

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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February 7, 2003

Mr. Brian Columbus
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Chicago, IL 60654

Subject: Site Investigation Report Review, Property at 301 East Brown Street Milwaukee, WI

FID: 341065230
BRRTS: 03-41-373872

Tax Key 353151 2100

Dear Mr. Columbus:

On behalf of Brown Street III LLC, STS Consultants (STS) has submitted a site investigation (SI) report dated January 10, 2003 for review by the Wisconsin Department of Natural Resources ("the Department"). STS has requested a review relevant to requirements found in ch. NR 716 Wisconsin Administrative Code, granting an exemption for a substance in groundwater that is above a preventative action limit under Section NR 140.28(3) Wisconsin Statutes, and a determination if the site is a historical fill site. This letter is in response to this request.

Site Investigation Report

The review of the SI report by the Department did not include Key Environmental's (KEY) Phase I, Phase II, and Supplemental Phase II reports. These reports were not included with the STS submittal. The site is zoned by the City of Milwaukee as a General Planned Development (GPD) non-industrial property within an area of mixed light industrial and residential land use. The SI report submitted by STS concentrated its investigation to the northeast corner of the property. This included four soil borings and installation of three groundwater-monitoring wells. Listed below are items the Department will require additional information, as required in a SI report in ch. NR 716, Wis. Adm. Code:

1. The SI report indicated that information is not available concerning the location of a tank(s) or system that provided fuel for the former boiler located onsite. The historical assessment that is associated with the PAH, lead, and TCE discharges at the site or facility has not been adequately addressed. Whether this information was included in Key's reports is unknown. For instance, were records or lists reviewed for landfill/solid waste disposal sites, hazardous waste/contaminated sites, registered underground storage tanks, local land records, building permits/inspection department reports, or local utility companies (for records relating to PCBs), to name a few. Section NR 716.07, Wis. Adm. Code, requires the historical aspect as part of the site investigation scoping of a site or facility.
2. Determining the source, degree, and extent of the lead, PAH, and TCE contamination as required in s. NR 716.11(3)(a), Wis. Adm. Code, including extending the investigation beyond the property boundaries [s. NR 716.11(4), Wis. Adm. Code] to fully define the extent is not complete.
3. TCE has a specific gravity (1.462 g/cc) that is greater than water (equal to 1) and is a chemical compound that is in a category known as a Dense Nonaqueous Phase Liquid (DNAPL). MW-2 has TCE detected above the PAL at a depth of 15 to 25 feet bgs (the screened interval of the well). TCE may be above the enforcement standard (ES) with increasing depth below 25 feet. Investigation of the groundwater for TCE contamination may be necessary to delineate the extent of this DNAPL as

required in s. NR 716.11(3)(a), Wis. Adm. Code. This would depend on the results of the investigation as discussed in the **Pal Exemption** paragraph below.

4. An evaluation of the potential pathway for migration of contamination for utility corridors was not completed as required in s. NR 716.11(5), Wis. Adm. Code. The depths of the utility corridors, an evaluation, and a map showing the location of utilities was not provided in the SI report.
5. Geologic cross-sections depicting the stratigraphy of the site as required in s. NR 716.15(2)(g)6, Wis. Adm. Code were not included in the SI report.
6. Isoconcentration maps were not included with the SI report as required in s. NR 716.15(2)(g)7, Wis. Adm. Code depicting the scope and complexity of the site.

PAL Exemption

Groundwater monitoring well MW-2 has a preventative action limit (PAL) exceedance for trichloroethene (TCE) at 0.864 ppb (PAL = 0.50 ppb) and below the enforcement standard (ES) of 5.0 ppb. STS has requested that a PAL exemption be granted under Section 140.28(3) Wisconsin Statutes.

