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Gayla Stappert

McGrath North Mullin & Kratz

1601 Dodge Street Omaha, NE 68102

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5th Floor - 502 E. 9th Street

Des Moines, IA 503190034

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McGrath North Mullin & Kratz, PC LLO

ATTORNEYS AT LAW

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1601 DODGE STREET, OMAHA, NEBRASKA 68102

STEVEN P. CASE

TELEPHONE: 402-341-3070 E-MAIL: scase@mnmk.com

RECEIVED AUG 2 2 2007

August 20, 2007

Cal Lundberg Iowa DNR 5th Floor 502 E. 9th Street Des Moines, IA 50319-0034

Dear Cal:

Per our discussion today, I am enclosing an Environmental Screening Summary Report. This is for a particular parcel of real estate located in Carter Lake. I would appreciate getting the benefit of your review of this report, and what might be involved if a decision is to go forward with purchasing the property.

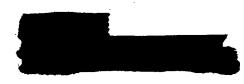
Thank you in advance for your assistance.

Steven P. Case

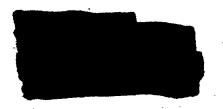
Sincerely

Enclosure SPC:gs

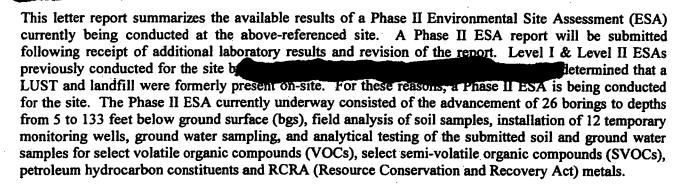




July 16, 2007



RE: ENVIRONMENTAL SCREENING SUMMARY LETTER



The borings advanced for this investigation were located in a grid pattern over most of the assessment site. The borings near the former gas pump and UST were located in areas of concern: MW-2 was located in the general vicinity of the former which has potential to be affected by past releases from the LUST), and MW-3 was located as near as possible to the former location of the LUST. Boring locations are illustrated on the attached Ground Water Flow Direction Maps.

The interpretation of analytical results for this site is complicated by the fact that the Iowa-Nebraska state line bisects the site. Hence the site is potentially subject to regulation by two state agencies: the NDEQ and the IDNR. The approximate location of the state line is shown on the attached aerial photograph.

SOIL SAMPLE RESULTS

Soil samples were collected at all boring locations and analyzed for VOCs with a 10.6 eV photoionization detector (PID). Samples were generally collected continuously through the entire depth of the on-site fill (present from immediately underneath the asphalt pavement to depths from 10 to 13 feet bgs), and once every five feet throughout the underlying alluvium. Typically, field samples slightly to moderately impacted by volatile and semi-volatile compounds associated with petroleum hydrocarbons exhibit headspace concentrations with an order of magnitude of 10-100 RRUs. In general, the soil samples collected during this investigation did not yield elevated headspace readings. Notably high headspace readings (above 10 RRUs) were encountered at the locations listed in Table 2, located on the following page.

TABLE 1. RESULTS OF HEADS ACE ANALYSIS (SOIL SAMPLES)

	LOCATION (feet below ground level)							
	B-2 (4-6)	B-3 (10-12)	B-10 (6-12)	B-12 (8-10)	B-17 (4-8)	B-22 (53.5-55)	B-25 (4-8)	B-26 (0.5-2.5)
HEADSPACE READING	101	13.2	65.3	15.8	10.3	11.7	12.1	31.2

Concentrations are in Relative Response Units (RRUs).

The samples with headspace concentrations in bold print were submitted for laboratory analysis.

One soil sample per boring, from the interval exhibiting the highest headspace reading from each of the three borings near the UST (B-2, B-3, and B-26), was submitted to the laboratory to be analyzed for select petroleum hydrocarbon constituents via Iowa Methods OA-1 and OA-2, and for RCRA Metals via EPA Methods 6010, 6610 and 7471.

For all of the other boring locations, one sample with the highest headspace reading from each of the four borings with samples exhibiting the highest overall headspace readings were submitted to the laboratory for analysis. These four samples were analyzed for select VOCs and SVOCs via EPA Methods 8260 and 8270, respectively.

