABORATORIES, INC.
**Northeast Region**
Meadowbrook Industrial Park
Milford, NH 03055
(603) 672-4835
(603) 673-8105 (FAX)

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828



November 16, 1993

Mike Teeling
Groundwater Technology, Inc.
80 Holtz Drive, Suite 107
Cheektowaga, NY 14225

Dear Mr. Teeling:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 10/27/93 under chain-of-custody records M7248 and M7249.

A formal Quality Assurance / Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified (approved) by the State of New York under number 10599.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Susan C. Uhler
Laboratory Director

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

## CAS NUMBERS AND DETECTION LIMITS

Base/Neutrals in Water
EPA Method 8270

| Analyte | CAS # | Method Detection Limit (MDL) ug/L |
|---|---|---|
| N-Nitrosodimethylamine | 62-75-9 | 10 |
| *bis*(2-Chloroethyl) Ether | 11-44-4 | 5.7 |
| 1,3-Dichlorobenzene | 541-73-1 | 1.9 |
| 1,4-Dichlorobenzene | 106-46-7 | 4.4 |
| 1,2-Dichlorobenzene | 95-50-1 | 1.9 |
| *bis*(2-Chloroisopropyl) Ether | 39638-32-9 | 5.7 |
| N-Nitroso-di-n-propylamine | 621-64-7 | 5.0 |
| Hexachloroethane | 67-72-1 | 1.6 |
| Nitrobenzene | 98-95-3 | 1.9 |
| Isophorone | 78-59-1 | 2.2 |
| *bis*(2-Chloroethoxy)methane | 111-91-1 | 5.3 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 5.0 |
| Naphthalene | 91-20-3 | 1.6 |
| 4-Chloroaniline | 106-47-8 | 5.0 |
| Hexachlorobutadiene | 87-68-3 | 0.9 |
| 2-Methylnaphthalene | 91-57-6 | 5.0 |
| Hexachlorocyclopentadiene | 77-47-4 | 5.0 |
| 2-Chloronaphthalene | 91-58-7 | 1.9 |
| 2-Nitroaniline | 88-74-4 | 25 |
| Dimethylphthalate | 131-11-3 | 1.6 |
| Acenaphthylene | 208-96-8 | 3.5 |
| 2,6-Dinitrotoluene | 606-20-2 | 5.0 |
| 3-Nitroaniline | 99-09-2 | 25 |
| Acenaphthene | 83-32-9 | 1.9 |
| Dibenzofuran | 132-64-9 | 5.0 |
| 2,4-Dinitrotoluene | 121-14-2 | 5.7 |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

## CAS NUMBERS AND DETECTION LIMITS

Base/Neutrals in Water
EPA Method 8270

| Analyte | CAS # | Method Detection Limit (MDL) ug/L |
|---|---|---|
| Diethylphthalate | 84-66-2 | 1.9 |
| 4-Chlorophenyl Phenyl Ether | 7005-72-3 | 4.2 |
| Fluorene | 86-73-7 | 1.9 |
| 4-Nitroaniline | 100-01-6 | 25 |
| N-Nitrosodiphenylamine | 86-30-6 | 1.9 |
| 4-Bromophenyl Phenyl Ether | 101-55-3 | 1.9 |
| Hexachlorobenzene | 118-74-1 | 1.9 |
| Phenanthrene | 85-01-8 | 5.4 |
| Anthracene | 120-12-7 | 1.9 |
| Di-n-butylphthalate | 84-74-2 | 2.5 |
| Fluoranthene | 206-44-0 | 2.2 |
| Pyrene | 129-00-0 | 1.9 |
| Butylbenzylphthalate | 85-68-7 | 2.5 |
| 3,3'-Dichlorobenzidine | 91-94-1 | 17 |
| Benz[a]anthracene | 56-55-3 | 7.8 |
| Chrysene | 218-01-9 | 2.5 |
| *bis*(2-Ethylhexyl)phthalate | 117-81-7 | 2.5 |
| Di-n-octylphthalate | 117-84-0 | 2.5 |
| Benzo[*b*]fluoranthene | 205-99-2 | 4.8 |
| Benzo[*k*]fluoranthene | 207-08-9 | 2.5 |
| Benzo[a]pyrene | 50-32-8 | 2.5 |
| Indeno[1,2,3-*c*,*d*]pyrene | 193-39-5 | 3.7 |
| Dibenz[a,*h*]anthracene | 53-70-3 | 2.5 |
| Benzo[*g*,*h*,*i*]perylene | 191-24-2 | 4.1 |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-01[f] | 100828-02 | 100828-03 | 100828-04[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-2 | SB-1 | SB-3 | SB-6 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/10/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL ug/L[b] | Concentration, ug/L[c] | | | |
| N-Nitrosodimethylamine | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Chloroethyl) Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,3-Dichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,4-Dichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,2-Dichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Chloroisopropyl) Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| N-Nitroso-di-n-propylamine | 10 | 100 U | 10 U | 19 U | 100 U |
| Hexachloroethane | 10 | 100 U | 10 U | 19 U | 100 U |
| Nitrobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| Isophorone | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Chloroethoxy)methane | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,2,4-Trichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| Naphthalene | 10 | 100 U | 10 U | 19 U | 14 J |
| 4-Chloroaniline | 20 | 200 U | 21 U | 38 U | 210 U |
| Hexachlorobutadiene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2-Methylnaphthalene | 10 | 100 U | 10 U | 19 U | 13 J |
| Hexachlorocyclopentadiene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2-Chloronaphthalene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2-Nitroaniline | 50 | 500 U | 52 U | 94 U | 520 U |
| Dimethylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Acenaphthylene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2,6-Dinitrotoluene | 10 | 100 U | 10 U | 19 U | 100 U |
| 3-Nitroaniline | 50 | 500 U | 52 U | 94 U | 520 U |
| Acenaphthene | 10 | 100 U | 10 U | 19 U | 34 J |
| Dibenzofuran | 10 | 100 U | 10 U | 19 U | 100 U |
| 2,4-Dinitrotoluene | 10 | 100 U | 10 U | 19 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 10.0 | 1.04 | 1.89 | 10.3 |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-01[f] | 100828-02 | 100828-03 | 100828-04[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-2 | SB-1 | SB-3 | SB-6 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/10/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL ug/L[b] | Concentration, ug/L[c] | | | |
| Diethylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| 4-Chlorophenyl Phenyl Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| Fluorene | 10 | 100 U | 10 U | 19 U | 15 J |
| 4-Nitroaniline | 50 | 500 U | 52 U | 94 U | 210 U |
| N-Nitrosodiphenylamine[e] | 10 | 100 U | 10 U | 19 U | 100 U |
| 4-Bromophenyl Phenyl Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| Hexachlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| Phenanthrene | 10 | 100 U | 10 U | 19 U | 23 J |
| Anthracene | 10 | 100 U | 10 U | 19 U | 100 U |
| Di-n-butylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Fluoranthene | 10 | 100 U | 10 U | 19 U | 32 J |
| Pyrene | 10 | 100 U | 10 U | 19 U | 35 J |
| Butylbenzylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| 3,3'-Dichlorobenzidine | 20 | 200 U | 21 U | 38 U | 210 U |
| Benz[*a*]anthracene | 10 | 100 U | 10 U | 19 U | 100 U |
| Chrysene | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Ethylhexyl)phthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Di-n-octylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[*b*]fluoranthene | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[*k*]fluoranthene | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[a]pyrene | 10 | 100 U | 10 U | 19 U | 100 U |
| Indeno[1,2,3-*c,d*]pyrene | 10 | 100 U | 10 U | 19 U | 100 U |
| Dibenz[*a,h*]anthracene | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[*g,h,i*]perylene | 10 | 100 U | 10 U | 19 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 10.0 | 1.04 | 1.89 | 10.3 |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-05 | 100828-06 | 100828-07 | 100828-08[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-8 | MW-B-4 | MW-B-3 | MW-2 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/08/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL ug/L[b] | Concentration, ug/L[c] | | | |
| N-Nitrosodimethylamine | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Chloroethyl) Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,3-Dichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,4-Dichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,2-Dichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Chloroisopropyl) Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| N-Nitroso-di-n-propylamine | 10 | 110 U | 10 U | 10 U | 100 U |
| Hexachloroethane | 10 | 110 U | 10 U | 10 U | 100 U |
| Nitrobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| Isophorone | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Chloroethoxy)methane | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,2,4-Trichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| Naphthalene | 10 | 38 J | 10 U | 10 U | 100 U |
| 4-Chloroaniline | 20 | 220 U | 20 U | 20 U | 200 U |
| Hexachlorobutadiene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2-Methylnaphthalene | 10 | 37 J | 10 U | 10 U | 26 J |
| Hexachlorocyclopentadiene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2-Chloronaphthalene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2-Nitroaniline | 50 | 560 U | 50 U | 50 U | 500 U |
| Dimethylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Acenaphthylene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2,6-Dinitrotoluene | 10 | 110 U | 10 U | 10 U | 100 U |
| 3-Nitroaniline | 50 | 560 U | 50 U | 50 U | 500 U |
| Acenaphthene | 10 | 110 U | 10 U | 10 U | 100 U |
| Dibenzofuran | 10 | 110 U | 10 U | 10 U | 100 U |
| 2,4-Dinitrotoluene | 10 | 110 U | 10 U | 10 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 11.1 | 1.00 | 1.00 | 10.0 |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-05 | 100828-06 | 100828-07 | 100828-08[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-8 | MW-B-4 | MW-B-3 | MW-2 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/08/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL ug/L[b] | Concentration, ug/L[c] | | | |
| Diethylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| 4-Chlorophenyl Phenyl Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| Fluorene | 10 | 110 U | 10 U | 10 U | 100 U |
| 4-Nitroaniline | 50 | 560 U | 50 U | 50 U | 500 U |
| N-Nitrosodiphenylamine[e] | 10 | 110 U | 10 U | 10 U | 100 U |
| 4-Bromophenyl Phenyl Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| Hexachlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| Phenanthrene | 10 | 110 U | 10 U | 10 U | 100 U |
| Anthracene | 10 | 110 U | 10 U | 10 U | 100 U |
| Di-n-butylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Fluoranthene | 10 | 110 U | 10 U | 10 U | 100 U |
| Pyrene | 10 | 110 U | 10 U | 10 U | 13 J |
| Butylbenzylphthalate | 10 | 110 U | 10 U | 10 U | 16 J |
| 3,3'-Dichlorobenzidine | 20 | 220 U | 20 U | 20 U | 200 U |
| Benz[a]anthracene | 10 | 110 U | 10 U | 10 U | 100 U |
| Chrysene | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Ethylhexyl)phthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Di-n-octylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Benzo[*b*]fluoranthene | 10 | 110 U | 10 U | 10 U | 100 U |
| Benzo[*k*]fluoranthene | 10 | 110 U | 10 U | 10 U | 10 J |
| Benzo[a]pyrene | 10 | 110 U | 10 U | 10 U | 100 U |
| Indeno[1,2,3-*c,d*]pyrene | 10 | 110 U | 10 U | 10 U | 100 U |
| Dibenz[*a,h*]anthracene | 10 | 110 U | 10 U | 10 U | 100 U |
| Benzo[*g,h,i*]perylene | 10 | 110 U | 10 U | 10 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 11.1 | 1.00 | 1.00 | 10.0 |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; extraction by EPA Method 3510 (liquid/liquid).

b Practical quantitation limit.

c Data Flag Definitions

U Indicates compound was analyzed for but not detected.

