CON 12-15
Doc # 7511

December 28, 2000

West Bend Elevator Company
PO Box 49
West Bend, Iowa 50579-0049

Attn: Mr. Don Haverman

Subj: Unleaded Gasoline Release
Above Grade Petroleum Bulk Storage Facility
135th Street
West Bend, Iowa
GeoTek #00-947
IDNR Spill #11280 – WMJ-1230

Dear Mr. Haverman:

Introduction

This correspondence presents the preliminary reporting of the initial response actions, interim corrective actions, and subsurface assessment activities for the referenced project. Our involvement was performed at the verbal request of Doug Schwartzkopf of the West Bend Elevator Company on November 28, 2000.

Background Information

The West Bend Elevator Company's petroleum bulk storage facility is located on the eastern limits of West Bend, Iowa (Figure 1). The facility consists of 13 aboveground storage tanks (ASTs) within an earthen berm. The facility was reportedly constructed in about 1972 (Figure 2).

We understand a shortage of approximately 6130 gallons of unleaded gasoline was noted in a bulk storage tank on November 27, 2000. Gasoline was subsequently identified in the ditch of 135th Street to the north of the bulk storage facility. The gasoline migrated about 420' eastward with surface run-off waters and entered a surface intake of a private drain tile. The drain tile discharges to Trulner Creek located about 1 ½ miles to the southeast (Figure 3).

7511

DATE STAMP

We understand the local fire department responded to the incident following reports of petroleum vapors in the Ron Wagner residence located approximately 1 1/4 miles southeast (Figure 3) of the bulk storage facility. Reportedly, the fire department checked with several other residents in the area regarding the presence of petroleum vapors. Petroleum vapors were not identified in other residences by the fire department.

Initial Response Actions

November 28, 2000 Activities

A technician from GeoTek (working in the area) was mobilized to the site on the afternoon of November 28. The technician assisted with the installation of absorption pillows down flow of the drain tile outfall. A heavy sheen and indications of product were observed at the outfall.

The West Bend Elevator Company constructed a dike in the ditch to the east of the bulk storage facility (See Note #1, Figure 4) to prevent gasoline from making its way to the drain tile surface intake. In addition, a dike was constructed to the west of the bulk storage facility (See Note #2, Figure 4) to prevent surface run-off waters from carrying product to the drain tile surface intake. The GeoTek technician left the site at approximately 5:00.

Two additional GeoTek personnel arrived in West Bend at 7:30 pm on November 28. The occupants of the Ron Wagner residence had been requested to stay in a motel for the night. The Ron Wagner residence was scanned with a lower explosive limit (LEL) meter and photoionization detector (PID). The data is summarized on Table 1. Gasoline odors (olfactory) were present upon entry of the house and both LEL and PID readings were recorded. The highest readings were recorded at a basement floor drain.

Ventilation of the drain tile via the installation of a vacuum blower at the surface intake east of the bulk storage facility (See Note #3, Figure 4) was undertaken. A vacuum was applied to the tile line at the surface intake located east of the bulk facility at approximately 10:00 pm on November 28. A portable generator was used to provide power for the blower.

During installation activities, reports of vapors in the Metzger residence north of the drain tile surface intake were received. The Metzger residence was scanned with a LEL and PID. Organic vapors were detected. The Sewell and Stattleman residences located to the north of the Metzger residence were also scanned. Organic vapors were detected in the Sewell residence. Only trace levels were detected in the Stattleman residence. The data is summarized on Table 1. Occupants of the Metzger and Sewell residences were requested to stay in a motel for the night.

November 29, 2000 Activities

The Wagner, Metzger, Sewell and Stattleman residences were scanned with a LEL/PID the morning of November 29. A report of vapors in the Montag residence, located about ½ miles east of the bulk storage facility, was received on the morning of November 29. This residence was also scanned with a LEL/PID. The PID/LEL monitoring data is provided on Table 1.

A clay dike was constructed in the ditch directly north of the bulk facility (See Note #4, Figure 4). A clay dike was also constructed in the ditch directly west of the drain tile surface intake (See Note #5, Figure 4). The surface intake (See Note #6, Figure 4) was excavated following removal of the vacuum blower to assist in determining the extent of gasoline contaminated soil in contact with the tile. Gasoline impacted soils were limited to surface soils and soils directly adjacent to the surface intake.

During excavation activities, unknown east/west clay tile was severed (See Note #7, Figure 4). Evidence of product and elevated gasoline vapors were detected in this tile. The clay tile was plugged to prevent product and vapors from entering the main (northwest/southeast) tile. The main tile exposed in the excavation was constructed of plastic pipe. During excavation activities, the line slumped downward, which created a liquid trap in the line due to its lower elevation. This trap prevented vapors from migrating northerly within the main tile.

Due to the vapors detected in the residences to the north (up-flow) of the surface intake, the tile line was exposed north of 135th Street on the Ron Metzger property (See Note #8, Figure 4). The vacuum blower installed at the surface intake was moved to this location for ventilation of the tile north of the recently created liquid trap. Start-up of the regenerative blower (blower #1) at this location occurred at approximately 3:00 pm. A portable generator was used to provide power for the blower.

Additional booms were installed below the tile outfall east of the Wagner residence. A heavy sheen was noted on the water exiting the tile outfall.

The origin of the east-west tile identified near the surface intake was unknown. To assist in determining its location, a trench was excavated east of the bulk storage facility (See Note #9, Figure 4). The trench was excavated in a southerly direction to a depth of approximately 10' below grade. The east-west clay tile was not encountered. However, free phase product entered the northern half of the trench. Additional excavation to locate the clay tile was performed in the ditch directly north of the bulk storage facility (See Note #10, Figure 4). The clay tile was encountered and plugged at this location. The clay tile was also plugged west of the bulk storage facility to minimize the amount of water flowing through the clay tile (See Note #11, Figure 4).

An additional blower (blower #2) was installed on the main tile at a surface intake in the south ditch of Highway B63, one mile to the south (Figure 3). A portable generator was used to provide power to the blower. A vacuum was applied to the tile at approximately 4:30 pm on November 29.

The affected residences were scanned with a LEL/PID late in the afternoon. Favorable data were obtained in the residences to the north. However, elevated readings were detected in the Metzger and Wagner residences. Occupants of both the Metzgers and Wagners were requested to stay in a motel for the night.

November 30, 2000 Activities

The affected residences were scanned with a LEL/PID meter the morning of November 30. The results are provided on Table 1. With the exception of the Wagner residence, favorable data were obtained.

Due to the elevated readings in the Wagner residence, a third blower (blower #3) was installed on the tile to the east of the Wagner residence (Figure 3). A vacuum was applied to the tile at approximately 2:00 pm on November 30. The City of West Bend installed electrical power to both blowers #1 and #3.

Due to the presence of product in the trench excavated on November 29th to locate the east-west tile, the construction of a cut-off trench on the bulk facility property was planned. Therefore, backfilling of the November 29th trench was undertaken. Prior to backfilling activities, the free phase product and groundwater in the bottom of the north half of the trench was removed with a vac truck.

Following backfilling of the November 29th trench, construction of the cut-off trench was initiated. The trench was excavated to a depth ranging from 10' to 12' below grade. Approximately 2' to 4' of concrete rock was installed over a 4" tile line placed at the bottom of the cut-off trench. An 18" diameter sump (sump #1) was installed at the northeast corner of the cut-off trench to a depth of about 14' below grade (See Note #12, Figure 4).

In an effort to better document the location of the east/west tile line in the area of the bulk storage facility, a jetting truck with locating capabilities was mobilized to the site. The jetting truck was used to locate the east-west tile line in the area of the bulk storage facility. The tile location is illustrated on Figure 4.

