BELING CONSULTANTS

Professional Engineering and Environmental Services

August 27, 1996

Department of the Navy
Engineering Field Activities
Midwest Code 930
Naval Facilities Engineering Command,Building 1-A
2703 Sheridan Road, Suite #120
Great Lakes, Illinois 60088-5600

Attn: Tony Andrews, Engineer in Charge

SUBJECT: PRELIMINARY ANALYTICAL RESULTS
FIELD SCREENING
PRIOR TO REMOVAL OF FUEL LINES

Dear Mr. Andrews:

The Work Plan approved by the Illinois Environmental Protection Agency (IEPA) and U.S. EPA Region V for field screening of limited locations was completed in August 1996. The preliminary results are provided with this transmittal. The final laboratory report from Hazelton Laboratory will indicate higher values for some pesticide/herbicide/PCB samples because the values provided in the preliminary report were based on wet-weight basis. They will be converted to a dry-weight basis upon final report.

Along with this preliminary report, laboratory qualifiers and definitions are attached. The values reported by the laboratory with the qualifiers (such as B or J) are provided in the tables. A brief report will be provided with the laboratory results when the final laboratory reports are received from Hazelton.

It is a pleasure to work with you on this project.

Sincerely,

BELING CONSULTANTS, INC.

Molly E. Arp, Geologist, CHMM
Manager - Environmental Compliance

kjy

cc: K.E. Meier - Beling
F.W. Lawrence - Beling
Beling file #29646

RESULTS OF ANALYTICAL TESTING
FFTU PRELIMINARY SCREENING
compounds shown were detected greater than "contract required" detection limits

TABLE 1

Catagory and Compound	TACO #s (assume Class I G.W.)	SAMPLING LOCATIONS											Note N0.
		No. 1 Sludge Down St	No. 13 Dupl. of No. 1	No. 2 O/W H2O	No.3 O/W H2O	No.5 Diesel Product	No.7 UST Exc H2O	No. 8 C.T. Sq Dirt	No.9 Burn pit Biosolid	No.10 Carrier drain dirt	No.11 Wipe floor	No.12 Wipe Wall	
Date Collected		8-2-96	8-2-96	8-9-96	8-9-96	8-9-96	8-9-96	8-2-96	8-2-96	8-2-96	8-2-96	8-2-96	
Metals Solids/soil		X	X					X	X	X			
Arsenic	15 ppb									50.5			
Barium	26 ppb	2450	1020					1380	49.2	153			
Cadmium	2 ppb							9.07	3.42	13.7			
Chromium	20 ppb	53.8	24.1					254	1250	32.6			
Selenium	3 ppb									3.22			
Thallidium	0.3 ppb	0.711	0.641					0.667	2.35	0.645			
Metals Water/GW				X	X	X	X						
Iron	5.0			366	2460		1500						
Lead	0.0075			3.12	3.3								
Manganese	0.15			37	176		224						
Zinc	5.0			278	63.1		62.6						
Organics Pesticides/PCB		X	X	X	X	X	X	X	X	X	PCBs only	PCBs only	
Gamma-BHC (Lindane)	0.006				0.070								
Heptachlor	0.06	27											
Dieldrin	0.001	76	120										
4,4-DDT	1.0		36							720			
4,4 DDT diff.CAS #	1.0									380			
Beta-BHC		190	47			130		37	2.7	390			
Aldrin	0.005					11							
Gamma Chloridane	2	54	49										
4,4-DDE	0.5									690			
HERBICIDES		X	X	X	X	X	X	X	X	X			
2,4-D	1.7	330*	390*							270*			
2,4,5-TP(Silvey)	2.7	18**											
Pentachloro-phenol	0.01		16**							180***			
2,4, DB										420*			
Dichloroprop										470*			
Dinoseb										44*			

NOTE: 1) Compounds not on tables which were detected in the blank
2) TACO Inorganic Cleanup Objectives for soil were taken from 135 IAC 742 Appendix B, Table C assuming pH of soil between 6.25 an
3)TACO Cleanup Objectives for the other tables shown utilize residential and Class I groundwater parameters.
* = Possibly a false positive
** = possibly a false positive
*** = PCP - a difinate "HIT" / needs to be more diluted for better definition