J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.

B Indicates that the analyte was found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

d The practical quantitation limit multiplier indicates the adjustments made to the data and PQLs for sample dilutions.

e Cannot be separated from diphenylamine.

f Sample was analyzed diluted due to demonstrated non-target interferences.



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

## METHOD BLANK RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | GTEL File ID | BW102893AR | |
| | Date Extracted | 10/28/93 | |
| | Date Analyzed | 11/10/93 | |
| Analyte | PQL, ug/L[b] | Concentration, ug/L[c] | |
| N-Nitrosodimethylamine | 10 | 10 | U |
| *bis*(2-Chloroethyl) Ether | 10 | 10 | U |
| 1,3-Dichlorobenzene | 10 | 10 | U |
| 1,4-Dichlorobenzene | 10 | 10 | U |
| 1,2-Dichlorobenzene | 10 | 10 | U |
| *bis*(2-Chloroisopropyl) Ether | 10 | 10 | U |
| N-Nitroso-di-n-propylamine | 10 | 10 | U |
| Hexachloroethane | 10 | 10 | U |
| Nitrobenzene | 10 | 10 | U |
| Isophorone | 10 | 10 | U |
| *bis*(2-Chloroethoxy)methane | 10 | 10 | U |
| 1,2,4-Trichlorobenzene | 10 | 10 | U |
| Naphthalene | 10 | 10 | U |
| 4-Chloroaniline | 20 | 20 | U |
| Hexachlorobutadiene | 10 | 10 | U |
| 2-Methylnaphthalene | 10 | 10 | U |
| Hexachlorocyclopentadiene | 10 | 10 | U |
| 2-Chloronaphthalene | 10 | 10 | U |
| 2-Nitroaniline | 50 | 50 | U |
| Dimethylphthalate | 10 | 10 | U |
| Acenaphthylene | 10 | 10 | U |
| 2,6-Dinitrotoluene | 10 | 10 | U |
| 3-Nitroaniline | 50 | 50 | U |
| Acenaphthene | 10 | 10 | U |
| Dibenzofuran | 10 | 10 | U |
| 2,4-Dinitrotoluene | 10 | 10 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

METHOD BLANK RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| | GTEL File ID | BW102893AR | |
|---|---|---|---|
| | Date Extracted | 10/28/93 | |
| | Date Analyzed | 11/10/93 | |
| Analyte | PQL, ug/L[b] | Concentration, ug/L[c] | |
| Diethylphthalate | 10 | 10 | U |
| 4-Chlorophenyl Phenyl Ether | 10 | 10 | U |
| Fluorene | 10 | 10 | U |
| 4-Nitroaniline | 50 | 50 | U |
| N-Nitrosodiphenylamine[d] | 10 | 10 | U |
| 4-Bromophenyl Phenyl Ether | 10 | 10 | U |
| Hexachlorobenzene | 10 | 10 | U |
| Phenanthrene | 10 | 10 | U |
| Anthracene | 10 | 10 | U |
| Di-n-butylphthalate | 10 | 10 | U |
| Fluoranthene | 10 | 10 | U |
| Pyrene | 10 | 10 | U |
| Butylbenzylphthalate | 10 | 10 | U |
| 3,3'-Dichlorobenzidine | 20 | 20 | U |
| Benz[a]anthracene | 10 | 10 | U |
| Chrysene | 10 | 10 | U |
| *bis*(2-Ethylhexyl)phthalate | 10 | 10 | U |
| Di-n-octylphthalate | 10 | 10 | U |
| Benzo[*b*]fluoranthene | 10 | 10 | U |
| Benzo[*k*]fluoranthene | 10 | 10 | U |
| Benzo[*a*]pyrene | 10 | 10 | U |
| Indeno[1,2,3-*c*,*d*]pyrene | 10 | 10 | U |
| Dibenz[*a*,*h*]anthracene | 10 | 10 | U |
| Benzo[*g*,*h*,*i*]perylene | 10 | 10 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

## METHOD BLANK RESULTS

### Base/Neutrals in Water
### EPA Method 8270[a]

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; extraction by EPA Method 3510 (liquid/liquid).

b Practical quantitation limit.

c Data Flag Definitions

U Indicates compound was analyzed for but not detected.

J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.

d Cannot be separated from diphenylamine.



GTEL ENVIRONMENTAL LABORATORIES, INC

GTEL
ENVIRONMENTAL
LABORATORIES, INC.
**Northeast Region**
Meadowbrook Industrial Park
Milford, NH 03055
(603) 672-4835
(603) 673-8105 (FAX)

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269



October 29, 1993

Tom Antonoff
Groundwater Technology, Inc.
80 Holtz Drive, Suite 107
Cheektowaga, NY 14225

Dear Mr. Antonoff:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 10/09/93 under chain-of-custody record M3966.

A formal Quality Assurance / Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified (approved) by the State of New York under number 10599.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Susan C. Uhler
Laboratory Director

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

## CAS NUMBERS AND DETECTION LIMITS

Volatile Organics in Soil - Low Level
Modified EPA Method 8240

| Analyte | CAS # | Method Detection Limit (MDL) ug/kg |
|---|---|---|
| Chloromethane | 74-87-3 | 1.1 |
| Bromomethane | 74-83-9 | 1.6 |
| Vinyl Chloride | 75-01-4 | 1.9 |
| Chloroethane | 75-00-3 | 1.8 |
| Methylene Chloride | 75-09-2 | 1.2 |
| Acetone | 67-64-1 | 2.5 |
| Carbon Disulfide | 75-15-0 | 1.3 |
| 1,1-Dichloroethene | 75-35-4 | 2.0 |
| 1,1-Dichloroethane | 75-35-3 | 0.9 |
| *cis*-1,2-Dichloroethene | -- | 0.8 |
| *trans*-1,2-Dichloroethene | 156-60-5 | 1.1 |
| Chloroform | 67-66-2 | 0.8 |
| 1,2-Dichloroethane | 107-06-2 | 1.4 |
| 2-Butanone | 78-93-3 | 3.8 |
| 1,1,1-Trichloroethane | 71-55-6 | 1.5 |
| Carbon Tetrachloride | 56-23-5 | 1.3 |
| Vinyl Acetate | 108-05-4 | 1.4 |
| Bromodichloromethane | 75-27-4 | 0.5 |
| 1,2-Dichloropropane | 78-87-5 | 0.8 |
| *cis*-1,3-Dichloropropene | 10061-01-5 | 2.3 |
| Trichloroethene | 79-01-6 | 1.6 |
| Dibromochloromethane | 124-48-1 | 1.4 |

Updated March 1993.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

## CAS NUMBERS AND DETECTION LIMITS

Volatile Organics in Soil - Low Level
Modified EPA Method 8240

| Analyte | CAS # | Method Detection Limit (MDL) ug/kg |
|---|---|---|
| 1,1,2-Trichloroethane | 79-00-5 | 1.9 |
| Benzene | 71-43-2 | 1.3 |
| 2-Chloroethyl Vinyl Ether | 110-75-8 | 2.8 |
| *trans*-1,3-Dichloropropene | 10061-02-6 | 2.5 |
| Bromoform | 75-25-2 | 1.3 |
| 4-Methyl-2-Pentanone | 108-10-1 | 0.9 |
| 2-Hexanone | 591-78-6 | 4.1 |
| Tetrachloroethene | 127-18-4 | 1.5 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 1.6 |
| Toluene | 108-88-3 | 1.4 |
| Chlorobenzene | 108-90-7 | 1.6 |
| Ethylbenzene | 100-41-4 | 1.3 |
| Styrene | 100-42-5 | 1.2 |
| *meta*- and *para*-Xylene | 108-38-3<br>106-42-3 | 2.7 |
| *ortho*-Xylene | 95-47-6 | 1.7 |
| 1,2-Dichlorobenzene | 95-50-1 | 2.2 |
| 1,3-Dichlorobenzene | 541-73-1 | 1.5 |
| 1,4-Dichlorobenzene | 106-46-7 | 1.7 |