In addition to recovery of product from the November 29th trench, additional product/water was recovered at the east surface intake excavation, the ditch north of the bulk facility, and the ditch to the east of the bulk facility using a vac truck. The recovered product/liquid was off-loaded into a West Bend Elevator tanker truck.

The affected residences were scanned with a LEL/PID late in the afternoon. Favorable data were obtained in the residences. Observation of tile outfall indicated little or no evidence of petroleum.

December 1, 2000 Activities

A second sump (sump #2) was installed on the east-west clay tile east of the bulk facility (See Note #13, Figure 4). This sump was installed at the eastern edge of the identified plume to collect product that may enter the line and to also prevent it from entering the main tile. Following installation of sump #2, cleanup of the ditch was performed. Up to 12" of contaminated soil/debris were excavated from the lowest part of the ditch (See Note #15 Figure 4). This material was loaded into dump trucks and transported to a concrete slab on the elevator property. The soil was covered with plastic pending disposal. The surface intake excavation was backfilled following repair of the tiles and replacement of the surface intake.

Due to a forecast of warmer weather, efforts were made to allow surface water to flow to the surface intake. A metal culvert was installed in the ditch directly north of the bulk facility following repair of the clay tile line in this area (See Note #14, Figure 4). This was undertaken to allow surface water run-off from west of the bulk facility to flow through the culvert and to the tile surface intake. Following installation of the culvert, the dike constructed in the ditch west of the bulk storage facility (See Note #2, Figure 4) was removed and surface water, which had backed up, was allowed to flow to the surface intake.

The blower installed on the surface intake on Highway B63 was removed. This was removed due to the low concentrations being extracted and the amount of surface water, which would likely accumulate in the ditch with warmer weather.

This set up of a temporary water treatment system, including a shallow tray air stripper was completed by early afternoon. Initial treatment of contaminated water was undertaken.

The impacted residences were scanned with a LEL/PID late in the afternoon. Favorable data were obtained in the residences.

Interim Corrective Actions

Sump #1 has been pumped on a regular basis to create a depression in the groundwater table to allow for the recovery of free product. As of December 27, 2000, approximately 270 gallons of gasoline were recovered from sump #1. Groundwater has been pumped from the bottom of the sump to allow for free product to accumulate on top of the water. A skimmer pump was installed on sump #1 to recover free product. Sump #2 has been pumped on an intermittent basis. A summary of the volume of liquid pumped each day is provided on Table 2. The removed water has been treated on-site and laboratory analysis

of the treated water has been provided to the city of West Bend prior to discharge to their lagoon system.
Blowers #1 and #3 continue to operate as a precautionary measure. The blowers will likely be removed the week of January 1, 2001.

Rerouting of the east/west clay tile line was undertaken on December 5. A new east-west line was installed to the south of the bulk storage facility (Figure 4). Installation of the line was completed on December 7.

Subsurface Assessment

A drill rig, crew and environmental personnel were mobilized to the site on November 30, 2000. Seven soil borings were advanced to assist in determining the horizontal and vertical extent of petroleum in the subsurface. Five of the soil borings were completed as groundwater monitoring wells. The locations of the monitoring wells and borings are illustrated on Figure 5. The soil boring logs and laboratory reports are attached.

Discussions

Continued pumping of sump #1 to provide a depression in the groundwater for the collection of free product is planned. Pumping of sump #1 is anticipated to continue until the quantity of product entering the sump is limited. As of December 27, 2000, approximately 270 gallons of gasoline were recovered from sump #1. We also recommend that a Tier 2 Assessment be undertaken at the site. The Tier 2 Assessment will likely include the installation of additional groundwater monitoring wells and soil borings.

Standard of Care

Recommendations contained in this report represent our professional opinions. These opinions are based on information currently available and arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

Remarks

GeoTek Engineering & Testing Services, Inc. appreciates the opportunity to have been of service on this project. Please contact us if you have questions or if we can be of further service.

GeoTek Engineering & Testing Services, Inc.

Daniel R. Hanson/ab
Daniel R. Hanson, PE
Senior Project Engineer
ICGWP #1383

Thomas J. Chap
Thomas P Chap
Senior Project Manager
IGWP #1177

This Report was Reviewed by

Linda J. Watts
Project Manager
IGWP #1169

TABLE 2
WESTBEND ELEVATOR GASOLINE SPILL
SUMMARY OF SUMP #1 (WEST) & SUMP #2 (EAST) PUMPING DATA

	GALLONS OF WATER REMOVED		
DATE	SUMP #1	SUMP #2	REMARKS
12-1-00	1500	500	
12-2-00	1500	500	
12-3-00	3500	--	
12-4-00	--	--	8" tile filling cut-off trench
12-5-00	--	--	8" tile filling cut-off trench
12-6-00	--	--	8" tile filling cut-off trench
12-7-00	--	--	8" tile filling cut-off trench
12-8-00	1800	--	8" tile rerouted
12-9-00	--	--	Weekend
12-10-00	--	--	Weekend
12-11-00	3000	--	
12-12-00	3000	--	
12-13-00	3000	--	
12-14-00	3000	--	
12-15-00	1000	--	
12-16-00	--	--	Weekend
12-17-00	--	--	Weekend
12-18-00	--	--	Blizzard
12-19-00	2300	--	
12-20-00	1800	--	
12-21-00	1000	--	

Table 1

West Bend Elevator 11-27-00 Gasoline Spill

OVM Readings from Impacted Residences and Vapor Extraction Systems (VES)

DATE/TME	LOCATION	OVM READING IN PPM	COMMENTS
11-28-00/8:40 pm	Metzer's Entrance	14	1st house N. of tile intake
11-29-00/7:45 am	"	12	
11-29-00/12:15 pm	"	3	
11-29-00/1:54	"	4	#1 VES relocated up gradient of tile intake
11-29-00/5:30 pm	"	0	
11-30-00/8:00 am	"	0	
11-30-00/5:25 pm	"	0	
12-1-00/9:05 am	"	0	
12-1-00/1:15 pm	"	0	
12-5-00/2:35 pm	"	0	
11-28-00/8:40 pm	Metzer's basement. sump	250	sealed off sump to house
11-29-00/7:45 am	Metzer's above sealed sump	0	Above sump seal
11-29-00/12:15 pm	"	0	
11-29-00/1:54	"	0	#1 VES relocated up gradient of tile intake
11-29-00/5:30 pm	"	0	
11-30-00/8:00 am	"	0	
11-30-00/5:25 pm	"	0	
12-1-00/9:05 am	"	0	
12-1-00/1:15 pm	"	0	
11-28-00/8:40 pm	Metzer's floor crack	200	In laundry room
11-29-00/7:45 am	"	189	
11-29-00/12:15 pm	"	145	
11-29-00/1:54	"	8	#1 VES relocated up gradient of tile intake
11-29-00/5:30 pm	"	0	
11-30-00/8:00 am	"	0	
11-30-00/5:25 pm	"	0	
12-1-00/9:05 am	"	0	
12-1-00/1:15 pm	"	0	
12-5-00/2:35 pm	"	0	
11-28-00/9:40 pm	Sewell entrance	5	2nd house N. of tile intake
11-29-00/7:55 am	"	3	
11-29-00/12:20 pm	"	4	
11-29-00/1:59	"	0	#1 VES relocated up gradient of tile intake
11-29-00/5:35 pm	"	0	
11-30-00/8:05 am	"	0	
11-30-00/5:30 pm	"	0	
12-1-00/9:10 am	"	0	
12-1-00/1:20 pm	"	0	
11-28-00/9:40 pm	Sewell's basement	8	2nd house N. of tile intake