The Department will need additional information about the site before it can determine if a PAL exemption can be granted for TCE as listed below:

1. The Department has not received any of the reports KEY completed in 1999 for the site. Part of the SI scoping procedures under s. NR 716.07, Wis. Adm. Code, should have included a history of any hazardous substance uses or discharges found at the site. The former solvent storage building and the materials stored there, may have caused or contributed to the TCE groundwater contamination. Please submit any information on the solvent storage building and the former facility on the use of solvents or hazardous substances on the site that may have contributed to the contamination.
2. KEY's map Figure 2 (enclosed), indicates there is soil and groundwater contamination from TCE on the adjacent property located west of the 301 East Brown Street property. This may be the source for TCE groundwater contamination other than the solvent storage building, but the Department can not determine this from the information that has been submitted. If additional investigation for groundwater contamination shows that this property may be the source area and not the former solvent storage building or former facility, then the 301 East Brown Street property may be eligible for an offsite exemption as stipulated in Section 292.13, Wis. Statutes.
3. The other possible source of TCE contamination may come from the adjacent industrial property east of the 301 East Brown Street property. MW-2 may be at the limits of a groundwater plume originating from this property. Again, the Department can not determine this from the current information provided by STS.
4. If the only source occurs at MW-2, then additional rounds of sampling from the three wells will need to be completed. If it can be documented that this is the only location TCE occurs in groundwater, the Department will consider one additional round of sampling of the three wells to reconfirm that TCE remains at the PAL level and then grant an exemption.

Historical Fill Site

Landfills that were established before 1970 and were never licensed by the Department of Natural Resources (DNR), are called historic fill sites. DNR's administrative codes prohibit the placement of structures or other development on buried waste without an exemption to s. NR 506.085, Wis. Adm. Code, because of legitimate and documented concerns about leachate, generation of methane, and past disposal practices. Section NR 506.085, Wis. Adm. Code, prohibits development under the following three circumstances:

- Use of the waste disposal area for agricultural purposes;
- Establishment or construction of any buildings over the waste disposal area; and
- Excavation of the final cover or any waste materials.

The SI soil boring logs for the soil borings (STS-1 thru STS-4) and groundwater monitoring wells MW-1 thru -4 indicate the area investigated contains fill material consisting of brick fragments, slag, coal, traces of asphalt and wood, concrete rubble mixed in with sand, gravel, and silt to silty clays. This material includes PAH contamination exceeding the combined target risk expressed as BaP-equivalent concentration of 0.61 ppm and lead contamination above s. NR 720 Table 2 residual contaminant levels based on human health risk from direct contact related to land use for non-industrial sites (> 50 ppm).

Based on this information, the site would require an exemption to development at a historic fill site. To what extent the fill material covers the site is unknown. KEY's Phase I, Phase II, and Supplemental Phase II may provide additional information. A more thorough investigation of this material on the site would need to be completed as a requirement for the exemption as supportive documentation. This would include a hazardous waste determination because of lead in soil that's greater than ch. NR 720, Wis. Adm. Code, Table 2 residual contaminant levels based on human health risk from direct contact related to land use.

Listed below are the Department's guidance's pertaining to historic fill sites that can be obtained from the Department's web site at: http://www.dnr.state.wi.us/org/aw/rr/archives/pub_index.html

- *Development at Historic Fill Sites and Licensed Landfills: What You Need to Know (RR-683)*
- *Development at Historic Fill Sites and Licensed Landfills: Guidance for Investigation (RR684)*
- *Development at Historic Fill Sites and Licensed Landfills: Consideration and Potential Problems (RR-685)*
- *Development at Historic Fill Sites and Licensed Landfills: Exemption Application (Forms 4400-226 and 226A)*

Review of the site investigation report only addresses the information submitted by STS Consultants. Additional characterization and/or investigation may be required based on additional documentation provided to the Department.

If you have any questions or comments, please feel free to contact me at the above address or at (414) 263-8644. Please refer to the FID number at the top of this letter in any future correspondence. Future correspondence should be sent directly to the Remediation and Redevelopment Program Assistant Vicky Stovall (414-263-8680) at the above address.