Updated March 1993.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil - Low Level
Modified EPA Method 8240[a]

| GTEL Sample Number | | 100269-01 | 100269-02 | -- | -- |
|---|---|---|---|---|---|
| Client Identification | | SB-01 | SB-02 | -- | -- |
| Date Sampled | | 10/08/93 | 10/07/93 | -- | -- |
| Date Analyzed | | 10/19/93 | 10/19/93 | -- | -- |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | | | |
| Chloromethane | 10 | 12 U | 12 U | -- | -- |
| Bromomethane | 10 | 12 U | 12 U | -- | -- |
| Vinyl Chloride | 10 | 12 U | 12 U | -- | -- |
| Chloroethane | 10 | 12 U | 12 U | -- | -- |
| Methylene Chloride | 5 | 6 U | 6 U | -- | -- |
| Acetone | 100 | 18 JB | 47 JB | -- | -- |
| Carbon Disulfide | 5 | 1.4 J | 5.0 J | -- | -- |
| 1,1-Dichloroethene | 5 | 6 U | 6 U | -- | -- |
| 1,1-Dichloroethane | 5 | 6 U | 6 U | -- | -- |
| 1,2-Dichloroethene (total)[d] | 5 | 6 U | 6 U | -- | -- |
| Chloroform | 5 | 6 U | 6 U | -- | -- |
| 1,2-Dichloroethane | 5 | 6 U | 6 U | -- | -- |
| 2-Butanone | 100 | 120 U | 120 U | -- | -- |
| 1,1,1-Trichloroethane | 5 | 6 U | 6 U | -- | -- |
| Carbon Tetrachloride | 5 | 6 U | 6 U | -- | -- |
| Vinyl Acetate | 50 | 59 U | 62 U | -- | -- |
| Bromodichloromethane | 5 | 6 U | 6 U | -- | -- |
| 1,2-Dichloropropane | 5 | 6 U | 6 U | -- | -- |
| *cis*-1,3-Dichloropropene | 5 | 6 U | 6 U | -- | -- |
| Trichloroethene | 5 | 6 U | 6 U | -- | -- |
| Dibromochloromethane | 5 | 6 U | 6 U | -- | -- |
| Practical Quantitation Limit Multiplier[e] | | 1.18 | 1.24 | -- | -- |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil - Low Level
Modified EPA Method 8240[a]

| GTEL Sample Number | | 100269-01 | 100269-02 | -- | -- |
|---|---|---|---|---|---|
| Client Identification | | SB-01 | SB-02 | -- | -- |
| Date Sampled | | 10/08/93 | 10/07/93 | -- | -- |
| Date Analyzed | | 10/19/93 | 10/19/93 | -- | -- |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | | | |
| 1,1,2-Trichloroethane | 5 | 6 U | 6 U | -- | -- |
| Benzene | 5 | 6 U | 6 U | -- | -- |
| 2-Chloroethyl Vinyl Ether | 10 | 12 U | 12 U | -- | -- |
| *trans*-1,3-Dichloropropene | 5 | 6 U | 6 U | -- | -- |
| Bromoform | 5 | 6 U | 6 U | -- | -- |
| 4-Methyl-2-Pentanone | 50 | 59 U | 62 U | -- | -- |
| 2-Hexanone | 50 | 59 U | 62 U | -- | -- |
| Tetrachloroethene | 5 | 6 U | 6 U | -- | -- |
| 1,1,2,2-Tetrachloroethane | 5 | 6 U | 6 U | -- | -- |
| Toluene | 5 | 6 U | 2.3 J | -- | -- |
| Chlorobenzene | 5 | 6 U | 6 U | -- | -- |
| Ethylbenzene | 5 | 6 U | 2.3 J | -- | -- |
| Styrene | 5 | 6 U | 6 U | -- | -- |
| Xylenes (total) | 5 | 1.6 J | 13 | -- | -- |
| 1,2-Dichlorobenzene | 10 | 12 U | 12 U | -- | -- |
| 1,3-Dichlorobenzene | 10 | 12 U | 12 U | -- | -- |
| 1,4-Dichlorobenzene | 10 | 12 U | 12 U | -- | -- |
| Practical Quantitation Limit Multiplier[e] | | 1.18 | 1.24 | -- | -- |
| Percent Solids, % | | 81.6 | 75.0 | -- | -- |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil - Low Level
Modified EPA Method 8240[a]

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; sample prepared by low level solvent extraction and purge and trap. Method modified to include additional compounds. Results are reported on a dry weight basis.

b Practical quantitation limit. The PQL limits are as published in SW846. Individual sample PQL's are adjusted for dry weight.

c Data Flag Definitions

U Indicates compound was analyzed for but not detected.

J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.

B Indicates that the analyte was found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

d Total 1,2-dichloroethene is the sum of the cis- and trans- isomers.

e The practical quantitation limit multiplier indicates the adjustments made to the data and PQLs for sample dilutions and percent solids.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

METHOD BLANK RESULTS

Volatile Organics in Soil - Low Level
Modified EPA Method 8240[a]

| | GTEL File ID | BL101893I | |
|---|---|---|---|
| | Date Analyzed | 10/18/93 | |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | |
| Chloromethane | 10 | 10 | U |
| Bromomethane | 10 | 10 | U |
| Vinyl Chloride | 10 | 10 | U |
| Chloroethane | 10 | 10 | U |
| Methylene Chloride | 5 | 5 | U |
| Acetone | 100 | 5.8 | J |
| Carbon Disulfide | 5 | 5 | U |
| 1,1-Dichloroethene | 5 | 5 | U |
| 1,1-Dichloroethane | 5 | 5 | U |
| 1,2-Dichloroethene (total)[d] | 5 | 5 | U |
| Chloroform | 5 | 5 | U |
| 1,2-Dichloroethane | 5 | 5 | U |
| 2-Butanone | 100 | 100 | U |
| 1,1,1-Trichloroethane | 5 | 5 | U |
| Carbon Tetrachloride | 5 | 5 | U |
| Vinyl Acetate | 50 | 50 | U |
| Bromodichloromethane | 5 | 5 | U |
| 1,2-Dichloropropane | 5 | 5 | U |
| *cis*-1,3-Dichloropropene | 5 | 5 | U |
| Trichloroethene | 5 | 5 | U |
| Dibromochloromethane | 5 | 5 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

METHOD BLANK RESULTS

Volatile Organics in Soil - Low Level
Modified EPA Method 8240[a]

| | GTEL File ID | BL101893I | |
|---|---|---|---|
| | Date Analyzed | 10/18/93 | |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | |
| 1,1,2-Trichloroethane | 5 | 5 | U |
| Benzene | 5 | 5 | U |
| 2-Chloroethyl Vinyl Ether | 10 | 10 | U |
| *trans*-1,3-Dichloropropene | 5 | 5 | U |
| Bromoform | 5 | 5 | U |
| 4-Methyl-2-Pentanone | 50 | 50 | U |
| 2-Hexanone | 50 | 50 | U |
| Tetrachloroethene | 5 | 5 | U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 | U |
| Toluene | 5 | 5 | U |
| Chlorobenzene | 5 | 5 | U |
| Ethylbenzene | 5 | 5 | U |
| Styrene | 5 | 5 | U |
| Xylenes (total) | 5 | 5 | U |
| 1,2-Dichlorobenzene | 10 | 10 | U |
| 1,3-Dichlorobenzene | 10 | 10 | U |
| 1,4-Dichlorobenzene | 10 | 10 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

# METHOD BLANK RESULTS

## Volatile Organics in Soil - Low Level
## Modified EPA Method 8240[a]

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; sample prepared by low level solvent extraction and purge and trap. Method modified to include additional compounds.

b Practical quantitation limit. The PQL limits are as published in SW846. Individual sample PQL's are adjusted for dry weight.

c Data Flag Definitions

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.

d Total 1,2-dichloroethene is the sum of the cis- and trans- isomers.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

## CAS NUMBERS AND DETECTION LIMITS

Volatile Organics in Soil
Modified EPA Method 8240

| Analyte | CAS # | Method Detection Limit (MDL) ug/kg |
|---|---|---|
| Chloromethane | 74-87-3 | 140 |
| Bromomethane | 74-83-9 | 190 |
| Vinyl Chloride | 75-01-4 | 140 |
| Chloroethane | 75-00-3 | 200 |
| Methylene Chloride | 75-09-2 | 100 |
| Acetone | 67-64-1 | 550 |
| Carbon Disulfide | 75-15-0 | 220 |
| 1,1-Dichloroethene | 75-35-4 | 190 |
| 1,1-Dichloroethane | 75-35-3 | 120 |
| *cis*-1,2-Dichloroethene | -- | 140 |
| *trans*-1,2-Dichloroethene | 156-60-5 | 160 |
| Chloroform | 67-66-2 | 120 |
| 1,2-Dichloroethane | 107-06-2 | 100 |
| 2-Butanone | 78-93-3 | 740 |
| 1,1,1-Trichloroethane | 71-55-6 | 200 |
| Carbon Tetrachloride | 56-23-5 | 250 |
| Vinyl Acetate | 108-05-4 | 140 |
| Bromodichloromethane | 75-27-4 | 200 |
| 1,2-Dichloropropane | 78-87-5 | 160 |
| *cis*-1,3-Dichloropropene | 10061-01-5 | 180 |
| Trichloroethene | 79-01-6 | 180 |
| Dibromochloromethane | 124-48-1 | 190 |

Updated March 1993.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

CAS NUMBERS AND DETECTION LIMITS

Volatile Organics in Soil
Modified EPA Method 8240

| Analyte | CAS # | Method Detection Limit (MDL) ug/kg |
|---|---|---|
| 1,1,2-Trichloroethane | 79-00-5 | 220 |
| Benzene | 71-43-2 | 140 |
| 2-Chloroethyl Vinyl Ether | 110-75-8 | 300 |
| *trans*-1,3-Dichloropropene | 10061-02-6 | 260 |
| Bromoform | 75-25-2 | 240 |
| 4-Methyl-2-Pentanone | 108-10-1 | 320 |
| 2-Hexanone | 591-78-6 | 380 |
| Tetrachloroethene | 127-18-4 | 220 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 180 |
| Toluene | 108-88-3 | 160 |
| Chlorobenzene | 108-90-7 | 120 |
| Ethylbenzene | 100-41-4 | 250 |
| Styrene | 100-42-5 | 150 |
| *meta*- and *para*-Xylene | 108-38-3<br>106-42-3 | 460 |
| *ortho*-Xylene | 95-47-6 | 250 |
| 1,2-Dichlorobenzene | 95-50-1 | 220 |
| 1,3-Dichlorobenzene | 541-73-1 | 190 |
| 1,4-Dichlorobenzene | 106-46-7 | 180 |

