Table H
Analysis of Soil Samples - BTEX and TPH (mg/kg)

	Date	*Depth (m)*	>nC9-C12 aliphatic*	>nC12-C16 aliphatic*	>nC16-C28 aliphatic*	>nC28-C35 aliphatic*	>nC9-C12 aromatic*	>nC12-C16 aromatic*	>nC16-C28 aromatic*	>nC28-C35 aromatic*		C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction		Benzene	Toluene	Ethylbenzene	m&p-Xylene	o-Xylene
Criteria																					
HIL's[1]			-	-	-	-	-	-	-	-		**65**		**1000**			**1**	**130**	**50**	**25**	
MW30	*7/12/2004*	0-0.45	nd	nd	75	79	nd	nd	113	131		na	na	na	na		nd	nd	nd	nd	nd
MW31	*7/12/2004*	0.5-0.95	nd	nd	65	nd	nd	nd	nd	50		na	na	na	na		nd	nd	nd	nd	nd
MW31	*7/12/2004*	1.4	na	na	na	na	na	na	na	na		na	na	na	na		nd	nd	nd	nd	nd
MW32	*7/12/2004*	1.2	nd	nd	nd	nd	nd	nd	nd	nd		na	na	na	na		nd	nd	nd	nd	nd
MW33	*7/12/2004*	0.5-0.95	13	218	217	nd	24	151	2124	nd		na	na	na	na		nd	nd	nd	nd	nd
MW34	*7/12/2004*	0.5-0.95	na	na	na	na	na	na	na	na		na	na	na	na		nd	nd	nd	nd	nd
MW34	*7/12/2004*	1.4	55	30	nd	nd	30	29	92	nd		na	na	na	na		nd	nd	nd	nd	nd
EN01669 DUP - MW31	*7/12/2004*	0.5-0.95	nd	nd	220	nd	nd	nd	nd	nd		na	na	na	na		na	na	na	na	na
MW39D	*17/02/2005*	10.5	nd	nd	nd	nd	nd	45	116	nd		nd	40	80	nd		nd	nd	nd	nd	nd
MW41D	*18/02/2005*	7	na	na	na	na	na	na	na	na		nd	nd	nd	nd		nd	nd	nd	nd	nd
MW38D	*16/02/2005*	2-2.45	na	na	na	na	na	na	na	na		nd	nd	nd	nd		nd	nd	nd	nd	nd

Table I

Total Concentration of Metals in soil (mg/kg)

	Date	Depth	Arsenic	Cadmium	Chromium (Total) (2)	Copper	Molybdenum	Nickel	Lead	Zinc	Mercury	Free Cyanide	Cyanide (Total)
Criteria (1)													
		HIL's	**500**	**100**	**60%**	**5000**	**-**	**3000**	**1500**	**35000**	**75**	**-**	**-**
		EIL's	**20**	**3**	**400**	**100**	**1050**	**60**	**600**	**200**	**1**	**-**	**-**
MW39D	*17/02/2005*	10.5	nd	nd	6	24	na	3	6	10	0.08	na	na
MW41D	*18/02/2005*	7	nd	nd	12	17	na	nd	7	6	0.05	na	na
MW38D	*16/02/2005*	2-2.45	nd	nd	9	nd	na	3	9	nd	0.05	na	na

Notes

Note: "nd" denotes below the detection limit of the method specified

"na" not analysed

Table J

Volatile and Semi-Volatile Organic Compounds in Soil (mg/kg)

