

#### **Enviro-Test Laboratories**

A Division of ETL Chemspec Analytical Limited

#### Toll Free 1-800-668-9878

Bay 2,1313-44 Ave. N.E. Calgary, AB T2E 6L5 Phone - (403) 291-9897

#### **ENVIRO-TEST FAXED ANALYSIS REPORT**

	INFOR	1	$\neg N$

COMPANY:

DILLON CONSULTING LTD

ATTENTION:

MICHAEL GILL

LAB WORK ORDER #:

L134451

PROJECT REFERENCE:

032374-1000

PROJECT P.O.#:

NA

SAMPLED BY:

MFG

DATE RECEIVED:

07-OCT-03

FAX NUMBER:

403-215-8889

TECHNICAL QUESTIONS:

**KELLY JONES** 

# of PAGES:

7

MESSAGE:

Preliminary Results

Soils passed through 2mm sieve to remove coarse gravels; salinity performed on fines. Proportion of fines as follows:

sample #3 39% fines

If you require results couriered immediately, check and return by fax.

All results will be mailed unless otherwise notified.

All couriered results will be billed directly at cost.

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17-OCT-03 06:32 PM

Sample Details/Parameters	Result	Queliller	D.L.	Units	Extracted	Analyzed	By	Batch
L134451-1 BH3@3.0								
Sample Date: 04-OCT-03 12:00								
Matrix: SOIL								
CCME TVHs and TEHs	1							
CCME Total Hydrocarbons		1						
F1 (C6-C10)	<5		5	mg/kg		13-OCT-03		
F1-BTEX	<5		5	mg/kg		13-OCT-03		
F2 (C10-C16)	<5		5	mg/kg		13-OCT-03		
F3 (C16-C34)	56		5	mg/kg	-	13-OCT-03		
F4 (C34-C50)	16	į	5	mg/kg	† [	13-OCT-03		
Total Hydrocarbons (C6-C50)	72		5	mg/kg		13-OCT-03		
Chromatogram to baseline at nC50	YES					13-OCT-03		
CCME Total Extractable Hydrocarbons Prep/Analysis Dates					10-OCT-03	12-OCT-03	LDR	R148687
CCME BTEX								
Benzene	<0.01		0.01	mg/kg		11-OCT-03		R148686
Toluene	<0.01		0.01	mg/kg		11-OCT-03		R148686
Ethylbenzene	<0.01		0.01	mg/kg		11-OCT-03		R148686
Xylenes	<0.01		0.01	mg/kg	10-OC1-03	11-OCT-03	JAG	R148686
% Moisture	12		0.1	%	10-OCT-03	11-OCT-03	JPL	R148586
Metals (ICP/MS)		1	0.5			10-OCT-03	MX	R148436
Silver (Ag)	<0.2		0.2 50	mg/kg		10-OCT-03	i	R148436
Aluminum (Al)	7880			mg/kg		10-OCT-03		R148436
Arsenic (As)	4.4		0.1	mg/kg		10-OCT-03		R148436
Boron (B)	7		0.5	mg/kg mg/kg		10-OCT-03	1	R148436
Banum (Ba)	125		0.3			10-OCT-03		R148436
Beryllium (Be)	0.5 <0.5		0.2	mg/kg mg/kg		10-OCT-03		R148436
Bismuth (Bi)	96700		100	mg/kg		10-OCT-03		R148436
Calcium (Ca)	0.3		0.1	mg/kg		10-QCT-03	i.	R148436
Cadmium (Cd) Cobalt (Co)	8.7		0.1	mg/kg		10-OCT-03	1	R148436
Chromium (Cr)	18.5		0.1	mg/kg		10-OCT-03		R148436
Copper (Cu)	18.9		0.5	mg/kg		10-OCT-03		R148436
iron (Fe)	20500		200	mg/kg		10-OCT-03	2	R148436
Potassium (K)	1650		50	mg/kg		10-OCT-03		R148436
Magnesium (Mg)	13600		20	mg/kg		10-OCT-03		R148436
Manganese (Mn)	447		1	mg/kg		10-OCT-03		R148436
Molybdenum (Mo)	1.4		0.1	mg/kg		10-OCT-03	4	R148436
Sodium (Na)	200		100	mg/kg		10-OCT-03	1	R148436
Nickel (Ni)	26.9		0.5	mg/kg		10-OCT-03	MX	R148436
Lead (Pb)	9.1		0.5	mg/kg		10-OCT-03	1	R148436
Selenium (Se)	0,3		0.2	mg/kg		10-OCT-03	MX	R148436
Tin (Sn)	<2		2	mg/kg		10-OCT-03	MX	R148436
Strontium (Sr)	159		1 1	mg/kg		10-OCT-03	F	R148436
Titanium (Ti)	46		1	mg/kg	İ	10-OCT-03	MX	R148436
Thallium (TI)	0.20		0.05	mg/kg		10-OCT-03	MX	R148436
Uranium (U)	1.02		0.05	mg/kg	1	10-OCT-03	MX	R148436
Vanadium (V)	22.6		0.2	mg/kg		10-OCT-03	MX	R148436
Zinc (Zn)	60		5	mg/kg		10-OCT-03	MX	R148436
L134451-2 BH6@3.0				<del></del>				
Sample Date: 04-OCT-03 12:00				1				1
Matrix: SOIL								
CCME TVHs and TEHs								
CCME Total Hydrocarbons								
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## **ENVIRO-TEST ANALYTICAL REPORT**

