

Client Sample ID			V_QA1	V_3160020_0.2	V_3160020_1.0	V_3160019_0.2
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My11185	M11-My11188	M11-My11189	M11-My11190
Date Sampled			May 24, 2011	May 24, 2011	May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit				
Nickel	4	mg/kg	20	27	20	24
Zinc	5	mg/kg	15	30	26	24

Client Sample ID			V_3160019_1.0	V_3160018_0.2	V_3160018_1.0	V_QA3
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My11191	M11-My11192	M11-My11193	M11-My11194
Date Sampled			May 24, 2011	May 24, 2011	May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit				
Cyclohexanone	5	mg/kg	< 5	< 5	< 5	< 5
Nitrate (as N)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 Aqueous extract)	0.1	units	10	9.4	9.8	9.5
Sulphate (S)	10	mg/kg	27	11	23	15
% Moisture	0.1	%	7.1	25	25	21
Volatile Organics						
1,1-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2,3-Trichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Allyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Iodomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	0.05	mg/kg	< 0.05	0.60	< 0.05	< 0.05
Styrene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V_3160019_1.0	V_3160018_0.2	V_3160018_1.0	V_QA3
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My11191	M11-My11192	M11-My11193	M11-My11194
Date Sampled			May 24, 2011	May 24, 2011	May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit				
Total m+p-Xylenes	0.10	mg/kg	< 0.1	0.60	< 0.1	< 0.1
trans-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	0.11	< 0.05	< 0.05
Xylenes(ortho,meta and para)	0.15	mg/kg	< 0.15	1.2	< 0.15	< 0.15
Fluorobenzene (surr.)	1	%	107	77	95	78
4-Bromofluorobenzene (surr.)	1	%	83	68	74	64
Explosives						
1,3-DNB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-TNB	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4- & 2,6-DNT	1	mg/kg	< 1	< 1	< 1	< 1
3-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
RDX	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TNT	1	mg/kg	< 1	< 1	< 1	< 1
Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2,4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160019_1.0	V_3160018_0.2	V_3160018_1.0	V_QA3
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My11191	M11-My11192	M11-My11193	M11-My11194
Date Sampled			May 24, 2011	May 24, 2011	May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit				
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3,3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4,4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDT	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160019_1.0	V_3160018_0.2	V_3160018_1.0	V_QA3
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My11191	M11-My11192	M11-My11193	M11-My11194
Date Sampled			May 24, 2011	May 24, 2011	May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit				
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	63	87	107	68
Nitrobenzene-d5 (surr.)	1	%	63	82	98	57
2-Fluorobiphenyl (surr.)	1	%	81	96	123	78
2,4,6-Tribromophenol (surr.)	1	%	58	67	92	61
Explosives						
1-Chloro-2-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-3-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-4-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenols (Halogenated)						
Tetrachlorophenols - Total	5.0	mg/kg	< 5	< 5	< 5	< 5
Total Halogenated Phenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Total Non-Halogenated Phenol	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Barium	10	mg/kg	20	240	270	130
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	14	< 10
Cobalt	5	mg/kg	12	12	14	12
Manganese	5	mg/kg	420	230	270	530
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.9	38	38	32
Copper	5	mg/kg	22	14	12	13
Lead	5	mg/kg	< 5	12	8.2	7.9

Client Sample ID			V_3160019_1.0	V_3160018_0.2	V_3160018_1.0	V_QA3
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My11191	M11-My11192	M11-My11193	M11-My11194
Date Sampled			May 24, 2011	May 24, 2011	May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit				
Nickel	4	mg/kg	45	29	33	28
Zinc	5	mg/kg	28	41	23	23

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
Cyclohexanone	Melbourne	May 27, 2011	14 Day
Nitrate (as N)	Melbourne	May 26, 2011	14 Day
- Method: APHA 4500-NO3 Nitrate Nitrogen by FIA			
pH (1:5 Aqueous extract)	Melbourne	May 27, 2011	7 Day
- Method: APHA 4500 pH by Direct Measurement			
Sulphate (S)	Melbourne	May 27, 2011	28 Day
- Method: APHA 4500-SO4 (SO4 by Discrete Analyser)			
% Moisture	Melbourne	May 27, 2011	14 Day
- Method: Method 102 - ANZECC - % Moisture			
Volatile Organics	Melbourne	May 27, 2011	14 Day
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Explosives	Melbourne	May 27, 2011	14 Day
- Method: MGT200A & USEPA8332 Explosives & NG			
Semivolatile Organics	Melbourne	May 30, 2011	14 Day
- Method: USEPA 8270 Semivolatile Organics			
Explosives	Melbourne	May 30, 2011	14 Day
- Method: MGT200A & USEPA8332 Explosives			
Phenols (Halogenated)	Melbourne	May 30, 2011	14 Day
- Method: USEPA 8270 Phenols			
Phenols (non-Halogenated)	Melbourne	May 30, 2011	14 Day
- Method: USEPA 8270 Phenols			
Antimony	Melbourne	May 27, 2011	6 Month