DATE/TME	LOCATION	OVM READING IN PPM	COMMENTS
11-29-00/7:55 am	"	6	
11-29-00/12:20 pm	"	3	
11-29-00/1:59	"	0	#1 VES relocated up gradient of tile intake
11-29-00/5:35 pm	"	0	
11-30-00/8:05 am	"	0	
11-30-00/5:30 pm	"	0	
12-1-00/9:10 am	"	0	
12-1-00/1:20 pm	"	0	
11-28-00/9:40 pm	Sewell's floor drain	200	2nd house N. of tile intake
11-29-00/7:55 am	"	39	
11-29-00/12:20 pm	"	75	
11-29-00/1:59	"	80	#1 VES relocated up gradient of tile intake
11-29-00/5:35 pm	"	57	
11-30-00/8:05 am	"	85	
11-30-00/5:30 pm	"	79	
12-1-00/9:10 am	"	2	
12-1-00/1:20 pm	"	4	
11-28-00/9:45 pm	Ed Stattlemen entrance	0	3rd house N. of tile intake
11-29-00/8:00 am	"	0	
11-29-00/12:25 pm	"	0	
11-29-00/2:05	"	0	#1 VES relocated up gradient of tile intake
11-29-00/540 pm	"	0	
11-30-00/8:10 am	"	0	
11-30-00/5:35 pm	"	0	
12-1-00/9:15 am	"	0	
12-1-00/1:25 pm	"	0	
11-28-00/9:45 pm	Ed Stattlemen floor drain	24	3rd house N. of tile intake
11-29-00/8:00 am	"	0	
11-29-00/12:25 pm	"	0	
11-29-00/2:05	"	0	#1 VES relocated up gradient of tile intake
11-29-00/540 pm	"	0	
11-30-00/8:10 am	"	0	
11-30-00/5:35 pm	"	0	
12-1-00/9:15 am	"	0	
12-1-00/1:25 pm	"	0	
11-28-00/8:45 pm	Wagner entrance	14	Farm 1.5 miles S of release
11-29-00/7:30 am	"	14	
11-29-00/1:25 pm	"	15	
11-29-00/2:05	"	14	#1 VES relocated up gradient of tile intake
11-29-00/5:40 pm	"	16	Co-86 VES on at 4:30 pm 11-29
11-30-00/8:10 am	"	7	
11-30-00/12:20 pm		8	
11-30-00/2:40 pm		0	Wagner VES on at @:10 pm

DATE/TME	LOCATION	OVM READING IN PPM	COMMENTS
11-30-00/5:35 pm	"	0	
12-1-00/9:15 am	"	0	
12-1-00/1:25 pm	"	0	
12-4-00/12:40 pm	"	0	
12-5-00/2:50 pm	"	0	
12-6-00/12:20 pm	"	0	
11-28-00/8:45 pm	Wagner basement	35	Farm 1.5 miles S of release
11-29-00/7:30 am	"	20	
11-29-00/1:25 pm	"	17	
11-29-00/2:05 pm	"	20	#1 VES relocated up gradient of tile intake
11-29-00/5:40 pm	"	20	Co-86 VES on at 4:30 pm 11-29
11-30-00/7:10 am	"	14	
11-30-00/11:10 am		15	
11-30-00/12:30 pm		8	
11-30-00/2:40 pm		0	Wagner VES on at @2:10 pm
11-30-00/5:35 pm	"	0	
12-1-00/9:15 am	"	0	
12-1-00/1:25 pm	"	0	
12-4-00/12:40 pm	"	0	
12-5-00/2:50 pm	"	0	
12-6-00/12:20 pm	"	0	
11-28-00/8:45 pm	Wagner floor drain	1000+	Farm 1.5 miles S of release
11-29-00/7:30 am	"	1000+	
11-29-00/1:25 pm	"	1000+	
11-29-00/2:05 pm	"	1000+	#1 VES relocated up gradient of tile intake
11-29-00/5:40 pm	"	1000+	Co-86 VES on at 4:30 pm 11-29
11-30-00/7:10 am	"	1000+	
11-30-00/11:10 am		375	
11-30-00/12:30 pm		295	
11-30-00/2:40 pm		8	Wagner VES on at @2:10 pm
11-30-00/4:40 pm	"	0	
12-1-00/8:40 am	"	0	
12-1-00/1:00 pm	"	0	
12-4-00/12:40 pm	"	0	
12-5-00/2:50 pm	"	0	
12-6-00/12:20 pm	"	0	
11-29-00/7:30 am	Montage farm entrance	0	Gasoline odors reported 7:20 am 11-29, house had been vented prior to sampling
11-29-00/1:15 pm	"	0	House vented
11-29-00/5:30 pm	"	0	House vented
11-29-00/4:30			Co. Rd-86 VES on
11/30/00/8:00 am	"	0	House closed up for 1 hour
11-30-00/2:15 pm	"	0	House closed up for 7 hours
11-30-00/5:20 pm	"	0	House closed up for 10 hours
12-1-00/8:55 am	"	0	House closed up for 24 hours
12-1-00/1:30 pm	"	0	

DATE/TME	LOCATION	OVM READING IN PPM	COMMENTS
12-5-00/2:40 pm	"	0	
11-29-00/7:30 am	Montage farm floor drain	0	Gasoline odors reported 7:20 am 11-29, house had been vented prior to sampling
11-29-00/1:15 pm	"	0	House vented
11-29-00/5:30 pm	"	0	House vented
11-29-00/4:30	"	0	Co. Rd-86 VES on
11/30/00/8:00 am	"	0	House closed up for 1 hour
11-30-00/2:15 pm	"	0	House closed up for 7 hours
11-30-00/5:20 pm	"	0	House closed up for 10 hours
12-1-00/8:55 am	"	0	House closed up for 24 hours
12-5-00/2:40 pm	"	0	
11-29-00/1:50 pm	VES #1	25	VES at tile inlet near release
11-30-00/7:15 am	"	75	
11-30-00/3:00 pm	"	88	
12-1-00/9:10 am	"	3	
12-1-00/1:35 pm	"	35	
12-4-00/12:15 pm	"	14	
12-5-00/2:30 pm	"	6	
12-6-00/8:00 am	"	0	
12-6-00/12:20 pm	"	0	
11-29-00/4:30 pm	VES #2	450	VES on Co. Rd-86
11-30-00/7:10 am	"	150	
11-30-00/9:00 am	"	138	
11-30-00/11:24 am	"	195	
11-30-00/12:20 pm	"	374	
11-30-00/2:55 pm	"	372	
11-30-00/5:05 pm	"	138	
12-1-00/8:30 am	"	33	
12-1-00/10;30 am	"	22	11:30, 12-1-00 VES removed
11-30-00/2:10 pm	Wagner VES		On line
11-30-00/2:50 pm	"	326	
11-30-00/4:30 pm	"	230	
12-1-00/8:40 am	"	39	
12-1-00/1:00 pm	"	22	
12-4-00/12:40 pm	"	9	
12-5-00/2:50 pm	"	0	
12-6-00/8:00 am	"	7	
12-6-00/12:20 pm	"	3	

