GERAGHTY & MILLER, INC.
Environmental Services

February 23, 1990

2414249.20
03-41-000081
closed

Mr. Jim Schmidt
Wisconsin Department of Natural Resources
Post Office Box 12436
Milwaukee, Wisconsin 53212

RE: Scot Industries - Installation and Monitoring of Sump/Air Venting System at Former UST Location.

Dear Mr. Schmidt:

Consistent with the Work Plan which Geraghty & Miller, Inc. submitted to the Wisconsin Department of Natural Resources (WDNR) on May 5, 1989, and which was approved by the WDNR on May 25, 1989, Scot Industries has installed a sump/air venting system at the location of a former UST inside their Milwaukee facility. The Scot Industries facility is located at 1532 W. Galena St., Milwaukee, Wisconsin. The purpose of the sump is to collect affected water and/or petroleum product, if any, emanating from a limited area of visibly stained soils/fill previously observed in the northwestern portion of the UST excavation (see Site Assessment Report, Geraghty & Miller, Inc., March 24, 1989). The purpose of the air venting portion of the system is to provide passive air venting for any affected soil/fill materials. This letter report documents the installation and monitoring of the system and also the monitoring of excavated soils.

Installation of System

The sump/air venting system was installed on December 12, 1989; installation of the system was documented by Geraghty & Miller staff. As discussed in the approved Work Plan, the sump/air venting system was installed along the west wall of the excavation prior to lining the excavation with concrete. The concrete lining is designed to act as a secondary containment structure for a new steel settling process tank which will be placed within the concrete-lined pit. The floor of the concrete-lined pit contains a closed sump for containing and collecting any liquids released from the steel tank.

The sump/air venting system consists of a 10-foot long slotted section of 4-inch diameter PVC pipe placed horizontally along the base of the stained soils previously observed. A second 10-foot long slotted section of 4-inch diameter PVC pipe was placed horizontally above the area of stained soils. An illustration of the sump/air venting system, as installed, is shown in Figure 1. The two slotted PVC pipes are attached to an un-slotted 8-inch diameter section of PVC pipe placed vertically extending up from the excavation. The lower slotted PVC pipe is gradually sloped downward toward the vertical pipe. Gravel-sized crushed rock was used to backfill around the slotted PVC pipes. The vertical PVC pipe extends above ground surface to a wall vent. An access port is located in the vertical pipe for access to measure any fluid levels, evacuate any fluids from the sump, and monitor/screen the air stream as it is passively vented from the soils. During installation of the system, and the preceding several months, no liquids were observed within the excavation.

Monitoring of System and Excavated Soils

As discussed in the approved Work Plan, the sump/air venting system was monitored by Geraghty & Miller staff after installation. Monitoring of the sump/air venting system was conducted on January 10, 1990 and January 18, 1990. In addition, the pile of excavated soils was also monitored.

January 10, 1990 Monitoring of System

The sump/air venting system was monitored by Geraghty & Miller staff for the presence of liquids and volatile organic compound (VOC) air emissions on January 10, 1990. The air stream from the passive ventilation system was screened using an Organic Vapor Analyzer (OVA). The passive ventilation system yielded an OVA reading of 0 parts per million (ppm) over background of VOCs. No discernable odors emanating from the sump were noticed during the screening process.

On January 10, liquids were observed in the bottom of the sump and a depth to water of 7.15 feet below ground surface was measured using an electronic oil/water interface probe. No oil layer was detected by the interface probe. The total depth of the sump was measured to be approximated 9.9 feet below ground surface. Using a new, polyethylene bailer and new polypropylene cord, a water sample (W-1) was collected from the sump. The water sample

appeared to consist of relatively clean water with a very slight white milky appearance. No oily sheen was observed on the water. The water sample was submitted to Swanson Environmental Laboratories (WDNR Certification #268181760) for benzene, toluene, ethylbenzene, and xylene (BTEX) analysis as well as total petroleum hydrocarbon (TPH) analysis.

Over the several months preceding installation of the system, and at the time of installation of the sump/air venting system, the excavation was not observed to contain any water. However, during installation of the concrete lining and backfill in the UST excavation, which followed the installation of the sump/air venting system, the concrete contractor reportedly used approximately 75 to 125 gallons of water for cutting and forming of the concrete. This water was allowed to percolate into the sump/air venting system backfill. The water observed within the sump on January 10, therefore, is at least partially due to installation of the concrete liner. Scot Industries pumped the sump out twice during the week of January 15, 1990. Approximately 50 gallons of clear and odorless water with no oily sheen were removed from the sump during this period.

January 18, 1990 Monitoring of System

The sump/air venting system was also monitored by Geraghty & Miller staff on January 18, 1990. The air stream from the passive ventilation system was screened using an HNu photoionization detector equipped with a 10.2 eV lamp. The passive ventilation system yielded an HNu reading of approximately 5 to 6 ppm of photoionizable VOCs over background levels. No discernable odors were found to be emanating from the sump during the screening process.

On January 18, liquids were again observed in the bottom of the sump and a depth to water of approximately 7.9 feet below ground surface was measured using an electronic oil/water interface probe. No oil layer was detected by the interface probe. Scot Industries has pumped the sump out again several times since January 18 and recovered approximately 200 to 250 gallons of water. Water removed from the sump is consistently relatively clear and odorless with no oily sheen. The majority of the water removed from the sump has been stored on-site.

Monitoring of Excavated Soils

At the time of installation of the sump/air venting system (December 12, 1989), the pile of soil removed from the excavation (estimated to be approximately 70 cubic yards) and stored on-site, was monitored using an HNu photoionization detector equipped with a 10.2 eV lamp. The monitoring was accomplished by placing three soil grab samples within sealed jars and bringing them inside the Scot Industries building to warm the soils. After warming the soils to near room temperature, the headspace of the three sample jars was then screened with the HNu. One sample produced an HNu reading of 2 to 3 parts per million (ppm) over background, while the other two samples did not produce any readings over background.

The pile of excavated soils stored on-site was sampled by Geraghty & Miller staff on January 10, 1990, at the request of the WDNR. This soil sampling was requested by the WDNR to verify that the soils do no contain substantial concentrations of BTEX compounds or TPH. Two grab soil samples were collected from the pile at depths of 1 to 2 feet into the pile. One of the two soil sample locations was at the point where the prior soil headspace analysis detected 2 to 3 ppm over background levels of VOCs (southeast corner of pile, S-1). The other soil sample was collected from the opposite side of the soil pile (northwest corner, S-2). The two soil samples were submitted to Swanson Environmental Laboratories for BTEX and TPH analyses. Due to a laboratory error, the two soil samples were collected again on February 2, 1990 (S-1-2, S-2-2).

Laboratory Analytical Results

The laboratory analytical results for the water sample collected from the sump and the two soil samples collected from the soil pile are presented in Table 1; the complete laboratory report is attached. Analysis of the water sample collected from the sump system indicates the water contains a relatively low concentration of xylene (3 parts per billion or ppb) and TPH (4.8 ppm). A sample of the honing oil used at Scot Industries was submitted to the laboratory for use as a standard in the TPH analyses. However, the laboratory could not extract any compounds from this oil and was unable to use it as a standard. The first soil sample (S-1-2) did not contain detectable concentrations of BTEX compounds or TPH. The second soil sample (S-2-2) contained relatively low concentrations of toluene (0.07 ppm), xylene (1.00 ppm), and TPH (19 ppm).

CONCLUSIONS

The sump/air venting system installed within the former tank excavation inside the Scot Industries building appears to be performing adequately for its intended purpose. This system was installed consistent with the WDNR approved Work Plan. The water sample collected from the sump, which is likely a combination of runoff from the concrete contractor, perched water beneath the building foundation, and possibly ground water, contained only trace levels of xylenes and TPH which are well below any available ground-water standards. The water being pumped out of the sump appears to be dischargeable to the sanitary sewer system based on the laboratory results. Monitoring of the air emissions indicates the air venting portion of the system is discharging negligible levels of petroleum related VOCs.

Based on the data presented above, it appears that additional monitoring of the sump/air venting system is not warranted. The water which collects in the sump is apparently relatively clean and is not expected to change adversely. Although the passive air venting system is producing detectable levels of VOC's, the levels are consistently relatively low (0 to 6 ppm). Therefore, considering the relatively low discharge rate from the passive system, additional monitoring of either the sump, or the passive venting system, is apparently not necessary. Periodic pumping out of the sump will be performed by Scot Industries in order to maintain the effectiveness of the passive venting system.

Soil samples from the pile of excavated soils stored on-site contained a non-detectable concentration to 19 ppm of TPH and one sample contained a relatively low level of toluene and xylenes. Because this is an industrial property with limited access, the property is underlain by clay-sized materials, the concentration of TPH detected in both soil samples was relatively low, and due to the relatively small quantity of soil (70 cubic yards) involved, the pile of excavated soils could be used for fill and spread on-site with minimal potential for affecting ground water or causing any type of adverse environmental effects.

Due to the findings of this investigation and results from installation and monitoring of the sump/air venting system, further remedial actions do not appear to be warranted and a closure of the former underground storage tank at Scot Industries has been documented. A Wisconsin Department of Industry, Labor and Human Relations (DILHR) Underground Petroleum Product Tank Inventory form has been completed and is attached.

Respectfully submitted,

GERAGHTY & MILLER, INC.

