ASSESSMENT DOCUMENTATION REPORT

KEY PRODUCTS, INC.

8634 W. Lynks

Milwaukee, WI 53225

Milwaukee County

ERP FID# 241437790

MILWAUKEE COUNTY
ERP FID# 241437790

ASSESSMENT DOCUMENTATION REPORT

Prepared for:

Key Products, Inc.
8634 W. Lynks
Milwaukee, Wisconsin 53225
Attn: Richard Meinburg

Prepared by:

Materials Management & Training Ltd.
14705 East View Ct.
Brookfield, WI 53005
Or
2711 W. Townsend Street
Milwaukee, WI 53216
(414) 447-4700

September 19, 1997

TABLE OF CONTENTS

EXECUTIVE SUMMARY

January 26, 1996 Key Products reported that a accidental release had occurred at their facility located on 8634 W. Lynks, Milwaukee, WI 53225 . No residual product was present, visible contamination or ground water was observed . Initial laboratory analysis of soil samples taken prior excavation revealed VOC contaminate levels , 29 to 48,000 mg/kg respectively. After excavation, laboratory analysis of soil samples showed VOC levels on the base and East end of the excavation at 1,500 -3,000 mg/kg. The Department of Natural Resources recommended that Key Products conduct an assessment and determine if groundwater is at 10-16 feet bgs and report on the degree and extent of contamination based on the information that the DNR provided to Key Products in their letter dated January 3, 1997. On July 23, 1997 MM&T Ltd. contracted with ESP Enterprises, Inc. of West Bend, WI to conduct geoprobe activities at the Key Products Site. The assessment was to determine if contamination in the excavation area originally reported in the Closure Documentation Report was due to soil disturbance during excavation and if groundwater is impacted. Geoprobe samples were set up adjacent to the former SS-1 and SS-4 location and at the property boundary down gradient of groundwater flow. Samples were taken to a depth of 15- 20 feet.

This assessment has been performed in accordance with state and local regulations. The assessment report has been prepared in accordance with federal and state requirements for release reporting.

INTRODUCTION

January 26, 1996 Key Products located at 8634 W. Lynks, Milwaukee, WI 53225 reported that a release had occurred from the handling of waste paint related materials. On July 23, 1997 geoprobe sampling was conducted at the Key Products Site to determine extent of contamination.

Materials Management & Training Ltd., 14705 East View Ct. Brookfield, WI 53005 was retained by Key Products to observe, document and prepare an assessment documentation report upon completion of field activities to determine the extent of contamination.

SITE BACKGROUND

Key Products Leased and previously operated the facility at the 8634 W. Lynks. Past practices for disposal of waste paint cans involved disposing of them into a dumpster where they leaked onto the surrounding soils. On May 26, 1997 Key Products, Inc., removed 226 tons of soil from the area where the dumpster was located. Soil analysis after excavation showed 1,500 mg/kg at the base and 3,000 mg/kg at the east wall of the excavation. All other areas of the excavation was had no detects.

Based on the remaining contamination in the soil Key Products determined the risk based levels and found the results to be below DNR standards. Key Products, Inc., requested no further action. On January 3, 1997 the DNR requested further investigation based on information from the Hampton Plumbing site which indicated groundwater at 12 feet bgs.

No groundwater was detected in the Key Products excavation during the time it remained open (about 3 months) other than rain water.

Don Gagas of Materials Management & Training Ltd., 14705 East View Ct., Brookfield, WI 53005, site assessor certification #01275, was retained to observe and document assessment activities and report upon completion of field operations. The general contractor providing geoprobe services was ESP Enterprises, Inc., 1784 Barton Ave., Suite 22 West Bend, WI 53095.

PURPOSE AND SCOPE

The purpose of this report is to document the assessment activities at Key Products, 8634 W.Lynks, Milwaukee, Wisconsin 53225. This report is being prepared for the owner's records and in fulfillment of the requirements of State of Wisconsin release reporting and assessment activities.

The information in this report is based on the following:

- *Periodic site visits for the purpose of observing and documenting assessment & geoprobe activities .*
- *Observation and recording of the type, characteristics, and quantities of soil materials used.*
- *Photographic recording of assessment and geoprobe activities.*
- *Documentation of subcontractors used during the geoprobe activities.*
- *Written summary of the observed assessment operations.*

Key Products arranged with MM&T Ltd. to provide supervision, coordination, and scheduling during on-site assessment activities. The on-site contractor was responsible for geoprobe, health and safety considerations.

The scope of this report is limited to the on-site assessment activities occurring during geoprobe activities at the former location of waste lugger storage owned and operated by Key Products, 8634 W. Lynks, Milwaukee, Wisconsin 53225.

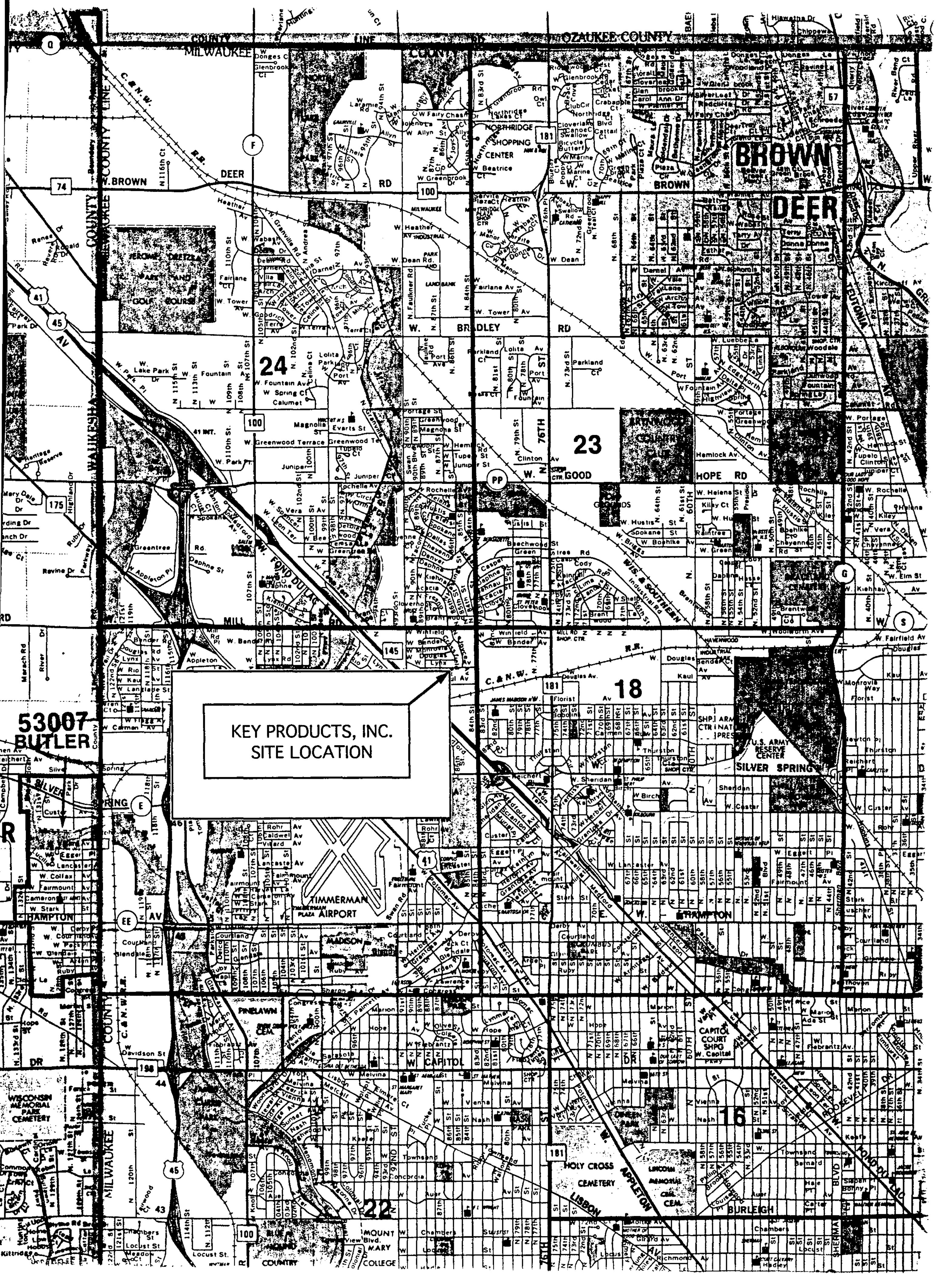
Soil samples were collected in accordance with the workplan and DNR Checklist.

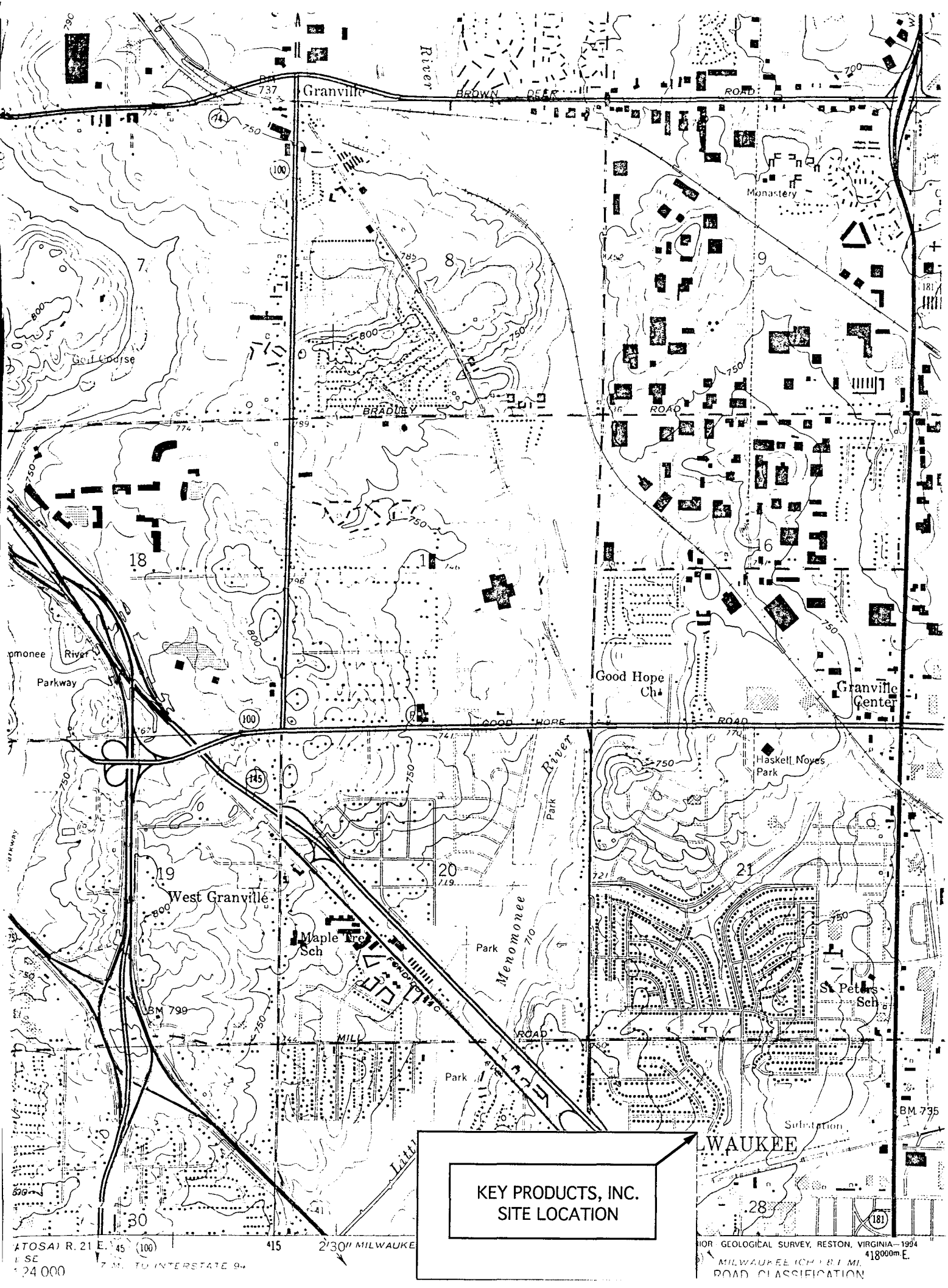
CONFIRMATION SAMPLING

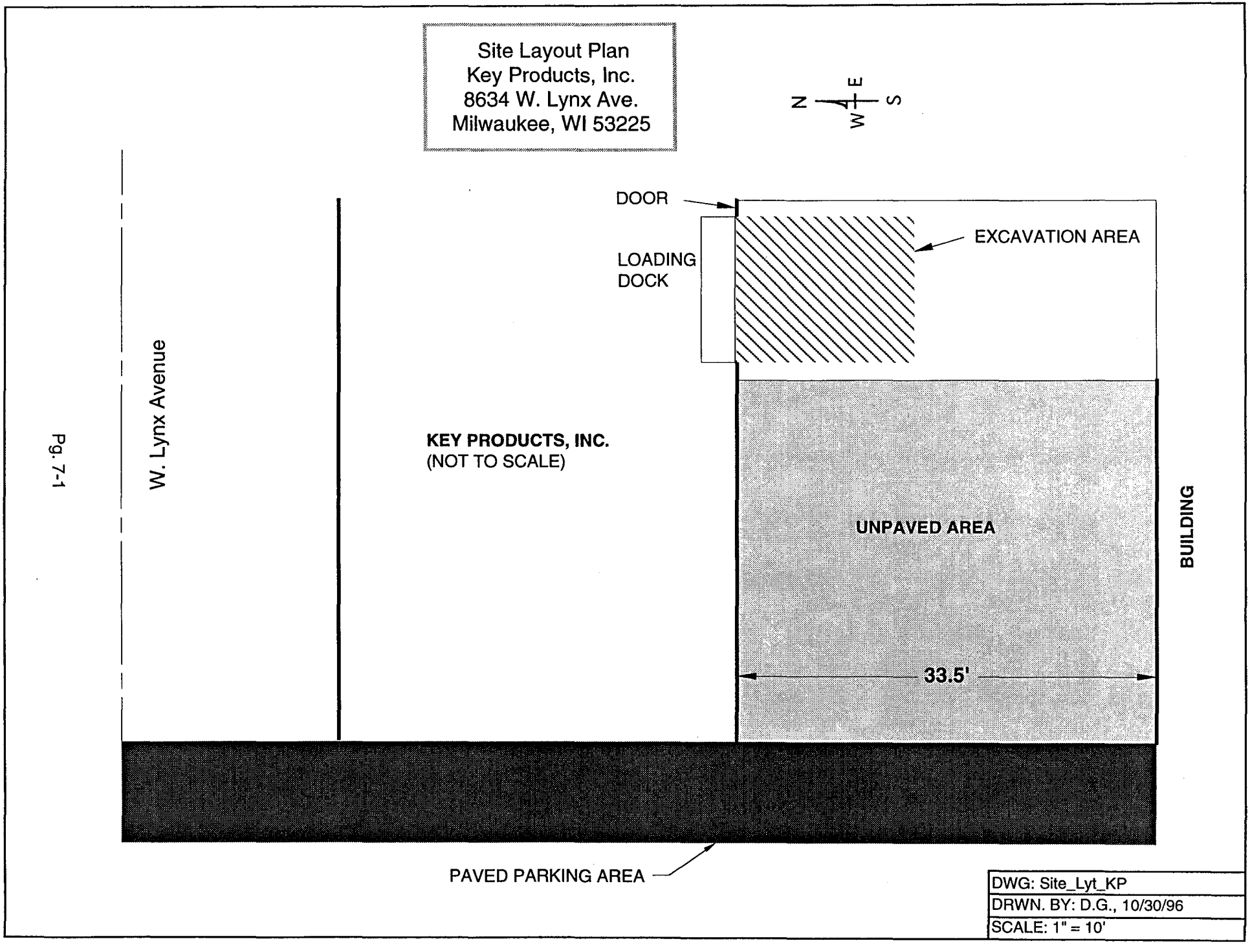
Soil sampling commenced on July 23, 1997 during which time soil samples were collected from geoprobe activities and analyzed for VOC's. The analysis indicated VOC levels of no-detect (< 5 mg/kg) to 83 mg/kg at locations, below the WDNR criteria limit of 100 (ref. Confirmation Samples - Soil, GP-1 thru GP-3). GP-1 analysis results are not included in the report eventhough the results are similar to GP-2 & GP-3.