TABLE 2
WESTBEND ELEVATOR GASOLINE SPILL
SUMMARY OF SUMP #1 (WEST) & SUMP #2 (EAST) PUMPING DATA

	GALLONS OF WATER REMOVED		
DATE	SUMP #1	SUMP #2	REMARKS
12-1-00	1500	500	
12-2-00	1500	500	
12-3-00	3500	--	
12-4-00	--	--	8" tile filling cut-off trench
12-5-00	--	--	8" tile filling cut-off trench
12-6-00	--	--	8" tile filling cut-off trench
12-7-00	--	--	8" tile filling cut-off trench
12-8-00	1800	--	8" tile rerouted
12-9-00	--	--	Weekend
12-10-00	--	--	Weekend
12-11-00	3000	--	
12-12-00	3000	--	
12-13-00	3000	--	
12-14-00	3000	--	
12-15-00	1000	--	
12-16-00	--	--	Weekend
12-17-00	--	--	Weekend
12-18-00	--	--	Blizzard
12-19-00	2300	--	
12-20-00	1800	--	
12-21-00	1000	--	

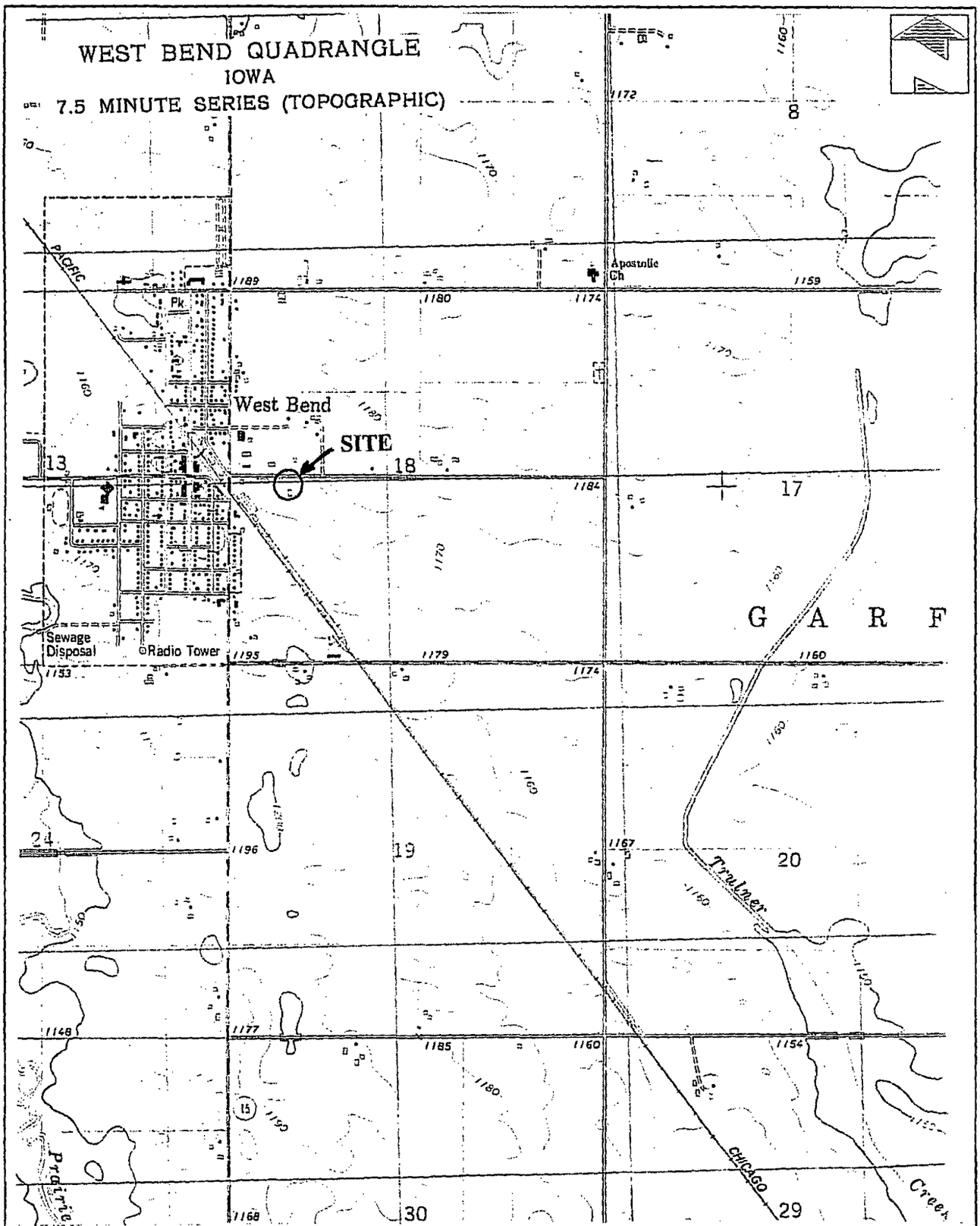


FIGURE 1 TOPOGRAPHICAL SITE LOCATION MAP ABOVE GRADE PETROLEUM BULK STORAGE FACILITY WEST BEND ELEVATOR COMPANY WEST BEND, IOWA	PROJECT #: 00-947 DRAWN BY: CHECKED BY: GEOTEK ENGINEERING & TESTING SERVICES, INC.