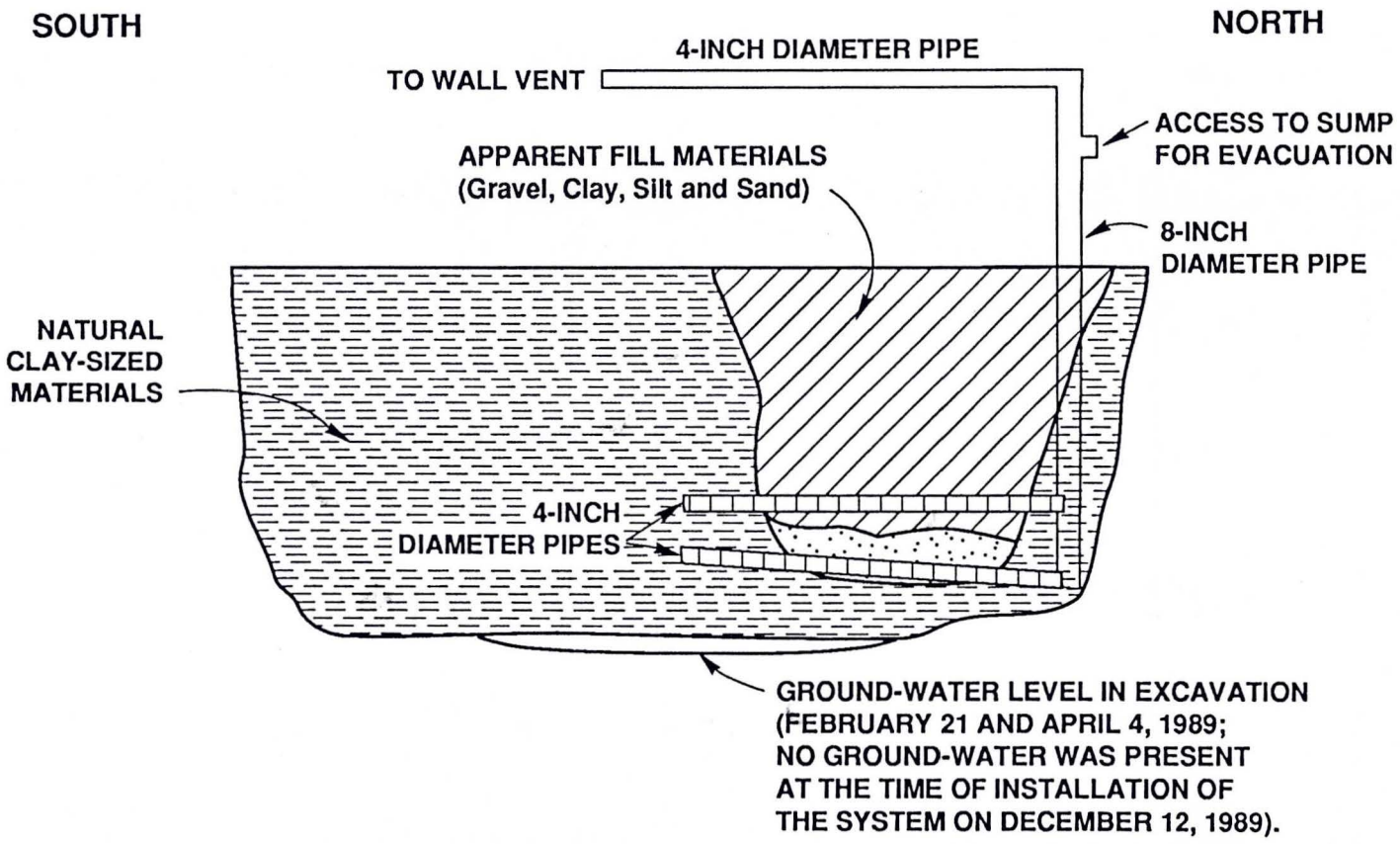
Thomas C. Sullivan
Staff Scientist

Brad J. Berggren, P.E.
Principal Engineer/
Associate

Enclosures

cc: Mr. Russel Ingbretson, Scot Industries
Safety & Buildings Division, DILHR
Mr. Alexander Pendleton, Foley & Lardner

445scot/vntsys.let



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VERTICAL AND HORIZONTAL
SCALE IN FEET

LEGEND

OBSERVED AREA OF STAINED SOILS

GERAGHTY & MILLER, INC.
Ground-Water Services

FIGURE 1
CROSS-SECTION OF
WEST WALL OF EXCAVATION
SHOWING SUMP/AIR VENTING SYSTEM
SCOT INDUSTRIES
MILWAUKEE, WISCONSIN

SWANSON ENVIRONMENTAL INC.

3150 North Brookfield Road
Brookfield, Wisconsin 53005
telephone (414) 783-6111
facsimile (414) 783-5752

ANALYTICAL REPORT

AIHA Accreditation #352
WDNR Certification #268181760

REPORT NUMBER: B0065
AMENDED 02/12/90

Geraghty & Miller
322 East Michigan, Suite 600
Milwaukee, WI 53202

Attn: Mr. Tom Sullivan
Project #WI02001

DATE: January 24, 1990
PURCHASE ORDER:
SEI JOB NO: WL1651
DATE COLLECTED: 01/10/90
DATE RECEIVED: 01/10/90

Water/Soil Samples (Milwaukee)

Units: ug/l (ppb)
Detection Limit: 1, unless otherwise noted below in ( )

Parameter	SEI ID / Water ID	1651-1 / W-1
Benzene		ND
Ethylbenzene		ND
Toluene		ND
Xylenes		3
Total Petroleum Hydrocarbons, mg/l (0.2)		4.8

Units: mg/kg (ppm)
Detection Limit: 0.05, unless otherwise noted below in ( )

Parameter	SEI ID / Soil ID	1651-2 / S-1	1651-3 / S-2
Benzene		ND	ND
Ethylbenzene		ND	ND
Toluene		ND	0.07
Xylenes		ND	1.00

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen
Laboratory Supervisor

ORIGINAL

SWANSON ENVIRONMENTAL INC.

3150 North Brookfield Road
Brookfield, Wisconsin 53005
telephone (414) 783-6111
facsimile (414) 783-5752

ANALYTICAL REPORT

AIHA Accreditation #352
WDNR Certification #268181760

REPORT NUMBER: B0194

Geraghty & Miller
322 East Michigan, Suite 600
Milwaukee, WI 53202

Attn: Mr. Tom Sullivan
Project #WI02001

DATE: February 7, 1990
PURCHASE ORDER:
SEI JOB NO: WL1855
DATE COLLECTED: 02/02/90
DATE RECEIVED: 02/02/90

Soil Sample (Milwaukee, WI)

Units: mg/kg (ppm)
Detection Limit: 5

SEI ID	Sample ID	Total Petroleum Hydrocarbons
1855-1	S-1-2	ND
1855-2	S-2-2	19

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen
Laboratory Supervisor

ORIGINAL

Wisconsin Department of Industry, Labor and Human Relations

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Send Completed Form To:
Safety & Buildings Division
P O. Box 7969
Madison, WI 53707
Telepnone (608) 267-5280

For Office Use Only:
Tank ID #

This form is to be completed pursuant to Section 101.142, Wis. Stats., to register all underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances. Please see the reverse side for additional information on this program. An underground storage tank is defined as any tank with at least 10 percent of its total volume (included piping) located below ground level. **A separate form is needed for each tank. Send each completed form to the agency designated in the top right corner.**

This registration applies to a tank that is (check one):
1 ☐ In Use
2 ☐ Abandoned With Product
3 ☐ Abandoned No Product (empty) or With Water
4 ☒ Abandoned - Tank Removed
6. ☐ Abandoned - Filled With Inert Material
7 ☐ Out of Service

Fire Department Providing Fire Coverage Where Tank Located:
MILWAUKEE, CITY OF

A. IDENTIFICATION: (Please Print)

1 Installation Name: SCOT INDUSTRIES

2 Mailing Name if Different Than #1:

Installation Street Address: 1532 W. GALENA

Mailing Address if Different Than #1: P.O. BOX 5589

☒ City ☐ Village ☐ Town of: MILWAUKEE

☒ City ☐ Village ☐ Town of: MILWAUKEE

State	Zip Code	County
WI	53205	MILWAUKEE

State	Zip Code	County
WI	53205	MILWAUKEE

3 Name of Contact Person: RUSSELL INGBRETSON, GENERAL MANAGER

4. Owner Name if Different Than #3:

Street Address: 1532 W. GALENA

Street Address:

☒ City ☐ Town ☐ Village of: MILWAUKEE | State: WI | Zip Code: 53205

☐ City ☐ Town ☐ Village of: | State: | Zip Code:

County: MILWAUKEE | Telephone No. (include area code): 414-342-4310

County: | Telephone No. (include area code):

5. Tank Age (date installed, if known: or years old): APPROX. 20 YEARS OLD

6. Tank Capacity (gallons): APPROX. 8,000

7. Tank Manufacturer's Name (if known): UNKNOWN

B. TYPE OF USER (check one):

1. ☐ Gas Station
2. ☐ Bulk Storage
3. ☐ Utility
4. ☐ Mercantile
5. ☒ Industrial
6. ☐ Government
7. ☐ School
8. ☐ Residential
9. ☐ Agricultural
10 ☐ Other (specify): _____

C. TANK CONSTRUCTION:

1. ☒ Bare Steel
2. ☐ Cathodically Protected and Coated Steel (☐ Sacrificial Anodes or ☐ Impressed Current)
3. ☐ Coated Steel
4. ☐ Fiberglass
5. ☐ Other (specify): _____
6. ☐ Relined
7. ☐ Steel - Fiberglass Reinforced Plastic Composite

Is tank UL Approved? ☐ Yes ☐ No UNKNOWN | Is Tank Double Walled? ☐ Yes ☒ No

Overfill Protection Provided? ☐ Yes ☒ No If yes, identify type:

D. PIPING CONSTRUCTION

1. ☒ Bare Steel
2. ☐ Cathodically Protected Steel (With Coating? ☐ Yes ☐ No)
3. ☐ Coated Steel
4 ☐ Fiberglass
5. ☐ Other (specify): _____
6. ☐ Unknown

Cathodic Protection By: ☐ Sacrificial Anodes or ☐ Impressed Current | UL Approved? ☐ Yes ☐ No | Double Walled ☐ Yes ☐ No

E. TANK CONTENTS

1. ☒ Diesel
2. ☐ Leaded
3. ☐ Unleaded
4. ☐ Fuel Oil
5. ☐ Gasohol
6. ☐ Other
7. ☐ Empty
8. ☐ Sand/Gravel/Slurry
9. ☐ Unknown
10. ☐ Premix
11. ☐ Waste Oil
12 ☐ Propane
13. ☐ Chemical * _____ _____ _____
14. ☐ Kerosene
15. ☐ Aviation

* If # 13 is checked, indicate the chemical name(s) or number(s) of the chemical or waste.

If Tank Abandoned, Give Date (mo/day/yr): 2/11/89

Has Clean Closure Status Been verified? (see reverse side for details) ☒ Yes ☐ No

If installation of a new tank is being reported, indicate who performed the installation inspection:
1 ☐ Fire Department 2. ☐ DILHR 3 ☐ Other (identify) _____

Signature of Person Completing Report: Thomas C. Sullivan, GERAGHTY & MILLER, INC.

Date Signed: 2/21/90

SBD 7437 (R 08.88)

BACKGROUND FOR TANK INVENTORY

On May 4, 1984, legislation commonly known as the Groundwater Protection Act was signed into law. This legislation required the creation of an inventory of underground petroleum product storage tanks. A record of this information was necessitated by numerous reported incidents of groundwater contamination by petroleum products. Many tanks have been installed, used and forgotten. These installations can threaten the groundwater.

This underground tank inventory is being established to help identify the need for future actions required to clear up potential problems before they occur. Your help in identifying abandoned, " in use " and " new use " tank locations will greatly assist this effort to protect Wisconsin's groundwater.

CLEAN CLOSURE INFORMATION

Requirements for clean closure of an out-of-service underground storage tank were outlined in the proposed federal rules in the April 17, 1987 Federal Register, Volume 52, No. 74 at § 280.80 as follows:

> (d) This requirement is satisfied if one of the external monitoring release detection methods allowed under § 280.41 is in use at the site at the time of closure, or if the owner or operator uses:
>
> (1) Portable gas chromatograph mapping;
>
> (2) Analysis of soil core samples for hydrocarbon and /or chemical contamination in the unsaturated zone;
>
> (3) Analysis of groundwater surrounding the tank for released product; or
>
> (4) Another site assessment method that has been approved by the implementing agency.

To record a clean closure, a report of the information and results obtained through the site assessment must be submitted to the following address:

Safety & Buildings Division
P.O. Box 7969
Madison, WI 53707

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES
P. O. Box 12436
Milwaukee, Wisconsin 53212

Carroll D. Besadny
Secretary

May 25, 1989

File Ref: 4440

Russel Ingbretson
Scot Industries
P. O. Box 5867
Milwaukee, Wisconsin 53205

RE: Petroleum Contaminated Soil at Scot Industries

Dear Mr. Ingbretson,

The Department has completed its review of the information supplied by Geraghty and Miller, Inc. on the sump/air venting system to be installed at your facility located at 1532 West Galena St., Milwaukee.

The system proposed should be adequate to allow for the decontamination of the soils and is approved by the Department provided the following conditions are met:

1. Once the installation is complete and enough liquid has entered the pipe to draw a sample, an intial analysis should be performed to determine the level of contamination. This will provide bench mark data which can be used both to determine the effectiveness of the system as well as data needed for disposal.