Ground water was not encountered during geoprobe activities nor were signs of surface water staining evident. Subsurface water was encountered at approximately 5 feet and indications of disturbed soil (sand,clay,stone) would be concluded by MM& T Ltd. and ESP that this is perched water. A sample of the perched water was taken for analysis (ref GP-3-water). All other soil samples taken during geoprobe activities were moist to dry below the 4-6 foot depth. No other groundwater was encountered.

SITE LOCATION MAPS


KEY PRODUCTS, INC.
SITE LOCATION
OZAUKEE COUNTY
MILWAUKEE COUNTY
BROWN DEER
NORTHRIDGE SHOPPING CENTER
W. BROWN DEER RD
W. BRADLEY RD
W. GOOD HOPE RD
MILL RD
W. FOND DU LAC
SILVER SPRING
U.S. ARMY RESERVE CENTER
TIMMERMAN AIRPORT
HAMPTON AV
W CAPITOL DR
APPLETON
LISBON
BURLEIGH
HOLY CROSS CEMETERY
WISCONSIN MEMORIAL PARK CEMETERY
MOUNT MARY COLLEGE
BROWN DEER PARK
53007 BUTLER
WAUKESHA COUNTY
24
23
18
16
22

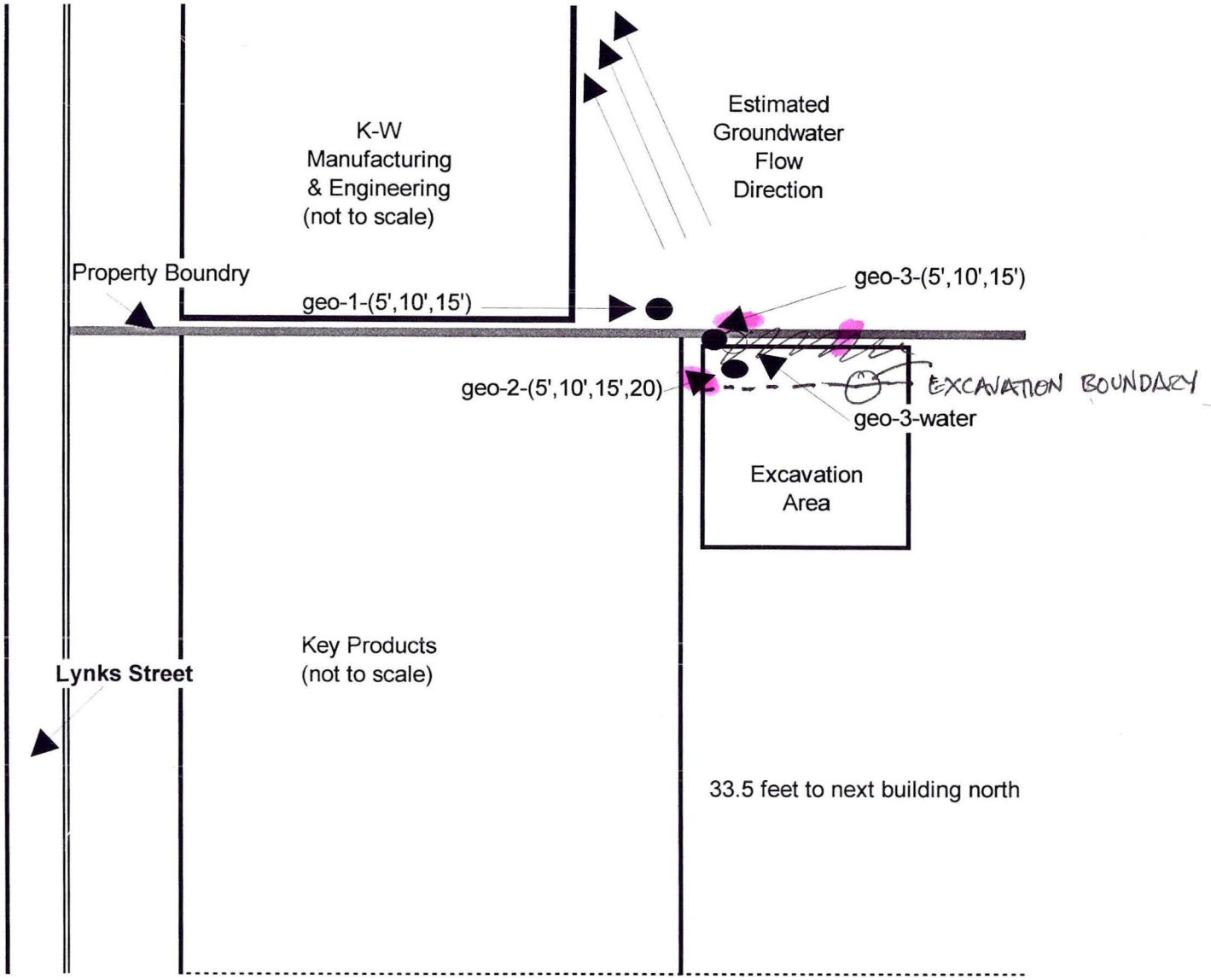

Granville
BROWN DEER ROAD
Monastery
Golf Course
BRADLEY ROAD
Good Hope Ch
GOOD HOPE ROAD
Granville Center
Haskell Noyes Park
Parkway
West Granville
Maple Tree Sch
Park
Menomonee River
St Peters Sch
MILL ROAD
Substation
KEY PRODUCTS, INC.
SITE LOCATION
MILWAUKEE
TO INTERSTATE 94
MILWAUKEE (CH.) 8.1 MI.
ROAD CLASSIFICATION


Site Layout Plan
Key Products, Inc.
8634 W. Lynx Ave.
Milwaukee, WI 53225
N
E
S
W
DOOR
LOADING
DOCK
EXCAVATION AREA
W. Lynx Avenue
KEY PRODUCTS, INC.
(NOT TO SCALE)
UNPAVED AREA
BUILDING
33.5'
PAVED PARKING AREA
DWG: Site_Lyt_KP
DRWN. BY: D.G., 10/30/96
SCALE: 1" = 10'

SOIL GEOLOGY

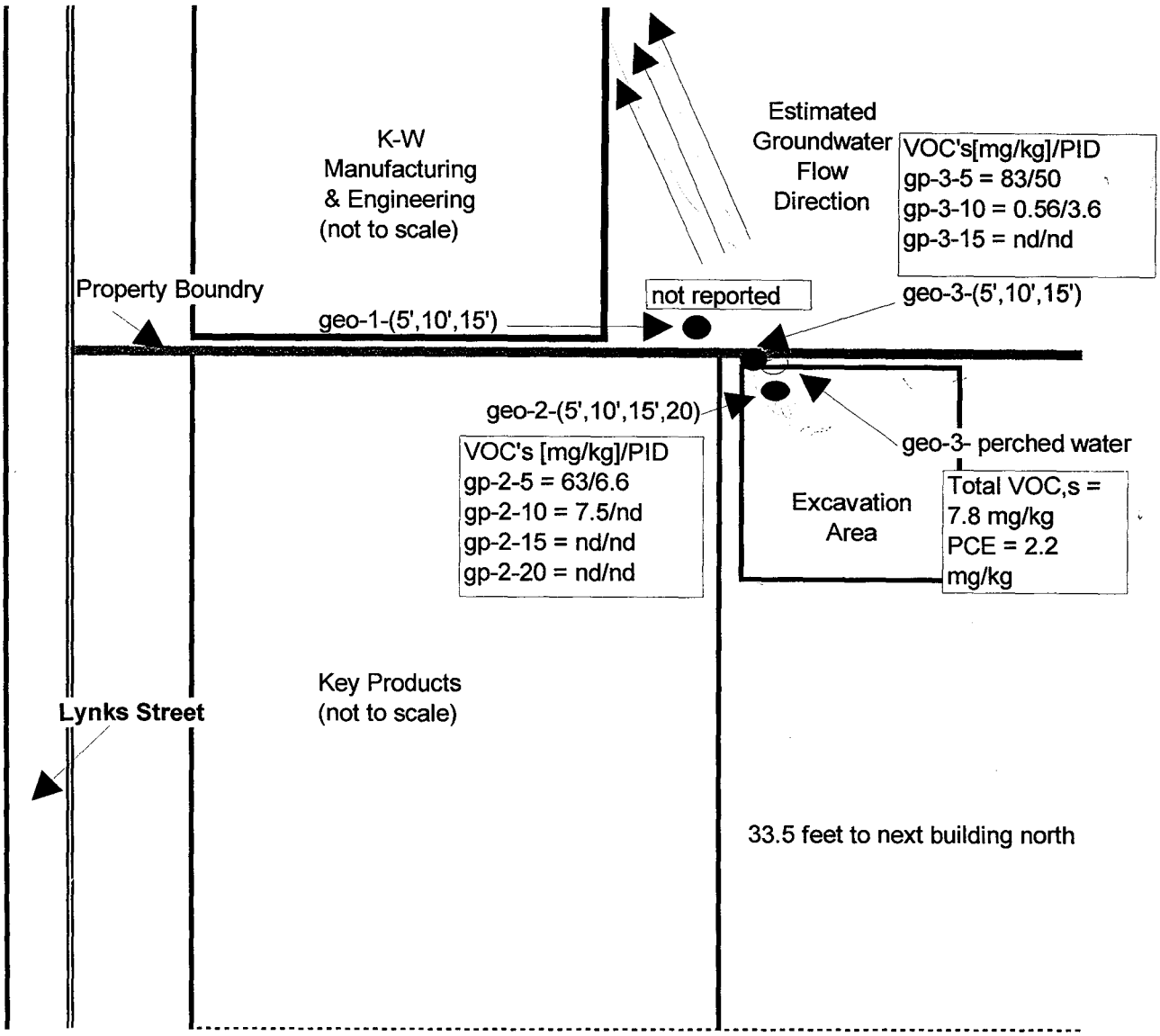
The soil survey of Milwaukee and Waukesha counties from the U.S. Soil Conservation Service indicates the soils in the region of the site are of the Ozaukee-Morley-Mequon association, consisting of well drained to somewhat poorly drained soils with a subsoil of silty clay loam and silty clay. The soils are formed in thin loess and silty clay loam glacial till, and on moraines.

SOIL SAMPLING LOCATIONS



Geoprobe Sample locations
Key Products
8634 W. Lynks
Milwaukee, WI 53225

DWG: soil_key_geoprobe
N
1" =10'
Print By:DFG
9/19/97



VOC Analysis Results & PID Readings
Key Products
8634 W. Lynks
Milwaukee, WI 53225

DWG: soil_key_geoprobe
N
1" =10'
Print By:DFG
9/19/97

CONFIRMATION SAMPLES - SOIL

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL AND QUALITY CONTROL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

08/04/1997

Job No: 97.06981

Enclosed are the Analytical and Quality Control reports for the following samples submitted for analysis:

Sample Number	Sample Description	Date Taken	Date Received
258658	GP-3-Water	07/23/1997	07/24/1997

Soil results are reported on a dry weight basis. The above sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed/extracted past hold time
B = Blank is contaminated
C = Standard outside of control limits
D = Diluted for analysis
F = Sample filtered in lab
G = Received past hold time
H = Late eluting hydrocarbons present
I = Improperly handled sample
J = Estimated concentration
L = Common lab solvent and contaminant
M = Matrix interference
P = Improperly preserved sample
Q = Result confirmed via re-analysis
S = Sediment present
T = Does not match typical pattern
W = BOD re-set due to missed dilution
X = Unidentified compound(s) present
Z = Internal standard outside limits

Brian D. DeJong, Organic Operations Manager
Certification No. 128053530

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL AND QUALITY CONTROL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997

Job No: 97.06980

Enclosed are the Analytical and Quality Control reports for the following samples submitted for analysis:

Sample Number	Sample Description	Date Taken	Date Received
258647	GP-2-5	07/23/1997	07/24/1997
258648	GP-2-10	07/23/1997	07/24/1997
258649	GP-2-15	07/23/1997	07/24/1997
258650	GP-2-20	07/23/1997	07/24/1997
258654	GP-3-5	07/23/1997	07/24/1997
258655	GP3-10	07/23/1997	07/24/1997
258656	Trip Blk	07/23/1997	07/24/1997

Soil results are reported on a dry weight basis. The above sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed/extracted past hold time
B = Blank is contaminated
C = Standard outside of control limits
D = Diluted for analysis
F = Sample filtered in lab
G = Received past hold time
H = Late eluting hydrocarbons present
I = Improperly handled sample
J = Estimated concentration
L = Common lab solvent and contaminant
M = Matrix interference
P = Improperly preserved sample
Q = Result confirmed via re-analysis
S = Sediment present
T = Does not match typical pattern
W = BOD re-set due to missed dilution
X = Unidentified compound(s) present
Z = Internal standard outside limits

Brian D. DeJong, Organic Operations Manager
Certification No. 128053530

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Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258647
Account No: 71290
Page 2

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-5
Recv'd 3.0 C

Date Taken: 07/23/1997 09:00 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
nzene	<25	ug/kg	25	S-8260	07/25/1997	410
omobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
omochloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
omodichloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
omoform	<25	ug/kg	25	S-8260	07/25/1997	410
omomethane	<100	ug/kg	100	S-8260	07/25/1997	410
Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
c-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
ct-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
rbon Tetrachloride	<25	ug/kg	25	S-8260	07/25/1997	410
lorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
lorodibromomethane	<25	ug/kg	25	S-8260	07/25/1997	410
loroethane	<35	ug/kg	35	S-8260	07/25/1997	410
loroform	<25	ug/kg	25	S-8260	07/25/1997	410
loromethane	<30	ug/kg	30	S-8260	07/25/1997	410
Chlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
Chlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
2-Dibromo-3-Chloropropane	<50	ug/kg	50	S-8260	07/25/1997	410
2-Dibromoethane (EDB)	<25	ug/kg	25	S-8260	07/25/1997	410
ibromomethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,4-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
ichlorodifluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
,1-Dichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloroethane	<13	ug/kg	13	S-8260	07/25/1997	410
,1-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
is-1,2-Dichloroethene	280	ug/kg	25	S-8260	07/25/1997	410
rans-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,1-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
is-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
rans-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
i-isopropyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
thylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410

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Watertown Division
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P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258647
Account No: 71290

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-5
Recv'd 3.0 C

Date Taken: 07/23/1997 09:00 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
xachlorobutadiene	<35	ug/kg	35	S-8260	07/25/1997	410
opropylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
Isopropyltoluene	<25	ug/kg	25	S-8260	07/25/1997	410
thylene Chloride	<50	ug/kg	50	S-8260	07/25/1997	410
thyl-t-butyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
phthalene	<25	ug/kg	25	S-8260	07/25/1997	410
Propylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
yrene	<25	ug/kg	25	S-8260	07/25/1997	410
1,1,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
1,2,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
trachloroethene	63,000	ug/kg	25	S-8260	07/28/1997	411
luene	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,4-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,1-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
chloroethene	310	ug/kg	25	S-8260	07/25/1997	410
chlorofluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2,3-Trichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,2,4-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,3,5-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
inyl Chloride	<25	ug/kg	25	S-8260	07/25/1997	410
ylenes, Total	<35	ug/kg	35	S-8260	07/25/1997	410
Surr: Dibromofluoromethane	99.8	%	n/a	S-8260	07/25/1997	410
Surr: Toluene-d8	97.2	%	n/a	S-8260	07/25/1997	410
Surr: Bromofluorobenzene	97.8	%	n/a	S-8260	07/25/1997	410

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WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258648
Account No: 71290
Page 4

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-10
Recv'd 3.0 C

Date Taken: 07/23/1997 09:05 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
nzene	<25	ug/kg	25	S-8260	07/25/1997	410
omobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
omochloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
omodichloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
omoform	<25	ug/kg	25	S-8260	07/25/1997	410
omomethane	<100	ug/kg	100	S-8260	07/25/1997	410
Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
c-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
rt-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
rbon Tetrachloride	<25	ug/kg	25	S-8260	07/25/1997	410
lorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
lorodibromomethane	<25	ug/kg	25	S-8260	07/25/1997	410
loroethane	<35	ug/kg	35	S-8260	07/25/1997	410
loroform	<25	ug/kg	25	S-8260	07/25/1997	410
loromethane	<30	ug/kg	30	S-8260	07/25/1997	410
Chlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
Chlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
2-Dibromo-3-Chloropropane	<50	ug/kg	50	S-8260	07/25/1997	410
2-Dibromoethane (EDB)	<25	ug/kg	25	S-8260	07/25/1997	410
ibromomethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,4-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
ichlorodifluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
,1-Dichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloroethane	<13	ug/kg	13	S-8260	07/25/1997	410
,1-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
is-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
rans-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,1-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
is-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
rans-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
Di-isopropyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
thylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258648
Account No: 71290