Updated March 1993.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil
Modified EPA Method 8240[a]

| GTEL Sample Number | | 100269-03 | 100269-04 | 100269-05 | 100269-06 |
|---|---|---|---|---|---|
| Client Identification | | SB-03 | SB-04 | SB-05 | SB-06 |
| Date Sampled | | 10/07/93 | 10/05/93 | 10/05/93 | 10/06/93 |
| Date Analyzed | | 10/19/93 | 10/19/93 | 10/19/93 | 10/19/93 |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | | | |
| Chloromethane | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Bromomethane | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Vinyl Chloride | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Chloroethane | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Methylene Chloride | 620 | 830 U | 780 U | 800 U | 790 U |
| Acetone | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Carbon Disulfide | 620 | 830 U | 780 U | 800 U | 790 U |
| 1,1-Dichloroethene | 620 | 830 U | 780 U | 800 U | 790 U |
| 1,1-Dichloroethane | 620 | 830 U | 780 U | 800 U | 790 U |
| 1,2-Dichloroethene (total)[d] | 620 | 830 U | 780 U | 800 U | 790 U |
| Chloroform | 620 | 830 U | 780 U | 800 U | 790 U |
| 1,2-Dichloroethane | 620 | 830 U | 780 U | 800 U | 790 U |
| 2-Butanone | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| 1,1,1-Trichloroethane | 620 | 830 U | 780 U | 800 U | 790 U |
| Carbon Tetrachloride | 620 | 830 U | 780 U | 800 U | 790 U |
| Vinyl Acetate | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Bromodichloromethane | 620 | 830 U | 780 U | 800 U | 790 U |
| 1,2-Dichloropropane | 620 | 830 U | 780 U | 800 U | 790 U |
| *cis*-1,3-Dichloropropene | 620 | 830 U | 780 U | 800 U | 790 U |
| Trichloroethene | 620 | 830 U | 780 U | 800 U | 790 U |
| Dibromochloromethane | 620 | 830 U | 780 U | 800 U | 790 U |
| Practical Quantitation Limit Multiplier[e] | | 1.34 | 1.25[f] | 1.29[f] | 1.28 |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil
Modified EPA Method 8240[a]

| GTEL Sample Number | | 100269-03 | 100269-04 | 100269-05 | 100269-06 |
|---|---|---|---|---|---|
| Client Identification | | SB-03 | SB-04 | SB-05 | SB-06 |
| Date Sampled | | 10/07/93 | 10/05/93 | 10/05/93 | 10/06/93 |
| Date Analyzed | | 10/19/93 | 10/19/93 | 10/19/93 | 10/19/93 |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | | | |
| 1,1,2-Trichloroethane | 620 | 830 U | 780 U | 800 U | 790 U |
| Benzene | 620 | 830 U | 780 U | 800 U | **1200** |
| 2-Chloroethyl Vinyl Ether | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| *trans*-1,3-Dichloropropene | 620 | 830 U | 780 U | 800 U | 790 U |
| Bromoform | 620 | 830 U | 780 U | 800 U | 790 U |
| 4-Methyl-2-Pentanone | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| 2-Hexanone | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Tetrachloroethene | 620 | 830 U | 780 U | 800 U | 790 U |
| 1,1,2,2-Tetrachloroethane | 620 | 830 U | 780 U | 800 U | 790 U |
| Toluene | 620 | 830 U | 780 U | 800 U | **430 J** |
| Chlorobenzene | 620 | 830 U | 780 U | 800 U | 790 U |
| Ethylbenzene | 620 | 830 U | 780 U | 800 U | **1200** |
| Styrene | 620 | 830 U | 780 U | 800 U | 790 U |
| Xylenes (total) | 620 | **460 J** | 780 U | 800 U | **4500** |
| 1,2-Dichlorobenzene | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| 1,3-Dichlorobenzene | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| 1,4-Dichlorobenzene | 1200 | 1600 U | 1500 U | 1500 U | 1500 U |
| Practical Quantitation Limit Multiplier[e] | | 1.34 | 1.25[f] | 1.29[f] | 1.28 |
| Percent Solids, % | | 74.2 | 79.2 | 75.4 | 76.9 |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil
Modified EPA Method 8240[a]

| GTEL Sample Number | | 100269-07 | 100269-08 | 100269-09 | -- |
|---|---|---|---|---|---|
| Client Identification | | SB-07 | SB-08 | SB-09 | -- |
| Date Sampled | | 10/06/93 | 10/06/93 | 10/06/93 | -- |
| Date Analyzed | | 10/19/93 | 10/19/93 | 10/19/93 | -- |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | | | |
| Chloromethane | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Bromomethane | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Vinyl Chloride | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Chloroethane | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Methylene Chloride | 620 | 7200 U | 820 U | 780 U | -- |
| Acetone | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Carbon Disulfide | 620 | 7200 U | 820 U | 780 U | -- |
| 1,1-Dichloroethene | 620 | 7200 U | 820 U | 780 U | -- |
| 1,1-Dichloroethane | 620 | 7200 U | 820 U | 780 U | -- |
| 1,2-Dichloroethene (total)[d] | 620 | 7200 U | 820 U | 780 U | -- |
| Chloroform | 620 | 7200 U | 820 U | 780 U | -- |
| 1,2-Dichloroethane | 620 | 7200 U | 820 U | 780 U | -- |
| 2-Butanone | 1200 | 14000 U | 1600 U | 1500 U | -- |
| 1,1,1-Trichloroethane | 620 | 7200 U | 820 U | 780 U | -- |
| Carbon Tetrachloride | 620 | 7200 U | 820 U | 780 U | -- |
| Vinyl Acetate | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Bromodichloromethane | 620 | 7200 U | 820 U | 780 U | -- |
| 1,2-Dichloropropane | 620 | 7200 U | 820 U | 780 U | -- |
| *cis*-1,3-Dichloropropene | 620 | 7200 U | 820 U | 780 U | -- |
| Trichloroethene | 620 | 7200 U | 820 U | 780 U | -- |
| Dibromochloromethane | 620 | 7200 U | 820 U | 780 U | -- |
| Practical Quantitation Limit Multiplier[e] | | 11.6[f] | 1.33 | 1.26[f] | -- |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil
Modified EPA Method 8240[a]

| GTEL Sample Number | | 100269-07 | 100269-08 | 100269-09 | -- |
|---|---|---|---|---|---|
| Client Identification | | SB-07 | SB-08 | SB-09 | -- |
| Date Sampled | | 10/06/93 | 10/06/93 | 10/06/93 | -- |
| Date Analyzed | | 10/19/93 | 10/19/93 | 10/19/93 | -- |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | | | |
| 1,1,2-Trichloroethane | 620 | 7200 U | 820 U | 780 U | -- |
| Benzene | 620 | 7200 U | 820 U | 780 U | -- |
| 2-Chloroethyl Vinyl Ether | 1200 | 14000 U | 1600 U | 1500 U | -- |
| *trans*-1,3-Dichloropropene | 620 | 7200 U | 820 U | 780 U | -- |
| Bromoform | 620 | 7200 U | 820 U | 780 U | -- |
| 4-Methyl-2-Pentanone | 1200 | 14000 U | 1600 U | 1500 U | -- |
| 2-Hexanone | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Tetrachloroethene | 620 | 7200 U | 820 U | 780 U | -- |
| 1,1,2,2-Tetrachloroethane | 620 | 7200 U | 820 U | 780 U | -- |
| Toluene | 620 | 7200 U | 820 U | 780 U | -- |
| Chlorobenzene | 620 | 7200 U | 820 U | 780 U | -- |
| Ethylbenzene | 620 | 7200 U | 3300 | 780 U | -- |
| Styrene | 620 | 7200 U | 820 U | 780 U | -- |
| Xylenes (total) | 620 | 7200 U | 19000 | 780 U | -- |
| 1,2-Dichlorobenzene | 1200 | 14000 U | 1600 U | 1500 U | -- |
| 1,3-Dichlorobenzene | 1200 | 14000 U | 1600 U | 1500 U | -- |
| 1,4-Dichlorobenzene | 1200 | 14000 U | 1600 U | 1500 U | -- |
| Practical Quantitation Limit Multiplier[e] | | 11.6[f] | 1.33 | 1.26[f] | -- |
| Percent Solids, % | | 84.6 | 77.3 | 82.2 | -- |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Volatile Organics in Soil
Modified EPA Method 8240[a]

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; sample prepared by high level solvent extraction and purge and trap. Method modified to include additional compounds. Results are reported on a dry weight basis.

b Practical quantitation limit.

c Data Flag Definitions

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.
- B Indicates that the analyte was found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

d Total 1,2-dichloroethene is the sum of the cis- and trans- isomers.

e The practical quantitation limit multiplier indicates the adjustments made to the data and PQLs for sample dilutions and percent solids.

f Sample was analyzed diluted due to the presence of non-target peaks.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

METHOD BLANK RESULTS

Volatile Organics in Soil
Modified EPA Method 8240[a]

| | GTEL File ID | BS101493JA | |
|---|---|---|---|
| | Date Analyzed | 10/14/93 | |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | |
| Chloromethane | 1200 | 1200 | U |
| Bromomethane | 1200 | 1200 | U |
| Vinyl Chloride | 1200 | 1200 | U |
| Chloroethane | 1200 | 1200 | U |
| Methylene Chloride | 620 | 620 | U |
| Acetone | 1200 | 1200 | U |
| Carbon Disulfide | 620 | 620 | U |
| 1,1-Dichloroethene | 620 | 620 | U |
| 1,1-Dichloroethane | 620 | 620 | U |
| 1,2-Dichloroethene (total)[d] | 620 | 620 | U |
| Chloroform | 620 | 620 | U |
| 1,2-Dichloroethane | 620 | 620 | U |
| 2-Butanone | 1200 | 1200 | U |
| 1,1,1-Trichloroethane | 620 | 620 | U |
| Carbon Tetrachloride | 620 | 620 | U |
| Vinyl Acetate | 1200 | 1200 | U |
| Bromodichloromethane | 620 | 620 | U |
| 1,2-Dichloropropane | 620 | 620 | U |
| *cis*-1,3-Dichloropropene | 620 | 620 | U |
| Trichloroethene | 620 | 620 | U |
| Dibromochloromethane | 620 | 620 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