Sincerely,



John J. Hnat
Hydrogeologist
Remediation and Redevelopment

Enclosure: Key Environmental Figure 2 Summary of Groundwater and Soil Sample Results

C: Mark Mejac, STS Consultants
WDNR SER Files

SOIL	
GP-1	
DEPTH	1'-3' 7'-9' 9'-11'
PID	<2
VOCs	ND
Ba	53
Cd	1.3
Cr	15
Pb	47
Hg	<0.1
PHEN	7.9(J)

SOIL	
B-7	
DEPTH	3.5'-5' 8.5'-10'
PID	<5
Ba	19
Cd	0.7
Cr	5.2
Pb	21
Se	<6.2 6.7

SOIL	
GP-2	
DEPTH	1'-3'
Ba	70
Cd	1.8
Cr	13
Pb	57

SOIL	
GP-3	
DEPTH	3'-5' 9'-11'
Ba	60
Cd	2.9
Cr	2.9
Pb	52

GROUNDWATER	
TW-1	
DATE	2/22/99
B	0.2(J)
TCE	0.2(J)

SOIL	
GP-14	
DEPTH	7'-9'
PID	<5
VOCs	ND

SOIL	
GP-15	
DEPTH	5'-7'
PID	<5
VOCs	ND

GROUNDWATER	
TW-3	
DATE	3/26/99
MC	0.62(A)
PCE	2.6

SOIL	
B-8	
DEPTH	1'-12.5'
PID	<5
VOCs	ND

SOIL	
GP-4	
DEPTH	7'-9'
PID	<2
GRO	<0.6
DRO	<1.1
PCE	320

GROUNDWATER	
TW-2	
DATE	2/22/99
B	0.4(J)
PCE	19
T	0.7(J)
TCE	0.7

SOIL	
GP-16	
DEPTH	3'-5' 7'-9'
PID	<5 <5
N	80 180
T	27 <25
TCE	49 43

SOIL	
GP-5	
DEPTH	1'-3'
PID	<2
VOCs	ND

SOIL	
GP-6	
DEPTH	1'-3'
PID	<2
N	37(J)