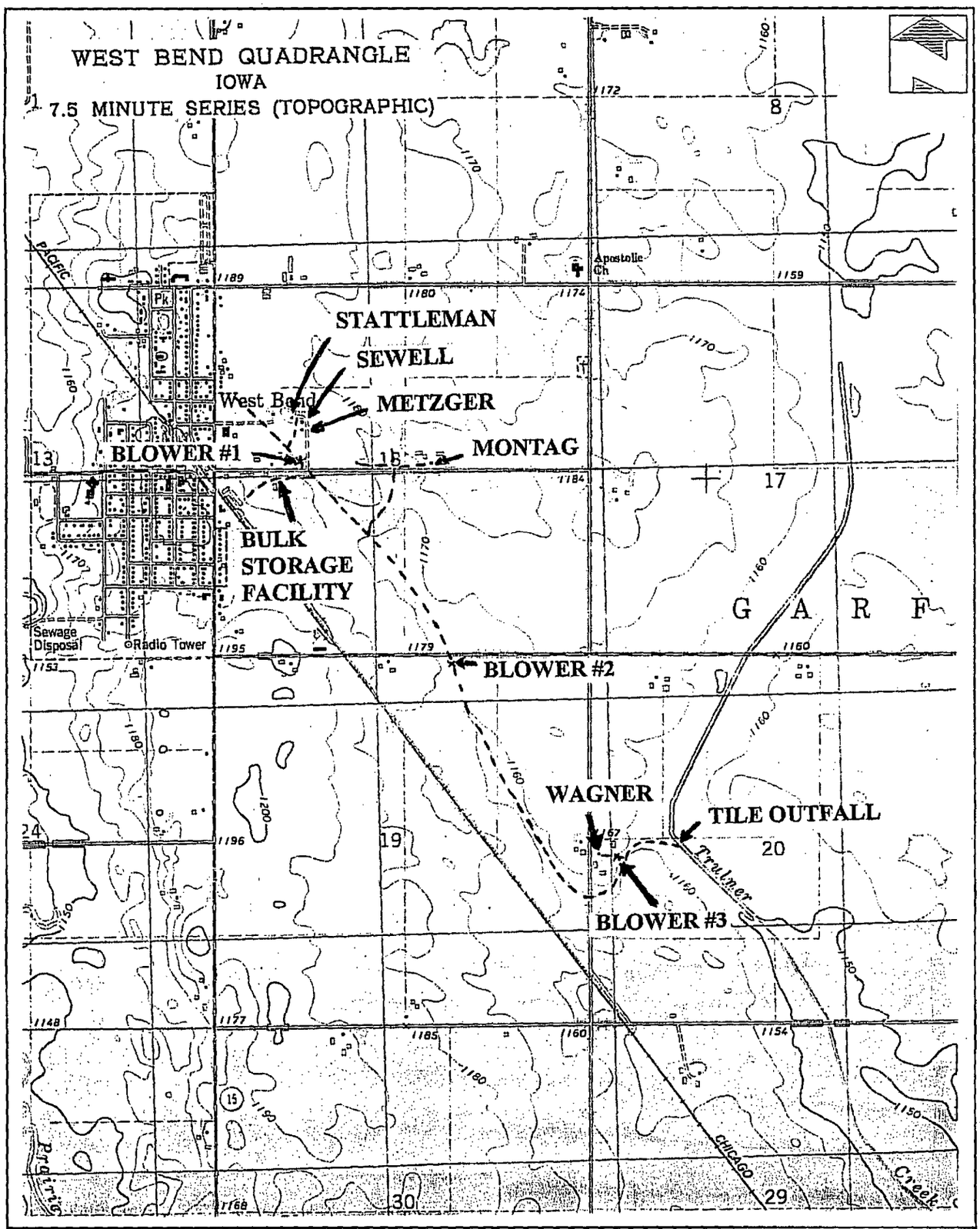


FIGURE 3
MAIN TILE/BLOWER LOCATION MAP
WEST BEND ELEVATOR COMPANY
WEST BEND, IOWA

PROJECT #: 00-947

DRAWN BY: CHECKED BY:

GEOTEK ENGINEERING & TESTING SERVICES, INC.

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well# SB1	Facility Name: WEST BEND ELEVATOR	Facility Address: WEST BEND, IOWA
Boring Depth 14 1/2' X Diameter 3 1/4"		Drilling Method: HOLLOW STEM AUGER
Well Contractor Registration # 40161		Logged by: R. HAGEDORN
Date & Time Start: 11-30-00 2:35	Date & Time End: 11-30-00 2:55	Ground Surface Elevation (ASL) / LUST Number:

Depth in Feet	Well Construction Details	Blow Count If Applicable	Sample No.	Sample Type*	PID/FID Reading **	Rock Formations, Soil, Color and Classification Observations (moisture, etc.)
0			1 0-2'	HSA	ND	TOPSOIL: Silty clay, black, a layer of brownish gray above 2' (CL)
						GLACIAL TILL: Lean clay, a little gravel, brown mottled (CL)
			2 2-4.5'	SS	ND	
5			3 4.5-7'	SS	ND	
			4 7-9.5'	SS	ND	
10			5 9.5-12'	SS	ND	
			6 12-14.5'	SS	ND	
15						Total depth 14 1/2' One soil sample collected @ 4 1/2-7'
20						

* SS (split spoon) HSA (hollow stem auger) FA (flight auger) NSR (no sample recovered) **ND (NON-DETECT)

OBSERVATIONS	Date :						
WATER LEVELS (depth to ground water)	Level :						
Static Water Level Symbol ⊻	Time :						

00-047MW

DNR FORM 542-1392

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well# SB2	Facility Name: WEST BEND ELEVATOR	Facility Address: WEST BEND, IOWA
Boring Depth 14 1/2' X Diameter 3 1/4"		Drilling Method: HOLLOW STEM AUGER
Well Contractor Registration # 40161		Logged by: R. HAGEDORN
Date & Time Start: 11-30-00 4:40	Date & Time End: 11-30-00 5:05	Ground Surface Elevation (ASL) / LUST Number:

Depth in Feet	Well Construction Details	Blow Count If Applicable	Sample No.	Sample Type*	PID/FID Reading **	Rock Formations, Soil, Color and Classification Observations (moisture, etc.)
0			1 0-2'	HSA	4ppm	TOPSOIL: Silty clay, black (CL)
						GLACIAL TILL: Lean clay, a little gravel, brown mottled (CL)
5			2 2-4.5'	SS	82ppm	
			3 4.5-7'	SS	132ppm	
			4 7-9.5'	SS	150ppm	
10			5 9.5-12'	SS	8ppm	
			6 12-14.5'	SS	9ppm	
15						Total depth 14 1/2' Two soil samples collected @ 4 1/2-7' 7-9 1/2'
20						

* SS (split spoon) HSA (hollow stem auger) FA (flight auger) NSR (no sample recovered) **ND (NON-DETECT)

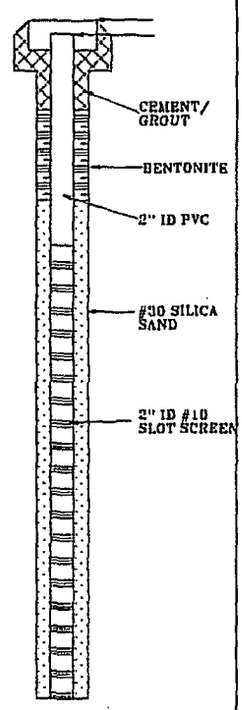
OBSERVATIONS	Date :						
WATER LEVELS (depth to ground water)	Level :						
Static Water Level Symbol ▼	Time :						

00-047MW

DNR FORM 542-1392

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well# MW1	Facility Name: WEST BEND ELEVATOR	Facility Address: WEST BEND, IOWA
Boring Depth 15' X Diameter 7 1/4"		Drilling Method: HOLLOW STEM AUGER
Well Contractor Registration # 40161		Logged by: R. HAGEDORN
Date & Time Start: 11-30-00 11:35	Date & Time End: 11-30-00 12:50	Ground Surface Elevation (ASL) / LUST Number:

Depth in Feet	Well Construction Details	Blow Count If Applicable	Sample No.	Sample Type*	PID/FID Reading **	Rock Formations, Soil, Color and Classification Observations (moisture, etc.)
0			1 0-2'	HSA	ND	TOPSOIL: Silty clay, black, a layer of fill at the surface (CL)
			2 2-4.5'	SS	ND	GLACIAL TILL: Lean clay, trace of gravel, light brownish gray mottled (CL)
5			3 4.5-7'	SS	ND	GLACIAL TILL: Lean clay, a little gravel, brown mottled, a layer of gray above 15' (CL)
			4 7-9.5'	SS	ND	
10			5 9.5-12'	SS	ND	
			6 12-14.5'	SS	ND	
15						Total depth 15' One soil sample collected @ 7-9 1/2'
20						

* SS (split spoon) HSA (hollow stem auger) FA (flight auger) NSR (no sample recovered) **ND (NON-DETECT)

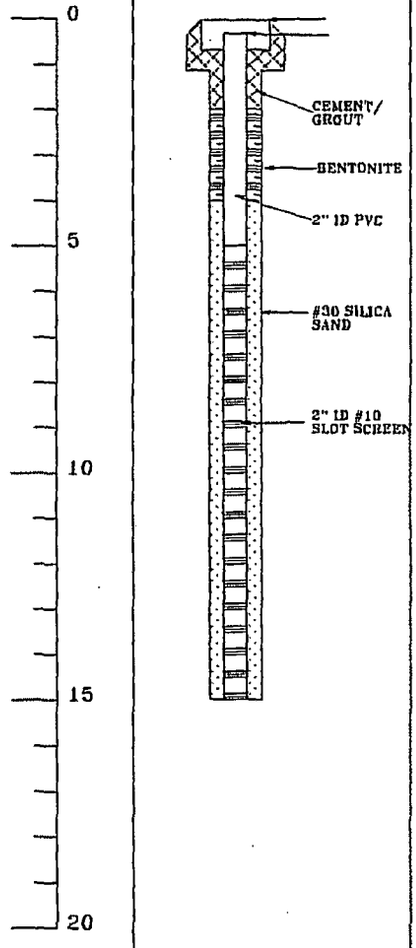
OBSERVATIONS	Date :						
WATER LEVELS (depth to ground water)	Level :						
Static Water Level Symbol ⊻	Time :						