L134451-2   BH6@3.0   Sample Date: 04-CCT-03   12:00   Matrix   SOIL   CCME TVHs and TEHS   CCME Total Hydrocarbons   F1 (C6-C10)   <5   F1-BTEX   <5   F2 (C10-C16)   12   F3 (C16-C34)   81   F4 (C34-C50)   12:00   F3 (C16-C34)   81   F4 (C34-C50)   12:00   Chromatogram to baseline at nC50   YES   CCME Total Extractable Hydrocarbons   Prep/Analysis Dates   CCME BTEX   Benzene   <0.01   Toluene   <0.01   Ethylbenzene   <0.01   Xylenes	Quelifier	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	LDR JAG JAG JAG JAG JAC MX MX MX MX	R148687 R148686 R148686 R148686 R148686 R148436 R148436 R148436 R148436 R148436
Sample Date: 04-OCT-03 12:00		5 5 5 5 5 5 5 0.01 0.01 0.01 0.01 0.01 0	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
Matrix:         SOIL           CCME TVHs and TEHs         CCME Total Hydrocarbons           F1 (C6-C10)         <5		5 5 5 5 5 5 5 0.01 0.01 0.01 0.01 0.01 0	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
CCME TVHs and TEHS CCME Total Hydrocarbons		5 5 5 5 5 5 5 0.01 0.01 0.01 0.01 0.01 0	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
CCME Total Hydrocarbons		5 5 5 5 5 5 5 0.01 0.01 0.01 0.01 0.01 0	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
F1 (C6-C10)		5 5 5 5 5 5 5 0.01 0.01 0.01 0.01 0.01 0	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
F1-BTEX F2 (C10-C16) F3 (C18-C34) F4 (C34-C50) Total Hydrocarbons (C6-C50) Chromatogram to baseline at nC50 CCME Total Extractable Hydrocarbons Prep/Analysis Dates  CCME BTEX Benzene Toluene Ethylbenzene Whetals (ICP/MS) Silver (Ag) Aluminum (Al) Arsenic (As) Boron (B) Barium (Ba) Beryillum (Be) Bismuth (Bi) Cadmium (Cd) Cadmium (Cd) Cadmium (Cr) Chromium (Cr) Copper (Cu) Iron (Fe) Potassium (Mg) Magnesse (Mn) Molybdenum (Mo) Sefenium (Se) Sefenium (Se) D, Augusta (Pb) Seferium (Se) D, Cacount (Na) Nickel (Ni) Lead (Pb) Seferium (Sr) Titanium (Ti) 12 Titanium (Ti) TES Titanium (Ti) 12 Titanium (Ti)		5 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
F3 (C16-C34) F4 (C34-C50) Total Hydrocarbons (C6-C50) Chromatogram to baseline at nC50  CCME Total Extractable Hydrocarbons Prep/Analysis Dates  CCME BTEX Benzene Toluene Ethylbenzene Xylenes  W Moisture  Metals (ICP/MS) Silver (Ag) Aluminum (Al) Arsenic (As) Beryllium (Be) Bismuth (Bi) Caicium (Ca) Cadmium (Cd) Cadmium (Cr) Copper (Cu) Iron (Fe) Potassium (Mg) Manganese (Mn) Manganese (Mn) Moisture  81 81 81 81 81 81 81 81 81 81 81 81 81		5 5 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6	mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 13-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
F4 (C34-C50)   31   120   12		0.01 0.01 0.01 0.01 0.1 0.2 50	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 13-OCT-03 12-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
Total Hydrocarbons (C6-C50) Chromatogram to baseline at nC50  CCME Total Extractable Hydrocarbons Prep/Analysis Dates  CCME BTEX Benzene Toluene Ethylbenzene Xylenes  Moisture  Metals (ICP/MS) Silver (Ag) Aluminum (Al) Arsenic (As) Beryllium (Be) Bismuth (Bi) Cafcium (Ca) Cadmium (Cd) Cadmium (Cf) Copper (Cu) Iron (Fe) Potassium (Mg) Manganese (Mn) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Tin (Sn) Strontium (Sr) Titanium (Ti)  Condat (C0) YES  420 YES  420 YES  420  40.01  40.0		0.01 0.01 0.01 0.01 0.1 0.2 50	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 13-OCT-03 12-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148686 R148586 R148436 R148436 R148436 R148436