	PQL (mg/kg)	MW38D	MW41D	MW39D
		16/02/2005	18/02/2005	17/02/2005
Depth		2-2.45	7	10.5
Benzene	0.5	nd	nd	nd
Toluene	1	nd	nd	nd
Ethylbenzene	1	nd	nd	nd
meta- & para-Xylene*	2	nd	nd	nd
Styrene	1	nd	nd	nd
ortho-Xylene	1	nd	nd	nd
Isopropylbenzene	1	nd	nd	nd
n-Propylbenzene	1	nd	nd	nd
1.3.5-Trimethylbenzene	1	nd	nd	nd
sec-Butylbenzene	1	nd	nd	nd
1.2.4-Trimethylbenzene	1	nd	nd	nd
tert-Butylbenzene	1	nd	nd	nd
p-Isopropyltoluene	1	nd	nd	nd
n-Butylbenzene	1	nd	nd	nd
Vinyl Acetate	1	nd	nd	nd
2-Butanone (MEK)	1	nd	nd	nd
4-Methyl-2-pentanone (MIBK)	1	nd	nd	nd
2-Hexanone (MBK)	1	nd	nd	nd
trans-1.3-Dichloropropylene	1	nd	nd	nd
1.2-Dibromoethane (EDB)	1	nd	nd	nd
Dichlorodifluoromethane	1	nd	nd	nd
Chloromethane	1	nd	nd	nd
Vinyl chloride	1	nd	nd	nd
Bromomethane	1	nd	nd	nd
Chloroethane	1	nd	nd	nd
Trichlorofluoromethane	1	nd	nd	nd
1.1-Dichloroethene	1	nd	nd	nd
Iodomethane	1	nd	nd	nd
trans-1.2-Dichloroethene	1	nd	nd	nd
1.1-Dichloroethane	1	nd	nd	nd
cis-1.2-Dichloroethene	1	nd	nd	nd
1.1.1-Trichloroethane	1	nd	nd	nd
1.1-Dichloropropylene	1	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd
1.2-Dichloroethane	1	nd	nd	nd
Trichloroethene	1	nd	nd	nd
Dibromomethane	1	nd	nd	nd
1.1.2-Trichloroethane	1	nd	nd	nd
1.3-Dichloropropane	1	nd	nd	nd
Tetrachloroethene	1	nd	nd	nd
1.1.1.2-Tetrachloroethane	1	nd	nd	nd
trans-1.4-Dichloro-2-butene	1	nd	nd	nd
cis-1.4-Dichloro-2-butene	1	nd	nd	nd
1.1.2.2-Tetrachloroethane	1	nd	nd	nd
1.2.3-Trichloropropane	1	nd	nd	nd
Pentachloroethane	1	nd	nd	nd
1.2-Dibromo-3-chloropropane	1	nd	nd	nd
Hexachlorobutadiene	1	nd	nd	nd
Chlorobenzene	1	nd	nd	nd
Bromobenzene	1	nd	nd	nd
2-Chlorotoluene	1	nd	nd	nd
4-Chlorotoluene	1	nd	nd	nd
1.3-Dichlorobenzene	1	nd	nd	nd
1.4-Dichlorobenzene	1	nd	nd	nd
1.2-Dichlorobenzene	1	nd	nd	nd
1.2.4-Trichlorobenzene	1	nd	nd	nd
1.2.3-Trichlorobenzene	1	nd	nd	nd
Chloroform	1	nd	nd	nd
Bromodichloromethane	1	nd	nd	nd
Dibromochloromethane	1	nd	nd	nd
Bromoform	1	nd	nd	nd
Carbon disulfide	1	nd	nd	nd
Naphthalene	1	nd	nd	8
beta-Endosulfan	1	nd	nd	nd
Heptachlor epoxide	1	nd	nd	nd
1.3.5-Trichlorobenzene	1	nd	nd	nd
1.2.4.5-Tetrachlorobenzene	1	nd	nd	nd
Methanesulfonate methyl	1	nd	nd	nd
Methanesulfonate ethyl	1	nd	nd	nd
cis-Isosafrole	1	nd	nd	nd
trans-Isosafrole	1	nd	nd	nd
Safrole	1	nd	nd	nd
Diallate	1	nd	nd	nd
2.3.4.6-Tetrachlorophenol	1	nd	nd	nd
Prothiofos	1	nd	nd	nd
Ethion	1	nd	nd	nd