2. This system should be pumped out on a weekly basis to begin with. If this frequency proves to be inadequate based on the recharge of the system an alternate pumping frequency should be proposed.

3. The air venting system should be screened with a photoionization dectector on a weekly basis to determine the effectivesness of the venting. Once data has been supplied a more definitive sampling schedule can be proposed. Should levels be found to be high on a continued basis (two months) an adjustment to the system (active vs. passive) will have to be made.

If you have any questions regarding this please contact me at 562-9648.

Sincerely,

James A. Schmidt

James A. Schmidt
Environmental Repair Section Supervisor

cc: Tom Bergamini SW/3-ERR

mb

GERAGHTY & MILLER, INC.
Ground-Water Services

May 5, 1989

Mr. Jim Schmidt
Wisconsin Department of Natural Resources
Post Office Box 12436
Milwaukee, Wisconsin 53212

RE: Scot Industries

Dear Mr. Schmidt:

As we discussed in our meeting on April 4, 1989, Geraghty & Miller, Inc. has prepared a Work Plan for installation of a sump/air venting system in the tank excavation at Scot Industries. Consistent with our discussions, this sump is intended to capture limited amounts of petroleum product, if any, emanating from the limited area of fill and stained soils observed in the northwest portion of the excavation. In addition, the sump is intended to act as a passive air venting system for the fill materials.

Scot Industries plans to line the present excavation with concrete and then install a steel settling tank and pumping system in the lined excavation. The new steel settling tank will be used in future plant operations. The concrete lining will contain a closed sump for containing and collecting liquids which may accumulate in the base of the lining from spills or rupture. Engineering drawings for the concrete lining are shown in Figure 1.

During installation of the concrete lining, a sump/air venting system will also be installed along the exterior of the west concrete lining wall. The sump/air venting system will consist of a 10 to 15-foot long slotted piece of 4-inch diameter schedule 80 PVC pipe placed horizontally along the base of the stained soils observed in the area of fill. In addition, a second 10 to 15-foot long slotted piece of 4-inch diameter schedule 80 PVC pipe will be placed horizontally above the area of stained soils (Figure 2). In the event any product accumulates in the lower pipe, the upper pipe can continue venting the soils. The two slotted PVC pipes will be attached to an unslotted 8-inch diameter piece of PVC pipe placed vertically extending out of the excavation (Figure 2). The slotted PVC pipes will be placed within the granular materials which are adjacent to the concrete lining; the lower PVC pipe will be sloped toward the vertical PVC pipe (Figure 2). The vertical segment of PVC will extend up above ground surface and over to a wall vent on the south wall of the building. The end of the PVC vent pipe will be capped to prevent foreign materials from

entering the system but will allow air to pass through. Installation of the system will be overseen and documented by Geraghty & Miller staff.

At a convenient location in the PVC piping above ground surface, a sealed access will be located for insertion of a suction hose to evacuate any product collected in the sump. The accumulated product will be discharged to a holding tank or 55-gallon drum, measured, and disposed of properly. Fluid levels in the sump/air venting system will be monitored on a regular basis and pumped until no further product accumulates. Monitoring of the sump will initially be performed by Geraghty & Miller staff and thereafter by Scot Industries. Based on observations following excavation, it is projected that only a small volume of product,if any, will be collected. The passive air venting system will be left in place indefinitely.

Conversations with Mr. Jeff Burger, WDNR Air Management Section, indicate no permit or air discharge monitoring is required for the passive air venting system, if organic compound emissions are less than 3 lbs/hr or 15 lbs/day. Emissions from the system are expected to be significantly below these levels. Benzene emissions are also regulated by the WDNR, however, benzene has not been detected in samples collected from the excavation.

Scot Industries would like to proceed with installation of the sump/air venting system and settling tank in the near future. Upon your approval of this Work Plan, Scot Industries will proceed. Please contact us if you have any questions or comments.

Respectfully Submitted,

GERAGHTY & MILLER, INC.

Tom Sullivan
Scientist II

Brad Berggren, P.E.
Principal Engineer

cc: Mr. Russell Ingbretson, Scot Industries
Mr. Alexander Pendleton, Foley & Lardner
Mr. Sandy Pendleton, Foley & Lardner

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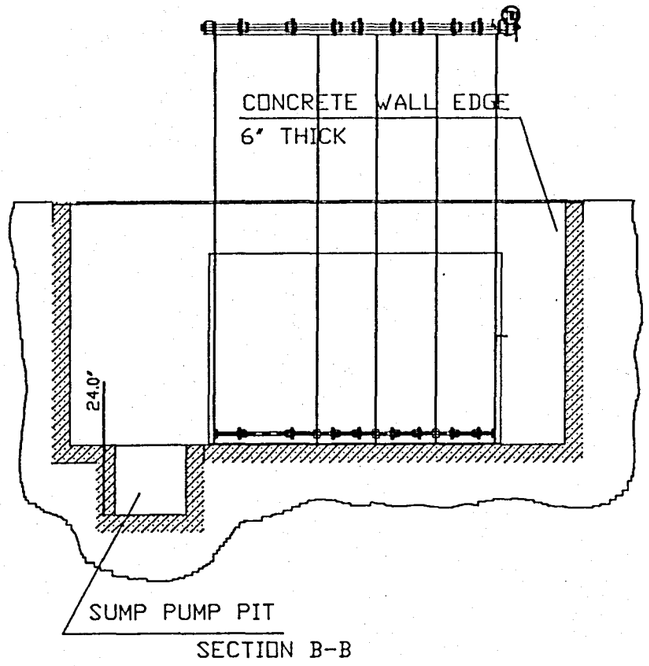
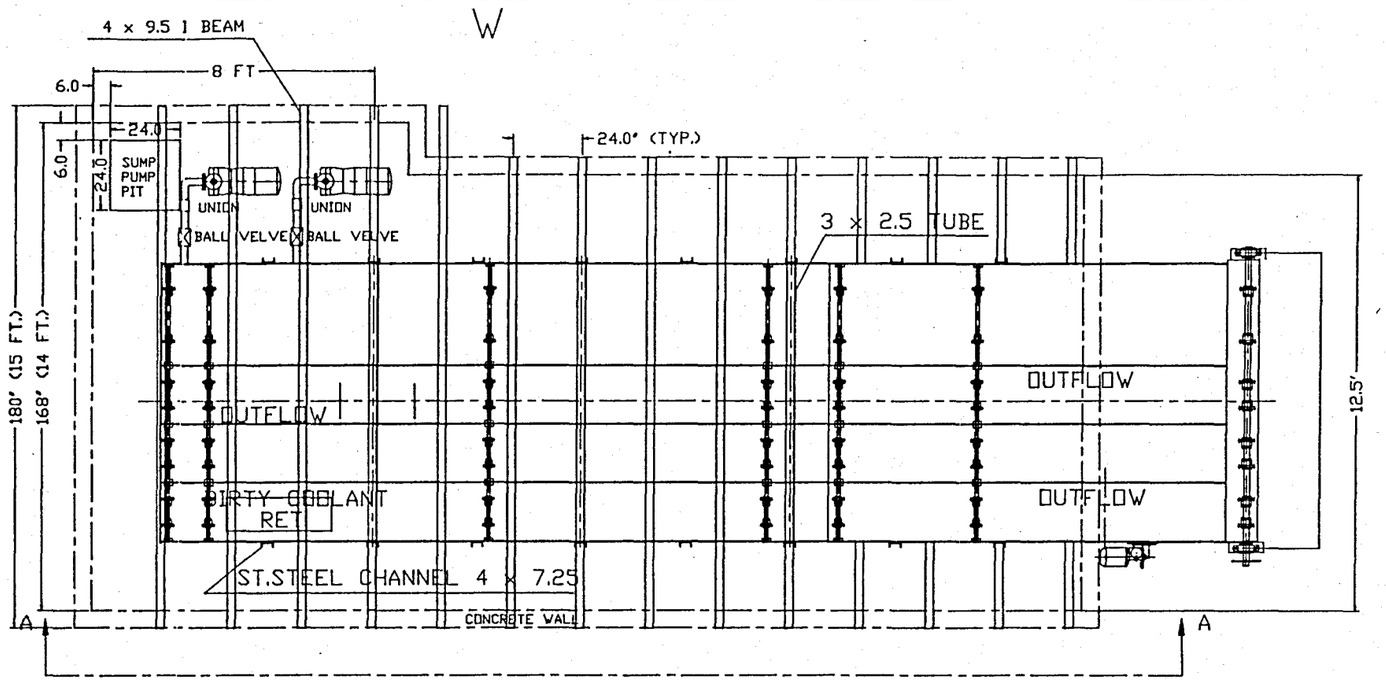
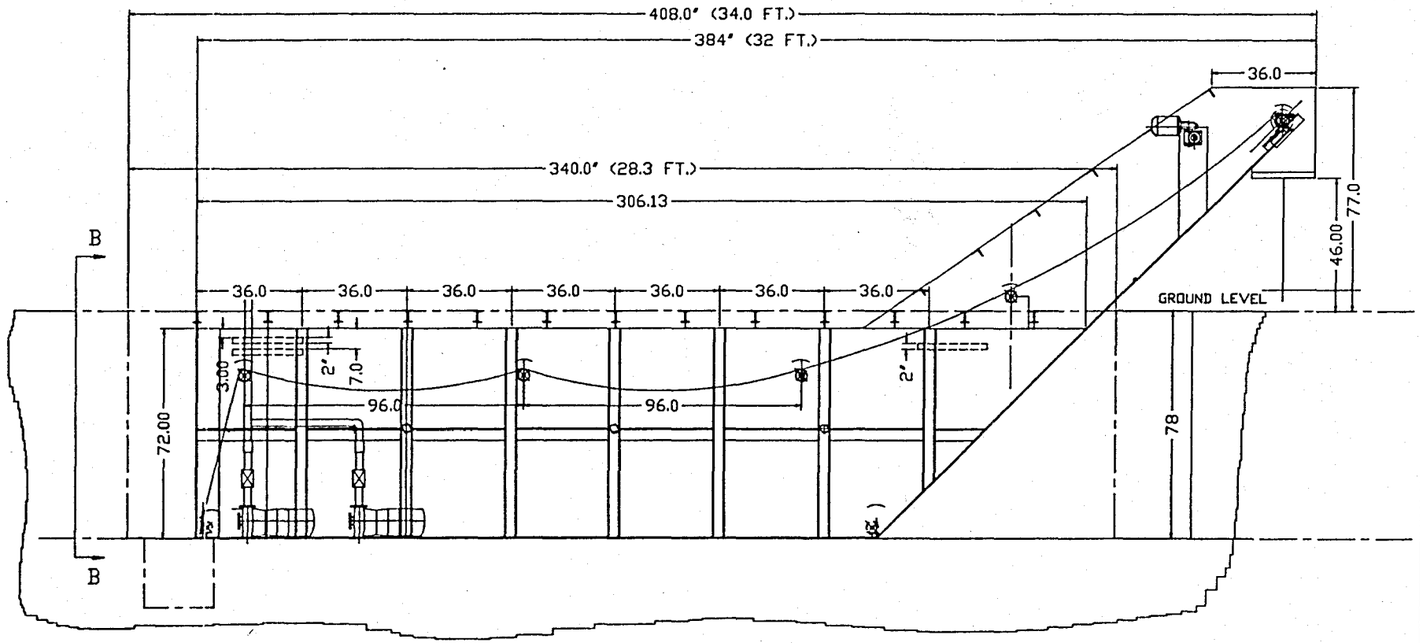