Chromatogram to baseline at nC50  CCME Total Extractable Hydrocarbons Prep/Analysis Dates  CCME BTEX  Benzene		0.01 0.01 0.01 0.01 0.1 0.2 50	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	13-OCT-03 12-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148586 R148586 R148436 R148436 R148436 R148436
CCME Total Extractable Hydrocarbons Prep/Analysis Dates         < 0.01		0.01 0.01 0.01 0.1 0.2 50 0.1	mg/kg mg/kg mg/kg % mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	12-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148586 R148586 R148436 R148436 R148436 R148436
Prep/Analysis Dates           CCME BTEX           Benzene         <0.01		0.01 0.01 0.01 0.1 0.2 50 0.1	mg/kg mg/kg mg/kg % mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JAG JPL MX MX MX MX	R148686 R148686 R148686 R148586 R148586 R148436 R148436 R148436 R148436
CCME BTEX   Benzene   <0.01     Toluene   <0.01     Ethylbenzene   <0.01     Xylenes   <0.01     % Moisture   14     Metals (ICP/MS)   Silver (Ag)   <0.2     Aluminum (Al)   7080     Arsenic (As)   4.4     Boron (B)   7     Barium (Ba)   139     Beryllium (Be)   0.4     Bismuth (Bi)   <0.5     Calcium (Ca)   84200     Cadmium (Cd)   0.2     Cobalt (Co)   8.1     Chromium (Cr)   19.2     Copper (Cu)   19.2     Iron (Fe)   16700     Potassium (Mg)   14400     Manganese (Mn)   327     Molybdenum (Mo)   1.2     Sodium (Na)   200     Nickel (Ni)   26.0     Lead (Pb)   9.2     Sejenium (Se)   132     Titanium (Ti)   63		0.01 0.01 0.01 0.1 0.2 50 0.1	mg/kg mg/kg mg/kg % mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03 10-OCT-03	11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JPL MX MX MX MX	R148686 R148686 R148586 R148436 R148436 R148436 R148436 R148436
Benzene		0.01 0.01 0.01 0.1 0.2 50 0.1	mg/kg mg/kg mg/kg % mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03 10-OCT-03	11-OCT-03 11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JPL MX MX MX MX	R148686 R148686 R148586 R148436 R148436 R148436 R148436 R148436
Ethylbenzene		0.01 0.01 0.1 0.2 50 0.1	mg/kg mg/kg % mg/kg mg/kg mg/kg mg/kg	10-OCT-03 10-OCT-03	11-OCT-03 11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JAG JPL MX MX MX MX	R148686 R148586 R148586 R148436 R148436 R148436 R148436
Xylenes       <0.01		0.01 0.1 0.2 50 0.1	mg/kg % mg/kg mg/kg mg/kg mg/kg	10-OCT-03	11-OCT-03 11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JAG JPL MX MX MX MX	R148586 R148586 R148436 R148436 R148436 R148436
% Moisture       14         Metals (ICP/MS)       <0.2		0.1 0.2 50 0.1	% mg/kg mg/kg mg/kg mg/kg		11-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	JPL MX MX MX MX	R148586 R148436 R148436 R148436 R148436
Metals (ICP/MS)       <0.2		0.2 50 0.1	mg/kg mg/kg mg/kg mg/kg	10-OCT-03	10-OCT-03 10-OCT-03 10-OCT-03 10-OCT-03	MX MX MX MX	R148436 R148436 R148436 R148436
Silver (Ag)       <0.2		50 0.1	mg/kg mg/kg mg/kg		10-OCT-03 10-OCT-03 10-OCT-03	XM XM XM	R148436 R148436 R148436
Aluminum (AI) 7080 Arsenic (As) 4.4 Boron (B) 7 Barium (Ba) 139 Beryllium (Be) 0.4 Bismuth (Bi) <0.5 Caicium (Ca) 84200 Cadmium (Cd) 0.2 Cobalt (Co) 8.1 Chromium (Cr) 19.2 Copper (Cu) 19.2 Iron (Fe) 16700 Potassium (K) 1440 Magnesium (Mg) 14000 Manganese (Mn) 327 Molybdenum (Mo) 1.2 Sodium (Na) 200 Nickel (Ni) 26.0 Lead (Pb) 9.2 Selenium (Se) 1.32 Titanium (Ti) 63		50 0.1	mg/kg mg/kg mg/kg		10-OCT-03 10-OCT-03 10-OCT-03	XM XM XM	R148436 R148436 R148436
Arsenie (As) 4.4 Boron (B) 7 Barium (Ba) 139 Beryllium (Be) 0.4 Bismuth (Bi) <0.5 Calcium (Ca) 84200 Cadmium (Cd) 0.2 Cobalt (Co) 8.1 Chromium (Cr) 19.2 Copper (Cu) 19.2 Iron (Fe) 16700 Potassium (K) 1440 Magnesium (Mg) 14000 Manganese (Mn) 327 Molybdenum (Mo) 1.2 Sodium (Na) 200 Nickel (Ni) 26.0 Lead (Pb) 9.2 Setenium (Se) 7 Strontium (Sr) 132 Titanium (Ti) 63		0.1	mg/kg mg/kg		10-OCT-03 10-OCT-03	MX MX	R148436 R148436