Near surface soil samples (containing fill material with various types of debris and rubble) from all other boring locations were analyzed, or are in the process of being analyzed, for RCRA metals via the methods described above. The Reports of Analysis for the submitted soil samples are summarized in the following table.



TABLE 2. RESULTS OF SOIL ANALYSIS

	;	Ethylbenzene	0.018	
	OA-1	Naphthalene	0.113	
		TPH*	9.30	
	OA-2	TEH** as Diesel	196.0	
B-2		Barium	200	
(4-6')	EPA 6010	Cadmium	0.64	
` '	EPA 0010	Chromium	49.6	
		Lead	296	
	EPA 6020	Arsenic	11.2	
	EPA 7471	Mercury	0.65	
		Naphthalene	0.02	
	OA-I	TPIA	3.90	
	OA-2	TEH** as Diese	290	
		TENOVAS Kenosene	**************************************	
B3		Barlum		
(10-12")		Cadmium	0.54	
	EPA 6010	Chromium	1576	
		Lead	46.9	
	EPA 6020	Arsenic	4.50	
	EPA 7471	None		
Company of the Compan		Barium	224	
	EPA 6010	Chromium	15.8	
B-9		Lead	101	
(2-10')	EPA 6020	Arsenic	11.0	
	EPA 7471	Mercury	0.47	
B-10	EPA 8260B	None		
(6-12')	EPA 8270C	Bis (2-ethylhexyl) Phthalate	1.63	
(0-12)	2112 02.00	Barium	194	
		Cadmium	· 17.1	
B-12	EPA 6010	Chromium		
			20.6	
(0.5-16')	EPA 6020	Lead	209	
-		Arsenic	7.15	
D 10	EPA 7471 EPA 8260B	Mercury None	0.17	
B-12			<u> </u>	
(8-10')	EPA 82/0C	None		
	DD 4 5050	Barium	508	
D 10	EPA 6010	Cadmium	3.95	
B-19	.•	Chromium	41.5	
(2-10')		Lead	1,107	
·	EPA 6020	Arsenic	20.3	
<u> </u>		Selenium	0.66	
	EPA 7471	Mercury	0.94	

		•			
		Bacium			
	EPA 6010	Castrillun	1.43		
B-21	LIACONO	Chomium	30.9		
(0.5-10°)	and the second s	Leic			
(0.3-10-)	EPA 6020	Arsente			
	MA OUZU	Selonium			
	EPA 7471	Mercury			
B-22	EPA 8260B	None			
(53.5-55')	EPA 8270C	None			
B-25 (4-8')	EPA 8260B	Noie			
	EPA 8270G	None			
	OA-1	TPH*	0.2		
	OA-2	TEH** as Diesel	13.0		
		Barium	122		
B-26	EPA 6010	Cadmium	1.73		
(0.5-2.5')	. El A 6010	Chromium	12.3		
(0.5-2.5')		Lead	244		
	EPA 6020	Arsenic	17.2		
		Selenium	0.70		
	EPA 7471	Mercury	0.14		

^{*}TPH = Total Purgeable Hydrocarbons

Nebraska Voluntary Cleanup Program Remediation Goals for Soil within Residential Settings:

Arsenic - 0.39 mg/kg

Barium and compounds - 1,400 mg/kg

Bis (2-ethylhexyl) Phthalate - 35 mg/kg

Cadmium and compounds – 9.3 mg/kg

Caamium ana compounas – 9.5 mg/kj

Total Chromium - 34 mg/kg

Lead - 400 mg/kg

Mercury and compounds - 5.9 mg/kg

Naphthalene - 36 mg/kg

Selenium - 98 mg/kg

Concentrations in bold print are above the above the remediation goals for the contaminants of concern.

The results of the analytical testing conducted on the submitted soil samples identified concentrations of the following contaminants above laboratory detection levels: ethylbenzene, naphthalene, total purgeable hydrocarbons (TPH), Total Extractable Hydrocarbons (TEH) as diesel, TEH as kerosene, bis (2-ethylhexyl) phthalate, as well as various metals.

None of the petroleum hydrocarbon constituents identified in on-site soil samples exceeded the applicable IDNR or NDEQ action levels. NDEQ's Look-Up Table 8-6 and IDNR's Tier 1 Look-up Table are shown on page 5 of this letter.