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-10
Recv'd 3.0 C

Date Taken: 07/23/1997 09:05 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
xachlorobutadiene	<35	ug/kg	35	S-8260	07/25/1997	410
opropylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
Isopropyltoluene	<25	ug/kg	25	S-8260	07/25/1997	410
thylene Chloride	<50	ug/kg	50	S-8260	07/25/1997	410
thyl-t-butyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
phthalene	<25	ug/kg	25	S-8260	07/25/1997	410
Propylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
yrene	<25	ug/kg	25	S-8260	07/25/1997	410
1,1,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
1,2,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
trachloroethene	7,500	ug/kg	25	S-8260	07/25/1997	410
luene	<25	ug/kg	25	S-8260	07/25/1997	410
2,3-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
2,4-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
1,1-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
1,2-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
ichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
ichlorofluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
2,3-Trichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
2,4-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
3,5-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
inyl Chloride	<25	ug/kg	25	S-8260	07/25/1997	410
ylenes, Total	<35	ug/kg	35	S-8260	07/25/1997	410
urr: Dibromofluoromethane	100.4	%	n/a	S-8260	07/25/1997	410
urr: Toluene-d8	100.8	%	n/a	S-8260	07/25/1997	410
urr: Bromofluorobenzene	100.8	%	n/a	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258649
Account No: 71290
Page 6

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-15
Recv'd 3.0 C

Date Taken: 07/23/1997 09:10 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
nzene	<30	ug/kg	25	S-8260	07/28/1997	411
omobenzene	<30	ug/kg	25	S-8260	07/28/1997	411
omochloromethane	<30	ug/kg	25	S-8260	07/28/1997	411
omodichloromethane	<30	ug/kg	25	S-8260	07/28/1997	411
omoform	<30	ug/kg	25	S-8260	07/28/1997	411
omomethane	<120	ug/kg	100	S-8260	07/28/1997	411
-Butylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411
ec-Butylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411
ert-Butylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411
rbon Tetrachloride	<30	ug/kg	25	S-8260	07/28/1997	411
lorobenzene	<30	ug/kg	25	S-8260	07/28/1997	411
lorodibromomethane	<30	ug/kg	25	S-8260	07/28/1997	411
loroethane	<42	ug/kg	35	S-8260	07/28/1997	411
loroform	<30	ug/kg	25	S-8260	07/28/1997	411
loromethane	<36	ug/kg	30	S-8260	07/28/1997	411
Chlorotoluene	<30	ug/kg	25	S-8260	07/28/1997	411
Chlorotoluene	<30	ug/kg	25	S-8260	07/28/1997	411
2-Dibromo-3-Chloropropane	<60	ug/kg	50	S-8260	07/28/1997	411
2-Dibromoethane (EDB)	<30	ug/kg	25	S-8260	07/28/1997	411
bromomethane	<30	ug/kg	25	S-8260	07/28/1997	411
2-Dichlorobenzene	<30	ug/kg	25	S-8260	07/28/1997	411
3-Dichlorobenzene	<30	ug/kg	25	S-8260	07/28/1997	411
4-Dichlorobenzene	<30	ug/kg	25	S-8260	07/28/1997	411
ichlorodifluoromethane	<30	ug/kg	25	S-8260	07/28/1997	411
,1-Dichloroethane	<30	ug/kg	25	S-8260	07/28/1997	411
,2-Dichloroethane	<16	ug/kg	13	S-8260	07/28/1997	411
,1-Dichloroethene	<30	ug/kg	25	S-8260	07/28/1997	411
is-1,2-Dichloroethene	<30	ug/kg	25	S-8260	07/28/1997	411
rans-1,2-Dichloroethene	<30	ug/kg	25	S-8260	07/28/1997	411
,2-Dichloropropane	<30	ug/kg	25	S-8260	07/28/1997	411
,3-Dichloropropane	<30	ug/kg	25	S-8260	07/28/1997	411
,2-Dichloropropane	<30	ug/kg	25	S-8260	07/28/1997	411
,1-Dichloropropene	<30	ug/kg	25	S-8260	07/28/1997	411
cis-1,3-Dichloropropene	<30	ug/kg	25	S-8260	07/28/1997	411
trans-1,3-Dichloropropene	<30	ug/kg	25	S-8260	07/28/1997	411
Di-isopropyl ether	<30	ug/kg	25	S-8260	07/28/1997	411
Ethylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258649
Account No: 71290
Page 7

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-15
Recv'd 3.0 C

Date Taken: 07/23/1997 09:10 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
xachlorobutadiene	<42	ug/kg	35	S-8260	07/28/1997	411
opropylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411
Isopropyltoluene	<30	ug/kg	25	S-8260	07/28/1997	411
thylene Chloride	<60	ug/kg	50	S-8260	07/28/1997	411
thyl-t-butyl ether	<30	ug/kg	25	S-8260	07/28/1997	411
iphthalene	<30	ug/kg	25	S-8260	07/28/1997	411
n-Propylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411
Styrene	<30	ug/kg	25	S-8260	07/28/1997	411
1,1,1,2-Tetrachloroethane	<30	ug/kg	25	S-8260	07/28/1997	411
1,1,2,2-Tetrachloroethane	<30	ug/kg	25	S-8260	07/28/1997	411
Tetrachloroethene	<30	ug/kg	25	S-8260	07/28/1997	411
Toluene	<30	ug/kg	25	S-8260	07/28/1997	411
1,2,3-Trichlorobenzene	<30	ug/kg	25	S-8260	07/28/1997	411
2,4-Trichlorobenzene	<30	ug/kg	25	S-8260	07/28/1997	411
1,1-Trichloroethane	<30	ug/kg	25	S-8260	07/28/1997	411
1,2-Trichloroethane	<30	ug/kg	25	S-8260	07/28/1997	411
ichloroethene	<30	ug/kg	25	S-8260	07/28/1997	411
ichlorofluoromethane	<30	ug/kg	25	S-8260	07/28/1997	411
2,3-Trichloropropane	<30	ug/kg	25	S-8260	07/28/1997	411
2,4-Trimethylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411
3,5-Trimethylbenzene	<30	ug/kg	25	S-8260	07/28/1997	411
nyl Chloride	<30	ug/kg	25	S-8260	07/28/1997	411
lenes, Total	<42	ug/kg	35	S-8260	07/28/1997	411
rr: Dibromofluoromethane	95.4	%	n/a	S-8260	07/28/1997	411
rr: Toluene-d8	99.0	%	n/a	S-8260	07/28/1997	411
rr: Bromofluorobenzene	97.4	%	n/a	S-8260	07/28/1997	411

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258650
Account No: 71290
Page 8

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-20
Recv'd 3.0 C

Date Taken: 07/23/1997 09:15 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
zene	<28	ug/kg	25	S-8260	07/25/1997	410
nobenzene	<28	ug/kg	25	S-8260	07/25/1997	410
nochloromethane	<28	ug/kg	25	S-8260	07/25/1997	410
nodichloromethane	<28	ug/kg	25	S-8260	07/25/1997	410
oform	<28	ug/kg	25	S-8260	07/25/1997	410
omethane	<110	ug/kg	100	S-8260	07/25/1997	410
tylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410
Butylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410
-Butylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410
on Tetrachloride	<28	ug/kg	25	S-8260	07/25/1997	410
robenzene	<28	ug/kg	25	S-8260	07/25/1997	410
rodibromomethane	<28	ug/kg	25	S-8260	07/25/1997	410
roethane	<38	ug/kg	35	S-8260	07/25/1997	410
oroform	<28	ug/kg	25	S-8260	07/25/1997	410
oromethane	<33	ug/kg	30	S-8260	07/25/1997	410
hlorotoluene	<28	ug/kg	25	S-8260	07/25/1997	410
Chlorotoluene	<28	ug/kg	25	S-8260	07/25/1997	410
2-Dibromo-3-Chloropropane	<55	ug/kg	50	S-8260	07/25/1997	410
2-Dibromoethane (EDB)	<28	ug/kg	25	S-8260	07/25/1997	410
bromomethane	<28	ug/kg	25	S-8260	07/25/1997	410
2-Dichlorobenzene	<28	ug/kg	25	S-8260	07/25/1997	410
3-Dichlorobenzene	<28	ug/kg	25	S-8260	07/25/1997	410
4-Dichlorobenzene	<28	ug/kg	25	S-8260	07/25/1997	410
ichlorodifluoromethane	<28	ug/kg	25	S-8260	07/25/1997	410
1-Dichloroethane	<28	ug/kg	25	S-8260	07/25/1997	410
2-Dichloroethane	<14	ug/kg	13	S-8260	07/25/1997	410
1-Dichloroethene	<28	ug/kg	25	S-8260	07/25/1997	410
is-1,2-Dichloroethene	<28	ug/kg	25	S-8260	07/25/1997	410
rans-1,2-Dichloroethene	<28	ug/kg	25	S-8260	07/25/1997	410
2-Dichloropropane	<28	ug/kg	25	S-8260	07/25/1997	410
3-Dichloropropane	<28	ug/kg	25	S-8260	07/25/1997	410
2-Dichloropropane	<28	ug/kg	25	S-8260	07/25/1997	410
1-Dichloropropene	<28	ug/kg	25	S-8260	07/25/1997	410
is-1,3-Dichloropropene	<28	ug/kg	25	S-8260	07/25/1997	410
rans-1,3-Dichloropropene	<28	ug/kg	25	S-8260	07/25/1997	410
i-isopropyl ether	<28	ug/kg	25	S-8260	07/25/1997	410
thylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258650
Account No: 71290

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-2-20
Recv'd 3.0 C

Date Taken: 07/23/1997 09:15 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
chlorobutadiene	<38	ug/kg	35	S-8260	07/25/1997	410
ropylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410
opropyltoluene	<28	ug/kg	25	S-8260	07/25/1997	410
ylene Chloride	<55	ug/kg	50	S-8260	07/25/1997	410
yl-t-butyl ether	<28	ug/kg	25	S-8260	07/25/1997	410
thalene	<28	ug/kg	25	S-8260	07/25/1997	410
opylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410
ene	<28	ug/kg	25	S-8260	07/25/1997	410
1,2-Tetrachloroethane	<28	ug/kg	25	S-8260	07/25/1997	410
2,2-Tetrachloroethane	<28	ug/kg	25	S-8260	07/25/1997	410
achloroethene	<28	ug/kg	25	S-8260	07/25/1997	410
ene	<28	ug/kg	25	S-8260	07/25/1997	410
,3-Trichlorobenzene	<28	ug/kg	25	S-8260	07/25/1997	410
,4-Trichlorobenzene	<28	ug/kg	25	S-8260	07/25/1997	410
,1-Trichloroethane	<28	ug/kg	25	S-8260	07/25/1997	410
,2-Trichloroethane	<28	ug/kg	25	S-8260	07/25/1997	410
chloroethene	<28	ug/kg	25	S-8260	07/25/1997	410
ichlorofluoromethane	<28	ug/kg	25	S-8260	07/25/1997	410
2,3-Trichloropropane	<28	ug/kg	25	S-8260	07/25/1997	410
2,4-Trimethylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410
3,5-Trimethylbenzene	<28	ug/kg	25	S-8260	07/25/1997	410
nyl Chloride	<28	ug/kg	25	S-8260	07/25/1997	410
lenes, Total	<38	ug/kg	35	S-8260	07/25/1997	410
rr: Dibromofluoromethane	103.0	%	n/a	S-8260	07/25/1997	410
rr: Toluene-d8	96.4	%	n/a	S-8260	07/25/1997	410
rr: Bromofluorobenzene	96.4	%	n/a	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258654
Account No: 71290
Page 10

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-3-5
Recv'd 3.0 C

Date Taken: 07/23/1997 10:00 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
zene	<25	ug/kg	25	S-8260	07/25/1997	410
nobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
nochloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
nodichloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
noform	<25	ug/kg	25	S-8260	07/25/1997	410
nomethane	<100	ug/kg	100	S-8260	07/25/1997	410
tylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
t-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
bon Tetrachloride	<25	ug/kg	25	S-8260	07/25/1997	410
lorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
lorodibromomethane	<25	ug/kg	25	S-8260	07/25/1997	410
loroethane	<35	ug/kg	35	S-8260	07/25/1997	410
loroform	<25	ug/kg	25	S-8260	07/25/1997	410
loromethane	<30	ug/kg	30	S-8260	07/25/1997	410
Chlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
Chlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
2-Dibromo-3-Chloropropane	<50	ug/kg	50	S-8260	07/25/1997	410
2-Dibromoethane (EDB)	<25	ug/kg	25	S-8260	07/25/1997	410
bromomethane	<25	ug/kg	25	S-8260	07/25/1997	410
2-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
3-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
4-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
chlorodifluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
1-Dichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
2-Dichloroethane	<13	ug/kg	13	S-8260	07/25/1997	410
1-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
s-1,2-Dichloroethene	490	ug/kg	25	S-8260	07/25/1997	410
rans-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,1-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
is-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
rans-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
i-isopropyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
thylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258654
Account No: 71290
Page 11

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-3-5
Recv'd 3.0 C

Date Taken: 07/23/1997 10:00 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
achlorobutadiene	<35	ug/kg	35	S-8260	07/25/1997	410
propylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
sopropyltoluene	<25	ug/kg	25	S-8260	07/25/1997	410
ylene Chloride	<50	ug/kg	50	S-8260	07/25/1997	410
yl-t-butyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
thalene	<25	ug/kg	25	S-8260	07/25/1997	410
ropylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
rene	<25	ug/kg	25	S-8260	07/25/1997	410
,1,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
rachloroethene	83,000	ug/kg	25	S-8260	07/28/1997	411
luene	<25	ug/kg	25	S-8260	07/25/1997	410
2,3-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
2,4-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
1,1-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
1,2-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
ichloroethene	530	ug/kg	25	S-8260	07/25/1997	410
ichlorofluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
2,3-Trichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
2,4-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
3,5-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
nyl Chloride	<25	ug/kg	25	S-8260	07/25/1997	410
lenes, Total	<35	ug/kg	35	S-8260	07/25/1997	410
rr: Dibromofluoromethane	101.4	%	n/a	S-8260	07/25/1997	410
rr: Toluene-d8	95.0	%	n/a	S-8260	07/25/1997	410
rr: Bromofluorobenzene	97.6	%	n/a	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258655
Account No: 71290

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP3-10
Recv'd 3.0 C

Date Taken: 07/23/1997 10:08 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
zene	<25	ug/kg	25	S-8260	07/28/1997	411
nobenzene	<25	ug/kg	25	S-8260	07/28/1997	411
nochloromethane	<25	ug/kg	25	S-8260	07/28/1997	411
nodichloromethane	<25	ug/kg	25	S-8260	07/28/1997	411
moform	<25	ug/kg	25	S-8260	07/28/1997	411
momethane	<100	ug/kg	100	S-8260	07/28/1997	411
utylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411
-Butylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411
t-Butylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411
bon Tetrachloride	<25	ug/kg	25	S-8260	07/28/1997	411
lorobenzene	<25	ug/kg	25	S-8260	07/28/1997	411
lorodibromomethane	<25	ug/kg	25	S-8260	07/28/1997	411
loroethane	<35	ug/kg	35	S-8260	07/28/1997	411
loroform	<25	ug/kg	25	S-8260	07/28/1997	411
loromethane	<30	ug/kg	30	S-8260	07/28/1997	411
Chlorotoluene	<25	ug/kg	25	S-8260	07/28/1997	411
Chlorotoluene	<25	ug/kg	25	S-8260	07/28/1997	411
2-Dibromo-3-Chloropropane	<50	ug/kg	50	S-8260	07/28/1997	411
2-Dibromoethane (EDB)	<25	ug/kg	25	S-8260	07/28/1997	411
bromomethane	<25	ug/kg	25	S-8260	07/28/1997	411
2-Dichlorobenzene	<25	ug/kg	25	S-8260	07/28/1997	411
3-Dichlorobenzene	<25	ug/kg	25	S-8260	07/28/1997	411
4-Dichlorobenzene	<25	ug/kg	25	S-8260	07/28/1997	411
chlorodifluoromethane	<25	ug/kg	25	S-8260	07/28/1997	411
1-Dichloroethane	<25	ug/kg	25	S-8260	07/28/1997	411
2-Dichloroethane	<13	ug/kg	13	S-8260	07/28/1997	411
1-Dichloroethene	<25	ug/kg	25	S-8260	07/28/1997	411
s-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/28/1997	411
ans-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/28/1997	411
2-Dichloropropane	<25	ug/kg	25	S-8260	07/28/1997	411
3-Dichloropropane	<25	ug/kg	25	S-8260	07/28/1997	411
2-Dichloropropane	<25	ug/kg	25	S-8260	07/28/1997	411
1-Dichloropropene	<25	ug/kg	25	S-8260	07/28/1997	411
s-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/28/1997	411
ans-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/28/1997	411
-isopropyl ether	<25	ug/kg	25	S-8260	07/28/1997	411
nylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258655
Account No: 71290
Page 13