Boron (B)       7         Barium (Ba)       139         Beryllium (Be)       0.4         Bismuth (Bl)       <0.5		1	mg/kg		10-OCT-03	MX	R148436
Barium (Ba)       139         Beryllium (Be)       0.4         Bismuth (Bi)       <0.5		2					]
Beryllium (Be)       0.4         Bismuth (Bl)       <0.5		ا م د				WIX	
Bismuth (Bi)       <0.5		0.5	mg/kg		10-OCT-03	MX	R148436
Cafcium (Ca)       84200         Cadmium (Cd)       0.2         Cobalt (Co)       8.1         Chromium (Cr)       19.2         Copper (Cu)       19.2         Iron (Fe)       16700         Potassium (K)       1440         Magnesium (Mg)       14000         Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2	1	0.2 0.5	mg/kg		10-OCT-03	MX	R148436
Cadmium (Cd)       0.2         Cobalt (Co)       8.1         Chromium (Cr)       19.2         Copper (Cu)       19.2         Iron (Fe)       16700         Potassium (K)       1440         Magnesium (Mg)       14000         Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2	ļ	100	mg/kg mg/kg		10-OCT-03	MX	R148436
Cobalt (Co)       8.1         Chromium (Cr)       19.2         Copper (Cu)       19.2         Iron (Fe)       16700         Potassium (K)       1440         Magnesium (Mg)       14000         Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2		0.1	mg/kg		10-OCT-03	MX	R148436
Chromium (Cr)       19.2         Copper (Cu)       19.2         Iron (Fe)       16700         Potassium (K)       1440         Magnesium (Mg)       14000         Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2		0.1	mg/kg		10-OCT-03	MX	R148436
Copper (Cu)       19.2         Iron (Fe)       16700         Potassium (K)       1440         Magnesium (Mg)       14000         Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2	ļ	0.2	mg/kg		10-OCT-03	MX	R148436
Iron (Fe)       16700         Potassium (K)       1440         Magnesium (Mg)       14000         Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2		0.5	mg/kg		10-OCT-03	MX	R148436
Potassium (K)       1440         Magnesium (Mg)       14000         Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Seienium (Se)       0.6         Tin (Sn)       <2		200	mg/kg		10-OCT-03	MX	R148436
Manganese (Mn)       327         Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Sefenium (Se)       0.6         Tin (Sn)       <2		50	mg/kg		10-OCT-03	МX	R148436
Molybdenum (Mo)       1.2         Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Seienium (Se)       0.6         Tin (Sn)       <2		20	mg/kg		10-OCT-03	MX	R148436
Sodium (Na)       200         Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2		1	mg/kg		10-OCT-03	MΧ	R148436
Nickel (Ni)       26.0         Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2		0.1	mg/kg		10-OCT-03	MΧ	R148436
Lead (Pb)       9.2         Selenium (Se)       0.6         Tin (Sn)       <2		100	mg/kg		10-OCT-03	MX	R148436
Selenium (Se)       0.6         Tin (Sn)       <2		0.5	mg/kg		10-OCT-03	MX	R148436
Tin (Sn)       <2		0.5	mg/kg		10-OCT-03	MX	R148436
Strontium (Sr) 132 Titanium (Ti) 63		0.2	mg/kg		10-OCT-03	ΜX	R148436
Titanium (Ti) 63		2	mg/kg		10-OCT-03	MΧ	R148436
` '	1	1	mg/kg		10-OCT-03	MX MX	R148436 R148436
		1	mg/kg		10-OCT-03	MX MX	R148436
Thailium (TI) 0.20		0.05 0.05	mg/kg		10-OCT-03	MX	R148436
Uranium (U) 1.28		0.05	mg/kg mg/kg		10-OCT-03	MX	R148436
Vanadium (V)         22.2           Zinc (Zn)         63		5	mg/kg		10-OCT-03	MX	R148436
L134451-3 BH8@0.3						• • • • • • • • • • • • • • • • • • • •	
Sample Date: 04-OCT-03 12:00							
Matrix: SOIL			1	i			
Basic Salinity					1		