	PQL (mg/kg)	MW38D	MW41D	MW39D
		16/02/2005	18/02/2005	17/02/2005
Depth		2-2.45	7	10.5
Dimethyl phthalate	1	nd	nd	nd
Diethyl phthalate	1	nd	nd	nd
Di-n-butyl phthalate	1	nd	nd	nd
Butyl benzyl phthalate	1	nd	nd	nd
bis(2-ethylhexyl) phthalate	1	nd	nd	nd
Di-n-octylphthalate	1	nd	nd	nd
N-Nitrosomethylethylamine	1	nd	nd	nd
N-Nitrosodiethylamine	1	nd	nd	nd
N-Nitrosopyrrolidine	1	nd	nd	nd
N-Nitrosomorpholine	1	nd	nd	nd
N-Nitrosodi-n-propylamine	1	nd	nd	nd
N-Nitrosopiperidine	1	nd	nd	nd
N-Nitrosodibutylamine	1	nd	nd	nd
N-Nitrosodiphenyl & Diphenylamine	10	nd	nd	nd
Methapyrilene	1	nd	nd	nd
2-Picoline	1	nd	nd	nd
Acetophenone	1	nd	nd	nd
Nitrobenzene	1	nd	nd	nd
Isophorone	1	nd	nd	nd
2.6-Dinitrotoluene	1	nd	nd	nd
2.4-Dinitrotoluene	1	nd	nd	nd
1-Naphthylamine	1	nd	nd	nd
4-Nitroquinoline-N-oxide	1	nd	nd	nd
5-Nitro-o-toluidine	1	nd	nd	nd
Azobenzene	10	nd	nd	nd
1.3.5-Trinitrobenzene	1	nd	nd	nd
Phenacetin	1	nd	nd	nd
4-Aminobiphenyl	1	nd	nd	nd
Pentachloronitrobenzene	1	nd	nd	nd
Pronamide	1	nd	nd	nd
Dimethylaminoazobenzene	1	nd	nd	nd
Chlorobenzilate	1	nd	nd	nd
Bis(2-chloroethyl) ether	1	nd	nd	nd
Bis(2-chloroethoxy) methane	1	nd	nd	nd
4-Chlorophenyl phenyl ether	1	nd	nd	nd
4-Bromophenyl phenyl ether	1	nd	nd	nd
1.4-Dichlorobenzene	1	nd	nd	nd
1.3-Dichlorobenzene	1	nd	nd	nd
1.2-Dichlorobenzene	1	nd	nd	nd
Hexachloroethane	1	nd	nd	nd
1.2.4-Trichlorobenzene	1	nd	nd	nd
Hexachloropropylene	1	nd	nd	nd
Hexachlorobutadiene	1	nd	nd	nd
Hexachlorocyclopentadiene	1	nd	nd	nd
Pentachlorobenzene	1	nd	nd	nd
Hexachlorobenzene (HCB)	1	nd	nd	nd
Aniline	1	nd	nd	nd
4-Chloroaniline	1	nd	nd	nd
2-Nitroaniline	1	nd	nd	nd
3-Nitroaniline	1	nd	nd	nd
Dibenzofuran	1	nd	nd	nd
4-Nitroaniline	1	nd	nd	nd
Carbazole	1	nd	nd	nd
3.3'-Dichlorobenzidine	10	nd	nd	nd
alpha-BHC	1	nd	nd	nd
beta-BHC	1	nd	nd	nd
gamma-BHC	1	nd	nd	nd
delta-BHC	1	nd	nd	nd
Heptachlor	1	nd	nd	nd
Aldrin	1	nd	nd	nd
alpha-Endosulfan	1	nd	nd	nd
4.4'-DDE	1	nd	nd	nd
Dieldrin	1	nd	nd	nd
Endrin	1	nd	nd	nd
4.4'-DDD	1	nd	nd	nd
Endosulfan sulfate	1	nd	nd	nd
4.4'-DDT	1	nd	nd	nd
Dichlorvos	1	nd	nd	nd
Dimethoate	1	nd	nd	nd
Diazinon	1	nd	nd	nd
Chlorpyrifos-methyl	1	nd	nd	nd
Malathion	1	nd	nd	nd
Fenthion	1	nd	nd	nd
Chlorpyrifos	1	nd	nd	nd
Pirimphos-ethyl	1	nd	nd	nd
Chlorfenvinphos	1	nd	nd	nd

Table J-2

QA Soil Analysis - BTEX and TPH (mg/kg)