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP3-10
Recv'd 3.0 C

Date Taken: 07/23/1997 10:08 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
chlorobutadiene	<35	ug/kg	35	S-8260	07/28/1997	411
ropylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411
sopropyltoluene	<25	ug/kg	25	S-8260	07/28/1997	411
hylene Chloride	<50	ug/kg	50	S-8260	07/28/1997	411
hyl-t-butyl ether	<25	ug/kg	25	S-8260	07/28/1997	411
thalene	<25	ug/kg	25	S-8260	07/28/1997	411
ropylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411
rene	<25	ug/kg	25	S-8260	07/28/1997	411
1,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/28/1997	411
2,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/28/1997	411
rachloroethene	56	ug/kg	25	S-8260	07/28/1997	411
uene	<25	ug/kg	25	S-8260	07/28/1997	411
3-Trichlorobenzene	<25	ug/kg	25	S-8260	07/28/1997	411
4-Trichlorobenzene	<25	ug/kg	25	S-8260	07/28/1997	411
1-Trichloroethane	<25	ug/kg	25	S-8260	07/28/1997	411
2-Trichloroethane	<25	ug/kg	25	S-8260	07/28/1997	411
chloroethene	<25	ug/kg	25	S-8260	07/28/1997	411
chlorofluoromethane	<25	ug/kg	25	S-8260	07/28/1997	411
,3-Trichloropropane	<25	ug/kg	25	S-8260	07/28/1997	411
,4-Trimethylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411
,5-Trimethylbenzene	<25	ug/kg	25	S-8260	07/28/1997	411
nyl Chloride	<25	ug/kg	25	S-8260	07/28/1997	411
lenes, Total	<35	ug/kg	35	S-8260	07/28/1997	411
rr: Dibromofluoromethane	96.0	%	n/a	S-8260	07/28/1997	411
rr: Toluene-d8	97.0	%	n/a	S-8260	07/28/1997	411
rr: Bromofluorobenzene	95.6	%	n/a	S-8260	07/28/1997	411

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258656
Account No: 71290
Page 14

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: Trip Blk
Recv'd 3.0 C

Date Taken: 07/23/1997 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
zene	<25	ug/kg	25	S-8260	07/25/1997	410
nobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
nochloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
nodichloromethane	<25	ug/kg	25	S-8260	07/25/1997	410
noform	<25	ug/kg	25	S-8260	07/25/1997	410
nomethane	<100	ug/kg	100	S-8260	07/25/1997	410
ıtylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
t-Butylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
bon Tetrachloride	<25	ug/kg	25	S-8260	07/25/1997	410
robenzene	<25	ug/kg	25	S-8260	07/25/1997	410
rodibromomethane	<25	ug/kg	25	S-8260	07/25/1997	410
roethane	<35	ug/kg	35	S-8260	07/25/1997	410
roform	<25	ug/kg	25	S-8260	07/25/1997	410
romethane	<30	ug/kg	30	S-8260	07/25/1997	410
hlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
hlorotoluene	<25	ug/kg	25	S-8260	07/25/1997	410
-Dibromo-3-Chloropropane	<50	ug/kg	50	S-8260	07/25/1997	410
-Dibromoethane (EDB)	<25	ug/kg	25	S-8260	07/25/1997	410
romomethane	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
chlorodifluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichloroethane	<13	ug/kg	13	S-8260	07/25/1997	410
-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
s-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
ans-1,2-Dichloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
s-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
ans-1,3-Dichloropropene	<25	ug/kg	25	S-8260	07/25/1997	410
-isopropyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
ylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

07/29/1997
Job No: 97.06980
Sample No: 258656
Account No: 71290
Page 15

JOB DESCRIPTION: Key Products Sample
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: Trip Blk
Recv'd 3.0 C

Date Taken: 07/23/1997 Date Received: 07/24/1997

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
VOC - METHANOL - 8260						
achlorobutadiene	<35	ug/kg	35	S-8260	07/25/1997	410
propylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
sopropyltoluene	<25	ug/kg	25	S-8260	07/25/1997	410
hylene Chloride	<50	ug/kg	50	S-8260	07/25/1997	410
hyl-t-butyl ether	<25	ug/kg	25	S-8260	07/25/1997	410
phthalene	<25	ug/kg	25	S-8260	07/25/1997	410
ropylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
rene	<25	ug/kg	25	S-8260	07/25/1997	410
,1,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2,2-Tetrachloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
rachloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
uene	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,4-Trichlorobenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,1-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
,2-Trichloroethane	<25	ug/kg	25	S-8260	07/25/1997	410
chloroethene	<25	ug/kg	25	S-8260	07/25/1997	410
chlorofluoromethane	<25	ug/kg	25	S-8260	07/25/1997	410
,3-Trichloropropane	<25	ug/kg	25	S-8260	07/25/1997	410
,4-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
,5-Trimethylbenzene	<25	ug/kg	25	S-8260	07/25/1997	410
nyl Chloride	<25	ug/kg	25	S-8260	07/25/1997	410
lenes, Total	<35	ug/kg	35	S-8260	07/25/1997	410
rr: Dibromofluoromethane	103.0	%	n/a	S-8260	07/25/1997	410
rr: Toluene-d8	96.6	%	n/a	S-8260	07/25/1997	410
rr: Bromofluorobenzene	100.2	%	n/a	S-8260	07/25/1997	410

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

08/04/1997
Job No: 97.06981
Sample No: 258658
Account No: 71290

JOB DESCRIPTION: Key Products
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: GP-3-Water
Recv'd 3.0 C

Date Taken: 07/23/1997 10:15 Date Received: 07/24/1997

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Prep/Run Batch
VOC - AQUEOUS - EPA 8260							
Benzene	7.0	ug/L	0.31	0.98	S-8260	07/31/1997	1024
Bromobenzene	<4.0	ug/L	0.20	0.64	S-8260	07/31/1997	1024
Bromochloromethane	<6.4	ug/L	0.32	1.0	S-8260	07/31/1997	1024
Bromodichloromethane	<4.0	ug/L	0.20	0.63	S-8260	07/31/1997	1024
Bromoform	<2.8	ug/L	0.14	0.45	S-8260	07/31/1997	1024
Bromomethane	<9.2	ug/L	0.46	1.5	S-8260	07/31/1997	1024
n-Butylbenzene	12	ug/L	0.44	1.4	S-8260	07/31/1997	1024
sec-Butylbenzene	16	ug/L	0.45	1.4	S-8260	07/31/1997	1024
tert-Butylbenzene	<7.6	ug/L	0.38	1.2	S-8260	07/31/1997	1024
Carbon Tetrachloride	<8.0	ug/L	0.40	1.3	S-8260	07/31/1997	1024
Chlorobenzene	<4.4	ug/L	0.22	0.69	S-8260	07/31/1997	1024
Chlorodibromomethane	<2.0	ug/L	0.10	0.33	S-8260	07/31/1997	1024
Chloroethane	<24	ug/L	1.2	3.9	S-8260	07/31/1997	1024
Chloroform	<3.6	ug/L	0.18	0.58	S-8260	07/31/1997	1024
Chloromethane	<7.6	ug/L	0.38	1.2	S-8260	07/31/1997	1024
2-Chlorotoluene	<5.6	ug/L	0.28	0.90	S-8260	07/31/1997	1024
4-Chlorotoluene	<9.4	ug/L	0.47	1.5	S-8260	07/31/1997	1024
1,2-Dibromo-3-Chloropropane	<28	ug/L	1.4	4.5	S-8260	07/31/1997	1024
1,2-Dibromoethane (EDB)	<3.2	ug/L	0.16	0.51	S-8260	07/31/1997	1024
Dibromomethane	<2.2	ug/L	0.11	0.36	S-8260	07/31/1997	1024
1,2-Dichlorobenzene	<4.0	ug/L	0.20	0.64	S-8260	07/31/1997	1024
1,3-Dichlorobenzene	<4.4	ug/L	0.22	0.71	S-8260	07/31/1997	1024
1,4-Dichlorobenzene	<7.0	ug/L	0.35	1.1	S-8260	07/31/1997	1024
Dichlorodifluoromethane	<9.8	ug/L	0.49	1.6	S-8260	07/31/1997	1024
1,1-Dichloroethane	<5.0	ug/L	0.25	0.79	S-8260	07/31/1997	1024
1,2-Dichloroethane	<4.0	ug/L	0.20	0.63	S-8260	07/31/1997	1024
1,1-Dichloroethene	<15	ug/L	0.73	2.3	S-8260	07/31/1997	1024
cis-1,2-Dichloroethene	3,800	ug/L	0.23	0.74	S-8260	07/31/1997	1024
trans-1,2-Dichloroethene	25	ug/L	0.39	1.2	S-8260	07/31/1997	1024
1,2-Dichloropropane	<5.8	ug/L	0.29	0.93	S-8260	07/31/1997	1024
1,3-Dichloropropane	<3.0	ug/L	0.15	0.46	S-8260	07/31/1997	1024
2,2-Dichloropropane	<7.4	ug/L	0.37	1.2	S-8260	07/31/1997	1024
1,1-Dichloropropene	<13	ug/L	0.63	2.0	S-8260	07/31/1997	1024
cis-1,3-Dichloropropene	<3.4	ug/L	0.17	0.56	S-8260	07/31/1997	1024
trans-1,3-Dichloropropene	<2.6	ug/L	0.13	0.42	S-8260	07/31/1997	1024
Di-isopropyl ether	<2.6	ug/L	0.13	0.41	S-8260	07/31/1997	1024

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120
WDNR No. 128053530

ANALYTICAL REPORT

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

08/04/1997
Job No: 97.06981
Sample No: 258658
Account No: 71290

JOB DESCRIPTION: Key Products
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: GP-3-Water
Recv'd 3.0 C

Date Taken: 07/23/1997 10:15 Date Received: 07/24/1997

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Prep/Run Batch
Ethylbenzene	99	ug/L	0.38	1.2	S-8260	07/31/1997	1024
Hexachlorobutadiene	<7.4	ug/L	0.37	1.2	S-8260	07/31/1997	1024
Isopropylbenzene	15	ug/L	0.36	1.1	S-8260	07/31/1997	1024
p-Isopropyltoluene	<7.0	ug/L	0.35	1.1	S-8260	07/31/1997	1024
Methylene Chloride	<17	ug/L	0.87	3.1	S-8260	07/31/1997	1024
Methyl-t-butyl ether	<2.8	ug/L	0.14	0.45	S-8260	07/31/1997	1024
Naphthalene	<7.0	ug/L	0.35	1.1	S-8260	07/31/1997	1024
n-Propylbenzene	20	ug/L	0.46	1.5	S-8260	07/31/1997	1024
Styrene	<3.2	ug/L	0.16	0.51	S-8260	07/31/1997	1024
1,1,1,2-Tetrachloroethane	<2.2	ug/L	0.11	0.34	S-8260	07/31/1997	1024
1,1,2,2-Tetrachloroethane	<7.8	ug/L	0.39	1.3	S-8260	07/31/1997	1024
Tetrachloroethene	2,200	ug/L	0.63	2.0	S-8260	07/31/1997	1024
Toluene	<7.8	ug/L	0.39	1.3	S-8260	07/31/1997	1024
1,2,3-Trichlorobenzene	<6.4	ug/L	0.32	1.0	S-8260	07/31/1997	1024
1,2,4-Trichlorobenzene	<3.6	ug/L	0.18	0.57	S-8260	07/31/1997	1024
1,1,1-Trichloroethane	<5.6	ug/L	0.28	0.88	S-8260	07/31/1997	1024
1,1,2-Trichloroethane	<3.0	ug/L	0.15	0.46	S-8260	07/31/1997	1024
Trichloroethene	430	ug/L	0.49	1.6	S-8260	07/31/1997	1024
Trichlorofluoromethane	<12	ug/L	0.58	1.8	S-8260	07/31/1997	1024
1,2,3-Trichloropropane	<5.6	ug/L	0.28	0.90	S-8260	07/31/1997	1024
1,2,4-Trimethylbenzene	100	ug/L	0.32	1.0	S-8260	07/31/1997	1024
1,3,5-Trimethylbenzene	14	ug/L	0.33	1.0	S-8260	07/31/1997	1024
Vinyl Chloride	990	ug/L	0.46	1.5	S-8260	07/31/1997	1024
Xylenes, Total	120	ug/L	1.1	3.6	S-8260	07/31/1997	1024
Surr: Dibromofluoromethane	107.8	%	n/a	n/a	S-8260	07/31/1997	1024
Surr: Toluene-d8	102.8	%	n/a	n/a	S-8260	07/31/1997	1024
Surr: Bromofluorobenzene	105.4	%	n/a	n/a	S-8260	07/31/1997	1024

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120

QUALITY CONTROL REPORT

BLANKS

08/04/1997

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

Job No: 97.06981
Account No: 71290

Job Description: Key Products

Parameter	Prep Batch	Run Batch	Blank Result	MDL	LOQ	Units
VOC - AQUEOUS - EPA 8260						
Benzene		1024	<0.31	0.31	0.98	ug/L
Bromobenzene		1024	<0.20	0.20	0.64	ug/L
Bromochloromethane		1024	<0.32	0.32	1.0	ug/L
Bromodichloromethane		1024	<0.20	0.20	0.63	ug/L
Bromoform		1024	<0.14	0.14	0.45	ug/L
Bromomethane		1024	<0.46	0.46	1.5	ug/L
n-Butylbenzene		1024	<0.44	0.44	1.4	ug/L
sec-Butylbenzene		1024	<0.45	0.45	1.4	ug/L
tert-Butylbenzene		1024	<0.38	0.38	1.2	ug/L
Carbon Tetrachloride		1024	<0.40	0.40	1.3	ug/L
Chlorobenzene		1024	<0.22	0.22	0.69	ug/L
Chlorodibromomethane		1024	<0.10	0.10	0.33	ug/L
Chloroethane		1024	<1.2	1.2	3.9	ug/L
Chloroform		1024	<0.18	0.18	0.58	ug/L
Chloromethane		1024	<0.38	0.38	1.2	ug/L
2-Chlorotoluene		1024	<0.28	0.28	0.90	ug/L
4-Chlorotoluene		1024	<0.47	0.47	1.5	ug/L
1,2-Dibromo-3-Chloropropane		1024	<1.4	1.4	4.5	ug/L
1,2-Dibromoethane (EDB)		1024	<0.16	0.16	0.51	ug/L
Dibromomethane		1024	<0.11	0.11	0.36	ug/L
1,2-Dichlorobenzene		1024	<0.20	0.20	0.64	ug/L
1,3-Dichlorobenzene		1024	<0.22	0.22	0.71	ug/L
1,4-Dichlorobenzene		1024	<0.35	0.35	1.1	ug/L
Dichlorodifluoromethane		1024	<0.49	0.49	1.6	ug/L
1,1-Dichloroethane		1024	<0.25	0.25	0.79	ug/L
1,2-Dichloroethane		1024	<0.20	0.20	0.63	ug/L
1,1-Dichloroethene		1024	<0.73	0.73	2.3	ug/L
cis-1,2-Dichloroethene		1024	<0.23	0.23	0.74	ug/L
trans-1,2-Dichloroethene		1024	<0.39	0.39	1.2	ug/L
1,2-Dichloropropane		1024	<0.29	0.29	0.93	ug/L
1,3-Dichloropropane		1024	<0.15	0.15	0.46	ug/L
2,2-Dichloropropane		1024	<0.37	0.37	1.2	ug/L
1,1-Dichloropropene		1024	<0.63	0.63	2.0	ug/L
cis-1,3-Dichloropropene		1024	<0.17	0.17	0.56	ug/L
trans-1,3-Dichloropropene		1024	<0.13	0.13	0.42	ug/L
Di-isopropyl ether		1024	<0.13	0.13	0.41	ug/L
Ethylbenzene		1024	<0.38	0.38	1.2	ug/L
Hexachlorobutadiene		1024	<0.37	0.37	1.2	ug/L

NATIONAL ENVIRONMENTAL TESTING, INC.

Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120

QUALITY CONTROL REPORT

BLANKS

08/04/1997

Mr. Don Gagas
TAYLOR INDUSTRIAL VAC, INC
2711 West Townsend
P. O. Box 16579
Milwaukee, WI 53216

Job No: 97.06981
Account No: 71290

Job Description: Key Products

Parameter	Prep Batch	Run Batch	Blank Result	MDL	LOQ	Units
Isopropylbenzene		1024	<0.36	0.36	1.1	ug/L
p-Isopropyltoluene		1024	<0.35	0.35	1.1	ug/L
Methylene Chloride		1024	<0.87	0.87	3.1	ug/L
Methyl-t-butyl ether		1024	<0.14	0.14	0.45	ug/L
Naphthalene		1024	<0.35	0.35	1.1	ug/L
n-Propylbenzene		1024	<0.46	0.46	1.5	ug/L
Styrene		1024	<0.16	0.16	0.51	ug/L
1,1,1,2-Tetrachloroethane		1024	<0.11	0.11	0.34	ug/L
1,1,2,2-Tetrachloroethane		1024	<0.39	0.39	1.3	ug/L
Tetrachloroethene		1024	<0.63	0.63	2.0	ug/L
Toluene		1024	<0.39	0.39	1.3	ug/L
1,2,3-Trichlorobenzene		1024	<0.32	0.32	1.0	ug/L
1,2,4-Trichlorobenzene		1024	<0.18	0.18	0.57	ug/L
1,1,1-Trichloroethane		1024	<0.28	0.28	0.88	ug/L
1,1,2-Trichloroethane		1024	<0.15	0.15	0.46	ug/L
Trichloroethene		1024	<0.49	0.49	1.6	ug/L
Trichlorofluoromethane		1024	<0.58	0.58	1.8	ug/L
1,2,3-Trichloropropane		1024	<0.28	0.28	0.90	ug/L
1,2,4-Trimethylbenzene		1024	<0.32	0.32	1.0	ug/L
1,3,5-Trimethylbenzene		1024	<0.33	0.33	1.0	ug/L
Vinyl Chloride		1024	<0.46	0.46	1.5	ug/L
Xylenes, Total		1024	<1.1	1.1	3.6	ug/L
Surr: Dibromofluoromethane		1024	102.2	n/a	n/a	%
Surr: Toluene-d8		1024	102.0	n/a	n/a	%
Surr: Bromofluorobenzene		1024	100.8	n/a	n/a	%

SUMMARY OF CONFIRMATION SAMPLES

Key Products on July 23, 1997 conducted an assessment of the former area where accidental release had occurred, located at company premises at 8634 W. Lynks, Milwaukee, Wisconsin 53225.

Laboratory analysis of soil samples taken from geoprobe activities during the assessment revealed VOC's levels at < 5 mg/kg - 83mg/kg respectively. Additionally, ground water was not encountered but a perched water sample was taken during assessment activities.

DISCUSSION AND SUMMARY

This report provides documentation of the geoprobe and sampling during assessment activities at the Key Products Property on 8634 W. Lynks, Milwaukee, Wisconsin 53225 .

This report is being prepared for Key Products's records and in fulfillment of the requirements of DNR requirements under NR700.

During assessment activities Materials Management & Training Ltd. arranged with geoprobe contractors to provide supervision, coordination and scheduling. The on-site contractor was responsible for geoprobe, health and safety considerations.

This assessment report has been performed in compliance with state and local requirements for release documentation reporting. The information in this report is based on the following:

- *Periodic site visits for the purpose of observing and documenting assessment geoprobe activities during the determination of extent of contamination.*
- *Observation and recording of the type, characteristics, and quantities of subsurface soil.*
- *Photographic recording of assessment and geoprobe activities.*
- *Documentation of subcontractors used during geoprobe activities.*
- *Written summary of observed assessment operations.*

This report was limited to the on-site assessment activities occurring at the former location of a lugger owned and operated by Key Products at 8634 W. Lynks, Milwaukee, Wisconsin 53225 . The assessment activities have been performed in compliance with state and local regulations.

CONCLUSIONS / RECOMMENDATION

On July 23, 1996 Key Products conducted an assessment according to DNR recommendations (Michael C. Thopmson). Assessment activities using PID readings and laboratory analysis revealed VOC levels of "no detect" to < 5.0 - 83 mg/kg respectively. Additionally, ground water was not encountered during sampling activities. Perched water was found at 5 feet bgs (4-6 feet bgs wet soil). Soil samples at 6-20 feet were moist to dry condition.

Based on these test results and previous data on the site, Key Products can conclude that the source of contamination was removed, insignificant contamination remains onsite and is exhibiting reduced levels over time possibly due to migration off-site, and no groundwater was impacted.

Due to no detected and reduced VOC levels and no groundwater impact Key Products respectfully submits this assessment report for review and no further action of the property located at 8634 W. Lynks, Milwaukee, Wisconsin 53225 .

ATTACHMENTS

NET NATIONAL ENVIRONMENTAL TESTING, INC.®

CHAIN OF CUSTODY

COMPANY: Taylor Fabrication
ADDRESS: 2911 W. Townsend St
PHONE: 447-4700 FAX: 447-4998
PROJECT NAME/LOCATION: Key Products
PROJECT NUMBER:
PROJECT MANAGER: Dan Griggs

REPORT TO: Taylor
INVOICE TO: Taylor
P.O. NO.: Verbal
NET QUOTE NO.:

SAMPLED BY
(PRINT NAME) Dan Griggs — SIGNATURE Daniel Griggs
(PRINT NAME) — SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: VOCs
7/23/97	9:00	GP-2-5	S	X						1	X
"	9:05	GP-2-10	S	X						1	X
"	9:10	GP-2-15	S	X						1	X
"	9:15	GP-2-26	S	X						1	X
"	9:30	GP-1-5	S	X						1	X
"	9:35	GP-1-10	S	X						1	X
"	9:40	GP-1-15	S	X						1	X
"	10:00	GP-3-5	S	X						1	X
"	10:05	GP-3-10	S	X						1	X
"	10:15	GP-3-Water	L	X						3	X
		Temp Blank								1	
		Trip Blank								1	—

To assist us in selecting the proper method
Is this work being conducted for regulatory compliance monitoring? Yes ___ No X
Is this work being conducted for regulatory enforcement action? Yes ___ No X
Which regulations apply: RCRA ___ NPDES Wastewater ___ UST ___ Drinking Water ___ Other X None ___

COMMENTS
MEOH REGION 3 ONLY (REQUIRED 07-24-97 16:05 WCT disposed 2

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) / NO FIELD FILTERED? YES / (NO)
COC SEALS PRESENT AND INTACT? (YES) / NO VOLATILES FREE OF HEADSPACE? (YES) / NO
TEMPERATURE UPON RECEIPT: 3°C
Bottles supplied by NET? YES / NO SAW 7/24/97 1607

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ___
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ___ DATE ___

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:		RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:	
Dan Griggs	7/23/97	1:30	Jerry Schmitz	7-24-97 1110	Jerry Schmitz	7-24-97	1550	[illegible]	7/25/97

METHOD OF SHIPMENT
REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY

COMPANY: Taylor Industries
ADDRESS: 2711 W Tonnessee St
PHONE: 447-4700 FAX: 447-4995
PROJECT NAME/LOCATION: Key Products
PROJECT NUMBER:
PROJECT MANAGER: Dan Cangas

REPORT TO: Kyle
INVOICE TO: Taylor
P.O. NO. Verbal
NET QUOTE NO.

SAMPLED BY

Dan Cangas (PRINT NAME) — Dan Cangas (SIGNATURE)

(PRINT NAME) — (SIGNATURE)

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: VOCs
7/23/97	9:00	GP-2-5	S	X						1	X
"	9:05	GP-2-10	S	X						1	X
"	9:10	GP-2-15	S	X						1	X
"	9:15	GP-2-20	S	X						1	X
"	9:30	GP-1-5	S	X						1	X
"	9:35	GP-1-10	S	X						1	X
"	9:40	GP-1-15	S	X						1	X
"	10:00	GP-3-5	S	X						1	X
	10:05	GP-3-10	S	X						1	X
"	10:15	GP-3-Water	L	X						3	X
		Temp Blank								1	
		Trip Blank								1	

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ____ No X

Is this work being conducted for regulatory enforcement action? Yes ____ No X

Which regulations apply: RCRA ____ NPDES Wastewater ____ UST ____ Drinking Water ____ Other X None ____

COMMENTS

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) / NO FIELD FILTERED? YES / (NO)

COC SEALS PRESENT AND INTACT? (YES) / NO VOLATILES FREE OF HEADSPACE? (YES) / NO

TEMPERATURE UPON RECEIPT: 3°C

Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ____

I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ____ DATE ____

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
Dan Cangas	7/23/97	1:30	7-24-97 1110				

METHOD OF SHIPMENT

REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY

COMPANY: Taylor Fabrication
ADDRESS: 211 W Tennessee St
PHONE: 447-4700 FAX: 447-4998
PROJECT NAME/LOCATION: Key Products
PROJECT NUMBER:
PROJECT MANAGER: Dan Griggs

REPORT TO: Higbee
INVOICE TO: Taylor
P.O. NO.: Verbal
NET QUOTE NO.:

SAMPLED BY
(PRINT NAME) Dan Griggs — SIGNATURE Daniel Griggs
(PRINT NAME) — SIGNATURE

ANALYSES

To assist us in selecting the proper method
Is this work being conducted for regulatory compliance monitoring? Yes ___ No X
Is this work being conducted for regulatory enforcement action? Yes ___ No X
Which regulations apply: RCRA ___ NPDES Wastewater ___ UST ___ Drinking Water ___ Other X None ___

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	VOCs
7/24/97	9:00	GP-2-5	S	X						1	X
"	9:05	GP-2-10	S	X						1	X
"	9:10	GP-2-15	S	X						1	X
"	9:15	GP-2-20	S	X						1	X
"	9:30	GP-1-5	S	X						1	X
"	9:35	GP-1-10	S	X						1	X
"	9:40	GP-1-15	S	X						1	X
"	10:00	GP-3-5	S	X						1	X
	10:05	GP-3-10	S	X						1	X
"	10:15	GP-3-Water	L	X						3	X
		Temp Blank								1	
		Trip Blank								1	-

COMMENTS: MEOH Reagent 3 only 1 Required
07-24-97 16:05 WLT disposed 2

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) / NO
FIELD FILTERED? YES / (NO)
COC SEALS PRESENT AND INTACT? (YES) / NO
VOLATILES FREE OF HEADSPACE? (YES) / NO
TEMPERATURE UPON RECEIPT: 3°C
Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ___
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ___ DATE ___

SAW 7/24/97 1607

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
Dan Griggs	7/25/97	1:30	Jerry Schmitz 7-24-97 1110	Jerry Schmitz	7-24-97	1550	[illegible] 7/25/97

METHOD OF SHIPMENT:
REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

WORKPLAN

TO DETERMINE THE EXTENT OF

CONTAMINATION

Prepared for:

KEY PRODUCTS
8634 W. LYNKS
MILWAUKEE, WI 53225

Prepared by:

MATERIALS MGMT. & TRAINING LTD.
14705 East View Ct.
Brookfield, WI 53005

June 4, 1997

TABLE OF CONTENTS

WRITTEN WORKPLAN FOR ASSESSMENT ACTIVITIES

*1.0 **Scope of Work***

The following written workplan sets forth the procedures to be followed during the assessment activities to determine the extent of contamination.

*1.1 **Introduction***

Materials Management & Training Ltd. proposes to supply the necessary labor, materials and supervision to conduct assessment activities at the Key Products property, 8634 W Lynks, Milwaukee, WI 53225. The tasks for the completion of this project involve the following:

1.2 Notification
1.3 Geoprobe activities
1.4 Soil sampling
1.5 Water sampling
1.6 Documentation requirements
1.7 Reporting

The Geoprobe contractor will be:

ESP Enterprises Inc.
1784 Barton Ave., Suite 22.
West Bend, Wisconsin 53095

The documentation and reporting will be performed by Don Gagas of Materials Management & Training Ltd., who is certified by the State of Wisconsin for assessment (Certification no. 01275).

The general contractor will have a site health and safety plan (HSP) for all activities onsite during the excavation.

*1.2 **Notification***

The contractor will notify the state DNR, in writing, 30 days prior to commencement of the assessment activities. ***A tentative date is set for geoprobe activities and sampling on July 17, 1997.*** *The contractor will identify any local ordinances governing assessment activities.*

1.3 Geoprobe Activities

1. *Prior to excavation:*

   a. *All utilities and obstructions will be located and visibly marked.*
   b. *All access will be restricted and roped off.*
   c. *Sources of ignition will be eliminated.*
   d. *Non-sparking tools will be used.*
   e. *All hoses and motors will be grounded to prevent electrostatic ignition.*

2. *Drilling locations will be according to the attached diagram..*

3. *The samples will be visually inspected for signs of contamination. This will involve inspecting for evidence of further contamination such as stained soil, free liquids, and odors which may be indicative of petroleum contamination.*

4. *Geoprobe activities will be photo documented.*

5. *After the soil and water samples are obtained a determination will be made for a potential 3 geoprobe location.*

1.4 Water Sampling

1. *Obtain a statement of qualifications of the person collecting the samples.*

2. *Collect soil samples from the following locations:*

   a. *Collect soil samples from native soil (not from backfill).*
   b. *Collect samples from areas with strong odors.*
   c. *Collect samples from areas with soil discoloration.*
   d. ***Collect water samples at a depth of 15 feet.***

3. *Collect soil samples as follows:*

   a. *Collect soil samples with as little disturbance and exposure to air as possible.*
   b. *Use trowel or hand auger to sample soil directly from the excavation area.*
   c. *Sample soil from backhoe bucket in hazardous conditions.*
   d. *Clean tools thoroughly between all sampling points. The decontamination procedures will be soap water wash; clean water rinse; solvent (ie., hexane) dry.*
   e. *Collect samples from unexposed areas by first scraping away 34 inches of soil.*

4. *Sample containers:*
   a. *Must be of glass or inert material.*
   b. *Must have Teflon (or equivalent) lined cap.*
   c. *Should be wide-mouth to prevent soil agitation.*

d. Must be filled to the brim with soil.

5. *Sample handling:*

   a. Label samples prior to or immediately after collection.
   b. Samples should have I.D. number and date.
   c. Seal samples immediately following collection.
   d. Chill samples immediately (4 deg. C)
   e. Follow chain-of-custody procedures.
   f. Ship to lab as soon as possible.
   g. Analyze samples using WI DNR approved methods.

*1.5 **Soil Sampling***

1. *Obtain a statement of qualifications of the person collecting the samples.*

2. *Collect soil samples from the following locations:*

   a. Collect soil samples from native soil (not from backfill).
   b. Collect samples from areas with strong odors.
   c. Collect samples from areas with soil discoloration.
   *d. **Collect samples at 5 foot increments to a depth of 15 feet (3-samples)..***

3. *Collect soil samples as follows:*

   a. Collect soil samples with as little disturbance and exposure to air as possible.
   b. Use sampling tube to remove soil directly from the excavation area.
   c. Clean tools thoroughly between all sampling points. The decontamination procedures will be soap water wash; clean water rinse; solvent (ie., hexane) dry.
   d. Collect samples from unexposed areas by first scraping away ~~3~~4 inches of soil.