SECTION B-B





SECTION A-A

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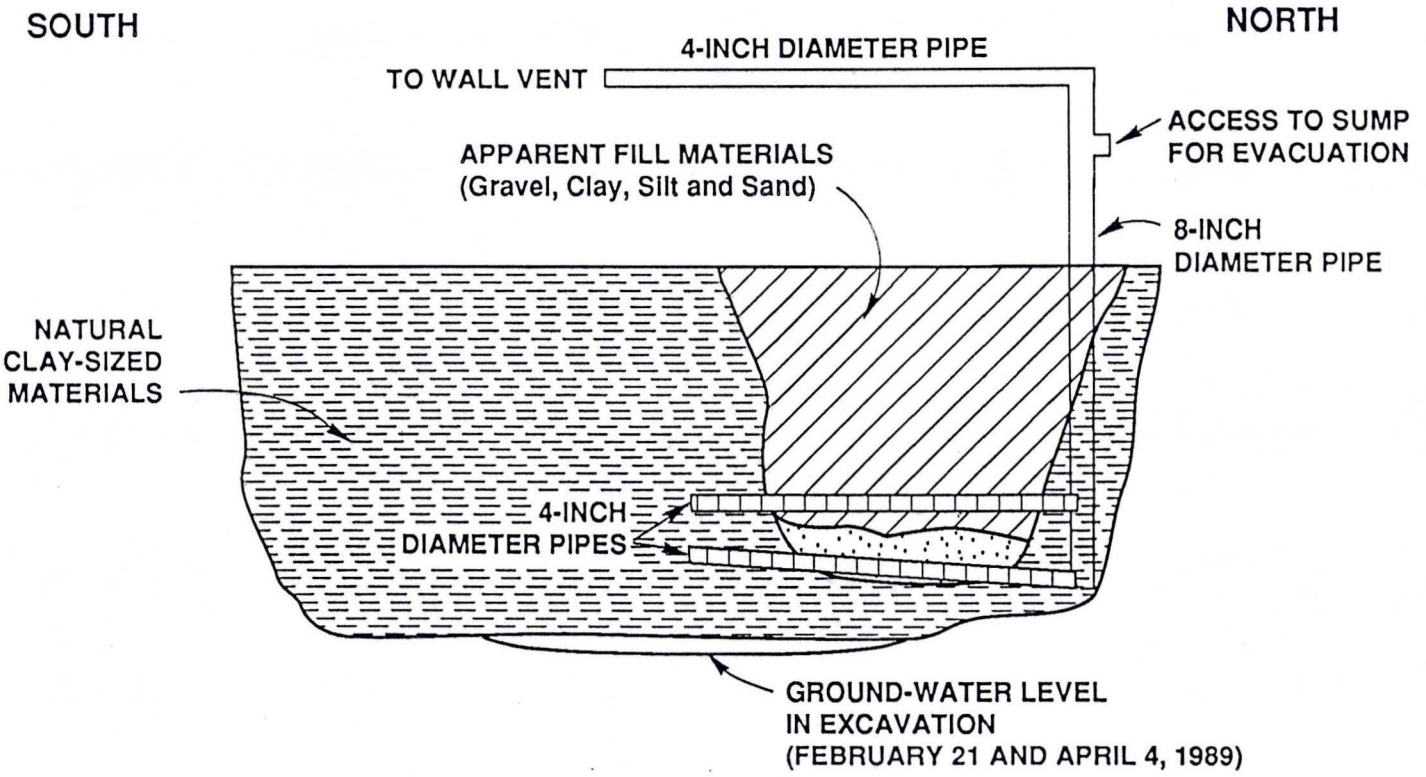
SOURCE: SCOT INDUSTRIES

FIGURE 1
PROPOSED LAYOUT OF MILWAUKEE PLANT
HONE COOLANT SYSTEM
CONCRETE SLAB

MIFA **APR 1 8 1989**



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VERTICAL AND HORIZONTAL
SCALE IN FEET

LEGEND

OBSERVED AREA OF STAINED SOILS

GERAGHTY & MILLER, INC.
Ground-Water Services

FIGURE 2
CROSS-SECTION OF
WEST WALL OF EXCAVATION
SHOWING SUMP/AIR VENTING SYSTEM
SCOT INDUSTRIES
MILWAUKEE, WISCONSIN

GERAGHTY & MILLER, INC.
Ground-Water Services

March 24, 1989

Mr. James Schmidt
Wisconsin Department of Natural Resources
Post Office Box 12436
Milwaukee, Wisconsin 53212

RE: Scot Industries

Dear Mr. Schmidt:

At the request of Scot Industries, Geraghty & Miller, Inc. has performed a preliminary assessment of an underground storage tank excavation at the Scot Industries facility in Milwaukee, Wisconsin. The purpose of this investigation was to determine the source of apparent petroleum product which was encountered in that excavation and to assess the extent of affected soils and potentially affected ground water. This letter report summarizes the results and conclusions of the investigation.

INTRODUCTION

The Scot Industries facility is located at 1532 West Galena Street, Milwaukee, Wisconsin (Figure 1). The facility is bounded by Galena Street to the south, 16th Street to the west, a storage yard to the east, and a parking lot to the north (Figure 2).

Scot Industries initially acquired a pre-existing building on the aforementioned property in approximately 1953. This building was subsequently expanded on two occasions by Scot Industries in 1956 and 1965. Figure 3 illustrates the current Scot Industries building including the pre-existing building and two expansions. The pre-existing building was reportedly occupied by a local

newspaper as a vehicle maintenance facility prior to Scot Industries' ownership. The current office area was developed from a former residence and is connected to the 1956 expansion.

A gas station is reported to have previously occupied a portion of the western (1965) expansion area (Figure 3). This gas station was located at the intersection of 16th and Galena Streets. Records of underground storage tank usage, integrity, and possible removal or abandonment in place are not readily available.

A review of available historical aerial photographs (1963-1985) of the area support the approximate dates of building expansion and the use of the intersection of 16th and Galena Streets as a gas station. The gas station is not readily discernable in the earliest available aerial photograph and may have closed prior to that time.

Current operations conducted at Scot Industries include honing, straightening, and custom working of steel tubing and pipe. Petroleum products used at the facility include cutting oil and honing oil. The cutting oil is self-contained in three above ground process coolant tanks (Figure 4). The honing oil used in process operations consists of diesel oil and sulfurized lard. After honing oil has been used in manufacturing processes, it is routed through above ground piping into a set of three filter process tanks which are combined as a 3500 gallon filtering tank unit (Figure 4). This filter process unit is open topped, approximately 5 feet deep, and the majority of the unit is underground. All piping for these tanks is above ground. This filter process unit is approximately 24 years old and constructed of welded steel. The underground tank which has been excavated had an approximate capacity of 8,000 gallons, was constructed of steel, and was used to store diesel oil, a component of the honing oil.

This tank was located inside a corner of the original Scot Industries building (Figure 4) and was approximately 20 years old.

BACKGROUND

Scot Industries completed excavation of the 8,000 gallon diesel oil underground storage tank on February 11, 1989. A visual inspection of the excavated tank by Scot Industries did not reveal any visible leaks from the tank or the tank fill piping. At that time, no petroleum product was reportedly observed in the excavation and the excavation did not contain any water. However, Plant personnel did observe several inches of water in the excavation along with some apparent petroleum product on February 13, 1989. Mr. Russell Ingbretson, General Manager of Scot Industries, then contacted the Wisconsin Department of Natural Resources (WDNR), the State Department of Building Inspection - Hazardous Materials Office, and the State Safety and Buildings Division - Bureau of Petroleum Inspection and Fire Protection to report the incident.

The soil removed from the excavation is presently being stored onsite, and the excavation has not yet been backfilled. The extracted underground storage tank has been dismantled and removed from the site by a contractor. Scot Industries excavated the tank because of plans to install a concrete pit in that location to house a settling tank to be used in plant operations.

FIELD INVESTIGATIONS

On February 21, 1989, representatives of Geraghty & Miller, Inc. inspected the excavation and Scot Industries facility. The

excavation, which is approximately 24 feet (length) by 11 feet (width) and 10 feet (depth), contained approximately 6 to 10 inches of standing water in the central portion of pit. A small amount of apparent petroleum product was observed to be floating on the water in a portion of the excavation. Based on visual inspection, the soils near the northwestern corner of the excavation appeared to be stained while all other soils appeared to be natural and unaffected. An HNu organic vapor analyzer was used to screen soil samples obtained from the base and walls of the excavation for the presence of detectable volatile organic compounds (VOCs). No readings in excess of background levels were detected from any portion of the excavation that was screened.

Soil samples were collected from near the base of the excavation at three locations. Two samples were collected at each sampling location for a total of six soil samples. The first sample at each location was collected from the surface soils on the wall of the excavation; the second sample from the same location was collected from a depth of 6 to 8 inches into the wall of the excavation. Equipment used for collecting soil samples consisted of stainless steel trowels and spoons. One soil sampling location was from the soils which visually appeared to be affected near the northwestern corner of the excavation. The six soil samples were submitted to a State of Wisconsin certified laboratory for benzene, ethylbenzene, toluene, and xylene analysis (BETX) and total petroleum hydrocarbon (TPH) analysis using a diesel standard.

A water sample was collected from the accumulated ground water in the base of the excavation. The sample was submitted to the aforementioned laboratory for VOC analysis, TPH analysis using a diesel standard, and total sulfur analysis.

The observed soils exposed on the sides of the excavation indicate that the near surface geology consists primarily of clay-sized materials. Underlying a 4 inch thick concrete slab present throughout the building is approximately 6 inches to 18 inches of organic rich, greenish, sandy to silty clay-sized materials. These materials were observed to be mottled and iron stained. Underlying these materials (at approximately 18 inches to 6 feet below land surface) is greenish-gray stiff silty clay. At a depth of approximately 6 feet below land surface to the base of the excavation (approximately 10 ft) are gray-brown, stiff clay sized materials.

The northern most 10 feet of the west wall in the excavation contained gravel, sand, silt and clay sized materials which appear to be fill (Figure 5). This area of fill is the same area which appeared to contain the affected soils. The other walls of the excavation appeared to consist of the natural clay-size materials described above.

Near the base of the northeastern corner of the excavation (depth of approximately 9.5 feet) a small water seep was present in the natural clay-sized materials. This seep appeared to be producing a small amount of water and is likely one of the sources of water accumulated in the base of the excavation. The seep did not appear to be producing any petroleum product and there was no apparent discoloration of soils around the seep with the exception of some iron staining. Volatile organic compound concentrations based on HNu readings within the area of the seep were not in excess of background levels.

Other field observations obtained from the excavation include the presence of several inactive clay storm sewer lines. These lines appear to have been deactivated when the underground tank was

originally installed, or earlier, and likely crossed the area of the excavation and former tank at depths of 2 to 6 feet below land surface. No fluids were present in the former sewer lines and the liquid present in the excavation is not emanating from any of these lines. The HNu instrument probe was placed inside each former sewer line and no elevated readings were recorded. The presence of the former sewer lines was unknown to Scot Industries staff prior to the excavation.

In the original building, to the west of the excavation, an active north-south trending storm sewer line is present. This sewer line continues north past the honing oil process tank and has two catch basins located in the original building.