	>nC9-C12 aliphatic*	>nC12-C16 aliphatic*	>nC16-C28 aliphatic*	>nC28-C35 aliphatic*	>nC9-C12 aromatic*	>nC12-C16 aromatic*	>nC16-C28 aromatic*	>nC28-C35 aromatic*	Benzene	Toluene	Ethylbenzene	m&p-Xylene	o-Xylene
QA/QC Criteria	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%
MW31	nd	nd	**65**	nd	nd	nd	nd	**50**	nd	nd	nd	nd	nd
EN01669 DUP	nd	nd	**220**	nd	nd	nd	nd	nd	na	na	na	na	na
RPD	**N/A**	**N/A**	**367**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

Notes

Note: "nd" denotes below the detection limit of the method specified

Table K
Field Duplicate Water Results - BTEX and TPH (μg/L)

	Benzene	Toluene	Ethylbenzene	m&p-Xylene	o-Xylene	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36
QA/QC Criteria	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%
Samples									
MW 04D	14	<5	<5	<5	<5	30	80	100	<50
Dup1 (Amdel)	20	ND	1	<2	<1	20	90	<100	<100
Dup2 (ALS)	2	<2	<2	<2	<2	30	70	<100	<50
RPD (Dup 1)	**35.3**	**N/A**	**N/A**	**N/A**	**N/A**	**40.0**	**11.8**	**N/A**	**N/A**
RPD (Dup 2)	**109.1**	**N/A**	**N/A**	**N/A**	**N/A**	**0.0**	**12.5**	**N/A**	**N/A**
MW 39D	22	<5	9	13	8	60	150	500	<50
Dup3	29	3	12	18	11	70	120	<100	<100
RPD	**27.5**	**N/A**	**28.6**	**32.3**	**31.6**	**15.4**	**22.2**	**N/A**	**N/A**
MW 42D	<5	<5	<5	<5	<5	<20	60	200	<50
Dup4	<1	<2	<2	<2	<2	<20	170	600	<50
RPD	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**95.7**	**100.0**	**N/A**

Table L

Field Duplicate Water Results - Polycyclic Aromatic Hydrocarbons (PAHs) (ug/L)

	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)&(k)fluorant	Benzo(a)pyrene	Indeno(1.2.3.cd)pyrene	Dibenzo(a.h)anthracene	Benzo(g.h.l)perylene
QA/QC Criteria	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%	<50%
Samples															
MW 04D	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2
Dup1 (Amdel)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dup2 (ALS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD (Dup 1)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RPD (Dup 2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW 39D	<2	<2	2	8	15	3	2	4	<2	<2	<4	<2	<2	<2	<2
Dup3	<1	<1	2	7	9	2	<1	1	<1	<1	<1	<1	<1	<1	<1
RPD	N/A	N/A	0.0	13.3	50.0	40.0	N/A	120.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW 42D	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2
Dup4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0
RPD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table M
Field Duplicate Water Results - Metals (mg/L)

	Arsenic	Cadmium	Chromium	Copper	Nickel	Lead	Zinc	Mercury
QA/QC Criteria	<30%	<30%	<30%	<30%	<30%	<30%	<30%	<30%
Samples								
MW 04D	0.005	<0.0001	<1.00	0.001	0.011	0.009	0.056	<0.0001
Dup1 (Amdel)	0.004	<0.0001	<0.05	<0.001	0.009	0.013	0.039	<0.001
Dup2 (ALS)	0.005	<0.0001	<1.00	0.001	0.011	0.009	0.056	<0.0001
RPD (Dup1)	**0.0**	**N/A**	**N/A**	**N/A**	**20.0**	**36.4**	**35.8**	**N/A**
RPD (Dup 2)	**0.0**	**N/A**	**N/A**	**0.0**	**0.0**	**0.0**	**0.0**	**N/A**
MW 39D	0.001	<0.0001	<0.010	<0.001	0.002	0.002	0.111	<0.0001
Dup3	<0.001	<0.0001	<0.05	<0.001	0.003	<0.001	0.021	<0.001
RPD	**N/A**	**N/A**	**N/A**	**N/A**	**40.0**	**N/A**	**136.4**	**N/A**
MW 42D	0.02	0.0003	<0.100	0.208	0.119	0.069	0.325	<0.0001
Dup4	0.019	0.0004	<0.100	0.21	0.122	0.072	0.289	<0.0001
RPD	**5.1**	**28.6**	**N/A**	**1.0**	**2.5**	**4.3**	**11.7**	**N/A**