4. *Sample containers:*

   a. Must be of glass or inert material.
   b. Must have Teflon (or equivalent) lined cap.
   c. Should be wide-mouth to prevent soil agitation.
   d. Must be filled to the brim with soil.

5. *Sample handling:*

   a. Label samples prior to or immediately after collection.
   b. Samples should have I.D. number and date.
   c. Seal samples immediately following collection.
   d. Chill samples immediately (4 deg. C)
   e. Follow chain-of-custody procedures.

f. Ship to lab as soon as possible.

g. Analyze samples using WI DNR approved methods.

1.6 ***Documentation Requirements***

1. *Provide site background information in narrative form:*

   a. Site owner and address.
   b. Contact person and telephone number.
   c. Assessment method to determine extent.
   d. Environmental consultant.
   e. Geoprobe contractor.
   f. Description of past and present property use.
   g. Description of tanks previously removed.
   h. Description of tanks remaining onsite.
   i. Results of previous geotechnical investigations, if applicable.
   j. Information on past system leaks or repairs.
   k. Other tanks or gas stations in the vicinity.
   l. Legal description of the site (quarter/quarter section, township range).
   m. Other relevant data.

2. *Site Map, Scale 1": 1'-0"*

3. *Site layout showing the location of:*

   a. Any pre-existing site conditions.
   b. Piping.
   c. Utilities.
   d. Buildings.
   e. Field instrument sampling points (if applicable).
   f. Lab analysis sampling points.
   g. Areal extent of excavation and depth below original grade.
   h. Map scale (1" = 10').
   i. North arrow.
   j. Title.
   k. Name of map draftsman.

4. *Tabulated field and lab data showing:*

   a. Lab results for each sample and field readings where applicable.
   b. Location of each sample or field reading keyed to site layout.
   c. Depth at which sample(s) was/were taken.
   d. Relative moisture content of sample(s).
   e. Petroleum product odor if present.
   f. Instrument quenching.

5. *Provide copies of:*

    a. *Laboratory analysis.*
    b. *Chain-of-custody forms.*

6. *Observations:*

    a. *Soil type, USGS classification.*
    b. *Excavation depth.*
    c. *Tank and piping condition.*
    d. *Possible leak locations.*
    e. *Presence of free standing water.*
    f. *Depth to ground water, if known.*
    g. *Presence of free product.*
    h. *Presence of stained soil.*
    i. *Observed odors.*
    j. *Signs of impacted/affected vegetation.*
    k. *Other signs of contamination.*

7. *Describe soil sampling procedures/techniques, including:*

    a. *Sample collection method.*
    b. *Tool cleaning method.*
    c. *Sample preservation method.*

8. *Describe field instruments, methods, and observations, including:*

    a *Instrument make and model.*
    b *Date of factory calibration.*
    c. *Date, time, and method of field calibration.*
    d. *Lamp energy electron volts (ev) for PID's.*
    e. *Instrument settings.*
    f. *Outside temperature.*
    g. *Weather conditions.*
    h. *Lab-headspace split sampling.*
    i. *Headspace sample containers.*
    j. *Headspace sample collection.*
    k. *Polyethylene bag procedure, if used.*
    l. *Equilibrium temperature for samples.*
    m. *Sample agitation.*
    n. *Sample equilibrium.*
    o. *Erratic instrument readings, if present.*
    p. *Instrument cleaning or repairs performed in the field.*

9. *Suitable photographs include:*

a. *Color prints.*
b. *Color reprints.*
c. *Color photocopies.*

1.7 ***Reporting***

1. *Send assessment copy to:*

   a. *Jim Schmidt*
   WDNR
   4041 N. Richards St.
   P. O. Box 12436
   Milwaukee, WI 53212

Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Key Products	_ _ _ _ _ _ _ _	GP-1

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started (M M D D Y Y)	Date Drilling Completed (M M D D Y Y)	Drilling Method
ESP Enterprises Inc, West Bend, WI	07/23/97	07/23/97	Geoprobe

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet MSL	_____ Feet MSL	2 inches

Boring Location
State Plane _____ N, _____ E S/C/N | Lat _ _ _ _ _ _
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____ E/W | Long _ _ _ _ _ _

Local Grid Location (If applicable)
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	DNR County Code	Civil Town/City/ or Village
Milwaukee	_ _ _	Milwaukee

Sample Number	Sample Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
				Compact Stone to 0.25'										
1				0.25' to 5' reddish brown clay, gravel sand fill, wet sample GP-1-5 (At 5')				77		wet				Lab Sample GP-1-5
2				5' to 10' reddish brown clay, some sand & gravel, moist to dry. Sample #GP-1-10 (At 10')				ND		Moist Dry				Lab sample GP-1-10
3				10' to 15' grayish clay dense, moist to dry. Sample #GP-1-15 (At 15')				ND		Moist Dry				Lab sample GP-1-15
				EOB at 15'										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm _____

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Key Products	_ _ _ _ _ _ _ _	GP-2

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
ESP Enterprises, West Bend, WI	07/23/97 (M M D D Y Y)	07/23/97 (M M D D Y Y)	Geoprobe

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet MSL	_____ Feet MSL	2 inches

Boring Location
State Plane _____ N, _____ E S/C/N Lat _____
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____ E/W Long _____

Local Grid Location (If applicable)
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	DNR County Code	Civil Town/City/ or Village
Milwaukee	_____	Milwaukee

Sample Number	Sample Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
				Compact Stone 0.25'				ND						
1				0.25' – 5' reddish brown clay, gravel, sand fill, wet. Sample # GP-2-5 (At 5')				6.6		Wet				Lab Sample GP-2-5
2				5'–10' reddish brown clay, some sand and gravel moist to dry Sample # GP-2-10 (At 10').				ND		Moist Dry				Lab Sample GP-2-10
3				10'–15' grayish clay dense, moist to dry Sample # GP-2-15 (At 15')				ND		Moist Dry				Lab sample GP-2-15
4				15'–20' grayish clay dense, moist to dry Sample # GP-2-20 (At 20')				ND		Moist Dry				Lab sample GP-2-20
				EOB At 20'										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Donald Stanger	MM&T Ltd.

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Key Products	_ _ _ _ _ _ _	GP-3

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started (M M D D Y Y)	Date Drilling Completed (M M D D Y Y)	Drilling Method
ESP Enterprises Inc., West Bend WI	07/23/97	07/23/97	Geoprobe

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet MSL	_____ Feet MSL	_____ inches

Boring Location
State Plane _____ N, _____ E S/C/N Lat _ _ _ Long _ _ _
_____ 1/4 of _____ 1/4 of Section _____, T ____ N, R ____ E/W

Local Grid Location (If applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Milwaukee	_ _	Milwaukee

Sample Number	Sample Length Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
				Compact stone 0.25'										
1				0.25' to 5' reddish brown clay, gravel sand fill, wet Sample #GP-3-5 (At 5')				50		wet				Lab sample GP-3-5
2				5' to 10' reddish brown clay, sand, moist to dry Sample #GP-3-10 (At 10').				3.6		Moist Dry				Lab sample GP-3-4
3				10' to 15' grayish clay dense, some sand, moist to dry No sample taken				ND		Moist Dry				Lab sample GP-3-1
				EOB At 15'										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Jacalee Jagos | Firm MM+T Ltd.

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State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other _____

SOIL BORING LOG INFORMATION

Form 4400-122 7-91

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Key Products	_ _ _ _ _ _ _ _	GP-3-Water

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started (M M D D Y Y)	Date Drilling Completed (M M D D Y Y)	Drilling Method
ESP Enterprises Inc West Bend WI	07/23/97	07/23/97	Geoprobe

DNR Facility Well No.	Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet MSL	_____ Feet MSL	2 inches

Boring Location
State Plane _____ N, _____ E S/C/N
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____ E/W
Lat _ _ _ Long _ _ _

Local Grid Location (If applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Milwaukee	_ _	Milwaukee

Sample Number	Sample Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
1				Compact Stone 0.25' 0.25' to 5' redish brown clay gravel, sand silt, wet Water sample GP-3-Water EOB at 5'				ND		Wet				Lab sample GP-3 water

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm MK&T Ltd.

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Gloria L. McCutcheon, District Director

Southeast District Annex
4041 N. Richards Street, Box 12436
Milwaukee, WI 53212-0436
TELEPHONE 414-229-0800
FAX 414-229-0810

January 3, 1997

IN REPLY REFER TO Milwaukee Co. ERP FID# 241437790

Mr. Richard Meinburg
Key Products, Inc.
8634 W Lynx Ave
Milwaukee, WI 53225

Subject: Environmental Contamination, Key Products Property, 8634 W Lynx, Milwaukee

Dear Mr. Meinburg:

I have reviewed the November 1996 Accidental Release Assessment Documentation Report prepared by Materials Management & Training Ltd. for the environmental contamination at the Key Products property, 8634 W Lynx, Milwaukee, WI. The report documents a paint and solvent spill and subsequent cleanup at the Key Products property, and requests that the DNR require no further action.

The report documents that 3,000 ppb PCE was detected in overexcavation confirmation sample REM SS1, which was collected at 12 ft bgs. The report contains a risk based analysis stating that the PCE does not pose a direct contact threat. DNR file information for the Hampton Plumbing site, 8617 W Kaul, Milwaukee, FID # 241731600 indicates that groundwater is likely to occur at 10 to 16 ft bgs (groundwater may not have been encountered during the Key Products excavation because of clayey soil). Based on this information and Equation 9 from the report, there is likely groundwater contamination at the Key Products property that exceeds the NR 140 enforcement standard. Contaminated groundwater may account for the increased PCE concentrations between SS4 and overexcavation confirmation sample REM SS4.

Additional investigation is needed at the Key Products site to determine groundwater quality. You should conduct the groundwater investigation and act accordingly as soon as possible. The conditions present at this site may pose a serious threat to human health and/or the environment. The site specific information known to the WDNR at this time, however, is not adequate to evaluate the relative potential threat from this site.

WDNR SE District Review Prioritization Policy

Due to the WDNR workload, it is necessary to rank all contamination cases for review priority. The highest priority sites have assigned WDNR project managers who are actively reviewing and approving investigation and remediation plans. Lower priority cases do not always have assigned project managers, however, responsible parties are required to proceed with investigation and clean-up efforts. Due to the lack of information about this site, it's relative priority cannot be determined. Therefore, the priority ranking of this site is considered unknown. Until a priority has been assigned to this site, you should proceed with the required response work, submitting all plans and reports, along with quarterly status reports, to this office. The WDNR will notify you if active oversight for you site will be given.

Your responsibilities include investigating the extent of the contamination and then selecting and implementing the most appropriate remedial action. Enclosed is information to help you understand what you need to do to ensure your compliance with the spills law.

The purpose of this letter is threefold: 1) to describe your legal responsibilities, 2) to explain what you need to do to investigate and clean up the contamination, and 3) to provide you with information about cleanups, environmental consultants, possible financial assistance, and working cooperatively with the Department of Natural Resources.

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substances spill law, Section 144.76 (3) Wisconsin Statutes, states:

* RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Codes chapters NR 700 through NR 728 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Chapter NR 708 includes provisions for immediate actions in response to limited contamination. Wisconsin Administrative Code chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

Steps to Take:

The longer contamination is left in the environment the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and to neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and administrative codes, you should hire a professional environmental consultant who understands what needs to be done. These are the first four steps to take:

1. By February 28, 1996 please submit written verification (such as a letter from the consultant) that you have hired an environmental consultant. You will need to work quickly to meet this timeline.

2. By March 31, 1996 your consultant must submit a workplan and a schedule for conducting the investigation. The consultant must follow the Department's administrative codes and our technical guidance documents. Please include with your workplan a copy of any previous information that has been completed (such as an underground tank removal report or a preliminary soil excavation report).

3. Please keep us informed of what is being done at your site. You or your consultant must provide us with a brief report at least every 90 days, starting after your workplan is submitted. These quarterly reports should summarize the work completed since the last report. Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. However, please note that should conditions at your site warrant, you may receive a letter requiring more frequent contacts with the Department.

4. When the site investigation is complete, your consultant must submit a full report on the extent and degree of soil and groundwater contamination and a proposal for cleaning up the contamination.

Due to the number of contaminated sites and our staffing levels, we will be unable to respond to each report. To maintain your compliance with the spills law and chs. NR 700 through NR 728, do not delay the investigation and cleanup of your site by waiting for WDNR responses. We have provided detailed technical guidance to environmental consultants. Your consultant is expected to be familiar with our technical procedures and administrative codes and should be able to answer your questions on meeting Wisconsin's cleanup requirements.

Your correspondence and reports regarding this site should be sent to the Department at the following address:

Mr. Jim Schmidt
c/o ERR/ERP
Wisconsin Department of Natural Resources
P.O. Box 12436
Milwaukee, Wisconsin 53212

Unless otherwise requested, please send only one copy of all plans and reports. Correspondence should be identified with the assigned WDNR facility identification number (FID#, ERR/ERP) which is listed at the top of this letter.

Information for Site Owners:
Enclosed is a list of environmental consultants and some important tips on selecting a consultant. If you are eligible for reimbursement of costs under Wisconsin's PECFA program (see last paragraph) you will need to compare at least three consultants' proposals before hiring a consultant. Consultants and laboratories working in the PECFA program are required to carry errors and omissions insurance to help protect you against unsuitable work. Also enclosed are materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method. This information has been prepared to help you understand your responsibilities and what your environmental consultant needs to do. Please read this information carefully.

If you are interested in obtaining the protection of limited liability under s. 144.765, Stats., please contact Mark Giesfeldt at (608) 267-7562 or Darsi Foss at (608) 267-6713, in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 144.765. Stats., is available to persons who meet the definition of "purchaser" in s. 144.765(1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

Please contact me if you have questions or comments; your call or letter will receive a prompt response.

Sincerely,

Michael C.

Michael C. Thompson
Department of Natural Resources-Southeast Region Spill Coordinator
(414) 229-0838

cc: Mr. Don Gagas, Materials Management & Training Ltd, 3271 N 84th St., Milwaukee, WI 53222

241731600 ERR-LU>1

DEC 0 8 1994

Additional Site Investigation

Hampton Plumbing Company, Inc. Site

8617 West Kaul Avenue, Milwaukee, Wisconsin
Advent Project No. 97195.03

Prepared for
Mr. Robert Wille

December 1994

A D V E N T

ENVIRONMENTAL SERVICES, INC.