To evaluate the potential for leakage from the filter process unit which contains diesel based honing oil, Scot Industries (under the direction of Geraghty & Miller) measured the tank volume over a two-day period when the plant was closed. Since all piping for the unit is above ground, the first measurement was obtained seven hours after the system was shut down to allow the pipe contents to drain back into the tank. The first measurement was obtained on February 25, 1989 at 7 a.m.; the second measurement was taken on February 26, 1989, prior to the second shift employees starting in the afternoon. The temperature of the honing oil was also taken at the time of each measurement to allow for potential expansion/contraction of the liquid. Table 1 presents the measurements and temperatures recorded. The results of these measurements indicate the tanks are not leaking honing oil.

ANALYTICAL RESULTS

The analytical results from the soil samples are summarized in Table 2 and the laboratory analytical report is presented in Appendix A. Ethylbenzene, toluene, and xylenes were detected in low levels (6.2 ppm total BETX) in the surface soil sample collected from the south wall of the excavation (SS-1). Total petroleum hydrocarbons were also detected in this sample at greater levels (130 ppm). The soil sample collected from the same location on the south wall from a depth of 6 to 8 inches (SS-2) did not have any compounds detected.

The two soil samples collected from the north wall of the excavation (SS-3, SS-4) did not contain any detectable compounds. The surface soil sample from the west wall of the excavation (SS-5) contained ethylbenzene (3.4 ppm), toluene (0.5 ppm), and xylenes (24.7 ppm). Total petroleum hydrocarbons were also detected in this sample at a relatively high level (690 ppm). This sample from the west wall is in the area which appeared to be affected. The soil sample collected from the same point on the west wall from a depth of 6 to 8 inches (SS-6) contained similar levels of ethylbenzene (3.7 ppm), toluene (1.4 ppm), and xylenes (23.2 ppm). The total petroleum hydrocarbon concentration was also relatively high in this sample (570 ppm).

The water sample collected from the excavation was analyzed for VOCs, TPH, and total sulfur. VOCs were not detected in the water sample with the exception of xylenes (1 ppb). Total petroleum hydrocarbons were not detected in the water sample and sulfur was detected at a low level (14 ppm). The laboratory analytical report is presented in Appendix A.

SUMMARY AND CONCLUSIONS

This investigation has focused on characterizing the soil and water quality in the underground storage tank excavation at Scot Industries. Based on the data and information collected from this investigation, the following conclusions can be made.

- Soils on the northwest and south sides of the excavation have been affected based on soil sample analysis.

- Ground water accumulated in the base of the excavation has not been impacted based on laboratory analysis of a water sample.

- Soils in the northwest portion of the excavation appear to consist of fill materials and have the greatest relative TPH concentrations (690 ppm). The source of hydrocarbons appears to be residual and emanating from the fill materials.

- These affected fill materials are located above the observed water level, are underlain by natural clay-sized materials, and are covered by a concrete slab located within a building restricting water percolation into the subsurface. The potential for ground water to become affected from the fill therefore appears to be minimal.

- The excavation is located in a relatively confined area within a building, further excavation of affected soils is not technically feasible without demolishing a portion of the original building which would be cost prohibitive.

Given the above conclusions, plans to install a concrete pit in the excavation to hold a new settling tank can proceed with WDNR concurrence. The walls and base of the excavation will be sealed during installation of the concrete and will prevent migration of the hydrocarbons. No additional remedial actions are necessary. The soils stored onsite from the excavation will need to be analyzed for proper treatment/disposal.

Please contact us if you have any comments or questions.

Respectfully Submitted,
GERAGHTY & MILLER, INC.

Thomas C. Sullivan
Scientist II

Bruce L. Cutright
Vice President

cc: Alexander Pendleton, Foley & Lardner
Russell Ingbretson, Scot Industries

445 Scot Industries/scot.let

TABLE 1

HONING OIL FILTER PROCESS UNIT
TANK MEASUREMENTS

TANK	2/25/89 DEPTH (1)	2/25/89 TEMPERATURE (2)	2/26/89 DEPTH (1)	2/26/89 TEMPERATURE (2)	NET CHANGE (INCHES)
BACKFLUSH TANK	45-3/8	91.9	45-3/8	80.6	0
MIDDLE CLEAN TANK	38-3/8	95.5	38-3/8	83.5	0
DIRTY TANK	21-1/16	91.4	21-1/8	78.5	+1/16

(1) DEPTH OF HONING OIL IN INCHES.

(2) TEMPERATURE IN DEGREES FARENHEIT.

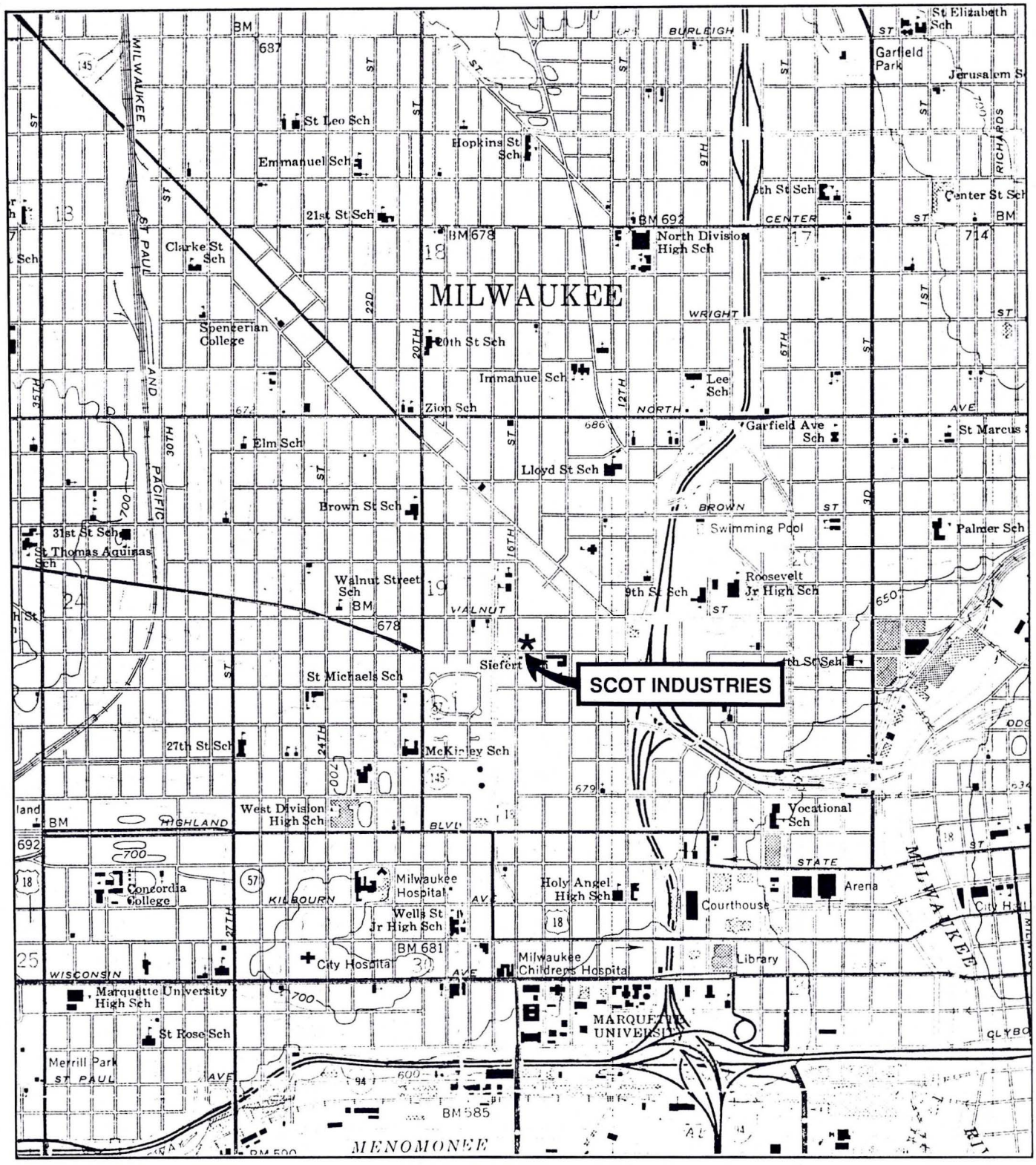
TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS

SAMPLE	PARAMETER(1) BENZENE	ETHYLBENZENE	TOLUENE	XYLENES	TPH(2)
SS-1 (Surface soil sample, south wall of excavation)	ND	1.0	0.2	5.0	130
SS-2 (Soil sample at depth, south wall of excavation)	ND	ND	ND	ND	ND
SS-3 (Surface soil sample, north wall of excavation)	ND	ND	ND	ND	ND
SS-4 (Soil sample at depth, north wall of excavation)	ND	ND	ND	ND	ND
SS-5 (Surface soil sample, west wall of excavation)	ND	3.4	0.5	24.7	690
SS-6 (Soil sample at depth, west wall of excavation)	ND	3.7	1.4	23.2	570

(1) Units are mg/kg or parts per million (ppm).
(2) Total Petroleum Hydrocarbons
ND Not detectable