# METHOD BLANK RESULTS

## Volatile Organics in Soil
## Modified EPA Method 8240[a]

| | GTEL File ID | BS101493JA | |
|---|---|---|---|
| | Date Analyzed | 10/14/93 | |
| Analyte | PQL, ug/kg[b] | Concentration, ug/kg[c] | |
| 1,1,2-Trichloroethane | 620 | 620 | U |
| Benzene | 620 | 620 | U |
| 2-Chloroethyl Vinyl Ether | 1200 | 1200 | U |
| *trans*-1,3-Dichloropropene | 620 | 620 | U |
| Bromoform | 620 | 620 | U |
| 4-Methyl-2-Pentanone | 1200 | 1200 | U |
| 2-Hexanone | 1200 | 1200 | U |
| Tetrachloroethene | 620 | 620 | U |
| 1,1,2,2-Tetrachloroethane | 620 | 620 | U |
| Toluene | 620 | 620 | U |
| Chlorobenzene | 620 | 620 | U |
| Ethylbenzene | 620 | 620 | U |
| Styrene | 620 | 620 | U |
| Xylenes (total) | 620 | 620 | U |
| 1,2-Dichlorobenzene | 1200 | 1200 | U |
| 1,3-Dichlorobenzene | 1200 | 1200 | U |
| 1,4-Dichlorobenzene | 1200 | 1200 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

ANALYTICAL RESULTS

Total Recoverable Petroleum Hydrocarbons in Soil
by Infrared Spectrometry
Modified EPA Method 418.1[a]

| Sample Identification | | Date Sampled | Date Extracted | Date Analyzed | Percent Solids, % | Detection Limit, mg/kg | Concentration, mg/kg |
|---|---|---|---|---|---|---|---|
| GTEL No. | Client ID | -- | -- | -- | -- | -- | -- |
| 100269-01 | SB-01 | 10/08/93 | 10/15/93 | 10/18/93 | 81.6 | 37 | 200 |
| 100269-02 | SB-02 | 10/07/93 | 10/15/93 | 10/18/93 | 75.0 | 47 | 290 |
| 100269-03 | SB-03 | 10/07/93 | 10/15/93 | 10/18/93 | 74.2 | 44 | 47 |
| 100269-04 | SB-04 | 10/05/93 | 10/15/93 | 10/18/93 | 79.2 | 410 | 1500 |
| 100269-05 | SB-05 | 10/05/93 | 10/15/93 | 10/18/93 | 75.4 | 440 | 4100 |
| 100269-06 | SB-06 | 10/06/93 | 10/15/93 | 10/18/93 | 76.9 | 430 | 6000 |
| 100269-07 | SB-07 | 10/06/93 | 10/15/93 | 10/18/93 | 84.6 | 360 | 2200 |
| 100269-08 | SB-08 | 10/06/93 | 10/15/93 | 10/18/93 | 77.3 | 430 | 1500 |
| 100269-09 | SB-09 | 10/06/93 | 10/15/93 | 10/18/93 | 82.2 | 37 | 90 |

a EPA 600/4-79-020, March 1983 revision. Extraction modified for soils (Soxhlet). Concentration calculated on a dry weight basis.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: MBT Lube Oil
Login Number: M3-10-0269

# METHOD BLANK RESULTS

## Volatile Organics in Soil
## Modified EPA Method 8240[a]

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; sample prepared by high level solvent extraction and purge and trap. Method modified to include additional compounds.

b Practical quantitation limit.

c Data Flag Definitions

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.

d Total 1,2-dichloroethene is the sum of the cis- and trans- isomers.



GTEL ENVIRONMENTAL LABORATORIES, INC.

GROUNDWATER TECHNOLOGY

Groundwater Technology, Inc.
80 Holtz Drive, Suite 107, Cheektowaga, NY 14225
Tel: (716) 634-1291

February 8, 1994

Mr. Glenn Heffner
Mobil Oil Corporation
One Babcock Street
Buffalo, New York 14210

Subject : Addendum to the Environmental Site Assessment of the Lube Oil Building and surrounding area

Dear Glenn,

Attached please find the reissue of laboratory results for the water samples from the borings and monitoring wells taken during the performance of the environmental site assessment of the Lube Oil Building and surrounding area. As stated in the original report, laboratory results of the groundwater samples indicated minimal impacts related to semi-volatile compounds on the EPA Method 8270 target list. However, the analytical results were flagged denoting interferences within the chromatographic results of the groundwater samples.

Further discussions with GTEL also indicated that these interferences were caused by semi-volatile compounds not on the target list and not by volatile compounds. GTEL subsequently reviewed the chromatograms of the sampled groundwater to determine the Tentatively Identified Compounds (TIC) that may have caused the interferences.

The results of the TIC analysis is included in the attached reissue of the laboratory results. The TIC review is limited to the identification of the type of organic species of compounds causing the interference noted in the original analysis. The results of the TIC analysis indicate that of semi-volatile compounds exist. As stated in the results, these compounds are generally classified as:

- Unknown Hydrocarbon (SB-2, SB-6, SB-8, MW-B-3 & 2-MW),
- Unknown Cyclohexane (SB-2, SB-8 & 2-MW),
- Unknown Substituted Benzene Isomer (SB-6, SB-8 & 2-MW),
- Unknown Naphthalene Isomer (2-MW) or
- Unknown (all samples).

The influence of these unknown compounds upon the overall quality of groundwater at the site can not be completely ascertained without additional or more extensive sampling protocols. However, the "Scan" number in column three of the TIC results can be used as an indicator of molecular weight which is directly proportional to scan number. According to GTEL, compounds with scan numbers greater than 300 can be considered semi-volatile compounds. Therefore the TIC results confirm the presence of medium to heavy weight semi-volatile compounds within the selected groundwater samples other than those targeted by EPA Method 8270.

If you have any questions, please call me at (716) 634-1291.

Sincerely,
GROUNDWATER TECHNOLOGY, INC.

Michael J. Peeling
Project Geologist

Thomas D. Antonoff
Buffalo Operations Manager

a:\mobil\lubeadnd.rpt

GTEL
ENVIRONMENTAL
LABORATORIES, INC.
**Northeast Region**
Meadowbrook Industrial Park
Milford, NH 03055
(603) 672-4835
(603) 673-8105 (FAX)

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828



December 21, 1993

Mike Teeling
Groundwater Technology, Inc.
80 Holtz Drive, Suite 107
Cheektowaga, NY 14225

Dear Mr. Teeling:

This report, previously 11/16/93, is a reissue.

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 10/27/93 under chain-of-custody records M7248 and M7249.

A formal Quality Assurance / Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified (approved) by the State of New York under number 10599.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Lynn Sullivan for SU

Susan C. Uhler
Laboratory Director

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## CAS NUMBERS AND DETECTION LIMITS

Base/Neutrals in Water
EPA Method 8270

| Analyte | CAS # | Method Detection Limit (MDL) ug/L |
|---|---|---|
| N-Nitrosodimethylamine | 62-75-9 | 10 |
| *bis*(2-Chloroethyl) Ether | 11-44-4 | 5.7 |
| 1,3-Dichlorobenzene | 541-73-1 | 1.9 |
| 1,4-Dichlorobenzene | 106-46-7 | 4.4 |
| 1,2-Dichlorobenzene | 95-50-1 | 1.9 |
| *bis*(2-Chloroisopropyl) Ether | 39638-32-9 | 5.7 |
| N-Nitroso-di-n-propylamine | 621-64-7 | 5.0 |
| Hexachloroethane | 67-72-1 | 1.6 |
| Nitrobenzene | 98-95-3 | 1.9 |
| Isophorone | 78-59-1 | 2.2 |
| *bis*(2-Chloroethoxy)methane | 111-91-1 | 5.3 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 5.0 |
| Naphthalene | 91-20-3 | 1.6 |
| 4-Chloroaniline | 106-47-8 | 5.0 |
| Hexachlorobutadiene | 87-68-3 | 0.9 |
| 2-Methylnaphthalene | 91-57-6 | 5.0 |
| Hexachlorocyclopentadiene | 77-47-4 | 5.0 |
| 2-Chloronaphthalene | 91-58-7 | 1.9 |
| 2-Nitroaniline | 88-74-4 | 25 |
| Dimethylphthalate | 131-11-3 | 1.6 |
| Acenaphthylene | 208-96-8 | 3.5 |
| 2,6-Dinitrotoluene | 606-20-2 | 5.0 |
| 3-Nitroaniline | 99-09-2 | 25 |
| Acenaphthene | 83-32-9 | 1.9 |
| Dibenzofuran | 132-64-9 | 5.0 |
| 2,4-Dinitrotoluene | 121-14-2 | 5.7 |



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CAS NUMBERS AND DETECTION LIMITS

Base/Neutrals in Water
EPA Method 8270

| Analyte | CAS # | Method Detection Limit (MDL) ug/L |
|---|---|---|
| Diethylphthalate | 84-66-2 | 1.9 |
| 4-Chlorophenyl Phenyl Ether | 7005-72-3 | 4.2 |
| Fluorene | 86-73-7 | 1.9 |
| 4-Nitroaniline | 100-01-6 | 25 |
| N-Nitrosodiphenylamine | 86-30-6 | 1.9 |
| 4-Bromophenyl Phenyl Ether | 101-55-3 | 1.9 |
| Hexachlorobenzene | 118-74-1 | 1.9 |
| Phenanthrene | 85-01-8 | 5.4 |
| Anthracene | 120-12-7 | 1.9 |
| Di-n-butylphthalate | 84-74-2 | 2.5 |
| Fluoranthene | 206-44-0 | 2.2 |
| Pyrene | 129-00-0 | 1.9 |
| Butylbenzylphthalate | 85-68-7 | 2.5 |
| 3,3'-Dichlorobenzidine | 91-94-1 | 17 |
| Benz[*a*]anthracene | 56-55-3 | 7.8 |
| Chrysene | 218-01-9 | 2.5 |
| *bis*(2-Ethylhexyl)phthalate | 117-81-7 | 2.5 |
| Di-n-octylphthalate | 117-84-0 | 2.5 |
| Benzo[*b*]fluoranthene | 205-99-2 | 4.8 |
| Benzo[*k*]fluoranthene | 207-08-9 | 2.5 |
| Benzo[*a*]pyrene | 50-32-8 | 2.5 |
| Indeno[1,2,3-*c,d*]pyrene | 193-39-5 | 3.7 |
| Dibenz[*a,h*]anthracene | 53-70-3 | 2.5 |
| Benzo[*g,h,i*]perylene | 191-24-2 | 4.1 |