^{**}TEH = Total Extractable Hydrocarbons

Look-Up Table 8-6

Enclosed Space Vapor Inhalation Exposure Pathways Residential Exposure; Building Present

			CHEMICALS OF CONCERN						
Media	Subsurface Sediments	Vertical Interval between Contamination and Structure	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	MTBE	TEH (as diesel oil)
		√3 feet	4.83	>So!	>Sol	>6oi	5.77	391	>Sol
- 1	Sands	3 - 6 feet	8.88	>Sol	>Sol	>Sel	10.4	797	>Sol
Ground Water Silts/C		>6 feet	9.77	>6el	>Sol	>Sal	11.2	953	>So!
		<3 feet	0.553	73.9	>Sol	137	0.528	88.1	6500
	Silts/Clays	3 - 6 feet	1.46	195	>Sol	>Set	1.38	241	· >Sol
		>6 feet	2.03	271	>Sol	>Sol	1.92	341	>Sol
Subsurface Soils		<3 feet	0.008	2.95	5.12	9.26	0.167	0.622	2390
	Sands	3 - 6 feet	0.241	89.4	>Sat	>6at	5.06	18.9	72,500
		>6 feet	0.485	180	>6at	>6at	10.2	38.0	>6at
	Silts/Clays	<3 feet	0.008	3.61	6.12	11.6	0.166	0.607	3085
		3 - 6 feet	0.268	110	>Sat	352	5.05	18.4	93,500
		>6 feet	0.539	220	>Sat	>S#I	10.1	37.0	188,000

NOTES:

- 1) All RBSL concentrations in mg/L for ground water or mg/kg for soil.
- 2) RBSLs for volatilization hazards from all contaminants of concern are based on a structure within the source area.
- 3) These pathways are to be considered incomplete for releases of waste oil, as all determined RBSLs for this product are greater than the highest expected concentration in pure product.
- 4) >Sol: The selected risk level is not exceeded for all possible dissolved levels.
- 5) >Sat: The selected target level is not exceeded for all possible saturated levels in soil.
- 6) RBSLs for benzene soil contamination in contact with an enclosed space may be below detection limits for most approved laboratory methods. This particular exposure pathway shall be considered clear if soil analytical results are non-detect at laboratory detection limits acceptable to the Department. The Department will provide guidance on acceptable detection limits at a later date.

		lowa	Pierd L	ook lip	lable	and the same	and was board and	
		Receptor	Group 1				Group 2: TEH	
Media	Exposure Pathway		Benzen e	Talvene	Ethylbenzen e	Xylenes	Diesel*	Waste Oil
	Groundwater Ingestion	actual	5	1,000	700	10,000	1,200	490
		potential	290	7,300	3,700	73,000	75,000	40,000
Groundwater (µg/L)	Groundwater Vapor to Enclosed Space	all	1,540	20,190	46,000	NA	2,200,000	NA
	Groundwater to Plastic Water Line	त्री)	290	7,300	3,700	73,000	75,000	40,000
	Surface Water	all	290	1,000	3,700	73,00D	75,000	40,000
Soil (mg/kg)	Soil Leaching to Groundwater	all	0.54	42	15	NA	3,800	NA
	Scil Vapor to Enclosed Space	all	1.16	48	79	NA	47,500	NA
	Scil to Plastic Water Line	all	1.8	120	43	NA	10,500	NA

NA: Not applicable. There are no limits for the chemical for the pathway, because for groundwater pathways the concentration for the designated risk would be greater than the solubility of the pure chemical in water, and for soil pathways the concentration for the designated risk would be greater than the soil concentration if pure chemical were present in the soil.

The State of Nebraska has established a Voluntary Cleanup Program (VCP) that utilizes risk-based corrective action protocol to assess and remediate contaminated sites. The guidance document has Remediation Goals (RGs) established for contaminants of concern for soils within residential and industrial settings. Although this site is currently considered a commercial property, in the interest of public safety and maintaining options for future land use, the contaminants of concern identified within the soil samples from this site were compared to the most stringent RG (intended for residential use) for each contaminant of concern identified above laboratory detection limits.