445 scot/table2.wk1



SOURCE: USGS 7.5 Minute Topographic Map, MILWAUKEE, WISCONSIN Quadrangle, 1971

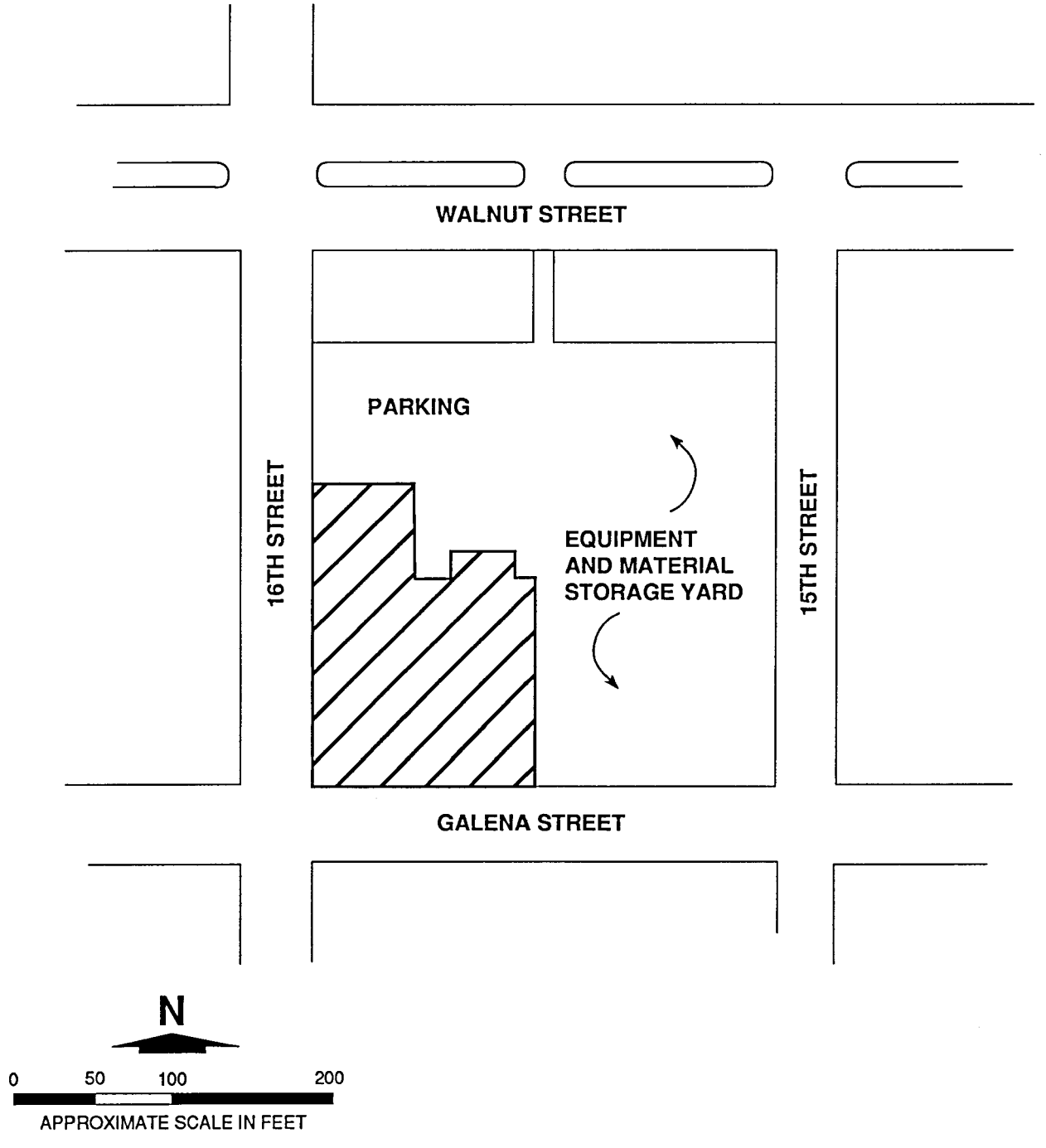
N

0 1000 2000 4000

SCALE IN FEET

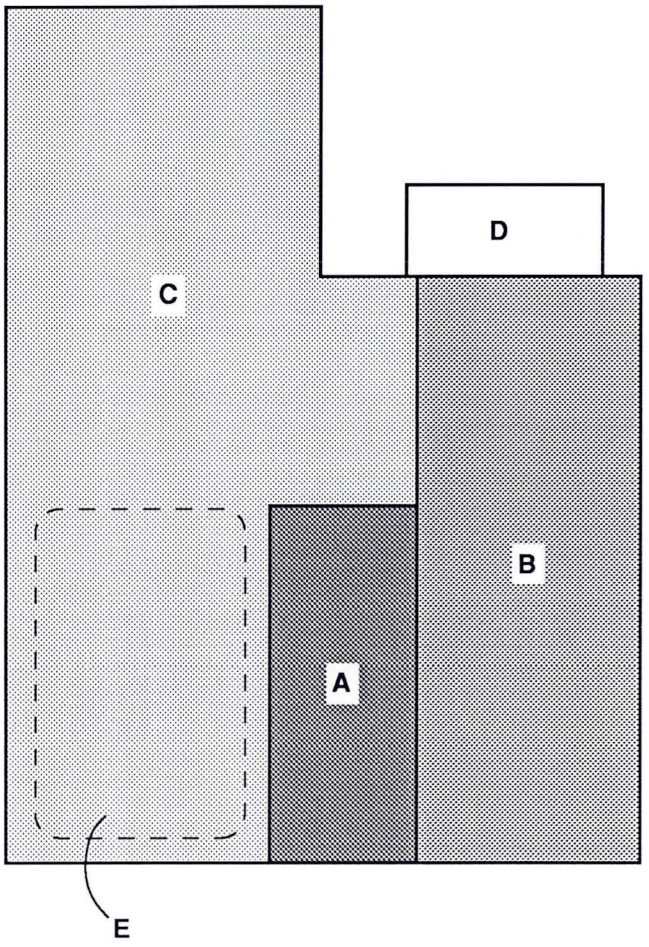
GERAGHTY & MILLER, INC.
Ground-Water Services

FIGURE 1
SITE LOCATION MAP
SCOT INDUSTRIES
MILWAUKEE, WISCONSIN



GERAGHTY & MILLER, INC.
Ground-Water Services

FIGURE 2
SITE LAYOUT MAP
SCOT INDUSTRIES
MILWAUKEE, WISCONSIN



N

0 45 90

APPROXIMATE SCALE IN FEET

LEGEND

A ORIGINAL, PRE-EXISTING BUILDING

B 1956 EXPANSION

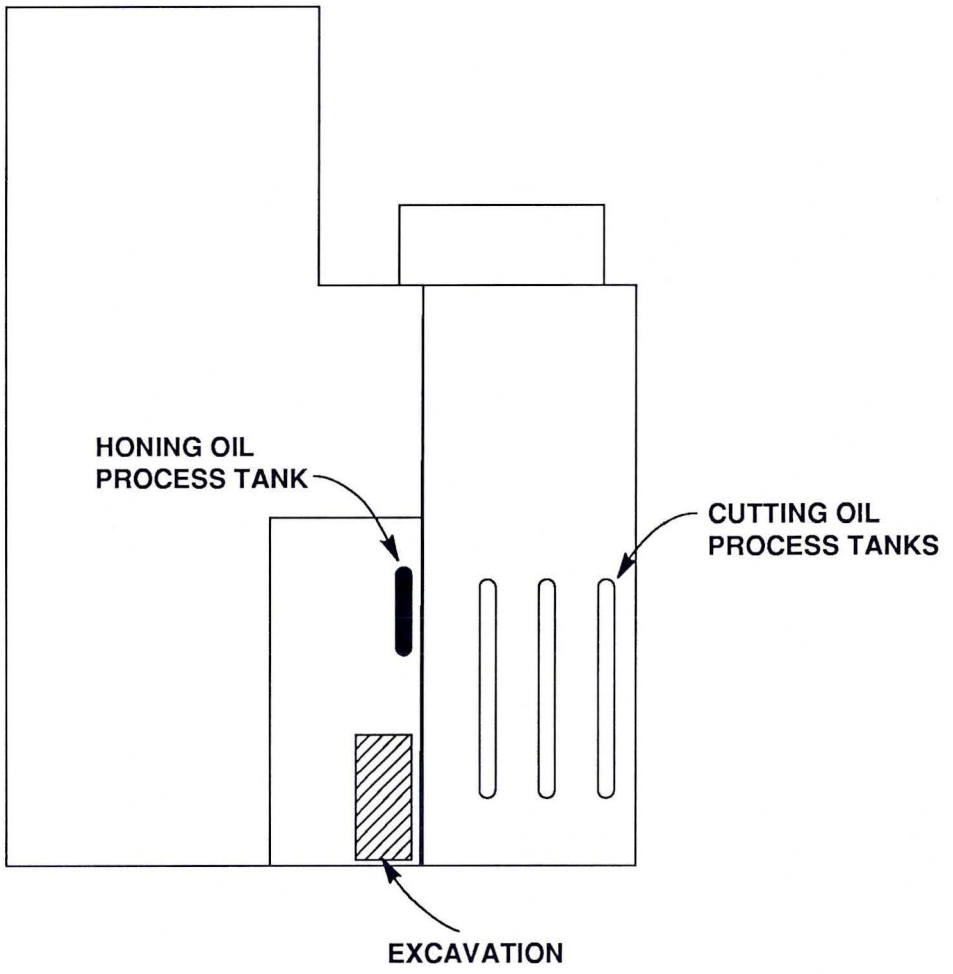
C 1965 EXPANSION

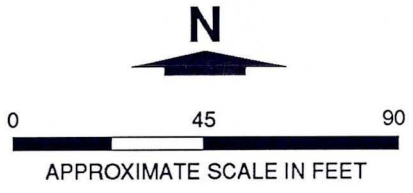
D OFFICE AREA

E FORMER GAS STATION

GERAGHTY & MILLER, INC.
Ground-Water Services

FIGURE 3
BUILDING DIAGRAM
SCOT INDUSTRIES
MILWAUKEE, WISCONSIN



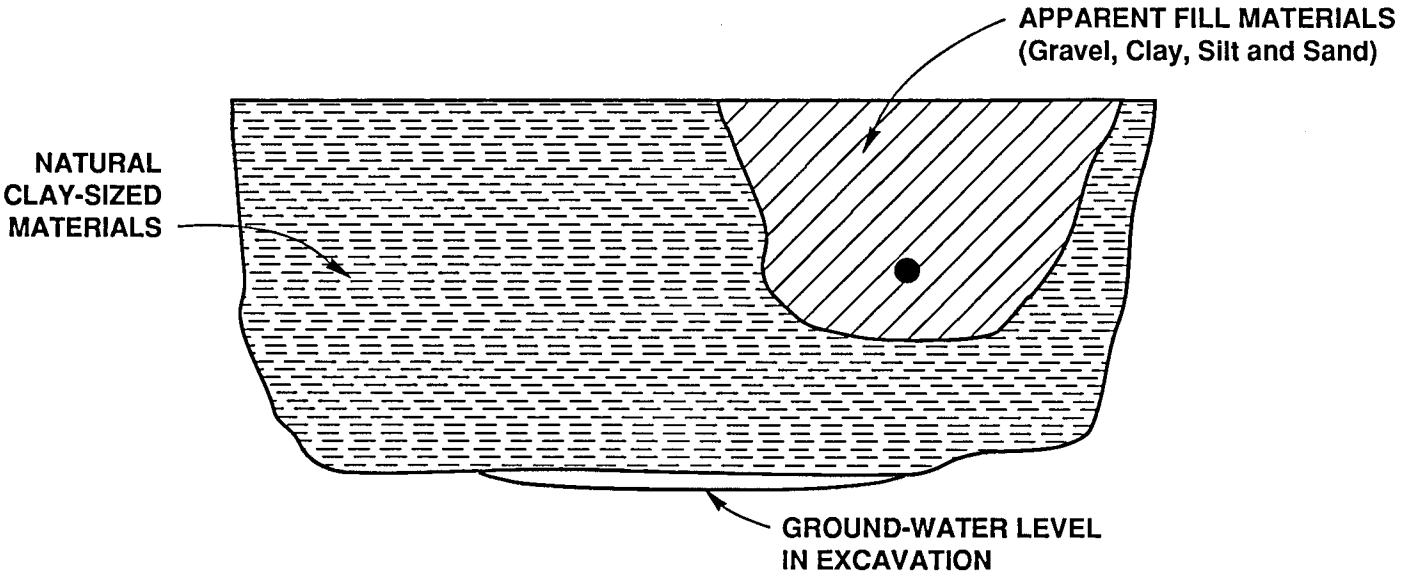


GERAGHTY & MILLER, INC.
Ground-Water Services

FIGURE 4
APPROXIMATE TANK LOCATION AND EXCAVATION LOCATION
SCOT INDUSTRIES
MILWAUKEE, WISCONSIN

SOUTH

NORTH



0 5 10

VERTICAL AND HORIZONTAL
SCALE IN FEET

LEGEND

● SOIL SAMPLING LOCATION
(SS-5, SS-6)

GERAGHTY & MILLER, INC.
Ground-Water Services

FIGURE 5
CROSS-SECTION OF
WEST WALL OF EXCAVATION
SCOT INDUSTRIES
MILWAUKEE, WISCONSIN

APPENDIX A

LABORATORY ANALYTICAL REPORT

SWANSON ENVIRONMENTAL INC.