SOIL	
B-13	
DEPTH	1'-12.5' 13.5'-15'
PID	<5 <5
DRO	1.9
VOCs	ND
PVOCs	ND

SOIL	
B-12	
DEPTH	1'-12.5' 13.5'-15'
PID	<5 <5
VOCs	ND ND

SOIL	
GP-7	
DEPTH	1'-3'
PID	<2
VOCs	ND

SOIL	
GP-12	
DEPTH	1'-12'
PID	<5
GRO	9.5
DRO	<5.6
t-BB	67
E	31
IPB	45
N	97
n-PB	52
T	38
TMBs	45
X	79

SOIL	
GP-8	
DEPTH	1'-13'
PID	<2
E	5,070
X	6,290
TMBs	43,300
s-BB	14,600
IPB	5,170
N	42,800
n-PB	7,130
p-IPT	8,090

SOIL	
GP-13	
DEPTH	1'-12'
PID	<5.0
GRO	<6.0
DRO	11
VOCs	ND

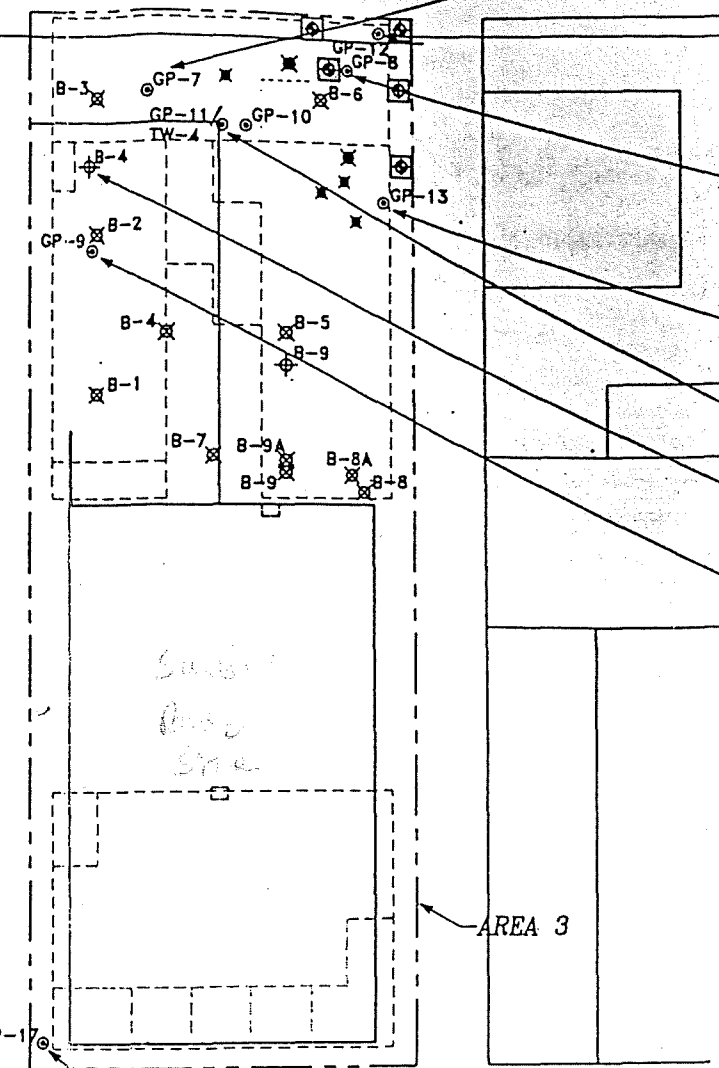
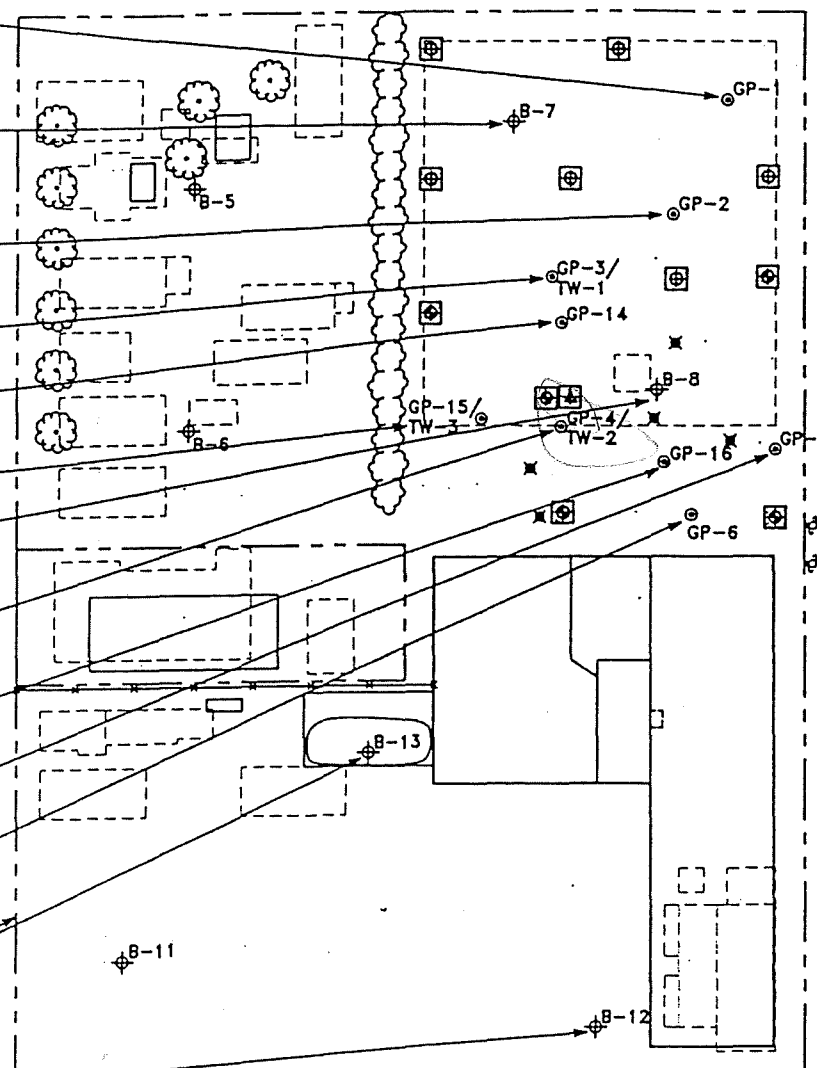
SOIL	
GP-11	
DEPTH	1'-12'
PID	<5
GRO	<6.0
DRO	<6.0
VOCs	ND

SOIL	
B-4	
DEPTH	3.5'-5'
PID	<5
VOCs	ND

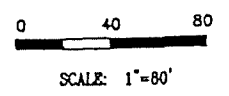
SOIL	
GP-9	
DEPTH	1'-3'
PID	<2
DRO	22
N	34(J)