RESULTS OF ANALYTICAL TESTING
FFTU PRELIMINARY CAREENING
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TABLE 2

Catagory and Compound	TACO #s (assume Class I G.W.)	SAMPLING LOCATIONS											Notes
		No. 1 Sludge Down St	No. 13 Dupl. of No. 1	No. 2 O/W H2O	No.3 O/W H2O	No.5 Diesel Product	No.7 UST Exc H2O	No. 8 C.T. Sq Dirt	No.9 Burn pit Biosolid	No.10 Carrier drain dirt	No.11 Wipe floor	No.12 Wipe Wall	
Date Collected		8-2-96	8-2-96	8-9-96	8-9-96	8-9-96	8-9-96	8-2-96	8-2-96	8-2-96	8-2-96	8-2-96	
Volatiles Solids/soil		X	X					X	X	X			
Methylene Chloride	0.01	2500BJ	890BJ					3BJ		28B			
Xylene	74	2500JX	1200JX							11X			
Toluene	5							0.9BJ		7BJ			
Naphthalene	30	6100BJ	4400B					2BJ					
1,2,4-Trichloro-benzene	2							2BJ	3BJ				
1,2-Dibromo-3-chloropropane	0.00061								3J				
Benzene	0.02									2J			
Ethylbenzene	5		310J										
Isopropylbenzene			220J										
n-Propylbenzene			670J										
1,2,4 Trimethyl benzene		8600	7600										
1,3,5 Trimethyl benzene		5500J	2600						7J	6J			
Trichlorofluro-methane								2J		12			
1,2,4- Trimethyl-benzene								2BJ	3BJ	21			

Volatile Water/GW													
			X	X	X	X	X						
Methylene chloride	5.0		980BJ	2J	13		1J						
Benzene	5.0					10KJ	12						
Toluene	1,000					110K	66						
Ethylbenzene	700		310J			120K	28						
Xylene	10,000		1200JX			3400KX	94						
Isopropyl benzene						120K	9						
sec-Butyl benzene						210K	7						
n-Propyl benzene			670J			90K	9						
1,3,5 Trimethyl benzene			2600			150K	9						
1,2,4 Trimethyl benzene			7600			630K	34						
p-Isopropyl toluene						500K	12						
Napthalene	25		4400B			410KB	72B						

Notes: K = times 1000

29646.QP.LAB646.WB1 TABLE UPDATED 8-27-96

RESULTS OF ANALYTICAL TESTING
FFTU PRELIMINARY SCREENING
compounds shown were detected greater than "contract required" detection limits

TABLE 3

Catagory and Compound	TACO #s (assume Class I G.W.)	SAMPLING LOCATIONS											Notes
		No. 1 Sludge Down St	No. 13 Dupl. of No. 1	No. 2 O/W H2O	No.3 O/W H2O	No.5 Diesel Product	No.7 UST Exc H2O	No. 8 C.T. Sq Dirt	No.9 Burn pit Biosolid	No.10 Carrier drain dirt	No.11 Wipe floor	No.12 Wipe Wall	
Date Collected		8-2-96	8-2-96	8-9-96	8-9-96	8-9-96	8-9-96	8-2-96	8-2-96	8-2-96	8-2-96	8-2-96	
SEMI VOC SOLIDS/SOIL		X	X					X	X	X	X	X	
4-Methylphenol									1500J				
2,4-Dimethyl-phenol	3		460J										
Naphthalene	30	11000J	6500					650J		1300J			
2-Methyl-naphthhalene		100000	47000										
Acenaphthene	200	30000	9100					1600J		7800J			
4-Nirophenol		16000J											
Dibenzofuran		27000	5100					2200		11000J			
Diethylphthalate	110											20	
Fluorene	160							3600		19000			
Phenanthrene			41000					3400		15000			
Carbazole			2900J					620J	550J				
Di-n-Butyl-phthalate	100							23000					
Fluoranthene	980							3500		84000			
Pyrene	14000	21000J	7300					5400	4600J	68000		13J	
Butylbenzyl-phthalate	68								210J			0.7J	
Benzo (a)-Anthracene	0.7		860J					2400		20000		7J	
Chrysene	1.0	3000J	1500J					4000	2600J	21000		8J	
bis(2-Ethylgexyl) Phthalate	11	2900J	960J					2100J	1700J	15000		16J	
Di-n-Octyl Phthalate								2200	83J			0.3J	
Benzo (b) Fluoranthene	4		1800J					5800	4900J	55000		28	
Benzo (a) Pyrene	4		1100J					3000	2500J	34000		16J	
Indeno(1,2,3-cd) Pyrene	35		790J					2400	1500J	21000		13J	
Dibenzo (a,h) Anthracene	11							180J		4600J		1J	
Benzo (g,h,i) Perylene			820J						1800J	18000		11J	