Sample Details/Parameters	Result	Qualitier	Οŭ	Units	Extracted	Ahelyzed	Вv	Balch
42454.2								
.134451-3 BH8@0.3 Sample Date: 04-OCT-03 12:00								
•								İ
viatrix: SOIL		İ						
Basic Salinity								
pH and EC (Saturated Paste) % Saturation	28.7		0.1	%		16-OCT-03	DHS	R149472
pH in Saturated Paste	7.6		0.1	pH		16-OCT-03	DHS	R149472
Conductivity Sat. Paste	3.61		0.03	dS m-1		16-OCT-03	DHS	R149472
SAR SAR	3.01		0.55	13.77		, ,	2	,
Calcium (Ca)	300		0.5	mg/L	1	16-OCT-03	KG	R149373
Potassium (K)	11.7		0.1	mg/L		16-OCT-03	KG	R149373
Magnesium (Mg)	70.1		0.1	mg/L		16-OCT-03	KG	R149373
Sodium (Na)	321		1	mg/L		16-OCT-03	KG	R14937
SAR	4.3			SAR		16-OCT-03	KG	R149373
	+			<u> </u>				
Sample Date: 04-OCT-03 12:00								
·								
Matrix: SOIL  CCME TVHs and TEHs			1					
CCME Total Hydrocarbons								
F1 (C6-C10)	<5		5	mg/kg		13-OCT-03		
F1-BTEX	<5		5	mg/kg		13-OCT-03		
F2 (C10-C16)	11		5	mg/kg		13-OCT-03		
F3 (C16-C34)	99		5	mg/kg		13-OCT-03		}
F4 (C34-C50)	35		5	mg/kg		13-OCT-03		
Total Hydrocarbons (C6-C50)	150		5	mg/kg	İ	13-OCT-03	-	1
Chromatogram to baseline at nC50	YES					13-OCT-03		
CCME Total Extractable Hydrocarbons Prep/Analysis Dates				Ĺ	10-OCT-03	12-OCT-03	LDR	R14868
CCME BTEX								
Benzene	<0.01		0.01	mg/kg	10-OCT-03	11-OCT-03	JAG	R148686
Toluene	<0.01		0.01	mg/kg	10-OCT-03	11-OCT-03	JAG	R14868
Ethylbenzene	<0.01		0.01	mg/kg	10-OCT-03	11-OCT-03	JAG	R14868
Xylenes	0.02		0.01	mg/kg	10-OCT-03	11-OCT-03	JAG	R14868
% Moisture	16		0.1	%	10-OCT-03	11-OCT-03	JPL	R148586
Metals (ICP/MS)								
Silver (Ag)	<0.2		0.2	mg/kg		10-OCT-03	MX	R14843
Aluminum (AI)	8540		50	mg/kg		10-OCT-03	MX	R14843
Arsenic (As)	5.7		0.1	mg/kg	İ	10-OCT-03	MX	R14843
Boron (B)	8		2	mg/kg		10-OCT-03		R14843
Barium (Ba)	173		0.5	mg/kg		10-OCT-03	MX	R14843
Beryllium (Be)	0.5		0.2	mg/kg		10-OCT-03	MX	R14843
Bismuth (Bi)	<0.5		0.5	mg/kg		10-OCT-03	MX	R14843
Calcium (Ca)	77000		100	mg/kg		10-OCT-03	MX	R14843
Cadmium (Cd)	0.3		0.1	mg/kg		10-OCT-03	MX	R14843
Cobalt (Co)	9.1		0.1	mg/kg		10-OCT-03	MX	R14843
Chromium (Cr)	21.8		0.2	mg/kg		10-OCT-03	MX	R14843
Copper (Cu)	21.4		0.5	mg/kg		10-OCT-03	MX	R14843
Iron (Fe)	20300		200	mg/kg		10-OCT-03	MX	R14843
Potassium (K)	1770		50	mg/kg	}	10-OCT-03	MX	R14843
Magnesium (Mg)	11000		20	mg/kg	1	10-OCT-03	MX	R14843
Manganese (Mn)	338		1	mg/kg	1	10-OCT-03	MX	R14843
Molybdenum (Mo)	1.1		0.1	mg/kg		10-OCT-03	MX	R14843
Sodium (Na)	300		100	mg/kg		10-OCT-03	MX	R14843
Nickel (Ni)	30.2		0.5	mg/kg	1	10-OCT-03	MX	R14843