00-047MW

DNR FORM 542-1392

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well# MW2	Facility Name: WEST BEND ELEVATOR	Facility Address: WEST BEND, IOWA
Boring Depth 15' X Diameter 7 1/4"		Drilling Method: HOLLOW STEM AUGER
Well Contractor Registration # 40161		Logged by: R. HAGEDORN
Date & Time Start: 11-30-00 1:05	Date & Time End: 11-30-00 1:50	Ground Surface Elevation (ASL) / LUST Number:



Depth in Feet	Well Construction Details	Blow Count If Applicable	Sample No.	Sample Type*	PID/FID Reading **	Rock Formations, Soil, Color and Classification Observations (moisture, etc.)
			1 0-2'	HSA	ND	TOPSOIL: Silty clay, black, a layer of fill at the surface (CL)
			2 2-4.5'	SS	ND	FINE ALLUVIUM: Silty clay, dark grayish brown and brownish gray (CL)
			3 4.5-7'	SS	ND	FINE ALLUVIUM: Silty clay, light brownish gray, a few lenses of sand above 7' (CL)
			4 7-9.5'	SS	ND	FINE ALLUVIUM: Silty clay, gray (CL)
			5 9.5-12'	SS	ND	GLACIAL TILL: Lean clay, a little gravel, gray (CL)
			6 12-14.5'	SS	ND	Total depth 15' One soil sample collected @ 4 1/2-7'

* SS (split spoon) HSA (hollow stem auger) FA (flight auger) NSR (no sample recovered) **ND (NON-DETECT)

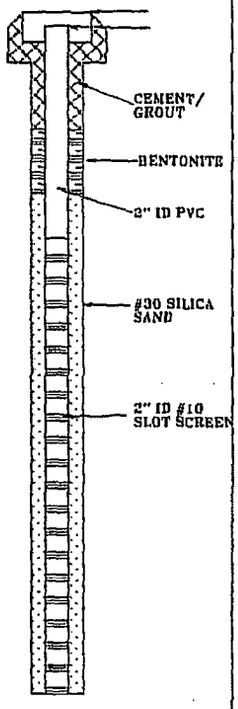
OBSERVATIONS	Date :						
WATER LEVELS (depth to ground water)	Level :						
Static Water Level Symbol ▼	Time :						

00-947MW

DNR FORM 542-1392

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well# MW3	Facility Name: WEST BEND ELEVATOR	Facility Address: WEST BEND, IOWA
Boring Depth 15' X Diameter 7 1/4"		Drilling Method: HOLLOW STEM AUGER
Well Contractor Registration # 40161		Logged by: R. HAGEDORN
Date & Time Start: 11-30-00 1:55	Date & Time End: 11-30-00 2:30	Ground Surface Elevation (ASL) / LUST Number:

Depth in Feet	Well Construction Details	Blow Count If Applicable	Sample No.	Sample Type*	PID/FID Reading **	Rock Formations, Soil, Color and Classification Observations (moisture, etc.)
0			1 0-2'	HSA	ND	TOPSOIL: Silty clay, black (CL)
			2 2-4.5'	SS	ND	FINE ALLUVIUM: Silty clay, brown mottled, a few lenses of lean clay (CL)
5			3 4.5-7'	SS	ND	
			4 7-9.5'	SS	ND	GLACIAL TILL: Lean clay, a little gravel, brown mottled, a layer of gray above 15' (CL)
10			5 9.5-12'	SS	ND	
			6 12-14.5'	SS	ND	
15						Total depth 15' One soil sample collected @ 9 1/2-12'
20						

* SS (split spoon) HSA (hollow stem auger) FA (flight auger) NSR (no sample recovered) **ND (NON-DETECT)

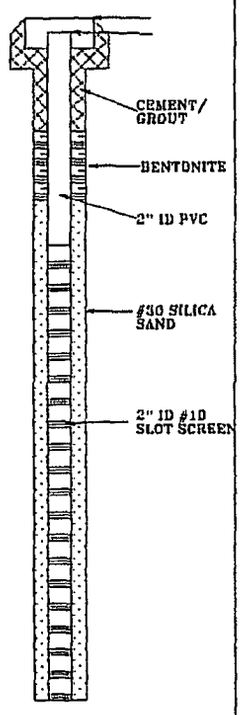
OBSERVATIONS							
WATER LEVELS (depth to ground water)	Date :						
Static Water Level Symbol ▼	Level :						
	Time :						

00-047MW

DNR FORM 542-1392

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well# MW4	Facility Name: WEST BEND ELEVATOR	Facility Address: WEST BEND, IOWA
Boring Depth 15' X Diameter 7 1/4"		Drilling Method: HOLLOW STEM AUGER
Well Contractor Registration # 40161		Logged by: R. HAGEDORN
Date & Time Start: 11-30-00 3:05	Date & Time End: 11-30-00 3:45	Ground Surface Elevation (ASL) / LUST Number:

Depth in Feet	Well Construction Details	Blow Count If Applicable	Sample No.	Sample Type*	PID/FID Reading **	Rock Formations, Soil, Color and Classification Observations (moisture, etc.)
0			1 0–2'	HSA	ND	TOP SOIL: Silty clay, black (CL)
			2 2–4.5'	SS	ND	GLACIAL TILL: Lean clay, a little gravel, brown mottled (CL)
5			3 4.5–7'	SS	ND	
			4 7–9.5'	SS	ND	
10			5 9.5–12'	SS	ND	
			6 12–14.5'	SS	ND	
15						Total depth 15' One soil sample collected @ 7–9 1/2'
20						

* SS (split spoon) HSA (hollow stem auger) FA (flight auger) NSR (no sample recovered) **ND (NON-DETECT)

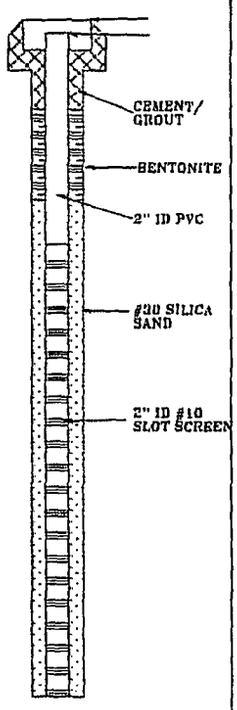
OBSERVATIONS	Date :						
WATER LEVELS (depth to ground water)	Level :						
Static Water Level Symbol ∇	Time :						

00-047MW

DNR FORM 542-1392

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well# MW5	Facility Name: WEST BEND ELEVATOR	Facility Address: WEST BEND, IOWA	
Boring Depth 15' X Diameter 7 1/4"		Drilling Method: HOLLOW STEM AUGER	
Well Contractor Registration # 40161		Logged by: R. HAGEDORN	
Date & Time Start: 11-30-00 3:55	Date & Time End: 11-30-00 4:40	Ground Surface Elevation (ASL)	LUST Number:

Depth in Feet	Well Construction Details	Blow Count If Applicable	Sample No.	Sample Type*	PID/FID Reading **	Rock Formations, Soil, Color and Classification Observations (moisture, etc.)
0			1 0-1.5'	HSA	7ppm	FILL: Mostly clay, a little gravel, black and dark brown
						GLACIAL TILL: Lean clay, black and brownish gray (CL)
5			2 2-4.5'	SS	10ppm	GLACIAL TILL: Lean clay, trace of gravel, light gray (CL)
			3 4.5-7'	SS	46ppm	
						GLACIAL TILL: Lean clay, a little gravel, brownish gray (CL)
10			4 7-9.5'	SS	8ppm	
						GLACIAL TILL: Lean clay, a little gravel, gray (CL)
			5 9.5-12'	SS	3ppm	
			6 12-14.5'	SS	ND	
15						Total depth 15' Two soil samples collected @ 4 1/2'-7' 9 1/2'-12'
20						