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ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-01[f] | 100828-02 | 100828-03 | 100828-04[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-2 | SB-1 | SB-3 | SB-6 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/10/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL, ug/L[b] | Concentration, ug/L[c] | | | |
| N-Nitrosodimethylamine | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Chloroethyl) Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,3-Dichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,4-Dichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,2-Dichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Chloroisopropyl) Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| N-Nitroso-di-n-propylamine | 10 | 100 U | 10 U | 19 U | 100 U |
| Hexachloroethane | 10 | 100 U | 10 U | 19 U | 100 U |
| Nitrobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| Isophorone | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Chloroethoxy)methane | 10 | 100 U | 10 U | 19 U | 100 U |
| 1,2,4-Trichlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| Naphthalene | 10 | 100 U | 10 U | 19 U | 14 J |
| 4-Chloroaniline | 20 | 200 U | 21 U | 38 U | 210 U |
| Hexachlorobutadiene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2-Methylnaphthalene | 10 | 100 U | 10 U | 19 U | 13 J |
| Hexachlorocyclopentadiene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2-Chloronaphthalene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2-Nitroaniline | 50 | 500 U | 52 U | 94 U | 520 U |
| Dimethylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Acenaphthylene | 10 | 100 U | 10 U | 19 U | 100 U |
| 2,6-Dinitrotoluene | 10 | 100 U | 10 U | 19 U | 100 U |
| 3-Nitroaniline | 50 | 500 U | 52 U | 94 U | 520 U |
| Acenaphthene | 10 | 100 U | 10 U | 19 U | 34 J |
| Dibenzofuran | 10 | 100 U | 10 U | 19 U | 100 U |
| 2,4-Dinitrotoluene | 10 | 100 U | 10 U | 19 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 10.0 | 1.04 | 1.89 | 10.3 |



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ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-01[f] | 100828-02 | 100828-03 | 100828-04[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-2 | SB-1 | SB-3 | SB-6 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/10/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL ug/L[b] | Concentration, ug/L[c] | | | |
| Diethylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| 4-Chlorophenyl Phenyl Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| Fluorene | 10 | 100 U | 10 U | 19 U | 15 J |
| 4-Nitroaniline | 50 | 500 U | 52 U | 94 U | 210 U |
| N-Nitrosodiphenylamine[e] | 10 | 100 U | 10 U | 19 U | 100 U |
| 4-Bromophenyl Phenyl Ether | 10 | 100 U | 10 U | 19 U | 100 U |
| Hexachlorobenzene | 10 | 100 U | 10 U | 19 U | 100 U |
| Phenanthrene | 10 | 100 U | 10 U | 19 U | 23 J |
| Anthracene | 10 | 100 U | 10 U | 19 U | 100 U |
| Di-n-butylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Fluoranthene | 10 | 100 U | 10 U | 19 U | 32 J |
| Pyrene | 10 | 100 U | 10 U | 19 U | 35 J |
| Butylbenzylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| 3,3'-Dichlorobenzidine | 20 | 200 U | 21 U | 38 U | 210 U |
| Benz[a]anthracene | 10 | 100 U | 10 U | 19 U | 100 U |
| Chrysene | 10 | 100 U | 10 U | 19 U | 100 U |
| *bis*(2-Ethylhexyl)phthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Di-n-octylphthalate | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[*b*]fluoranthene | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[*k*]fluoranthene | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[*a*]pyrene | 10 | 100 U | 10 U | 19 U | 100 U |
| Indeno[1,2,3-*c,d*]pyrene | 10 | 100 U | 10 U | 19 U | 100 U |
| Dibenz[*a,h*]anthracene | 10 | 100 U | 10 U | 19 U | 100 U |
| Benzo[*g,h,i*]perylene | 10 | 100 U | 10 U | 19 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 10.0 | 1.04 | 1.89 | 10.3 |



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ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-05[g] | 100828-06 | 100828-07 | 100828-08[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-8 | MW-B-4 | MW-B-3 | MW-2 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/08/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL ug/L[b] | Concentration, ug/L[c] | | | |
| N-Nitrosodimethylamine | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Chloroethyl) Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,3-Dichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,4-Dichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,2-Dichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Chloroisopropyl) Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| N-Nitroso-di-n-propylamine | 10 | 110 U | 10 U | 10 U | 100 U |
| Hexachloroethane | 10 | 110 U | 10 U | 10 U | 100 U |
| Nitrobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| Isophorone | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Chloroethoxy)methane | 10 | 110 U | 10 U | 10 U | 100 U |
| 1,2,4-Trichlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| Naphthalene | 10 | 38 J | 10 U | 10 U | 100 U |
| 4-Chloroaniline | 20 | 220 U | 20 U | 20 U | 200 U |
| Hexachlorobutadiene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2-Methylnaphthalene | 10 | 37 J | 10 U | 10 U | 26 J |
| Hexachlorocyclopentadiene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2-Chloronaphthalene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2-Nitroaniline | 50 | 560 U | 50 U | 50 U | 500 U |
| Dimethylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Acenaphthylene | 10 | 110 U | 10 U | 10 U | 100 U |
| 2,6-Dinitrotoluene | 10 | 110 U | 10 U | 10 U | 100 U |
| 3-Nitroaniline | 50 | 560 U | 50 U | 50 U | 500 U |
| Acenaphthene | 10 | 110 U | 10 U | 10 U | 100 U |
| Dibenzofuran | 10 | 110 U | 10 U | 10 U | 100 U |
| 2,4-Dinitrotoluene | 10 | 110 U | 10 U | 10 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 11.1 | 1.00 | 1.00 | 10.0 |



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ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| GTEL Sample Number | | 100828-05[g] | 100828-06 | 100828-07 | 100828-08[f] |
|---|---|---|---|---|---|
| Client Identification | | SB-8 | MW-B-4 | MW-B-3 | MW-2 |
| Date Sampled | | 10/26/93 | 10/26/93 | 10/26/93 | 10/26/93 |
| Date Extracted | | 10/28/93 | 10/28/93 | 10/28/93 | 10/28/93 |
| Date Analyzed | | 11/08/93 | 11/08/93 | 11/08/93 | 11/08/93 |
| Analyte | PQL ug/L[b] | Concentration, ug/L[c] | | | |
| Diethylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| 4-Chlorophenyl Phenyl Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| Fluorene | 10 | 110 U | 10 U | 10 U | 100 U |
| 4-Nitroaniline | 50 | 560 U | 50 U | 50 U | 500 U |
| N-Nitrosodiphenylamine[e] | 10 | 110 U | 10 U | 10 U | 100 U |
| 4-Bromophenyl Phenyl Ether | 10 | 110 U | 10 U | 10 U | 100 U |
| Hexachlorobenzene | 10 | 110 U | 10 U | 10 U | 100 U |
| Phenanthrene | 10 | 110 U | 10 U | 10 U | 100 U |
| Anthracene | 10 | 110 U | 10 U | 10 U | 100 U |
| Di-n-butylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Fluoranthene | 10 | 110 U | 10 U | 10 U | 100 U |
| Pyrene | 10 | 110 U | 10 U | 10 U | 13 J |
| Butylbenzylphthalate | 10 | 110 U | 10 U | 10 U | 16 J |
| 3,3'-Dichlorobenzidine | 20 | 220 U | 20 U | 20 U | 200 U |
| Benz[*a*]anthracene | 10 | 110 U | 10 U | 10 U | 100 U |
| Chrysene | 10 | 110 U | 10 U | 10 U | 100 U |
| *bis*(2-Ethylhexyl)phthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Di-n-octylphthalate | 10 | 110 U | 10 U | 10 U | 100 U |
| Benzo[*b*]fluoranthene | 10 | 110 U | 10 U | 10 U | 100 U |
| Benzo[*k*]fluoranthene | 10 | 110 U | 10 U | 10 U | 10 J |
| Benzo[*a*]pyrene | 10 | 110 U | 10 U | 10 U | 100 U |
| Indeno[1,2,3-*c,d*]pyrene | 10 | 110 U | 10 U | 10 U | 100 U |
| Dibenz[*a,h*]anthracene | 10 | 110 U | 10 U | 10 U | 100 U |
| Benzo[*g,h,i*]perylene | 10 | 110 U | 10 U | 10 U | 100 U |
| Practical Quantitation Limit Multiplier[d] | | 11.1 | 1.00 | 1.00 | 10.0 |



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Login Number: M3-10-0828

ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | | GTEL Sample Number | 100828-01 |
| | | Client Identification | SB-2 |
| | | Date Sampled | 10/26/93 |
| | | Date Extracted | 10/28/93 |
| | | Date Analyzed | 11/08/93 |
| | CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. | -- | Unknown | 603 | 180 J |
| 2. | -- | Unknown | 668 | 160 J |
| 3. | -- | Unknown Hydrocarbon | 712 | 88 J |
| 4. | -- | Unknown Cyclohexane | 728 | 110 J |
| 5. | -- | Unknown | 753 | 97 J |
| 6. | -- | Unknown Hydrocarbon | 760 | 280 J |
| 7. | -- | Unknown | 800 | 93 J |
| 8. | -- | Unknown Hydrocarbon | 806 | 110 J |
| 9. | -- | Unknown Cyclohexane | 835 | 22 J |
| 10. | -- | Unknown | 920 | 18 J |
| 11. | -- | Unknown Cyclohexane | 934 | 12 J |
| 12. | -- | Unknown Hydrocarbon | 943 | 36 J |
| 13. | -- | Unknown Hydrocarbon | 1033 | 11 J |
| 14. | -- | Unknown Hydrocarbon | 1102 | 13 J |
| 15. | -- | Unknown Hydrocarbon | 1148 | 17 J |
| Practical Quantitation Limit Multiplier[d] | | | | 10.0 |



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ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | | GTEL Sample Number | 100828-02 |
| | | Client Identification | SB-1 |
| | | Date Sampled | 10/26/93 |
| | | Date Extracted | 10/28/93 |
| | | Date Analyzed | 11/10/93 |
| CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. -- | -- | -- | -- |
| Practical Quantitation Limit Multiplier[d] | | | 1.04 |



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ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | | GTEL Sample Number | 100828-03 |
| | | Client Identification | SB-3 |
| | | Date Sampled | 10/26/93 |
| | | Date Extracted | 10/28/93 |
| | | Date Analyzed | 11/08/93 |
| | CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. | -- | Unknown | 189 | 18 JA |
| 2. | -- | Unknown | 718 | 14 J |
| Practical Quantitation Limit Multiplier[d] | | | | 1.89 |