3150 North Brookfield Road
Brookfield, Wisconsin 53005
telephone (414) 783-6111
facsimile (414) 783-5752

AIHA Accreditation #352
WDNR Certification #268181760

ANALYTICAL REPORT

REPORT NUMBER: B7548

Geraghty & Miller, Inc.
322 East Michigan Street, Suite 600
Milwaukee, WI 53202

Attn: Mr. Tom Sullivan
(Project #WI0942SI01)

DATE: March 10, 1989
PURCHASE ORDER:
SEI JOB NO: WL9009
DATE COLLECTED: 02/21/89
DATE RECEIVED: 02/2/89

Soil Samples

Units: mg/kg (ppm)
Detection Limit: 0.1, unless otherwise noted below in ( )

Parameters	SEI ID / Sample ID	9009-1 SS-1	9009-2 SS-2	9009-3 SS-3	9009-4 SS-4	9009-5 SS-5
Sulfur		--	--	--	--	--
Benzene		ND	ND	ND	ND	ND
Ethylbenzene		1.0	ND	ND	ND	3.4
Toluene		0.2	ND	ND	ND	0.5
Xylenes		5.0	ND	ND	ND	24.7
Total Petroleum Hydrocarbons (10)		130	ND	ND	ND	690

Parameters	SEI ID / Sample ID	9009-6 SS-6	9009-7 WS-1*
Sulfur (1)		--	14
Benzene		ND	--
Ethylbenzene		3.7	--
Toluene		1.4	--
Xylenes		23.2	--
Total Petroleum Hydrocarbons		570 (10)	ND (0.5)

* Results for this sample (WS-1) are reported in units of mg/l.

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen
Laboratory Supervisor

ORIGINAL

SWANSON ENVIRONMENTAL INC.

3150 North Brookfield Road
Brookfield, Wisconsin 53005
telephone (414) 783-6111
facsimile (414) 783-5752

AIHA Accreditation #352
WDNR Certification #268181760

REPORT NUMBER: B7548

ANALYTICAL REPORT

Geraghty & Miller, Inc.
322 East Michigan Street, Suite 600
Milwaukee, WI 53202

Attn: Mr. Tom Sullivan
(Project #WI0942SI01)

DATE: March 10, 1989
PURCHASE ORDER:
SEI JOB NO: WL9009
DATE COLLECTED: 02/21/89
DATE RECEIVED: 02/2/89

Groundwater Samples

Units: ug/l (ppb)
Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES PURGE & TRAP	SEI ID Sample ID	9009-7 WS-1
Benzene		ND
Bromomethane (10)		ND
Bromodichloromethane (2)		ND
Bromoform		ND
Carbon tetrachloride (2)		ND
Chlorobenzene (2)		ND
Chloroethane		ND
2-Chloroethylvinylether (4)		ND
Chloroform		ND
Chloromethane (10)		ND
Dibromochloromethane (2)		ND
1,2-Dichlorobenzene (2)		ND
1,3-Dichlorobenzene (2)		ND
1,4-Dichlorobenzene (2)		ND
1,1-Dichloroethane		ND
1,2-Dichloroethane		ND
1,1-Dichloroethene		ND
trans-1,2-Dichloroethene		ND
1,2-Dichloropropane		ND
cis-1,3-Dichloropropene (2)		ND
trans-1,3-Dichloropropene (2)		ND
Ethylbenzene		ND

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen
Laboratory Supervisor

ORIGINAL

SWANSON ENVIRONMENTAL INC.

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Brookfield, Wisconsin 53005
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ANALYTICAL REPORT

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Milwaukee, WI 53202

Attn: Mr. Tom Sullivan
(Project #WI0942SI01)

DATE: March 10, 1989
PURCHASE ORDER:
SEI JOB NO: WL9009
DATE COLLECTED: 02/21/89
DATE RECEIVED: 02/2/89

Groundwater Samples

Units: ug/l (ppb)
Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES PURGE & TRAP	SEI ID Sample ID	9009-7 WS-1
Methylene chloride		ND
1,1,2,2-Tetrachloroethane (3)		ND
Tetrachloroethene		ND
Toluene		ND
1,1,1-Trichloroethane		ND
1,1,2-Trichloroethane		ND
Trichloroethene		ND
Trichlorofluoromethane		ND
Vinyl chloride (10)		ND
Xylenes		1

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen
Laboratory Supervisor

ORIGINAL

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES
P. O. Box 12436
Milwaukee, Wisconsin 53212

Carroll D. Besadny
Secretary

February 20, 1989

File Ref: 4440

Russell Ingbretson
Scot Industries
P. O. Box 5867
Milwaukee, Wisconsin 53205

RE: Petroleum Contaminated Soil at Scot Industries

Dear Mr. Ingbretson,

This is to inform you that the Department of Natural Resources is in receipt of your letter dated February 14, 1989 notifiying us of the recently discovered soil contamination.

To aid you in your investigation I am enclosing a document entitled "Site Assessment Guidance". This material will point out what the Department is looking for as far as reporting.

If you have any questions about this document or your responsibilities, please call me at 562-9648.

Sincerely,

James A. Schmidt

James A. Schmidt
Environmental Repair Section Supervisor

cc: Tom Bergamini - SW/3 ER

mb

GERAGHTY & MILLER, INC.
Ground-Water Services

February 22, 1989

Mr. James Schmidt
Wisconsin Department of Natural Resources
Post Office Box 12436
Milwaukee, Wisconsin 53212

RE: Scot Industries Tank Excavation

Dear Mr. Schmidt:

Geraghty & Miller, Inc. has been retained by Foley & Lardner, on behalf of Scot Industries, to investigate a tank excavation at the Scot Industries facility located at 1532 West Galena Street, Milwaukee, Wisconsin. Mr. Russell Ingbretson, of Scot Industries, notified your office in a letter dated February 14, 1989, that part of the excavation was found to contain a material which appeared to be petroleum based.

On February 21, 1989, Geraghty & Miller staff inspected the excavation and Scot Industry facility. To determine the source and content of apparent petroleum product and to assess the extent of its distribution, Geraghty & Miller staff collected six soil samples from the tank excavation in addition to a water sample collected from the water which had accumulated in the base of the excavation. The samples were submitted to a laboratory for analysis.

While awaiting laboratory analytical results, Geraghty & Miller staff are collecting additional site history and background information pertaining to the Scot Industries facility. Upon receipt and interpretation of the laboratory results, Geraghty & Miller will submit a site assessment letter report to the Wisconsin Department of Natural Resources with conclusions and recommendations pertaining to the excavation.

Please contact us if you have any questions.

Sincerely,

GERAGHTY & MILLER, INC.

Thomas C. Sullivan
Scientist

Bruce L. Cutright
Vice President

cc: Allan Williams, Foley & Lardner
Sandy Pendleton, Foley & Lardner
Russell Ingbretson, Scot Industries

1TEXT22/TCS.8

SCOT INDUSTRIES

HONING • TUBING • STRAIGHTENING • HARDCHROME PLATING

February 14, 1989

Hazardous Substance Office
Department of Natural Resources
P.O. Box 12436
Milwaukee, WI 53212

ATTN: James Schmidt

Dear Sir:

While doing excavation at Scot Industries' facility located at 1532 West Galena Street, Milwaukee, Wisconsin, we have discovered soil which is apparently contaminated with petroleum. Whether this contamination is the result of a spill or an underground storage tank leak is unclear. The contamination may have been caused by a gas station that was previously located on our property. However, the contamination may be due to diesel fuel that is used at Scot Industries in our manufacturing process. We do not know exactly what the material in the soil is, what the source of it is, the extent of its spread, or for how long it has been there.

In order to help determine this information, we have hired the environmental firm of Geraghty & Miller to perform a site assessment. We have also notified the City of Milwaukee Hazardous Materials Office of the situation. We will keep you informed of further developments as warranted.

Very truly yours,

Russell Ingbretson

Russell Ingbretson

cc Alexander Pendleton

RI/jb

N13 W24600 SCOT DRIVE
PEWAUKEE, WI 53072
(414) 547-2552

P.O. BOX 146
LONE STAR, TX 75668
(214) 639-2556

P.O. BOX 5867
MILWAUKEE, WI 53205
(414) 342-4310

P.O. BOX 205
SUGAR GROVE, IL 60554
(312) 466-7591

P.O. BOX 248
MUSCODA, WI 53573
(608) 739-3171

→ ~~Bergamini~~ (FYD)
→ Jim Schmidt - SED Jim: pls (log in / and confirm)

SCOT INDUSTRIES

HONING · TUBING · STRAIGHTENING · HARDCHROME PLATING

1.) Copy to Director of DNR
2.) original to Hunt for a PECFA folder.

RECEIVED
FEB 21 1989
BUREAU OF SOLID & HAZARDOUS WASTE MANAGEMENT

February 14, 1989

Safety and Buildings Division
Bureau of Petroleum Inspection
and Fire Protection
P.O. Box 7969
Madison, Wisconsin 53707

ATTN: Donald E. Nelson

Dear Sir:

While doing excavation at Scot Industries' facility located at 1532 West Galena Street, Milwaukee, Wisconsin, we have discovered soil which is apparently contaminated with petroleum. Whether this contamination is the result of a spill or an underground storage tank leak is unclear. The contamination may have been caused by a gas station that was previously located on our property. However, the contamination may be due to diesel fuel that is used at Scot Industries in our manufacturing process. We do not know exactly what the material in the soil is, what the source of it is, the extent of its spread, or for how long it has been there.

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Very truly yours,

Russell Ingbretson

Russell Ingbretson

cc Alexander Pendleton

RI/jb

RECEIVED
DNR/HEADQUARTERS
SED
1989 MAR -7 AM 9:51

N13 W24600 SCOT DRIVE
PEWAUKEE, WI 53072
(414) 547-2552

P.O. BOX 146
LONE STAR, TX 75668
(214) 639-2556

P.O. BOX 5867
MILWAUKEE, WI 53205
(414) 342-4310

P.O. BOX 205
SUGAR GROVE, IL 60554
(312) 466-7591

P.O. BOX 248
MUSCODA, WI 53573
(608) 739-3171

REV. 10/89

DEPARTMENT OF NATURAL RESOURCES
LEAKING UNDERGROUND STORAGE TANK

COMPUTER TRACKING
FORM 4400

8/

PMN#: _____ FID#: _____

PROJECT MGR: C. Krohn

SUPPORT PERSON: _____

DISTRICT: SED COUNTY: 41 HNDI: ____

SITE NAME: Scot Industries

ADDRESS: 1532 W. Galena St.
Milwaukee, WI __TN__CITY__VIL

LEGAL DESC: ___1/4___1/4 SEC___T___R___E/W

DATE OF INITIAL CONTACT: 2/14/89 (mo day yr)

DATE OF RP LETTER: NO ___/___/___ (mo day yr)

DATE SITE CLOSURE APPROVED: ___/___/___ (mo day yr)

LUST TRUST ELIGIBLE: (X)
___ 1 = FEDERAL
___ 2 = NON-FEDERAL

8000 fuel oil for business
or it was gas for old gas station

STATUS: (X)
___ 1 = STATE LEAD
X 2 = RP LEAD

PRIORITY SCREENING: (X)
X 1 = HIGH SCORE: 20
~~X 2 = MEDIUM~~
___ 3 = LOW
___ 4 = UNKNOWN

(see worksheet on back)

FUNDING SOURCE: (X)
___ 1 = RESPONSIBLE PARTY
___ 2 = LUST TRUST FUND
___ 3 = ENVIRONMENTAL RESPONSE FUND
___ 4 = SUPER FUND
___ 5 = NONE
___ 6 = OTHER _____

(X AS APPROPRIATE)	DATE INITIATED (MO DAY YR)	DATE COMPLETED (MO DAY YR)	COMMENTS:
___ NO ACTION TAKEN	___/___/___	___/___/___	
___ EMERGENCY	___/___/___	___/___/___	
___ EMERGENCY RESPONSE	___/___/___	___/___/___	
X FIELD INVESTIGATION	3/24/89	___/___/___	site investigation
X REMEDIAL ACTION	5/5/89	___/___/___	RAP proposal
___ LONG TERM MONITORING	___/___/___	___/___/___	