* SS (split spoon) HSA (hollow stem auger) FA (flight auger) NSR (no sample recovered) **ND (NON-DETECT)

OBSERVATIONS	Date :						
WATER LEVELS (depth to ground water)	Level :						
Static Water Level Symbol ▼	Time :						

00-047MW

DNR FORM 542-1392

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

CHAIN OF CUSTODY # 14664

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 14, 2000

SAMPLE MEDIUM: SOIL

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

DATE SAMPLED: November 30 , 2000
DATE RECEIVED: December 01, 2000

PHONE:

SAMPLER: Linda Watts 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit
MW-1 7-9.5	3965-00					
	12/5/2000	OA-1	Benzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	<10.000	mg/kg	10 mg/kg
	12/5/2000	OA-2	TEH as Diesel	<10.000	mg/kg	10 mg/kg
			Surrogate	100 %		
MW-2 4.5-7	3966-00					
	12/5/2000	OA-1	Benzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	<10.000	mg/kg	10 mg/kg
	12/5/2000	OA-2	TEH as Diesel	<10.000	mg/kg	10 mg/kg
			Surrogate	100 %		

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

CHAIN OF CUSTODY # 14664

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 14, 2000

SAMPLE MEDIUM: SOIL

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

DATE SAMPLED: November 30 , 2000
DATE RECEIVED: December 01, 2000

PHONE:

SAMPLER: Linda Watts 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit
MW-3 9.5-12	3967-00					
	12/5/2000	OA-1	Benzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	<10.000	mg/kg	10 mg/kg
	12/5/2000	OA-2	TEH as Diesel	<10.000	mg/kg	10 mg/kg
			Surrogate	100 %		
MW-4 7-9.5	3968-00					
	12/5/2000	OA-1	Benzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	<10.000	mg/kg	10 mg/kg
	12/5/2000	OA-2	TEH as Diesel	<10.000	mg/kg	10 mg/kg
			Surrogate	100 %		

REPORT OF ANALYTICAL RESULTS

PROJECT #: 00-947-8

CHAIN OF CUSTODY # 14664

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 14, 2000

SAMPLE MEDIUM: SOIL

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

DATE SAMPLED: November 30 , 2000
DATE RECEIVED: December 01, 2000

PHONE:

SAMPLER: Linda Watts 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit
MW-5 4.5-7	3969-00					
	12/5/2000	OA-1	Benzene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	*656.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Gasoline	<10.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Diesel	4931.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Waste Oil	<10.0	mg/kg	10 mg/kg
Comments: * - chromatographic profile indicates light diesel components.			Surrogate	100 %		
MW-5 9.5-12	3970-00					
	12/5/2000	OA-1	Benzene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	<10.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Gasoline	<10.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Diesel	<10.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Waste Oil	<10.0	mg/kg	10 mg/kg
			Surrogate	100 %		

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

CHAIN OF CUSTODY # 14664

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 14, 2000

SAMPLE MEDIUM: SOIL

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

PHONE:

DATE SAMPLED: November 30 , 2000
DATE RECEIVED: December 01, 2000

SAMPLER: Linda Watts 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit
SB-1 4.5-7	3971-00					
	12/5/2000	OA-1	Benzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.200	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	<10.000	mg/kg	10 mg/kg
	12/5/2000	OA-2	TEH as Diesel	<10.000	mg/kg	10 mg/kg
			Surrogate	100 %		
SB-2 4.5-7	3972-00					
	12/5/2000	OA-1	Benzene	2.36	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	10.70	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	1.28	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	5.94	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	34.30	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Gasoline	253.00	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Diesel	<10.00	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Waste Oil	<10.00	mg/kg	10 mg/kg
			Surrogate	100 %		

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

CHAIN OF CUSTODY # 14664

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 14, 2000

SAMPLE MEDIUM: SOIL

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

DATE SAMPLED: November 30 , 2000
DATE RECEIVED: December 01, 2000

PHONE:

SAMPLER: Linda Watts 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit
SB-2 7-9.5	3973-00					
	12/5/2000	OA-1	Benzene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Toluene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Ethylbenzene	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	Xylenes	<0.2	mg/kg	0.2 mg/kg
	12/5/2000	OA-1	TPH as Gasoline	<10.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Gasoline	<10.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Diesel	<10.0	mg/kg	10 mg/kg
	12/7/2000	OA-2	TEH as Waste Oil	<10.0	mg/kg	10 mg/kg
			Surrogate	100 %		

Analysts: Katherine Howard and Jason Cook

Respectfully submitted

Katherine Howard, Laboratory Supervisor

SN: 14664

GEOTEK ENGINEERING & TESTING SERVICES, INC.

909 East 50th Street North
Sioux Falls, SD 57104
Telephone (605) 335-5512 • Fax (605) 335-0773

CHAIN OF CUSTODY RECORD
Analytical Request

LAB: _____

GEOTEK PROJECT NAME West Bend Elev. Spill — Geotek Project # 00-947-8 — TRANSMITTAL OF RESULTS

Address West Bend — Geotek Project Manager TJC, DH, LJW — Report To _____

P.O. #/Billing Reference _____ — Fax? _____

Bill To _____ — Express Mail? _____

Standard Mail? _____

Sampled by (PRINT) LINDA WATTS — Phone# _____

Sampler Signature [signature] — Date Sampled 11/30/00

ANAYSIS REQUESTED

Sample No.	Sample Description	Sample Type	No. of Contain.	PID Reading	LABORATORY METHODS (State Regulatory Agency)	BTEX/MTBE	TH as Gasoline	Naphthalene	TH as Fuel Oil/Diesel	TH as Waste Oil	TDS/TSS				Speed of Analysis No. days if other than standard turnaround	Remarks
3965	MW1@7-9 1/2	Soil	1	ND	OA2 OA1	X	X		X	X						
3966	MW2 @ 4 1/2-7	Soil	1	ND	OA2 OA1	X	X		X	X						
3967	MW3 @ 9 1/2-12	Soil	1	ND	↓	↓	↓		↓							
3968	MW4 @ 7-9 1/2	Soil	1	ND												
3969	MW5 @ 4 1/2-7	Soil	1	46												W.O.
3970	MW5 @ 9 1/2-12	Soil	1	3												W.O.
3971	SB1 @ 4 1/2-7	Soil	1	ND												
3972	SB2 @ 4 1/2-7	Soil	1	132												W.O.
3973	SB2 @ 7-9 1/2	Soil	1	150	↓	↓	↓		↓							W.O.