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ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | | |
|---|---|---|---|---|
| | | | GTEL Sample Number | 100828-04 |
| | | | Client Identification | SB-6 |
| | | | Date Sampled | 10/26/93 |
| | | | Date Extracted | 10/28/93 |
| | | | Date Analyzed | 11/08/93 |
| | CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. | -- | Unknown Sub. Benzene Isomer | 231 | 100 J |
| 2. | -- | Unknown Sub. Benzene Isomer | 391 | 160 J |
| 3. | -- | Unknown Sub. Benzene Isomer | 408 | 110 J |
| 4. | -- | Unknown Sub. Benzene Isomer | 428 | 140 J |
| 5. | -- | Unknown Sub. Benzene Isomer | 469 | 180 J |
| 6. | -- | Unknown Sub. Benzene Isomer | 517 | 72 J |
| 7. | -- | Unknown Sub. Benzene Isomer | 543 | 110 J |
| 8. | -- | Unknown | 602 | 62 J |
| 9. | -- | Unknown | 631 | 93 J |
| 10. | -- | Unknown Hydrocarbon | 759 | 82 J |
| 11. | -- | Unknown | 816 | 52 J |
| 12. | -- | Unknown Hydrocarbon | 823 | 52 J |
| 13. | -- | Unknown | 834 | 52 J |
| 14. | -- | Unknown Hydrocarbon | 942 | 72 J |
| 15. | -- | Unknown Hydrocarbon | 1148 | 62 J |
| Practical Quantitation Limit Multiplier[d] | | | | 10.3 |



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ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | | GTEL Sample Number | 100828-05 |
| | | Client Identification | SB-8 |
| | | Date Sampled | 10/26/93 |
| | | Date Extracted | 10/28/93 |
| | | Date Analyzed | 11/08/93 |
| | CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. | -- | Unknown Sub. Benzene Isomer | 230 | 78 J |
| 2. | -- | Unknown Sub. Benzene Isomer | 383 | 56 J |
| 3. | -- | Unknown Sub. Benzene Isomer | 428 | 89 J |
| 4. | -- | Unknown Hydrocarbon | 435 | 67 J |
| 5. | -- | Unknown Sub. Benzene Isomer | 468 | 100 J |
| 6. | -- | Unknown Sub. Benzene | 633 | 78 J |
| 7. | -- | Unknown Hydrocarbon | 759 | 67 J |
| 8. | -- | Unknown Hydrocarbon | 787 | 44 J |
| 9. | -- | Unknown Cyclohexane | 834 | 44 J |
| 10. | -- | Unknown Hydrocarbon | 942 | 67 J |
| 11. | -- | Unknown Hydrocarbon | 1103 | 56 J |
| 12. | -- | Unknown Hydrocarbon | 1148 | 78 J |
| Practical Quantitation Limit Multiplier[d] | | | | 11.1 |



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Login Number: M3-10-0828

ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | | GTEL Sample Number | 100828-06 |
| | | Client Identification | MW-B-4 |
| | | Date Sampled | 10/26/93 |
| | | Date Extracted | 10/28/93 |
| | | Date Analyzed | 11/08/93 |
| CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. -- | Unknown | 479 | 5.0 J |
| 2. -- | Unknown | 1796 | 63 J |
| Practical Quantitation Limit Multiplier[d] | | | 1.00 |



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Login Number: M3-10-0828

ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | | GTEL Sample Number | 100828-07 |
| | | Client Identification | MW-B-3 |
| | | Date Sampled | 10/26/93 |
| | | Date Extracted | 10/28/93 |
| | | Date Analyzed | 11/08/93 |
| | CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. | -- | Unknown | 602 | 5.1 J |
| 2. | -- | Unknown | 748 | 21 J |
| 3. | -- | Unknown | 824 | 5.1 J |
| 4. | -- | Unknown Hydrocarbon | 942 | 6.5 J |
| 5. | -- | Unknown | 1791 | 17 J |
| 6. | -- | Unknown | 1981 | 18 J |
| 7. | -- | Unknown | 2193 | 48 J |
| Practical Quantitation Limit Multiplier[d] | | | | 1.00 |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

ANALYTICAL RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | | |
|---|---|---|---|---|
| | | GTEL Sample Number | | 100828-08 |
| | | Client Identification | | MW-2 |
| | | Date Sampled | | 10/26/93 |
| | | Date Extracted | | 10/28/93 |
| | | Date Analyzed | | 11/08/93 |
| | CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. | -- | Unknown | 382 | 72 J |
| 2. | -- | Unknown Sub. Benzene Isomer | 632 | 92 J |
| 3. | -- | Unknown Hydrocarbon | 749 | 48 J |
| 4. | -- | Unknown Hydrocarbon | 758 | 120 J |
| 5. | -- | Unknown Cyclohexane Isomer | 833 | 68 J |
| 6. | -- | Unknown Hydrocarbon | 888 | 60 J |
| 7. | -- | Unknown Naphthalene Isomer | 900 | 44 J |
| 8. | -- | Unknown Naphthalene Isomer | 915 | 48 J |
| 9. | -- | Unknown Naphthalene Isomer | 933 | 52 J |
| 10. | -- | Unknown Hydrocarbon | 941 | 88 J |
| 11. | -- | Unknown Naphthalene Isomer | 1033 | 48 J |
| 12. | -- | Unknown Hydrocarbon | 1101 | 52 J |
| 13. | -- | Unknown Hydrocarbon | 1147 | 84 J |
| 14. | -- | Unknown | 2157 | 280 J |
| Practical Quantitation Limit Multiplier[d] | | | | 10.0 |



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LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

ANALYTICAL RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; extraction by EPA Method 3510 (liquid/liquid).

b Practical quantitation limit.

c Data Flag Definitions

U Indicates compound was analyzed for but not detected.

J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.

B Indicates that the analyte was found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

A Suspected Aldol Condensation Product.

d The practical quantitation limit multiplier indicates the adjustments made to the data and PQLs for sample dilutions.

e Cannot be separated from diphenylamine.

f Sample was analyzed diluted due to demonstrated non-target interferences.

g The practical quantitation limit multiplier was elevated due to limited sample volume.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

## METHOD BLANK RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | GTEL File ID | BW102893AR | |
| | Date Extracted | 10/28/93 | |
| | Date Analyzed | 11/10/93 | |
| Analyte | PQL, ug/L[b] | Concentration, ug/L[c] | |
| N-Nitrosodimethylamine | 10 | 10 | U |
| *bis*(2-Chloroethyl) Ether | 10 | 10 | U |
| 1,3-Dichlorobenzene | 10 | 10 | U |
| 1,4-Dichlorobenzene | 10 | 10 | U |
| 1,2-Dichlorobenzene | 10 | 10 | U |
| *bis*(2-Chloroisopropyl) Ether | 10 | 10 | U |
| N-Nitroso-di-n-propylamine | 10 | 10 | U |
| Hexachloroethane | 10 | 10 | U |
| Nitrobenzene | 10 | 10 | U |
| Isophorone | 10 | 10 | U |
| *bis*(2-Chloroethoxy)methane | 10 | 10 | U |
| 1,2,4-Trichlorobenzene | 10 | 10 | U |
| Naphthalene | 10 | 10 | U |
| 4-Chloroaniline | 20 | 20 | U |
| Hexachlorobutadiene | 10 | 10 | U |
| 2-Methylnaphthalene | 10 | 10 | U |
| Hexachlorocyclopentadiene | 10 | 10 | U |
| 2-Chloronaphthalene | 10 | 10 | U |
| 2-Nitroaniline | 50 | 50 | U |
| Dimethylphthalate | 10 | 10 | U |
| Acenaphthylene | 10 | 10 | U |
| 2,6-Dinitrotoluene | 10 | 10 | U |
| 3-Nitroaniline | 50 | 50 | U |
| Acenaphthene | 10 | 10 | U |
| Dibenzofuran | 10 | 10 | U |
| 2,4-Dinitrotoluene | 10 | 10 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

## METHOD BLANK RESULTS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | GTEL File ID | BW102893AR | |
| | Date Extracted | 10/28/93 | |
| | Date Analyzed | 11/10/93 | |
| Analyte | PQL, ug/L[b] | Concentration, ug/L[c] | |
| Diethylphthalate | 10 | 10 | U |
| 4-Chlorophenyl Phenyl Ether | 10 | 10 | U |
| Fluorene | 10 | 10 | U |
| 4-Nitroaniline | 50 | 50 | U |
| N-Nitrosodiphenylamine[d] | 10 | 10 | U |
| 4-Bromophenyl Phenyl Ether | 10 | 10 | U |
| Hexachlorobenzene | 10 | 10 | U |
| Phenanthrene | 10 | 10 | U |
| Anthracene | 10 | 10 | U |
| Di-n-butylphthalate | 10 | 10 | U |
| Fluoranthene | 10 | 10 | U |
| Pyrene | 10 | 10 | U |
| Butylbenzylphthalate | 10 | 10 | U |
| 3,3'-Dichlorobenzidine | 20 | 20 | U |
| Benz[a]anthracene | 10 | 10 | U |
| Chrysene | 10 | 10 | U |
| *bis*(2-Ethylhexyl)phthalate | 10 | 10 | U |
| Di-n-octylphthalate | 10 | 10 | U |
| Benzo[*b*]fluoranthene | 10 | 10 | U |
| Benzo[*k*]fluoranthene | 10 | 10 | U |
| Benzo[*a*]pyrene | 10 | 10 | U |
| Indeno[1,2,3-*c,d*]pyrene | 10 | 10 | U |
| Dibenz[*a,h*]anthracene | 10 | 10 | U |
| Benzo[*g,h,i*]perylene | 10 | 10 | U |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
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LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

METHOD BLANK RESULTS
TENTATIVELY IDENTIFIED COMPOUNDS

Base/Neutrals in Water
EPA Method 8270[a]

| | | | |
|---|---|---|---|
| | | GTEL File ID | BW102893AR |
| | | Date Extracted | 10/28/93 |
| | | Date Analyzed | 11/10/93 |
| CAS Number | Compound | SCAN | Estimated Concentration, ug/L[c] |
| 1. – | – | – | – |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 011115311
Project ID: 31010
LUBE OIL ASSES.
MOBIL BUFFALO
TERMINAL
Login Number: M3-10-0828

METHOD BLANK RESULTS

Base/Neutrals in Water
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d Cannot be separated from diphenylamine.



GTEL ENVIRONMENTAL LABORATORIES, INC.