Sample Details/Parameters	Result	Qualifier	D.L	Units	Extracted	Analyzed	Вv	Batch
L134451-4 BH9@3.0								
Sample Date: 04-OCT-03 12:00								
Matrix: SOIL	,							
Metals (ICP/MS)								
Lead (Pb)	9,6		0,5	mg/kg		10-OCT-03	MX	R148436
Selenium (Se)	0.7		0.2	mg/kg		10-OCT-03	MX	R148436
Tin (Sn)	<2		2	mg/kg		10-OCT-03	MX	R148436
Strontium (Sr)	181		1	mg/kg		10-OCT-03	MX	R148436
Titanium (Ti)	26		1	mg/kg		10-OCT-03	MX	R148436
Thallium (TI)	0.19		0.05	mg/kg	1	10-OCT-03	MX	R148436
Uranium (U)	1.12		0.05	mg/kg		10-OCT-03	MX	R148436
· Vanadium (V)	23.2		0.2	mg/kg		10-OCT-03	1	R148436
Zinc (Zn)	72		5	mg/kg		10-OCT-03	MX	R148436
L134451-6 BH12@0.3								
Sample Date: 04-OCT-03 12:00								
Matrix: SOIL	1							
CCME TVHs and TEHS								
CCME Total Hydrocarbons F1 (C6-C10)	<5	-	5	mg/kg		13-OCT-03		
F1-BTEX	<5		5	mg/kg		13-OCT-03		
F2 (C10-C16)	47		5	mg/kg		13-OCT-03	1	
F3 (C16-C34)	740		5	mg/kg		13-OCT-03		
F4 (C34-C50)	120		5	mg/kg		13-OCT-03	3	
Total Hydrocarbons (C6-C50)	910		5	rng/kg	}	13-OCT-03	:	
Chromatogram to baseline at nC50	YES					13-OCT-03		
CCME Total Extractable Hydrocarbons Prep/Analysis Dates					10-OCT-03	12-OCT-03	LDR	R148687
CCME BTEX								
Benzene	<0.01		0.01	mg/kg	1	11-OCT-03		R148686
Toluene	<0.01		0.01	mg/kg		11-OCT-03		R148686
Ethylbenzene	<0.01		0.01	mg/kg	1	11-OCT-03		R148686
Xylenes	<0.01		0.01	mg/kg	10-OCT-03	11-OCT-03	JAG	R148686
% Moisture	9.5		0.1	%	10-OCT-03	11-OCT-03	JPL	R148586
Metais (ICP/MS)				į .		40.007.00	2.237	D440400
Silver (Ag)	<0.2		0.2	mg/kg		10-OCT-03		R148436
Aluminum (Al)	7960		50	mg/kg		10-OCT-03		R148436 R148436
Arsenic (As)	6.3		0.1	mg/kg		10-OCT-03	i	R148436
Boron (B)	10		2	mg/kg		10-OCT-03	1	R148436