29646.QP.LAB646.WB1 TABLE UPDATED 8-26-96

RESULTS OF ANALYTICAL TESTING
FFTU PRELIMINARY SCREENING
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TABLE 4

Catagory and Compound	TACO #s (assume Class I G.W.)	SAMPLING LOCATIONS											Notes
		No. 1 Sludge Down St	No. 13 Dupl. of No. 1	No. 2 O/W H2O	No.3 O/W H2O	No.5 Diesel Product	No.7 UST Exc H2O	No. 8 C.T. Sq Dirt	No.9 Burn pit Biosolid	No.10 Carrier drain dirt	No.11 Wipe floor	No.12 Wipe Wall	
Date Collected		8-2-96	8-2-96	8-9-96	8-9-96	8-9-96	8-9-96	8-2-96	8-2-96	8-2-96	8-2-96	8-2-96	
SEMI VOC WATER/GW				X	X	X	X						
Naphthalene	0.025				2J	860KJ	260						
2-Methyl-naphthalene						6200K	1900						
Acenaphthene	0.42			7J	7J	1900KJ	240						
Dibenzofuran					10	2500K	230						
Diethylphthalate	5.6				10		210						
Fluorene	0.28			17	16		350						
4-Nitroaniline					2J								
Phenanthrene							310						
Carbazole					0.5J								
Pyrene	0.21			0.8J	0.4J	120KJ	86J						
bis(2-Ethylhexyl) phthalate	0.006			1J	1J								
Di-n-Octyl Phthalate					0.2J								

29646.QP.LAB646.WB1

TABLE UPDATED 8-26-96

Hazleton Environmental Services, Inc.

DATA QUALIFIER DEFINITIONS
INORGANIC

PQL

Concentration Qualifier

- "B" - Reported value was obtained from a reading that was less than the Contract Required Detection Limit but greater than or equal to the Instrument Detection Limit.
- "U" - Analyte was analyzed for but not detected.

Q Qualifier

- "E" - The reported value is estimated because of the presence of interference.
- "M" - Duplicate injection precision not met.
- "N" - Spiked sample recovery not within control limits.
- "S" - The reported value was determined by the Method of Standard Additions (MSA).
- "W" - Post-digestion spike for Furnace AA analysis is out of the control limits (85% - 115%), while the sample absorbance is less than 50% of the spike absorbance
- "*" - Duplicate analysis not within control limits.
- "+" - Correlation coefficient for the MSA is less than 0.995.

Note: Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

M (Method) Qualifier

P for ICP
F for Furnace AA
AV for Automated Cold Vapor AA
C for Manual Spectrophotometric
NR if the analyte is not required to be analyzed
" " where no data has been entered

ATTACHMENT

DATA QUALIFIER DEFINITIONS

ORGANIC

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result if less than the sample quantitation limit but greater than zero. The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag, instead use a laboratory-defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

A - This flag indicates that a TIC is a suspected aldol-concentration product.

X - Other specific flags may be required to properly define the results. If used, they must be fully described, and such description attached to the Sample Data Summary Package and the Case Narrative. Begin by using "X". If more than one flag is required, use "Y" and "Z" as needed.

DATA QUALIFIER DEFINITIONS

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. If one or more compounds have a response greater than full scale, the sample must be diluted and re-analyzed. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g., a diluted analysis is not required for total xylenes unless the concentration of the peak representing the single isomer exceeds 200 ug/L or the peak representing the two coeluting isomers on that GC column exceeds 400 ug/L. Similarly, if the two 1,2-Dichloroethene isomers coelute, a diluted analysis is not required unless the concentration exceeds 400 ug/L.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

INORGANIC

Concentration Qualifier

"B" -Reported value was obtained from a reading that was less than the Contract Required Detection Limit but greater than or equal to the Instrument Detection Limit.

"U" -Analyte was analyzed for but not detected.

Q Qualifier

E -The reported value is estimated because of the presence of interference. An explanatory note must be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).

M -Duplicate injection precision not met.

N -Spiked sample recovery not within control limits.

S -The reported value was determined by the Method of Standard Additions (MSA).

DATA QUALIFIER DEFINITIONS

Q Qualifier Continued

W -Post-digestion spike for Furnace AA analysis is out of control limits (85 - 115%), while sample absorbance is less than 50% of spike absorbance.

* -Duplicate analysis not within control limits.

\+ -Correlation coefficient for the MSA is less than 0.995.

Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

M (Method) Qualifier

P for ICP
F for Furnace AA
AV for Automated Cold Vapor AA
C for Manual Spectrophotometric
NR if the analyte is not required to be analyzed
" " where no data has been entered