TABLE O

SUMMARY OF BACKGROUND WATER LABORATORY RESULTS AT NORTH EVERLEIGH WORKSHOPS

All results in ug/L

Reference SAMPLE ID Date of Sampling	Threshold Concentration Freshwater	 Health	 Aesethic	E1GW	E2GW	E3GW	E4GW	E5GW	E6GW	E7GW	E8GW
HEAVY METALS											
Arsenic (total)	24 [5]	7	---	<5	<5	<5	<5	<5	<5	<5	<5
Cadmium	0.2	2	---	0.1	0.1	**0.3**	0.2	0.1	nd	0.2	0.1
Chromium	3.3	55000 [3]	---	2	1	nd	2	nd	nd	nd	nd
Copper	1.4	2000	1000	**13**	**19**	**8**	**22**	**2**	**6**	**3**	**5**
Manganese				154	804	914	1100	824	1133	287	54
Nickel	11	20	---	4	**33**	8	**24**	**28**	**18**	3	4
Lead	3.4	10	---	3	nd	nd	10	nd	nd	nd	2
Zinc	8	---	3000	**61**	**86**	**43**	**616**	**40**	**69**	**55**	**50**
Iron				600	950	9110	1330	370	280	1920	3250
Mercury	0.05	1		nd	nd	nd	nd	nd	nd	nd	nd
Ammonia				50	40	110	140	40	10	50	70
Cyanide	7	80		nd	nd	nd	~	~	nd	~	~
BTEX											
Benzene	950	1	---	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	180	800	25	nd	nd	nd	2	nd	nd	nd	nd
Ethylbenzene	50	300	3	nd	nd	nd	nd	nd	nd	nd	nd
Total Xylene	70 [4]	600	20	nd	nd	nd	nd	nd	nd	nd	nd
Total Petroleum Hydrocarbons											
C6-C9 Fraction	150	---	---	nd	nd	nd	nd	nd	nd	nd	nd
Total TPH C10-C36	600 [4]	---	---	nd	nd	nd	nd	nd	nd	247	nd
PCBs				nd	~	~	~	~	nd	nd	nd
PAHs											
Naphthalene	16 [1]	70		nd	nd	nd	nd	nd	nd	208	5
Acenaphthylene				nd	nd	nd	nd	nd	nd	1	nd
Acenaphthene				nd	nd	nd	nd	nd	nd	7	1
Fluorene				nd	nd	nd	nd	nd	nd	5	1
Phenanthrene	5 [4]			nd	nd	nd	nd	nd	nd	2	1
Anthracene	5 [4]			nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene	1 [4]			nd	nd	nd	nd	nd	nd	nd	nd
Pyrene				nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)anthracene				nd	nd	nd	nd	nd	nd	nd	nd
Chrysene	0.5 [4]			nd	nd	nd	nd	nd	nd	nd	nd
Benzo[b,k]fluoranthene	0.05 [4]			nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)pyrene	0.05 [4]	0.01		nd	nd	nd	nd	nd	nd	nd	nd
Indeno(123-cd)pyrene	0.05 [4]			nd	nd	nd	nd	nd	nd	nd	nd
Dibenz(ah)anthracene				nd	nd	nd	nd	nd	nd	nd	nd
Benzo(ghi)perylene	0.05 [4]			nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs				nd	nd	nd	nd	nd	nd	223	8
VHCs				nd	nd	nd	nd	nd	nd	nd	nd

NOTES:

- Concentration exceeds the ANZECC Freshwater 95% Protection Level Criteria (1992)
- Concentration exceeds the Health Based Preliminary US EPA Drinking Water Theshold Concentrations
- Concentration exceeds the Aesthetic Based Drinking Water Theshold Concentrations

[1] ANZECC (1992) freshwater criteria

[2] NEPC (1999a) freshwater criteria

[3] USEPA Preliminary Remedial Goal for tap water

[4] Dutch 2000 Groundwater Intervention Value

[5] ANZECC (2000) Arsenic (III) criteria adopted for freshwater ecosystems

[6] A cyanide (total) criteria of 7 should only be used of no free cyanide results are available

nd Not Detected

~ Not Analysed

Reference *State Rail Authority* (2000) North Eveleigh Workshops - Baseline Groundwater Investigation