Barium (Ba)	142		0.5	mg/kg		10-OCT-03		R148436
Beryllium (Be)	0.5		0.2 0.5	mg/kg		10-OCT-03	1	R148436
Bismuth (Bi)	<0.5		100	mg/kg mg/kg		10-OCT-03	1	R148436
Calcium (Ca)	92300		0.1	mg/kg		10-OCT-03	1	R148436
Cadmium (Cd)	0.4 8.3	1	0.1	mg/kg		10-OCT-03	1	R148436
Cobait (Co)	18.4		0.1	mg/kg		10-OCT-03	1	R148436
Chromium (Cr)	20.3		0.5	mg/kg		10-OCT-03	i	R148436
Copper (Cu) iron (Fe)	19100		200	mg/kg		10-OCT-03	1	R148436
Potassium (K)	1900		50	mg/kg		10-OCT-03	MX	R148436
Magnesium (Mg)	11400		20	mg/kg		10-OCT-03	1	R148436
Magnesium (Mg)  Manganese (Mn)	345		1	mg/kg		10-OCT-03	MX	R148436
Molybdenum (Mo)	1.6		0.1	mg/kg		10-OCT-03	MX	R148436
Sodium (Na)	200		100	mg/kg	-	10-OCT-03	MX	R148436
Nickel (Ni)	26.4		0.5	mg/kg		10-OCT-03	MX	R148436
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Sample: Defails/Parameters	Result	Qualifier	ÐL	Units	Extracted	Ahelyzed	Вv	Balch
L134451-6 BH12@0.3								
Sample Date: 04-OCT-03 12:00								
Matrix: SOIL								
Metals (ICP/MS)						10.007.00		E110100
Lead (Pb) Selenium (Se)	9.9 0.8		0.5 0.2	mg/kg mg/kg		10-OCT-03 10-OCT-03	MX MX	R148436 R148436
Tin (Sn)	<2		2	mg/kg		10-OCT-03	MX	R148436
Strontium (Sr)	183 59		1	mg/kg mg/kg		10-OCT-03 10-OCT-03	MX MX	R148436 R148436
Titanium (Ti) Thallium (Tl)	0.23		0.05	mg/kg		10-OCT-03	MX	R148436
Uranium (U)	1.28		0.05	mg/kg	 	10-OCT-03	MX	R148436
Vanadium (V) Zinc (Zn)	23.5 77		0.2 5	mg/kg mg/kg		10-OCT-03 10-OCT-03	MX MX	R148436 R148436
		d oth o do lo m i		Ingrig		10 00, 02	(1)/	
Refer to Referenced Information for Qualifie	rs (IT any) and N	ethodology.						
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#### Reference Information