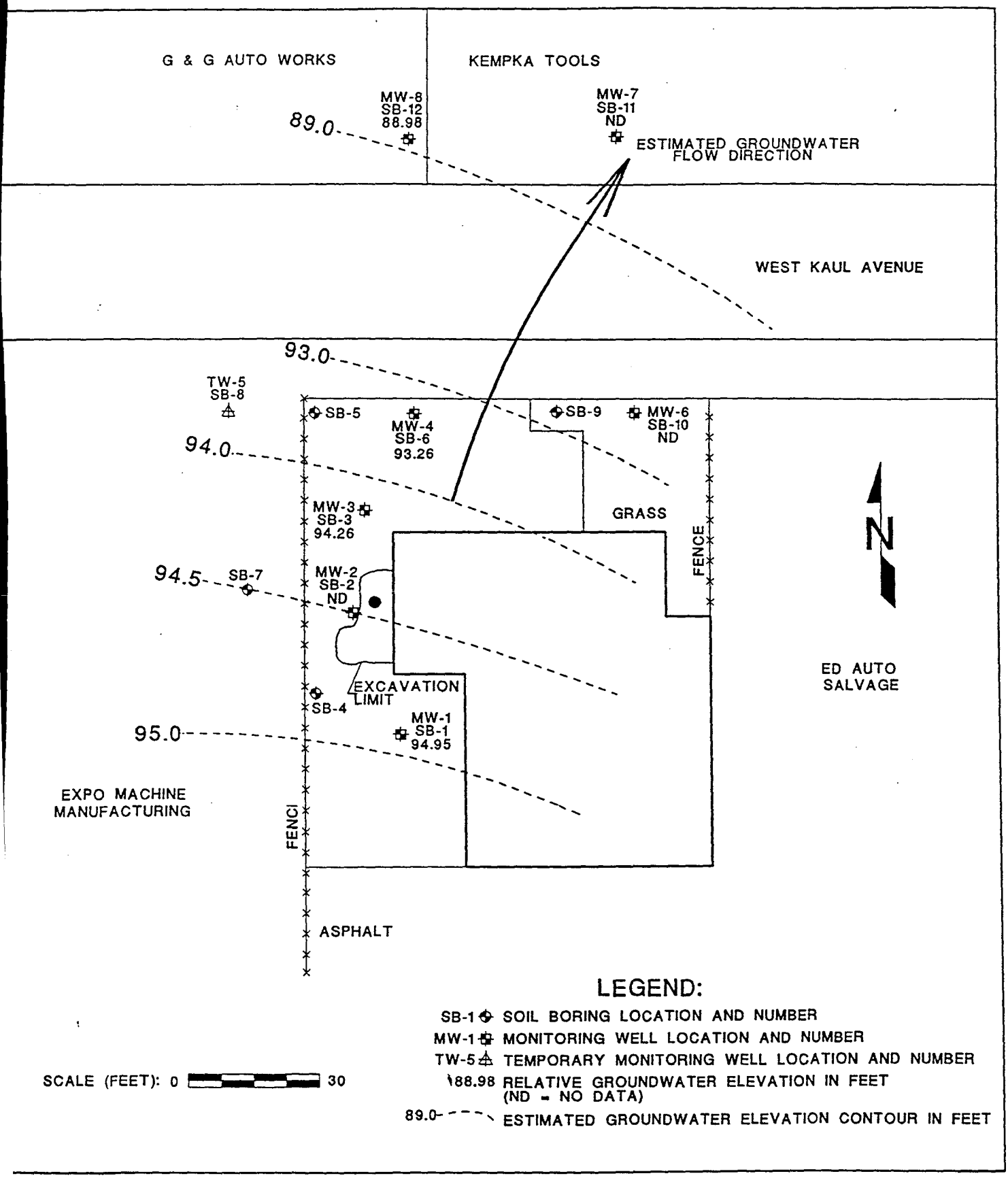


FIGURE 7 RELATIVE GROUNDWATER ELEVATION MAP
HAMPTON PLUMBING COMPANY
MILWAUKEE, WISCONSIN

A D V E N T
ENVIRONMENTAL SERVICES, INC.
DATE: 11/29/94
DRAWING # 97195.03H

sconsin
of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 7-91

Page 4 of 6

Project Name	License/Permit/Monitoring Number	Boring Number
...p ton Plumbing Company.		SB-10

Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
...r Drilling, Inc. / Dennis	11/08/94 (M M / D D / Y Y)	11/08/94 (M M / D D / Y Y)	Hollow Stem Auger.

DNR Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-6	____ Feet MSL	____ Feet MSL	8.0 inches

Location	Lat/Long	Local Grid Location (If applicable)
____ N, ____ E S/C/N	Lat ____	☐N ☐E
of NW 1/4 of Section 28, T 8 N, R 21 E/W	Long ____	____ Feet ☐S ____ Feet ☐W

DNR County Code	Civil Town/City/ or Village
41	Milwaukee

Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
	0	0-4. Drk gray silty clay.				0		moist				
	5	4-10.' Brown stiff silty clay, mottled.				0 35 0						Lab-sample SB-10-A.
	10	10-16: Dark gray, plastic, silty clay.				0 0 0		Wet				SB-10-B. Lab-sample.
	15											
		End of boring at 16 feet										
	20											

fy that the information on this form is true and correct to the best of my knowledge.

= Darowi

Firm: Advent Environmental Service, Inc.

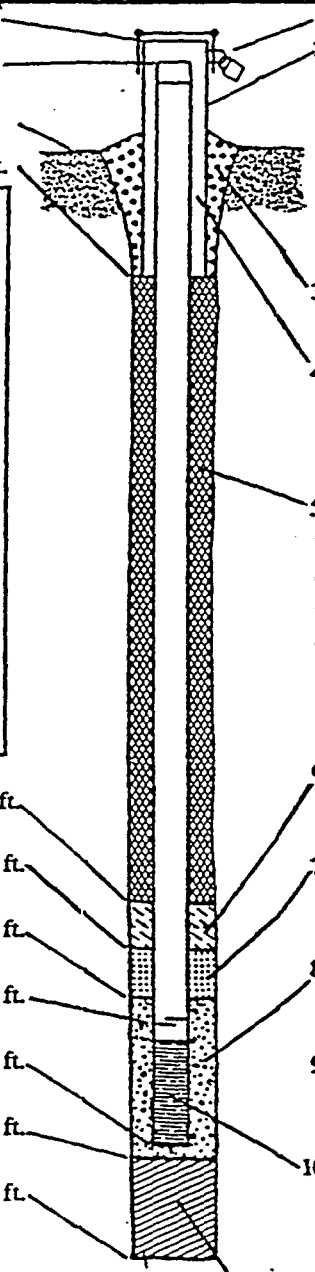
orized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or ...tion. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

sconsin
of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

oject Name: ston Plumbing Co	Local Grid Location of Well: _____ ft. ☐N ☐S, _____ ft. ☐E ☐W	Well Name: MW-6
ense, Permit or Monitoring Number: _____	Grid Origin Location: Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number / DNR Well Number: _____
ell: Water Table Observation Well ☒ 11, Piezometer ☐ 12	Section Location of Waste/Source: NE 1/4 of NW 1/4 of Sec. 28, T. 8 N, R. 21 ☒E ☐W	Date Well Installed: 11/08/94 (m m d d y y)
ell Is From Waste/Source Boundary: 30 ft	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient; d ☒ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) Sauter Drilling Inc. / Advent / Khalid Durrani
oint of Enforcement Std. Application? ☒ Yes ☐ No		



ve pipe, top elevation _____ ft. MSL
ing, top elevation _____ ft. MSL
face elevation _____ ft. MSL
seal, bottom _____ ft. MSL or _____ ft.

classification of soil near screen:
GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SC ☒ ML ☐ MH ☐ CL ☐ CH ☐
k ☐

nalysis attached? ☐ Yes ☒ No

g method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐

g fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

additives used? ☒ Yes ☐ No

e _____

of water (attach analysis): _____

seal, top _____ ft. MSL or 0.5 ft.
top _____ ft. MSL or 2.5 ft.
k, top _____ ft. MSL or 4.0 ft.
nt, top _____ ft. MSL or 6.0 ft.
m _____ ft. MSL or 16.0 ft.
, bottom _____ ft. MSL or 16.0 ft.
ottom _____ ft. MSL or 16.0 ft.
iameter 8.0 in.
casing 2.10 in.
asing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
   a. Inside diameter: ___.__ in.
   b. Length: ___.__ ft.
   c. Material: Steel ☐ 04; Other ☐ _____
   d. Additional protection? ☐ Yes ☒ No
   If yes, describe: _____
3. Surface seal: Bentonite ☒ 30; Concrete ☐ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐ _____; Other ☐ _____
5. Annular space seal: a. Granular Bentonite ☒ 33
   b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
   c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
   d. _____ % Bentonite .... Bentonite-cement grout ☐ 50
   e. _____ Ft^3 volume added for any of the above
   f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
   b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite pellets ☐ 32
   c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
   a. Badger mining
   b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
   a. Red Flint
   b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ _____
10. Screen material: PVC
    a. Screen type: Factory cut ☐ 11; Continuous slot ☐ 01; Other ☐ _____
    b. Manufacturer _____
    c. Slot size: 0.___ in.
    d. Slotted length: ___.__ ft.
11. Backfill material (below filter pack): None ☐ 14; Other ☐ _____

rtify that the information on this form is true and correct to the best of my knowledge.

K. Durrani	Firm: Advent Environmental, Inc.

te both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., 41, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than h day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each n. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

ıment of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

ty/Project Name	County Name	Well Name
ampion Plumbing Co	Milwaukee	MW-6
y License, Permit or Monitoring Number	County Code	Wis. Unique Well Number / DNR Well Number
_____	41	_____ / _____

		Before Development	After Development
n this well be purged dry?	☒ Yes ☐ No		
ll development method			
surged with bailer and bailed	☐ 41		
surged with bailer and pumped	☒ 61		
surged with block and bailed	☐ 42		
surged with block and pumped	☐ 62		
surged with block, bailed and pumped	☐ 70		
compressed air	☐ 20		
bailed only	☐ 10		
pumped only	☐ 51		
pumped slowly	☐ 50		
Other _____	☐		
11. Depth to Water (from top of well casing)		a. 10.14 ft.	15.6 ft.
Date		b. 4/15/94 (m m d d y y)	11/15/94 (m m d d y y)
Time		c. ___:___ ☒ a.m. ☐ p.m.	___:___ ☒ a.m. ☐ p.m.
12. Sediment in well bottom		1.0 inches	___.__ inches
13. Water clarity		Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
ne spent developing well	10 min.		
pth of well (from top of well casisng)	16.0 ft.		
ide diameter of well	2.00 in.		
lume of water in filter pack and well ing	3.0 gal.		
ume of water removed from well	3.0 gal.		
me of water added (if any)	0.0 gal.		
ce of water added NA			

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

lysis performed on water added? ☐ Yes ☐ No
es, attach results)

itional comments on development:

eloped by: Person's Name and Firm

Khalid Durrani
Advent Environmental Servics

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: K Durrani
Print Initials: KPD
Firm: Advent Environmental Service

Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

COPY

ACCIDENTAL RELEASE ASSESSMENT

DOCUMENTATION REPORT

Prepared for:

Key Products, Inc.
8634 W. Lynx Ave.
Milwaukee, Wisconsin 53225
Attn: Mr. Richard Meinburg

Prepared by:

Materials Management & Training Ltd.
3271 N. 84th Street
Milwaukee, WI 53222

November 8, 1996

Equation 9: Algorithm for Groundwater Mixing Zone Dilution Attenuation Factor (DAF) for NR 720 Generic Residual Contaminant Levels

(Screening calc. (not table I values - more conservative)

1) → *Residual Contaminant Level* (µg/kg) = *PAL* × 10^{-3} *mg/µg* × *Koc* × *foc* × *DAF*

Table I = (Scsoil) × (DAF) = $\frac{d}{\theta t}(Koc\,foc\,\rho + n)$

where

Parameter/Definition (units)	Default	
PAL/preventive action limit (µg/L)	chemical-specific	
Koc/organic carbon:water partitioning coefficient (L/kg)	chemical-specific	PCE K_{OC} = 3.64×10^2
foc/fractional organic carbon content (g/g)	0.001	.001 g/g
d/depth of groundwater mixing zone (cm)	152.4	152.4 cm = 5'
θ/average volumetric soil moisture content of unsaturated zone (cm^3/cm^3)	0.1	.1 cm^3/cm^3
t/thickness of [redacted] (cm)	15	THICKNESS OF CONTAM. SOIL = 15 cm
ρ/soil dry bulk density (g/cm^3)	1.35	1.35 g/cm^3
n/porosity (cm^3/cm^3)	0.49	.49 cm^3/cm^3

ALL PATH numbers Direct Contact Number OK

Groundwater numbers use equation above (screening)

Scsoil × DAF = less restrictive number

1

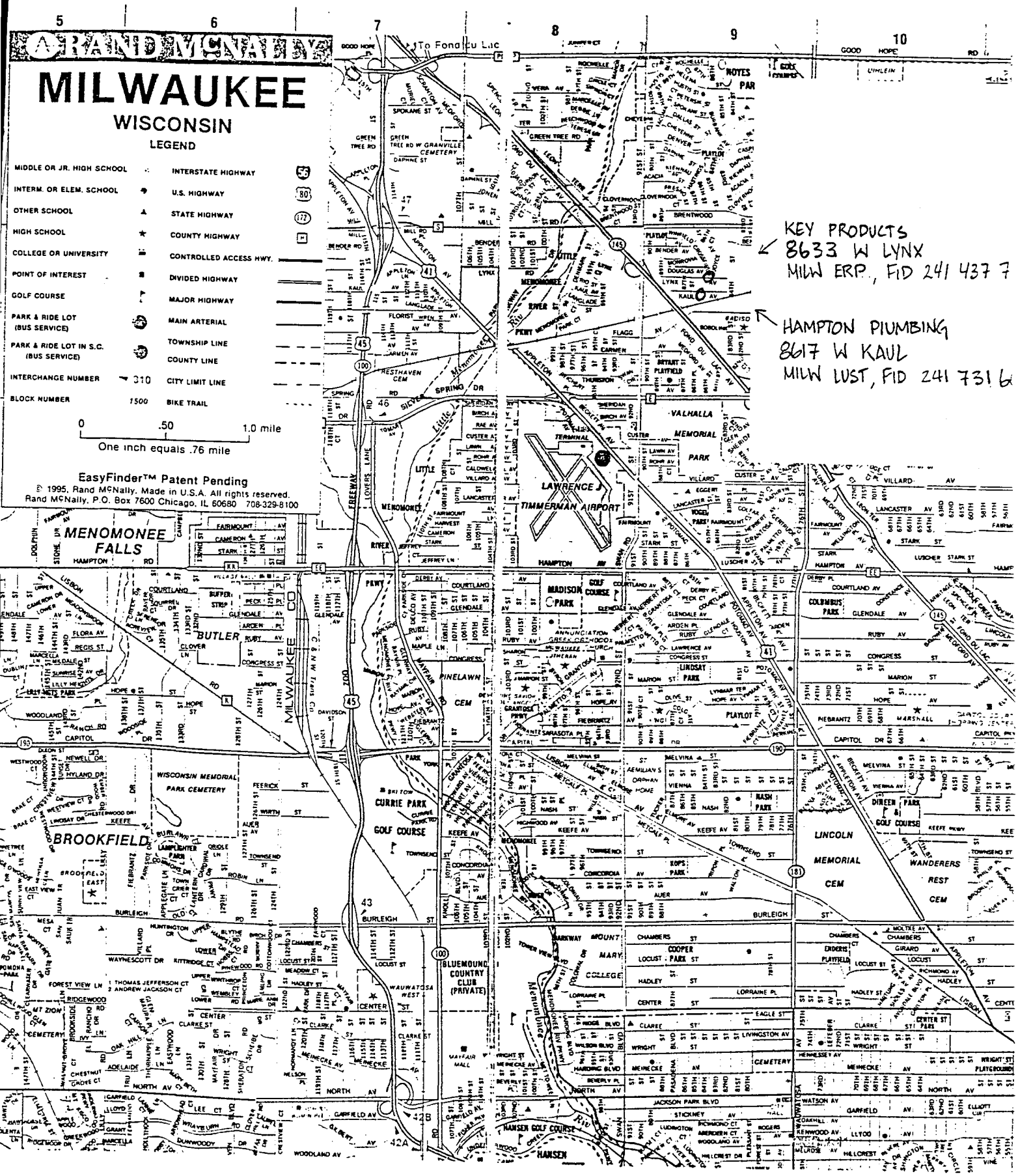
Sources: I=IRIS H=HEAST A=HEAST alternate W=Withdrawn from IRIS or HEAST E=EPA-ECAO Regional Support provisional value O=Other EPA documents.

Basis: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level S=soil saturation concentration.