FIRM OR PERSON RESPONSIBLE: Scot Industries
CONTACT: Russell Ingbretsen
ADDRESS: P.O Box 5867
Milw, WI 53205
PHONE: 414/342 4310
(list additional on separate list & attach)

CONSULTANT: Geraghty & Miller, Inc
CONTACT: Tom Sullivan
ADDRESS: 322 E. Mich. St. Suite 600, Mlw., WI 53202
PHONE: 414/276 7742
AMOUNT COMMITTED: $_____.___ AMOUNT SPENT: $_____.___
(list additional on separate list & attach)

PECFA REVIEW REQUESTED:(X) ___YES ___NO

DATE PECFA REQUEST RECEIVED:(mo day yr) ___/___/___

	KNOWN IMPACTS:(x)	POTENTIAL IMPACTS:(X)
FIRE/EXPLOSION THREAT	___	___
CONTAMINATED PRIVATE WELL	___	___
CONTAMINATED PUBLIC WELL	___	___
GROUNDWATER CONTAMINATION	___	X
SOIL CONTAMINATION	X	___
OTHER: _____	___	___

SUBSTANCES:(X) QUANTITY DISCHARGED:(gals)_____
___ LEADED GAS ___ VOCS
___ UNLEADED GAS ___ PESTICIDE
___ DIESEL
___ FUEL OIL
X UNKNOWN HYDROCARBONS Diesel or gas
___ OTHER _____

ENFORCEMENT ACTION TAKEN

01=INF. CONTACT,RESP INITIATED
02=RP LETTER,RESP INITIATED
03=NTC OF NON COMPLIANCE
06=INSPECTION LETTER
07=RESPONSE RECEIVED
11=CLOSE OUT
14=NOTICE OF VIOLATION
18=ADMIN. ORDER FINAL
20=ADMIN. ORDER CANCELLED
23=REFERRAL TO DOJ
25=REFERRAL TO EPA
99=OTHER ACTION:_____

ACTION (code from above)	DATE (mo/day/yr)	COMMENT:
99	5/25/89	Work Plan review ~~RAP review~~ - conditional approval
___	___/___/___	
___	___/___/___	
___	___/___/___	

(for additional action codes see instructions/list additional on separate list and attach)

OVER ALL CASE COMMENT: _____

LUST CASE PRIORITY SCREENING WORKSHEET

HIGH FACTORS: (DEFINITION: Any case which presents an actual threat to human health, or has a high potential of causing a threat to human health and property; and/or any case which has caused or has a high potential of causing substantial impacts to the soil waters and air of the State of Wisconsin)

HIGH FACTORS:

____ Contaminated private or public well >NR140 enf. std.
____ Explosive or toxic vapors in structures
____ Threat of fire
____ Floating product
____ Known gw contamination
____ Impacted surface water--wetland, trout stream, etc. impacted

MEDIUM FACTORS: (DEFINITION: Any case which does not appear to be an immediate threat to human health or vital natural resources but which shows levels of contamination that may cause substantial environmental impacts if left unaddressed.)

____ saturated soil contamination
X Moderate soil contamination with moderate potential for impacting groundwater.
____ Impacted surface water--no critical habitat threats.

LOW FACTORS: (DEFINITION: Any case where contamination has been documented, but which presents limited potential for any immediate threat to human health and vital natural resources.)

____ Soil contamination which appears to have a limited potential for impacting groundwater. (less than 100 ppm TPH)
____ Initial remedial action has substantially reduced environmental threat.

UNKNOWN FACTOR: (DEFINITION: Any case where some indication of contamination is present, but due to incomplete or inaccurate information the level of threat to human health or the environment can not be assessed at this time.)

____ Inadequate information to assign a high, medium, or low ranking.

OVERALL RANKING: The screening rank for the site along with the date of ranking. This may be updated when additional information is received. Special circumstances for a particular case may be taken into account in the comment section. The District LUST coordinator may independently set the ranking of a site based upon "special circumstances."

Circle one & date, indicate in priority screening box opposite side _____HIGH__X__MEDIUM_____LOW_____UNKNOWN

COMMENT: _____

NUMERICAL LUST SCORING WORKSHEET (complete for LUST cases ranked HIGH)

1. GROUNDWATER & SOILS: (circle one)

POINTS	Documented Petroleum Contamination:	POINTS	
20	Municipal well	8	Soil & gw within 1200′ of a public well
18	>6 private wells	6	Soil & gw within 1200′ of one or more private wells
16	4 - 6 private wells	(4)	GW contamination, no wells within 1200′
14	2 - 3 private wells	2	Soil contamination
12	1 private well		

2. EXPLOSIVE OR TOXIC VAPORS: (circle one)

POINTS CONFIRMED	POTENTIAL	
20	10	Explosive levels in a residence or building
16	8	Explosive levels in a sewer or structure
12	6	Toxic levels in a residence or building

Note: Explosive levels determined to be >20% LEL as per an explosivity meter; toxicity levels are based on OSHA permissible exposure limits (PEL)

3. HYDROGEOLOGIC SETTING: (circle one)

POINTS	
12	Highly permeable sub-soils (gravel, well sorted sand, fractured bedrock or utilities capable of intercepting and directing flow) and groundwater within 25 feet of the ground surface.
10	Highly permeable sub-soils and groundwater more than 25 feet below ground surface.
8	Moderately permeable sub-soils (silty sands, silty gravel, clayey sands) and groundwater within 25 feet of ground surface
6	Moderately permeable sub-soils and groundwater greater than 25 feet below ground surface.
(4)	Low permeability sub-soils (silt, clayey silt, sand clays) and groundwater within 25 feet of ground surface.
2	Low permeability sub-soils and groundwater greater than 25 feet below ground surface.

4. TYPE OF PRODUCT: (circle one)

POINTS		
		NOTE: Add 4 points if free product is present. (score in parentheses)
8	(12)	Gasoline, mixture of gasoline and other products, other light petroleum products.
6	(10)	Diesel, fuel oil
2	(6)	Bunker oil, other heavy oils or crude fractions

_____ TOTAL SCORE (indicate score in priority screening box on opposite side)

Return this form to:

Wisconsin Department of Natural Resources
Tank Response Unit - Annual Report SW/3
P.O. Box 7921
Madison, WI 53707

ANNUAL SITE STATUS FORM
LEAKING UNDERGROUND STORAGE TANK (LUST) SITE
Form 4400-161 5-93

INSTRUCTIONS: The information on this form will be used to monitor progress on site clean up, and to determine whether action by the Department is necessary to attain compliance with s. 144.76, Wis. Stats., Hazardous Substance Spills. Personally identifiable information on this form will be used by the Department for no other purpose. This voluntary form is for actions taken in the preceding calendar year. Actions taken at LUST sites in other years are not to be included, unless specified below. A separate form is to be completed for each site. This form is to be completed in addition to technical reports which have been submitted to the Department. Krohn 241424920 - LUST

SITE IDENTIFICATION

Site Name: SCOT INDUSTRIES, INC	Site Owner's Name: SCOT INDUSTRIES, INC
Site Address: 1532 W. GALENA ST.	Site Owner's Telephone Number: 414 342-4310
City, State, Zip Code (Site Address): MILWAUKEE, WI 53205	Environmental Consulting Firm: —
County in Which Site is Located: MILWAUKEE	DNR Site Identification Number: — SED-81 (from DNR correspondence)

SITE STATUS - Check all which apply, enter yards and gallons in the spaces provided. **Definitions are on back of page.**

___ Field Investigation - This site was still being investigated in the preceding calendar year to identify the extent of contamination.

___ Soil Excavation in preceding calendar year.
(Indicate cubic yards for each below.)

_____ yds^3 Landfilled
_____ yds^3 Mixed into asphalt
_____ yds^3 Thermal treatment process ("incineration")
_____ yds^3 Thinspead
_____ yds^3 Excavated and placed into active bioremediation
_____ yds^3 Landspread (Ch. NR 518, Wis. Adm. Code)
_____ yds^3 Placed in a stockpile awaiting treatment or disposal
_____ yds^3 Other: _____

___ In-situ (in place) Soil Treatment in preceding calendar year.
(Indicate systems active in 1992, regardless of the year started.)

_____ (est.) yds^3 Soil vapor extraction system
_____ (est.) yds^3 Natural (passive) contaminant biodegradation
_____ (est.) yds^3 Active bioremediation
_____ (est.) yds^3 Other: _____

___ Groundwater Treatment in preceding calendar year

_____ gals. Pumped and airstripped
_____ gals. Pumped and other aboveground treatment
Type of treatment unit - _____
_____ (est.) gals. Air sparging
_____ (est.) gals. Active groundwater bioremediation
_____ gals. Other: _____

___ Free Product Recovery - 0 gallons of petroleum product were removed from the water table at this site in the preceding calendar year.

Signature: Russell Ingbretson Date Signed: 6-18-93

___ Site owner
2 Other (indicate your relationship to this site) Plant Mgr

Please use this space and the back of the page to provide any additional information you would like the Department to have regarding the status of this site.

Thank You.

Definitions:

FIELD INVESTIGATION - The initial investigation to determine the extent and degree of contamination in soil and groundwater was in progress.

SOIL EXCAVATION - Contaminated soil was excavated and stored, treated or disposed. This may be a partial or total response to contamination. This definition does not include removal of clean tank backfill material. Enter the cubic yards of soil which went to each destination.

LANDFILLED - Excavated contaminated soil was disposed of at a licensed landfill.

MIXED INTO ASPHALT - Excavated contaminated soil was mixed into asphalt as a plant which is permitted to accept petroleum contaminated soil.

THERMAL TREATMENT - Excavated contaminated soil was treated in a unit which heats soil to volatilize contaminants and controls emissions of contaminants to the atmosphere.

THIN SPREAD - Excavated contaminated soil was spread on an impermeable surface and remediated by exposure to the atmosphere and naturally occurring microbes.

ACTIVE BIOREMEDIATION - Oxygen and/or nutrients were added to soil or groundwater to promote the breakdown of contaminants by microbes. Active bioremediation may be an in-situ or ex-situ treatment method.

LANDSPREAD - Excavated contaminated soil was spread on the land surface to promote natural degradation of the contaminants through exposure to the atmosphere and naturally occurring microbes. Landspreading must be conducted in accordance with the requirements of Ch. NR 518, Wis. Adm. Code.

IN-SITU TREATMENT - Contaminated soil and/or groundwater was remediated without removal from its original location. Soil vapor extraction is an example of in-situ soil treatment .

SOIL VAPOR EXTRACTION - A system consisting of vapor recovery wells, pumps and, in some cases, an off-gas treatment system, was installed to remove contamination from the soil.

NATURAL BIODEGRADATION - The rate of natural breakdown of petroleum compounds by naturally occurring microbes in soil or groundwater was monitored.

GROUNDWATER TREATMENT - Contaminated groundwater was treated in compliance with applicable state and federal requirements to remove contaminants.

PUMPED AND AIRSTRIPPED - Contaminated groundwater was pumped from the aquifer and treated to remove the contaminants by mixing the water with air in a tower or other structure.

AIR SPARGING - Air was injected into the aquifer to move dissolved contaminants from groundwater into the air. Air sparging is usually used in conjunction with soil vapor extraction.

FREE PRODUCT - Liquid petroleum which was floating on the water table was removed by pumping.