None of the contaminants, with the exception of lead and arsenic concentrations, identified in the on-site soil samples exceeds its respective RG. Based on the special circumstances present in the Omaha metropolitan area, arsenic concentrations at this site would not likely warrant remedial action by the NDEQ or EPA (although based on IDNR guidelines further assessment and/or remedial action might be required). The lead level identified at B-19, however, is above the established EPA, NDEQ, and IDNR screening levels of 400 mg/kg. Although this lead concentration was only encountered in one location, the high concentration identified might be considered cause for environmental concern and possible remedial action.

Based on the results of the samples already analyzed for RCRA metals, additional samples containing fill material obtained from all other borings advanced during this investigation were submitted to Midwest for analysis. The results of these analyses are not yet available. These results will be included in a Phase II ESA report currently awaiting laboratory results, completion and review.

GROUND WATER SAMPLE RESULTS

All ground water samples were analyzed for select VOCs via EPA Method 8260B and RCRA Metals via EPA Methods 200.7, 200.8 and 245.1. Samples taken from the deep wells (MW-1, MW-6, MW-13, MW-22 and MW-25) were analyzed for select SVOCs via EPA Method 8270C. The samples obtained from shallow wells were analyzed for select petroleum hydrocarbon constituents via Iowa Method OA-2. The laboratory reports of analysis are summarized in the following table.

TABLE 3. LABORATORY ANALYSIS (GROUND WATER)

<u> </u>	<u> </u>		
	EPA 200.7	Barium	310
	EPA 200.8	Arsenic	2
		Selenium	2
MW-1	EPA 245.1	None	
	EPA 8260B-LOW	Bromodichloromethane	5
		Chloroform	22
	EPA 8270C	None	
	EPA/200.7	Barlun	480
	EPA 2008	Arsenic	32
		Sejenium	
	EPA 245.1	None	
MW-2	10000000000000000000000000000000000000	Bénzene	2
	TRIA POZOD T ONE	Bromodich promethage.	Estat In the Control of the Control
	EPA 8260B-LOW	Cherobanzane	
		Chloroftum	No. 2 Control of the
	GA-2	Natitialsie	
	EPA 200.7	Fig. 14 as Diesel	
		Barium	640
	EPA 200.8	Arsenic	88
MW-3	EPA 245.1	None	
NI W-3	EPA 8260B-LOW	Bromodichloromethane	<u> </u>
	EFA 8200B-LOW	Chloroform	9
	OA-2	Naphthalene None	2
	EPA 200.7	Berium	
		Arsenic	450
	EPA 200.8	Selenium	
	EPA 245.1	None	
MW-6	DI 6.2531	Bromodichloromethane	
	EPA 8260B-LOW	Chlorodibromomethane	.
		Chloraform	
	EPA 8270€	None	2
<u> </u>	EPA 200.7	Barium	<u> 2000 y milionik and Arton II. October 1985 den ditak</u>
	EPA 200.7		930
	EPA 245.1	Arsenic None	61
MW-10	LIA 243.1	Benzene	
	EPA 8260B-LOW	Chlorobenzene	3 2
	LIA 6200B-LOW	Chloroform	3
	OA-2	TEH as Diesel	
	UA-2	1 En as Diesei	220

	EPA 200.7	Barium	120
•	ĚPA 200 8	Arsenic	2
	EFA 200.8	Selenium	2
MW-13	EPA 245.1	None	
	EPA 8260B-LOW	Bromodichloromethane	6
	EFA 6200B-EOW	Chloroform	35
	EPA 8270C	None	, -
	EPA 200.7	Barium	260
	EPA 200.8	Arsenic	15
MW-14	EPA 245.1	None	
	EPA 8260B-LOW	Chloroform	4
	OA-2	TEH as Diesel	130
	EPA 200.7	Barium	660
	EPA 200.8	Arsenic	2
MW-17	EPA 245.1	None	
	EPA 8260B-LOW	Benzene	6
	OA-2	TEH as Diesel	210
	EPA 200.7	Barium	210
		Arsenic	8
B. # T T T A O	EPA 200.8	Selenium	2
MW-18	EPA 245.1	None	
	EPA 8260B-LOW	Chloroform	1
,	OA-2	None	
	EPA 200.7	Barlum	710
The second of th	EPA 200.8	Arsenic	68
MW-20	EPA 245.1	None	
	EPA 8260B-LOW	Chlaroform	
	0A-2	TBE as Diesel	50
Telegraphy (1981-1987)	EPA 200.7	Barium	150
		Arsenic	2
	EPA 200.8	Selenium	2
MW-22	EPA 245.1	Mercury	0.5
		Bromodichloromethane	5
	EPA 8260B-LOW	Chloroform	31
	EPA 8270C	None	
	BPA 2007	Barium	400
	Market Strang and Control of the Control	Arsenië e	2
	BPA 200.8	Selenium	
	EPA 245.1	None	
MW-25		Bromodichloromethane	2
自己要求的 医大力抗量 为原因 (1)	EPA-8260B-LOW	Chlorodibromomethane	
		Chloroform	A STATE OF THE STA
	EPA-8270C	None	
		ngram Pamadiation Goals for Gran	