M2P2
DHWR SUMMARY

MOBIL OIL CORPORATION
ELK STREET, BUFFALO, NY

(Site I.D. No. 915040)

Mobil Oil complex occupies 77 acres land along the Buffalo River. Out of this complex only 3 acres is a disposal area which was used by City of Buffalo from 1920 to 1951. Mobil purchased disposal area in 1951 and used it for disposal of sludge containing tetraethyl lead, spent catalysts, and sediments from gravity separator, air flotation unit and cooling water unit.

Based upon 1979 Inter Agency Task Force findings, this site was listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as a Class "2a". Upon review of the site investigations the site was reclassified to Class 3 in 1988. (Classification Code 3 means that the site does not present a significant threat to the public health or environmental and the action may be deferred).

Site Investigations:

In 1982 USGS made soil borings and collected soil samples. The soil samples showed slightly elevated concentrations of lead.

DHWR was primarily concerned with the 3 acre disposal area and focused investigations on this area (also referred as site).

A State Superfund Phase I Investigation was completed in September 1983. Mobil Oil entered into a Consent Order with NYSDEC to perform a Phase II Investigation. URS Consultants were retained by Mobil Oil to conduct a Phase II Investigation. The Phase II Report was completed in 1986.

During Phase II Investigation five groundwater monitoring wells were installed. Soil samples were collected from 12 boreholes. Soil samples showed low levels of PAHs. The soil samples also showed low levels of PAHs. The soil samples also showed lead up to 3160 ppm and magnesium up to 3500 ppm.

One monitoring well MW-2 showed up to 55 ppb benzene and also found free petroleum hydrocarbons product (mixture of gasoline and diesel fuel). Another monitoring well MW-3 showed traces of PAHs.

Surface water and sediment samples from the river did not show any appreciable levels of contaminants.

Mobil Oil was to perform periodic groundwater monitoring and submit the reports to DHWR, however such reports were rarely forwarded to NYSDEC.

J. S. WALIA

## Division of Water

The Mobil Oil Corporation, Buffalo Refinery was first issued a NPDES Permit (No. NY-0000264) in July 1977 for the discharge of both treated process and non-contact cooling water into the Buffalo River. The source of all cooling water used by this former refinery was Lake Erie. Approximately 30 MGD of this lake water was supplied to Mobil by the Buffalo River Improvement Corporation (BRIC). This corporation was formed in February 1967 for the operation and maintenance of a nine million dollar project to provide a dependable supply of fresh raw water for industrial cooling purpose for Mobil Oil and four other industries located along the river. In addition, the discharge of this cooling water provided an effectual and advantageous means of augmenting the flow in the Buffalo River. This project was financed by bonds issued by the City of Buffalo and is still operated and maintained by BRIC, under a lease with the City of Buffalo.

Approximately 95 percent of the water used in the Buffalo Refinery was for cooling and condensing of hydrocarbon streams and the remainder was used in the refinery process. The various contaminated process water streams were segregated from the once through cooling water flow. Mobil's process wastewater was treated in an oil/water separator followed by a dissolved air floatation unit. This treated water was combined with the non-contact cooling water, treated in an additional gravity

separator prior to being discharged through a single outfall into the Buffalo River. In November of 1979, the process wastewater was tied into the Buffalo Municipal Sewer System.

The Buffalo Refinery was closed in May 1981 and after having operated at this site for more than a century; most of the facilities were slowly demolished. A determination was made in October 1984 to delete the Mobil Oil SPDES Permit since all flows, including stormwater were directed to the Buffalo Municipal Sewer System. The present operations at Mobil Oil's Buffalo Terminal consist of transporting gasoline and fuel to commercial and retail customers in the Buffalo area. The majority of these products comes by pipeline and the remaining products are shipped by barge. In June of 1990, Mobil Oil requested a new SPDES Permit because of the installation of an improved secondary containment system for the active bulk storage tanks. These improvements to the dike retention capacities required that the drainage of accumulated stormwater be routed to the Buffalo River via a 1,500 gpm oil/water separator. A new permit No. NY-0204480 was issued on April 30, 1992 and is currently in effect.

New York State Department of Environmental Conservation

# MULTI-MEDIA INSPECTION CHECKLIST

## PART A - Facility Data

Facility RCIS# _____ - _____ M2 Inspection DATE – / – / – Type : RMMI or CMMI (circle one)
Inspector's Name DONNA KIERSZ

## Division of Air

| Regulated activities | Permit Number | Operating Hours/Day | Operating Days/~~Week~~ YEAR | Consent Order | Other Enforcement Actions |
|---|---|---|---|---|---|
| Incinerator | | | | | |
| Boiler | | | | | |
| Other Certified Sources | | | | | |
| WELD1 EXHAUST | | 2.0 | 260 | | |
| WELD2 EXHAUST | | 2.0 | 260 | | |
| TANK 00038 | | 24.0 | 365 | | |
| TANK 0075T | | 24.0 | 365 | | |
| TANK 00097 | | 24.0 | 365 | | |
| TANK 00099 | | 24.0 | 365 | | |
| TANK 0171T | | 24.0 | 365 | | |
| TANK 0176T | | 24.0 | 365 | | |

**NOTES**

1. Please use extra sheets, if needed, to add more regulated activities and number extra sheets with alphabetical suffixes to the page number (1a, 1b, etc.)

2. CSG: Please attach extra sheets to compile Case Specific Guidance (CSG) regarding the concerns in each program at the facility.

New York State Department of Environmental Conservation

# MULTI-MEDIA INSPECTION CHECKLIST

## PART A - Facility Data

Facility RCIS# _____-____ M2 Inspection DATE -/-/- Type : RMMI or CMMI (circle one)

Inspector's Name DONNA KIERSZ

## Division of Air

| | Regulated activities | Permit Number | Operating Hours/Day | Operating Days/~~Week~~ YEAR | Consent Order | Other Enforcement Actions |
|---|---|---|---|---|---|---|
| | Incinerator | | | | | |
| | Boiler | | | | | |
| | Other Certified Sources | | | | | |
| | 00VRU | | 24.0 | 365 | | |
| (1) | 00100 | 9-1402-00600/10-0 | 24.0 | 365 | | |
| (2) | 000A1 | | 24.0 | 365 | | |
| (3) | 00001 | | 24.0 | 365 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

(1) CO EXPIRED 03/01/94 ; NOT IN OPERATION

(2) CO APPLICATION FOR EXISTING TANK

(3) PC APPLICATION FOR AIR SPARGING SYSTEM

**NOTES**

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New York State Department of Environmental Conservation
# MULTI-MEDIA INSPECTION CHECKLIST
PART A - Facility Data

## Division of Solid Waste

| Regulated activities | Closed | Inactive | Operating | Permit Number | Consent Order | Other Enforcement Actions |
|---|---|---|---|---|---|---|
| Municipal Landfill | | | | | | |
| Industrial Landfill | | | | | | |
| Ash Landfill | | | | | | |
| C&D Landfill | | | | | | |
| Incinerator | | | | | | |
| Land Application | | | | | | |
| Composting | | | | | | |
| Liquid Storage | | | | | | |
| Transfer Station | | | | | | |
| Recycling | | | | | | |
| Waste Tire Storage | | | | | | |
| Medical Waste | | | | | | |
| Waste Oil | | | | | | |

* No Known Solid Waste activities on site.

**NOTES**

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New York State Department of Environmental Conservation

# MULTI-MEDIA INSPECTION CHECKLIST

## PART A - Facility Data

### Division of Water

| Regulated activities | Permit Number | Number of Outfalls | Consent Order | Other Enforcement Actions |
|---|---|---|---|---|
| Surface Water | NY-0204480 | 1 | | |
| Ground Water | | | | |
| Municipal System | 91-05-BU045 | 1 | | |
| Pretreatment | | | | |
| Industrial User | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**NOTES**

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New York State Department of Environmental Conservation
# MULTI-MEDIA INSPECTION CHECKLIST
## PART A - Facility Data

### Division of Spills Management
### Bulk Storage

| Regulated activities | Registration/ License Numbers | Consent Order | Other Enforcement Actions |
|---|---|---|---|
| Petroleum Tanks | | | |
| Chemical Tanks | | | |
| | | | |
| | | | |
| Oil Spill Remediation | Spill # 8808982 | Remediation of | historic oil |
| | spills. Product | water recovery | from 6 recovery |
| | wells, each utilizing dual water and | | product pumps, |
| | Total fluid recovery | from well point | system installed |
| | along Buffalo River. Water discharge to BSA. | | |
| | Monthly and quarterly reporting | | |
| | | | |
| | Spill # 9314016 | Site assesment | showing residual |
| | petroleum contamination on parcel | | of land |
| | owned by Mobil, | north side Elk St | between Winona |
| | and Bradford Streets. | | |
| | Spill # 9314015 | Site assessment | showing residual |
| | petro contamination in area of old | | Lube Oil Building |
| | (Northeast corner | of Babcock Street & | Buffalo River |

**NOTES**

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ELK STREET

BABCOCK STREET

B-1MW

Mound Removal
Custom Top Soil
(Concrete Crushing) - Leaving

B-3MW

B-4MW

LAKES DIVISION GARAGE

B-5MW(RR)

B-5MW

B-5MW(R)

17-MW

SAFETY BUILDING

9-MW

NEW LOADING RACK

103 107
2 105

16-MW

EXISTING TRUCK RACK

FIRE HOUSE

1-MW

2-MW

3-MW

DISCHARGE TO BUFFALO SEWER AUTHORITY

4-MW

5-MW

RW-5

OIL/WATER SEPARATOR

8-MW

RW-4

6-MW

7-MW

10-MW

RW-3

11-MW

25

26

20

98

195

13-MW

ALKY AREA

PUMP PAD

15-MW

75

90

RW-6

12-MW

RW-1

18-MW

ESI-1

ESI-2

99

38

87

14-MW

ESI-3

RW-2

19-MW

20-MW

171

ESI-5

ESI-4

67

104

105

21-MW

FIRE PUMP HOUSE

BUFFALO RIVER

5/14/13 9:31:14 AM

B-2MWR

B-2MW

BIOTREATMENT CELL

cell closed

LAB BLDG

STORAGE

STORAGE

STORE HOUSE OFFICE

175

176

W-2

W-1

8-8MW