Methods	Listed	(if	applicable)	:
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TL Test Code	Matrix	Test Description	Preparation Method Reference(Based O	n) Analytical Method Reference(Based Or
TL-BTX,TVH-CCME-CL	Soil	COME BTEX	CCME CWS-PHC DEC2000	CCME CWS-PHC Dec-2000 - Pub# 1310
TL-TEH-CCME-CL	Soil	CCME Total Extractable Hydrocarbons	CCME CWS-PHC DEC2000	CCME CWS-PHC Dec-2000 - Pub# 1310
METAL-LOW-EXD-ED	Soil	Metals (ICP/MS)	EPA 3050	EPA 6020
REP-MOISTURE-CL	Sail	% Moisture		Oven dry 105C-Gravimetric
AR-CALC-CL	Soil	SAR		CSSS 18.4-Calculation
SAT/PH/EC-CL	Soil	pH and EC (Saturated Pas	ste)	CSSS, Chp. 18 - Saturation Extract
** Laboratory Methods en	nployed follo	w in-house procedures, which	are generally based on nationally or internat	ionally accepted methodologies.
Chain of Custody number				
L134451				
L134451 The last two letters of t	he above te:	st code(s) indicate the laborato	ry that performed analytical analysis for tha	it test. Refer to the list below:
<u>-</u>		st code(s) indicate the laborato	ry that performed analytical analysis for tha Laboratory Definition Code	at test. Refer to the list below:  Laboratory Location
The last two letters of t	ode La Er		Laboratory Definition Code	
The last two letters of t	ode La Er	aboratory Location nviro-Test Laboratories - Calga anada	Laboratory Definition Code	Laboratory Location  Enviro-Test Laboratories - Edmonton,
The last two letters of t	ode La Er	aboratory Location nviro-Test Laboratories - Calga anada <u>Samples Re</u>	Laboratory Definition Code ry, Alberta, ED	Laboratory Location  Enviro-Test Laboratories - Edmonton,
The last two letters of t Laboratory Definition C CL	Code La Er Ca	aboratory Location nviro-Test Laboratories - Calga anada <u>Samples Re</u> nple ID	Laboratory Definition Code  ry, Alberta, ED  guiring Regular Turnaround	Laboratory Location  Enviro-Test Laboratories - Edmonton, Alberta, Canada
The last two letters of t Laboratory Definition C CL Sample #	Code La	aboratory Location nviro-Test Laboratories - Calga anada <u>Samples Re</u> nple ID	Laboratory Definition Code  ry, Alberta, ED  guiring Regular Turnaround	Laboratory Location  Enviro-Test Laboratories - Edmonton, Alberta, Canada
The last two letters of the Laboratory Definition Concentration Concentr	Code La Er Ca Client sam BH3@3.0	aboratory Location nviro-Test Laboratories - Calga anada Samples Re nple ID	Laboratory Definition Code  ry, Alberta, ED  guiring Regular Turnaround	Laboratory Location  Enviro-Test Laboratories - Edmonton, Alberta, Canada
The last two letters of the Laboratory Definition Concentration Concentr	Client sam BH3@3.0	aboratory Location  nviro-Test Laboratories - Calga anada  Samples Re  nple ID  3	Laboratory Definition Code  ry, Alberta, ED  guiring Regular Turnaround	Laboratory Location  Enviro-Test Laboratories - Edmonton, Alberta, Canada
The last two letters of the Laboratory Definition CCC  Sample # L134451-1 L134451-2 L134451-3	Client sam BH3@3.0 BH6@3.0 BH8@0.3	aboratory Location nviro-Test Laboratories - Calga anada Samples Re nple ID  3	Laboratory Definition Code  ry, Alberta, ED  guiring Regular Turnaround	Laboratory Location  Enviro-Test Laboratories - Edmonton, Alberta, Canada
The last two letters of the Laboratory Definition Concentration Concentr	Client sam  BH3@3.0  BH8@0.3  BH9@3.0	aboratory Location  nviro-Test Laboratories - Calga anada  Samples Re  nple ID  3 3	Laboratory Definition Code  ry, Alberta, ED  guiring Regular Turnaround	Laboratory Location  Enviro-Test Laboratories - Edmonton, Alberta, Canada
The last two letters of the Laboratory Definition CCL  Sample # L134451-1 L134451-2 L134451-3 L134451-4 L134451-5	Client sam  BH3@3.0 BH6@3.0 BH8@0.3 BH9@3.0	aboratory Location nviro-Test Laboratories - Calga anada Samples Re nple ID  3 3 3	Laboratory Definition Code  ry, Alberta, ED  guiring Regular Turnaround	Laboratory Location  Enviro-Test Laboratories - Edmonton, Alberta, Canada

#### GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds. The reported surrogate recovery value provides a measure of method efficiency. The Laboratory warning units are determined under column heading D.L.

mg/kg (units) - unit of concentration based on mass, parts per million mg/L (units) - unit of concentration based on volume, parts per million

< - Less than

D.L. - Detection Limit

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory. UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION. UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

Enviro-Test Laboratories has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, Enviro-Test Laboratories assumes no liability for the use or interpretation of the results.