Nebraska Voluntary Cleanup Program Remediation Goals for Ground water:

Arsenic - 50 μg/L

Barium and compounds - 2,000 µg/L

Benzene - 5.0 µg/L

Bromodichloromethane – $1.1 \mu g/L$

Chlorodibromomethane (Dibromochloromethane) – $0.8~\mu g/L$

Chlorobenzene – 100 µg/L

Chloroform - 0.21 µg/L

Mercury and compounds - 2.0 µg/L

Naphthalene - 0.00028 µg/L

Selenium – 50 µg/L

Concentrations in bold print are above the above the most stringent remediation goals for the contaminants of concern.

The results of the laboratory analysis indicate that concentrations of the following metals were present above laboratory detection limits: arsenic, barium, mercury and selenium. Of these metals, only arsenic was encountered in concentrations greater than the NDEQ's RG. The arsenic concentrations identified in ground water samples from MW-3, MW-10, and MW-20 were found to be above the RG for arsenic. However, this is a very stringent limit established for arsenic within drinking water. This RG would not likely be applicable to this site because the city of Omaha is in a Remedial Action Class 3 (RAC-3) zone. RAC-3 zones are areas where ground water is not being used and has little or no potential for being used as a public or private drinking water supply. Since this site is within a RAC-3 zone, the NDEQ would not likely initiate a remedial action response with respect to arsenic in ground water at this site.

The arsenic levels encountered in ground water samples from MW-2 and MW-14 (collected from the Iowa side of the assessment site) are also higher than the IDNR's Statewide Standards for Protected (but not higher than the Standard for Non-protected) Ground water. Based on the type of materials encountered at this site (frequently silts and sands at depths equal to or greater than 10 feet bgs), the ground water velocity at this site is considered likely to be greater than 0.44 meters/day, which (if it also contains total dissolved solids of less than 2,500 mg/L) defines it as "protected ground water." The IDNR's statewide standards for arsenic in protected ground water and non-protected ground water are 10 ppb and 50 ppb, respectively.

Concentrations of the following VOCs were also identified in concentrations above laboratory detection limits: benzene, bromodichloromethane, chlorobenzene, chloroform, chlorodibromomethane (also known as dibromochloromethane) and naphthalene. Furthermore, concentrations of one or more of these chemicals were found in concentrations above their respective RGs in all of the on-site monitoring wells, except for MW-18. However, as described above for dissolved metals in ground water, these stringent limits are not likely to be directly applicable to these contaminants in a RAC-3 zone. In addition, the chlorine-based chemicals listed above (bromodichloromethane, chlorobenzene, chloroform and chlorodibromomethane) have been shown to be present as laboratory surrogates in ground water samples containing organic compounds due to a chemical reaction of chlorinated water with the sulfuric acid preservative. The remaining contaminants identified in these ground water samples are benzene and naphthalene. The naphthalene concentrations identified in the samples from MW-2 (1 µg/L) and MW-3 (2 µg/L) were significantly higher than its RG of 0.00028 µg/L. The benzene concentration found in the sample from MW-17 (6 µg/L) is much lower than the applicable RBSL (2,030 µg/L for ground water in silts/clays greater than 6 feet bgs) found in this table.