Relinquished by Sampler: (Signature)	DATE/TIME	Received by Shipper: (Signature)	DATE/TIME	Method of Shipment:
[signature]	12/1/00			
Delivered by Shipper: (Signature)	DATE/TIME	Received by Laboratory: (Signature)	DATE/TIME	
		[signature]	12-1-00 10:00	

LABORATORY: Was cooler received with Chain of Custody Seal intact? ___ Yes ___ No Initials _____

Form 10436-4-99

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

CHAIN OF CUSTODY # 14682

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 11, 2000

SAMPLE MEDIUM: WATER

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

PHONE:

DATE SAMPLED: December 06 , 2000
DATE RECEIVED: December 07, 2000

SAMPLER: Tom Chap 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit
MW #3	4010-00					
	12/8/2000	OA-1	Benzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Toluene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Ethylbenzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Xylenes	<5	ug/L	5 ug/L
	12/8/2000	OA-1 GCMS	MTBE	<15	ug/L	15 ug/L
	12/8/2000	OA-1	TPH as Gasoline	<100	ug/L	100 ug/L
			Surrogate	103 %		
MW #4	4011-00					
	12/8/2000	OA-1	Benzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Toluene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Ethylbenzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Xylenes	<5	ug/L	5 ug/L
	12/8/2000	OA-1 GCMS	MTBE	<15	ug/L	15 ug/L
	12/8/2000	OA-1	TPH as Gasoline	<100	ug/L	100 ug/L
			Surrogate	103 %		
MW #5	4012-00					
	12/8/2000	OA-1	Benzene	4	ug/L	2 ug/L
	12/8/2000	OA-1	Toluene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Ethylbenzene	2	ug/L	2 ug/L
	12/8/2000	OA-1	Xylenes	39	ug/L	5 ug/L
	12/8/2000	OA-1 GCMS	MTBE	4	ug/L	15 ug/L
	12/8/2000	OA-1	TPH as Gasoline	140	ug/L	100 ug/L
			Surrogate	100 %		

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

CHAIN OF CUSTODY # 14682

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 11, 2000

SAMPLE MEDIUM: WATER

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

DATE SAMPLED: December 06 , 2000
DATE RECEIVED: December 07, 2000

PHONE:

SAMPLER: Tom Chap 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit

Analysts: Katherine Howard and Jason Cook

Respectfully submitted

Katherine Howard, Laboratory Supervisor

SN: 14682

GEOTEK ENGINEERING
& TESTING SERVICES, INC.
909 East 50th Street North
Sioux Falls, SD 57104
Telephone (605) 335-5512 • Fax (605) 335-0773

CHAIN OF CUSTODY RECORD
Analytical Request

LAB: GEOTEK

GEOTEK PROJECT NAME WEST BEND ELEV. Geotek Project # 00-947

Address _____ Geotek Project Manager TOM

WEST BEND Bill To _____

Sampled by (PRINT) TOM CHAP Phone# _____

Sampler Signature Roman J. Chap Date Sampled 12-6-00

TRANSMITTAL OF RESULTS

Report To _____

Fax? _____

Express Mail? _____

Standard Mail? _____

ANAYSIS REQUESTED

Sample No.	Sample Description	Sample Type	No. of Contain.	PID Reading	LABORATORY METHODS (State Regulatory Agency)	BTEX/MTBE QCMS	TH as Gasoline	Naphthalene	TH as Fuel Oil/Diesel	TH as Waste Oil	TDS/TSS			Speed of Analysis No. days if other than standard turnaround	Remarks
4010	MW-3	H_2O	3			X	X								
4011	MW-4	"	"			X	X								
4012	MW-5	"	"			X	X								Strong Odor

Relinquished by Sampler: (Signature)	DATE/TIME	Received by Shipper: (Signature)	DATE/TIME	Method of Shipment:
Roman J. Chap	12-7-00			
Delivered by Shipper: (Signature)	DATE/TIME	Received by Laboratory: (Signature)	DATE/TIME	
			12-7-00 9:00	

LABORATORY: Was cooler received with Chain of Custody Seal Intact? ___ Yes ___ No Initials _____

Form 10436-4-99

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

CHAIN OF CUSTODY # 14683

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

DATE: December 22, 2000

SAMPLE MEDIUM: WATER

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597

DATE SAMPLED: December 05 , 2000
DATE RECEIVED: December 07, 2000

PHONE:

SAMPLER: Tom Chap 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit
METZGER WELL	4007-00					
	12/8/2000	OA-1	Benzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Toluene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Ethylbenzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Xylenes	<5	ug/L	5 ug/L
	12/8/2000	OA-1 GCMS	MTBE	<15	ug/L	15 ug/L
	12/8/2000	OA-1	TPH as Gasoline	<100	ug/L	100 ug/L
			Surrogate	100 %		
MW #1	4008-00					
	12/7/2000	OA-1	Benzene	<2	ug/L	2 ug/L
	12/7/2000	OA-1	Toluene	<2	ug/L	2 ug/L
	12/7/2000	OA-1	Ethylbenzene	<2	ug/L	2 ug/L
	12/7/2000	OA-1	Xylenes	<5	ug/L	5 ug/L
	12/8/2000	OA-1 GCMS	MTBE	<15	ug/L	15 ug/L
	12/7/2000	OA-1	TPH as Gasoline	<100	ug/L	100 ug/L
			Surrogate	96.6 %		
MW #2	4009-00					
	12/8/2000	OA-1	Benzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Toluene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Ethylbenzene	<2	ug/L	2 ug/L
	12/8/2000	OA-1	Xylenes	<5	ug/L	5 ug/L
	12/8/2000	OA-1 GCMS	MTBE	<15	ug/L	15 ug/L
	12/8/2000	OA-1	TPH as Gasoline	<100	ug/L	100 ug/L
			Surrogate	102 %		

REPORT OF ANALYTICAL RESULTS

PROJECT # : 00-947-8

PROJECT:
WEST BEND ELEVATOR
WEST BEND, IA

CLIENT:
West Bend Elevator Company
P O Box 49
West Bend, IA 50597
PHONE:

CHAIN OF CUSTODY # 14683

DATE: December 22, 2000

SAMPLE MEDIUM: WATER

DATE SAMPLED: December 05 , 2000
DATE RECEIVED: December 07, 2000

SAMPLER: Tom Chap 605-335-5512

Site	Lab ID#	Method	Compound Analyzed	Test Results	Units	Method Detection Limit

Analysts: Katherine Howard and Jason Cook

Respectfully submitted

Katherine Howard, Laboratory Supervisor

SN: 14683

GEOTEK ENGINEERING
& TESTING SERVICES. INC.
909 East 50th Street North
Sioux Falls, SD 57104
Telephone (605) 335-5512 • Fax (605) 335-0773

CHAIN OF CUSTODY RECORD
Analytical Request

LAB: GEOTEK

GEOTEK PROJECT NAME WEST BEND ELEV. Geotek Project # 00-947

Address

WEST BEND

Geotek Project Manager TOM

P.O. #/Billing Reference

Bill To

TRANSMITTAL OF RESULTS

Report To

Fax?

Express Mail?

Standard Mail?

Sampled by (PRINT) TOM CHAP Phone# 1'

Sampler Signature Thomas J. Chap Date Sampled 12-5-00

ANAYSIS REQUESTED

Sample No.	Sample Description	Sample Type	No. of Contain.	PID Reading	LABORATORY METHODS (State Regulatory Agency)	BTEX/MTBE	TH as Gasoline	Naphthalene	TH as Fuel Oil/Diesel	TH as Waste Oil	TDS/TSS			Speed of Analysis No. days if other than standard turnaround	Remarks
4007	METZGER WELL	H_2O	3			X	X								
4008	MW-1	"	3			X	X								
4009	MW-2	"	3			X	X								

Relinquished by Sampler: (Signature)	DATE/TIME	Received by Shipper: (Signature)	DATE/TIME	Method of Shipment:
Thomas J. Chap	12-5-00			
Delivered by Shipper: (Signature)	DATE/TIME	Received by Laboratory: (Signature)	DATE/TIME	
		Kathleen Hall	12-7-00 9:00	

LABORATORY: Was cooler received with Chain of Custody Seal intact? ___ Yes ___ No Initials _____

Form 10436-4-99