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg-d/mg	CPSi kg-d/mg	VOC	Risk-Based Concentrations: Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion: Industrial mg/kg	Soil Ingestion: Residential mg/kg	Soil Screening Levels - Transfers from Soil to: Air mg/kg	Soil Screening Levels - Transfers from Soil to: Groundwater mg/kg
Sodium azide	26628228	4.00E-03 I					150 N	15 N	5.4 N	8200 N	310 N		
Sodium diethyldithiocarbamate	148185	3.00E-02 I		2.70E-01 H			0.25 C	0.023 C	0.012 C	21 C	2.4 C		
Sodium fluoroacetate	62748	2.00E-05 I					0.73 N	0.073 N	0.027 N	41 N	1.6 N		
Sodium metavanadate	13718268	1.00E-03 H					37 N	3.7 N	1.4 N	2000 N	78 N		
Strontium, stable	7440246	6.00E-01 I					22000 N	2200 N	810 N	1E+06 N	47000 N		
Strychnine	57249	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N		
Styrene	100425	2.00E-01 I	2.86E-01 I			V	1600 N	1000 N	270 N	410000 N	16000 N	1400 E	2 E
Systhane	88671890	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N		
2,3,7,8-TCDD (dioxin)	1746016			1.56E+05 H	1.16E+05 H		4E-07 C	5E-08 C	C	4E-05 C	4E-06 C		
Tebuthiuron	34014181	7.00E-02 I					2600 N	260 N	95 N	140000 N	5500 N		
Temephos	3383968	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N		
Terbacil	5902512	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N		
Terbufos	13071799	2.50E-05 H					0.91 N	0.091 N	0.034 N	51 N	2 N		
Terbutryn	886500	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N		
1,2,4,5-Tetrachlorobenzene	95943	3.00E-04 I				V	1.8 N	1.1 N	0.41 N	610 N	23 N	91 N	0.69 N
1,1,1,2-Tetrachloroethane	630206	3.00E-02 I		2.60E-02 I	2.59E-02 I	V	0.41 C	0.24 C	0.12 C	220 C	25 C		
1,1,2,2-Tetrachloroethane	79345			2.00E-01 I	2.03E-01 I	V	0.052 C	0.031 C	0.016 C	29 C	3.2 C	0.4 E	0.001 E
Tetrachloroethylene (PCE)	127184	1.00E-02 I		5.20E-02 E	2.03E-03 E	V	1.1 C	3.1 C	0.061 C	110 C	12 C	11 E	0.04 E
2,3,4,6-Tetrachlorophenol	58902	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N		
p,a,a,a-Tetrachlorotoluene	5216251			2.00E+01 H		V	0.00053 C	0.00031 C	0.00016 C	0.29 C	0.032 C		
Tetrachlorovinphos	961115	3.00E-02 I		2.40E-02 H			2.8 C	0.26 C	0.13 C	240 C	27 C		
Tetraethyldithiopyrophosphate	3689245	5.00E-04 I					18 N	1.8 N	0.68 N	1000 N	39 N		
Lead (tetraethyl)	78002	1.00E-07 I					0.0037 N	0.00037 N	0.00014 N	0.2 N	0.0078 N	0.0(	
Thallic oxide	1314325	7.00E-05 W					2.6 N	0.26 N	0.095 N	140 N	5.5 N		
Thallium													
Thallium acetate	563688	9.00E-05 I					3.3 N	0.33 N	0.12 N	180 N	7 N		
Thallium carbonate	6533739	8.00E-05 I					2.9 N	0.29 N	0.11 N	160 N	6.3 N		
Thallium chloride	7791120	8.00E-05 I					2.9 N	0.29 N	0.11 N	160 N	6.3 N		
Thallium nitrate	10102451	9.00E-05 I					3.3 N	0.33 N	0.12 N	180 N	7 N		
Thallium selenite	12039520	9.00E-05 W					3.3 N	0.33 N	0.12 N	180 N	7 N		
Thallium sulfate	7446186	8.00E-05 I					2.9 N	0.29 N	0.11 N	160 N	6.3 N		
Thiobencarb	28249776	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N		
2-(Thiocyanomethylthio)-benzothiazole	21564170	3.00E-02 H					1100 N	110 N	41 N	61000 N	2300 N		
Thiofanox[2]	39196184	3.00E-04 H					11 N	1.1 N	0.41 N	610 N	23 N		
Thiophanate-methyl	23564058	8.00E-02 I					2900 N	290 N	110 N	160000 N	6300 N		
Thiram	137268	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N		
Tin and compounds		6.00E-01 H					22000 N	2200 N	810 N	1E+06 N	47000 N		
Toluene	108883	2.00E-01 I	1.14E-01 I			V	750 N	420 N	270 N	410000 N	16000 N	5	
Toluene-2,4-diamine	95807			3.20E+00 H			0.021 C	0.002 C	0.00099 C	1.8 C	0.2 C		
Toluene-2,5-diamine	95705	6.00E-01 H					22000 N	2200 N	810 N	1E+06 N	47000 N		
Toluene-2,6-diamine	823405	2.00E-01 H					7300 N	730 N	270 N	410000 N	16000 N		

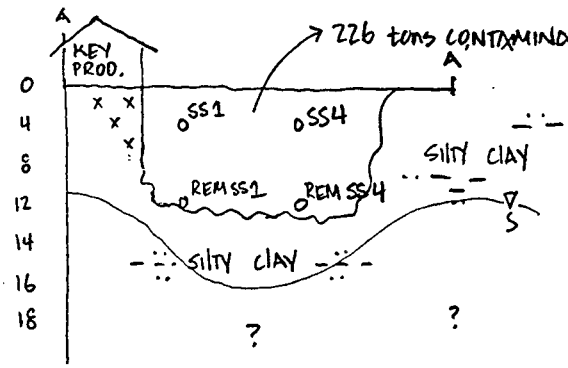
Table A-1. Water Solubility, Vapor Pressure, Henry's Law Constant, Koc, and Kow Data for Selected Chemicals.

Chemical Name	CAS #	EPA	Water Solubility (mg/l)	Ref	Vapor Pressure (mn Hg)	Ref	Henry's Law Constant (atm-m3/mol)	Ref	Koc (ml/g)	Ref	Kow	Ref
Hexachlorocyclopentadiene	77-47-4	HPP	2.10E+00	A	8.00E-02	A	1.37E-02	A	4.80E+03	A	1.10E+05	A
Hexachloroethane [Perchloroethane]	67-72-1	HPP	5.00E+01	A	4.00E-01	A	2.49E-03	A	2.00E+04	A	3.98E+04	A
Iodomethane [Methyl Iodide]	77-88-4		1.40E+04	A	4.00E+02	A	5.34E-03	A	2.30E+01	B	4.90E+01	A
Isoprene	78-79-5				4.00E+02	A						
Pentachloroethane [Pentalin]	76-01-7		3.70E+01	C	3.40E+00	C	2.44E-02	X	1.90E+03	D	7.76E+02	C
1,1,1,2-Tetrachloroethane	630-20-6		2.90E+03	A	5.00E+00	A	3.81E-04	A	5.40E+01	B		
1,1,2,2-Tetrachloroethane	79-34-5	HPP	2.90E+03	A	5.00E+00	A	3.81E-04	A	1.18E+02	A	2.45E+02	A
Tetrachloroethene [PERC]	127-18-4	HPP	1.50E+02	A	1.78E+01	A	2.59E-02	A	3.64E+02	A	3.98E+02	A
Tetrachloromethane [CarbonTetrachloride]	56-23-5	HPP	7.57E+02	A	9.00E+01	A	2.41E-02	A	4.39E+02	Q	4.37E+02	A
Tribromomethane [Bromoform]	75-25-2	HPP	3.01E+03	A	5.00E+00	A	5.52E-04	A	1.16E+02	A	2.51E+02	A
1,1,1-Trichloroethane [Methylchloroform]	71-55-6	HPP	1.50E+03	A	1.23E+02	A	1.44E-02	A	1.52E+02	A	3.16E+02	A
1,1,2-Trichloroethane [Vinyltrichloride]	79-00-5	HPP	4.50E+03	A	3.00E+01	A	1.17E-03	A	5.60E+01	A	2.95E+02	A
Trichloroethene [TCE]	79-01-6	HPP	1.10E+03	A	5.79E+01	A	9.10E-03	A	1.26E+02	A	2.40E+02	A
Trichlorofluoromethane [Freon 11]	75-69-4	PP	1.10E+03	A	6.67E+02	A	1.10E-01	Q	1.59E+02	A	3.39E+02	A
Trichloromethane [Chloroform]	67-66-3	HPP	8.20E+03	A	1.51E+02	A	2.87E-03	A	4.70E+01	C	9.33E+01	A
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		1.00E+01	A	2.70E+02	A					1.00E+02	A
AROMATIC COMPOUNDS												
1,1-Biphenyl [Diphenyl]	92-52-4		7.50E+00	E	6.00E-02	G	1.50E-03	G			7.54E+03	E
Benzene	71-43-2	HPP	1.75E+03	A	9.52E+01	A	5.59E-03	A	8.30E+01	A	1.32E+02	A
Bromobenzene [Phenyl Bromide]	108-86-1		4.46E+02	E	4.14E+00	O	1.92E-03	X	1.50E+02	P	9.00E+02	E
Chlorobenzene	108-90-7	HPP	4.66E+02	A	1.17E+01	A	3.72E-03	A	3.30E+02	Q	6.92E+02	A
4-Chloro-m-cresol [Chlorocresol]	59-50-7	HPP	3.85E+03	C	5.00E-02	C	2.44E-06	X	4.90E+02	C	9.80E+02	C
2-Chlorophenol [o-Chlorophenol]	95-57-8	HPP	2.90E+04	C	1.80E+00	C	1.05E-05	X	4.00E+02	C	1.45E+02	C
Chlorotoluene [Benzyl Chloride]	100-44-7		3.30E+03	A	1.00E+00	A	5.06E-05	A	5.00E+01	B	4.27E+02	A
m-Chlorotoluene	108-41-8		4.80E+01	D	4.60E+00	C	1.60E-02	X	1.20E+03	D	1.90E+03	C
o-Chlorotoluene	95-49-8		7.20E+01	C	2.70E+00	C	6.25E-03	X	1.60E+03	D	2.60E+03	C
p-Chlorotoluene	106-43-4		4.40E+01	D	4.50E+00	C	1.70E-02	X	1.20E+03	D	2.00E+03	C
Cresol (Technical) [Methylphenol]	1319-77-3		3.10E+04	A	2.40E-01	A	1.10E-06	A	5.00E+02	A	9.33E+01	A
o-Cresol [2-Methylphenol]	95-48-7	HSL	2.50E+04	J	2.43E-01	O	1.50E-06	X			8.91E+01	H
p-Cresol [4-Methylphenol]	106-44-5	HSL			1.14E-01	O					8.51E+01	H
Dibenzofuran		HSL									1.32E+04	H
1,2-Dichlorobenzene [o-Dichlorobenzene]	95-50-1	HPP	1.00E+02	A	1.00E+00	A	1.93E-03	A	1.70E+03	A	3.98E+03	A
1,3-Dichlorobenzene [m-Dichlorobenzene]	541-73-1	HPP	1.23E+02	A	2.28E+00	A	3.59E-03	A	1.70E+03	A	3.98E+03	A
1,4-Dichlorobenzene [p-Dichlorobenzene]	106-46-7	HPP	7.90E+01	A	1.18E+00	A	2.89E-03	A	1.70E+03	A	3.98E+03	A
2,4-Dichlorophenol	120-83-2	HPP	4.60E+03	A	5.90E-02	A	2.75E-06	A	3.80E+02	A	7.94E+02	A
Dichlorotoluene [Benzal Chloride]	98-87-3		2.50E+00	D	3.00E-01	C	2.54E-02	X	9.90E+03	D	1.60E+04	D
Diethylstilbestrol [DES]	56-53-1		9.60E-03	A					2.80E+01	B	2.88E+05	A
2,4-Dimethylphenol [as-m-Xylenol]	1300-71-6	HPP	4.20E+03	C	6.21E-02	H	2.38E-06	X	2.22E+02	C	2.63E+02	C
1,3-Dinitrobenzene	99-65-0		4.70E+02	A					1.50E+02	B	4.17E+01	A



KEY PRODUCTS
8633 W LYNX
MILW ERP, FID 241 437 7

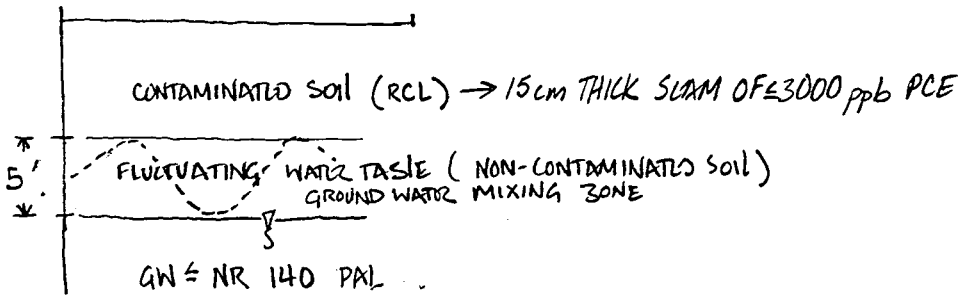
HAMPTON PLUMBING
8617 W KAUL
MILW LUST, FID 241 731 6



SAMPLE	CONCENTRATION PCE (ppb)
SS 1	↑↑ PVOCs
REMSS 1	3000
SS 4	DETECT PVOCs
REM SS4	1500

EQU 9: ALGORITHM FOR GW MIXING ZONE DAF FOR NR 720 GENERIC RCL'S FROM 08 NOV 96 KLY PRODUCTS REPORT →

ASSUMPTIONS:



1) RESIDUAL CONTAMINANT LEVEL ($\mu g/kg$) = NR 140 PAL $\times 10^{-3}$ mg/$\mu g \cdot K_{oc} \cdot f_{oc} \cdot$ DAF

2) NR 140 PAL $\times 10^{-3}$ mg/μg = $\dfrac{RCL}{K_{oc} \cdot F_{oc} \cdot DAF}$

3) $C_{GW} \times 10^{-3}$ mg/μg = $\dfrac{C_{soil}}{K_{oc} \cdot F_{oc} \cdot DAF^*}$ $\cong$ 83 ppb PCE

* $DAF = \dfrac{d}{\theta t}\left(K_{oc} f_{oc} \rho + n\right) = \left(\dfrac{152.4\,cm}{.1\,cm^3/cm^3 \cdot 15\,cm}\right)\left(3.64\times10^2\,ml/g \cdot .001\,g/g \cdot 1.35\,g/cm^3 + .49\,cm^3/cm^3\right)$

$DAF = (101.6)(.9814) = 99.71$

CONCLUSION: BASED ON EQU 9 FROM THE 08NOV96 KLY PRODUCTS REPORT; A 15 cm THICK SEAM OF 3000 ppb PCE CONTAMINATED SOIL WOULD RESULT IN A GW CONCENTRATION OF ≃ 83 ppb PCE. ASSUMING A 5' GW MIXING ZONE, PCE $K_{oc} = 3.64\times10^2$ L/kg, $f_{oc} = .001$ g/g, $\theta = .1\,cm^3/cm^3$, $\rho = 1.35$ g/cm^3, AND $n = .49\,cm^3/cm^3$.

A GROUND WATER CONCENTRATION OF 83 ppb PCE EXCEEDS THE NR 140 PAL (.5ppb PCE AND THE NR 140 ES (5ppb PCE)

$$DAF = \underbrace{\frac{d}{\theta t}}_{a}\underbrace{(K_{oc} f_{oc} \rho + n)}_{b} = (101.6)(.9814) = 99.71$$

$$a = \frac{152.4\ cm}{\frac{.1\ cm^3}{1\ cm^3} \cdot \frac{15\ cm}{1}} = \frac{152.4\ cm}{1.5\ cm} = \boxed{101.6}$$

$$b = \left(\frac{3.64 \times 10^{2}\ L}{kg} \cdot \frac{.001\ g}{g} \cdot \frac{1.35\ g}{cm^3}\right) + \frac{.49\ cm^3}{cm^3}$$

$$= \left(\frac{364\ L}{1\ kg} \cdot \frac{1 \times 10^{-6}\ kg}{g} \cdot \frac{1.35\ g}{.001\ L}\right) + \frac{.49\ cm^3}{cm^3}$$

$$b = (.4914 + .49) = \boxed{.9814}$$

$$C_{GW} \cdot \frac{10^{-3}\ mg}{ug} = \frac{C_{SOIL}}{\underbrace{K_{oc} \cdot F_{oc} \cdot DAF}_{x}} \cong 83\ ppb\ PCE$$

$1\ Kg = 1000\ g$

$$x = \left[\frac{\left(\frac{3000\ ug}{kg}\right)\ PCE\ @\ REMSS1}{\underbrace{\left(\frac{364\ L}{kg}\right) \cdot \left(\frac{1 \times 10^{-6}\ kg}{g}\right) \cdot \left(\frac{99.71}{1}\right)}_{.0363\ \frac{L}{g}}}\right] = \left[\frac{3000\ ug}{1000\ g} \cdot \frac{1\ g}{.0363\ L}\right] \cong 82.6\ mg/L$$

$$\left(C_{GW} \cdot \frac{10^{-3}\ mg}{ug}\right) = x$$

$$C_{GW} = \frac{83\ ug}{L} \cdot \frac{1\ mg}{10^{-3}\ ug} \cdot \frac{1\ mg}{.001\ g} \cdot \frac{1 \times 10^{-6}\ g}{1\ mg} = 83\ mg/L$$

Photo #1 - Geoprobe Area

Photo #2 - Geoprobe Area

Photo #3 - Geoprobe Area

REFERENCES

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