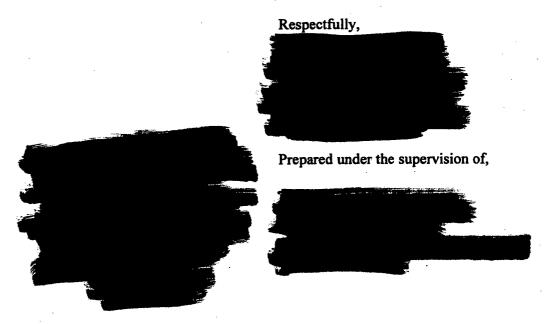
The IDNR's statewide standard for naphthalene in protected ground water is $100 \mu g/L$ and the lowest action level for benzene in ground water is $5 \mu g/L$ (for actual ground water ingestion). However, since this property is located in an area that has no current plans to use ground water as a drinking water source, this stringent action level for benzene is not considered applicable to this site. The next lowest action level is $290 \mu g/L$ (for potential ground water ingestion, ground water to plastic water line, and surface water), which is significantly higher than the $6 \mu g/L$ concentration encountered in the on-site sample. Therefore, the concentrations of these two contaminants identified in ground water during this investigation are not likely to elicit state-supervised remedial response from either EPA, Nebraska or Iowa regulatory agencies.

Based upon the available results of the Phase II ESA currently underway, makes the following conclusions/recommendations regarding the previously identified environmental concerns at the assessment site.

 Based upon the minimal concentrations of petroleum hydrocarbon constituents identified in the submitted soil and ground water samples collected during on-site activities and the lack of any field observations indicating grossly petroleum hydrocarbon impacted soils, the assessment site does not appear to be significantly impacted by petroleum hydrocarbons.

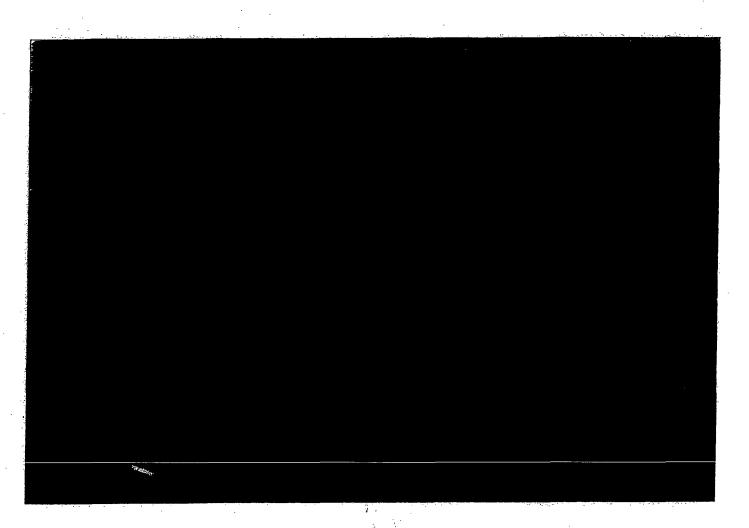
- The concentration of lead identified in the fill encountered from B-19 (2-10 feet bgs) was 1,107 mg/kg, which is significantly higher than the applicable NDEQ, IDNR and EPA established screening levels for lead in soil in residential settings. This concentration is also higher than the NDEQ's RG for lead in soil in an industrial setting of 750 mg/kg. Based upon this result, additional soil samples are currently being analyzed to determine the extent of elevated lead concentrations at the assessment site.
- Arsenic and naphthalene concentrations identified in ground water samples collected from the site exceed NDEQ RGs for ground water. However, since this site is located in a RAC-3 zone, these concentrations are not likely to be of subject to regulation by the NDEQ. The on-site arsenic concentrations in the ground water samples from MW-2 and MW-14 (both on the Iowa side of the assessment site) are 32 and 15 ppb, respectively, which exceed the IDNR's Statewide Standards for Protected Ground water of 10 ppb, but not the Statewide Standard for Non-protected groundwater of 50 ppb. According to interpretation of IDNR's regulations, the ground water at this site would likely be classified as protected ground water.

If you have any questions or if there is any additional information that I can provide regarding the environmental condition of this site, please feel free to contact us.



Attachments: G

Ground water flow direction maps Aerial photograph



DOC ILLEGIBLE