- SOIL NOTES**
- P.I.D.: PHOTOMETRIC DETECTOR, L.U.
 - L.U.: INSTRUMENT UNITS
 - GRO: GASOLINE RANGE ORGANICS, mg/kg
 - DRO: DIESEL RANGE ORGANICS, mg/kg
 - VOCs: VOLATILE ORGANIC COMPOUNDS, ug/kg
 - PVOCs: PETROLEUM VOLATILE ORGANIC COMPOUNDS, ug/kg
 - K: ETHYLBENZENE, ug/kg
 - T: TOLUENE, ug/kg
 - X: TOTAL XYLENES, ug/kg
 - TMBs: TOTAL TRIMETHYLBENZENES, ug/kg
 - s-BB: sec-BUTYL BENZENE, ug/kg
 - t-BB: t-BUTYL BENZENE, ug/kg
 - IPB: ISOPROPYL BENZENE, ug/kg
 - N: NAPHTHALENE, ug/kg
 - n-PB: n-PROPYL BENZENE, ug/kg
 - p-IPT: p-ISOPROPYL TOLUENE, ug/kg
 - PCE: TETRACHLOROETHENE, ug/kg
 - TCE: TRICHLOROETHENE, ug/kg
 - Ba: BARIUM, mg/kg
 - Cd: CADMIUM, mg/kg
 - Cr: CHROMIUM, mg/kg
 - Pb: TOTAL LEAD, mg/kg
 - Hg: MERCURY, mg/kg
 - Se: SELENIUM, ug/kg
 - PHEN: PHENANTHRENE, mg/kg
 - mg/kg: MILLIGRAMS PER KILOGRAM
 - ug/kg: MICROGRAMS PER KILOGRAM
 - <: LESS THAN
 - : NOT ANALYZED
 - ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
 - (J): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
- GROUNDWATER NOTES**
- B: BENZENE, ug/l
 - PCE: TETRACHLOROETHENE, ug/l
 - T: TOLUENE, ug/l
 - TCE: TRICHLOROETHENE, ug/l
 - MC: METHYLENE CHLORIDE, ug/l
 - ug/l: MICROGRAMS PER LITER
 - (J): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
 - (A): LABORATORY ARTIFACT (NOT LIKELY PRESENT IN SAMPLE)

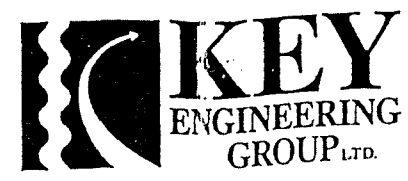
- LEGEND**
- ⊕ PROPOSED SOIL PROBE LOCATION
 - ⊗ PROPOSED MONITORING WELL LOCATION
 - ⊕ PROPOSED PIEZOMETER LOCATION
 - ⊙ SOIL PROBE LOCATION
 - ✖ SOIL PROBE REFUSAL AT <5 FT. BELOW GROUND SURFACE
 - ⊕ GEOTECHNICAL SOIL BORING LOCATION, FEBRUARY 1999
 - ✖ GEOTECHNICAL SOIL BORING LOCATION, JANUARY 2002
 - ☑ CONCENTRATION GREATER THAN: NR 140 ENFORCEMENT STANDARD (ES) (GROUNDWATER) or NR 720 GENERIC RESIDUAL CONTAMINANT LEVEL (GRCL) (SOIL)
 - ☑ CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT (PAL) (GROUNDWATER)



SOIL	
GP-17	
DEPTH	3'-5' 7'-9'
PID	<5 <5
VOCs	ND
Ba	52
Cr	12
Pb	9.5
Hg	0.14
Se	1.0



DRN. BY:	C.S.	DATE:	01/14/02
DSN. BY:	D.K.P.	FILE NO.:	PROPOSAL
CHK. BY:	D.K.P.	DWG. NO.:	TANDEM
REV. BY:	G.L.J.	SHEET NO.:	2



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FIGURE 2
SUMMARY OF GROUNDWATER AND SOIL SAMPLE ANALYTICAL RESULTS

PRELIMINARY PROPOSAL FOR SITE INVESTIGATION SERVICES
TANDEM DEVELOPMENT, LLC PROPERTY
EAST RESERVOIR AVENUE and BROWN STREET
MILWAUKEE, WISCONSIN