Company Name: GHD Pty Ltd VIC
Address: Level B, 180 Lonsdale St
Melbourne
Victoria 3000

Client Job No.: CAIRNLFVA VALIDATION SAMPLING
312764D

Order No.: 300376
Report #: 8687 8000
Phone: 8687 8111
Fax:

Received: May 25, 2011 12:00
Due: Jun 1, 2011 12:28
Priority: 5 Day
Contact name: S 33

mgt-LabMark Client Manager: S 33

Sample Detail

Laboratory where analysis is conducted

Melbourne Laboratory - NATA Site #1251

Sydney Laboratory - NATA Site #1645

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	% Moisture	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Nitrate (as N)	pH (1:5 Aqueous extract)	Sulphate (S)	Tin	Zinc	Explosives	Semivolatile Organics	Volatile Organics	Phenols (IWRG 621)
V_3160006_0_2	May 24, 2011		Soil	M11-MY11169	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160006_1_0	May 24, 2011		Soil	M11-MY11170	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160005_0_2	May 24, 2011		Soil	M11-MY11171	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160005_1_0	May 24, 2011		Soil	M11-MY11172	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160004_0_2	May 24, 2011		Soil	M11-MY11173	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160004_1_0	May 24, 2011		Soil	M11-MY11174	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160003_0_2	May 24, 2011		Soil	M11-MY11175	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160003_1_0	May 24, 2011		Soil	M11-MY11176	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160002_0_2	May 24, 2011		Soil	M11-MY11177	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160002_1_0	May 24, 2011		Soil	M11-MY11178	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160001_0_2	May 24, 2011		Soil	M11-MY11179	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160001_1_0	May 24, 2011		Soil	M11-MY11180	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160002_1_0	May 24, 2011		Soil	M11-MY11181	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Company Name: GHD Pty Ltd VIC
Address: Level 8, 180 Lonsdale St
Melbourne
Victoria 3000

Client Job No.: CAIRNLFVA VALIDATION SAMPLING
3127640

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Laboratory where analysis is conducted																										
Melbourne Laboratory - NATA Site #1261																										
Sydney Laboratory - NATA Site #1645																										
V_3160021_1_0	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160022_0_2	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160022_1_0	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_QA1	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_TB1	May 24, 2011	Water		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_RB1	May 24, 2011	Water		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160020_0_2	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160020_1_0	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160019_0_2	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160019_1_0	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160018_0_2	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_3160018_1_0	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
V_QA3	May 24, 2011	Soil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis.
7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg: milligrams per Kilogram	mg/L: milligrams per litre
µg/l: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100ml: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-20%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD
- eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Quality Control Results

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Method Blank					
Nitrate (as N)	mg/kg	< 5	5	Pass	
Sulphate (S)	mg/kg	< 10	10	Pass	
Method Blank					
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics b					
1.1-Dichloroethane	mg/kg	< 0.05	0.05	Pass	
1.1-Dichloroethene	mg/kg	< 0.05	0.05	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05	0.05	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05	0.05	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05	0.05	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05	0.05	Pass	
1.2-Dibromoethane	mg/kg	< 0.05	0.05	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05	0.05	Pass	
1.2-Dichloroethane	mg/kg	< 0.05	0.05	Pass	
1.2-Dichloropropane	mg/kg	< 0.05	0.05	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05	0.05	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05	0.05	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05	0.05	Pass	
1.3-Dichloropropane	mg/kg	< 0.05	0.05	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05	0.05	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05	0.05	Pass	
2-Butanone (MEK)	mg/kg	< 0.05	0.05	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05	0.05	Pass	
4-Chlorotoluene	mg/kg	< 0.05	0.05	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05	0.05	Pass	
Allyl chloride	mg/kg	< 0.05	0.05	Pass	
Benzene	mg/kg	< 0.05	0.05	Pass	
Bromobenzene	mg/kg	< 0.05	0.05	Pass	
Bromochloromethane	mg/kg	< 0.05	0.05	Pass	
Bromodichloromethane	mg/kg	< 0.05	0.05	Pass	
Bromoform	mg/kg	< 0.05	0.05	Pass	
Bromomethane	mg/kg	< 0.05	0.05	Pass	
Carbon disulfide	mg/kg	< 0.05	0.05	Pass	
Carbon Tetrachloride	mg/kg	< 0.05	0.05	Pass	
Chlorobenzene	mg/kg	< 0.05	0.05	Pass	
Chloroethane	mg/kg	< 0.05	0.05	Pass	
Chloroform	mg/kg	< 0.05	0.05	Pass	
Chloromethane	mg/kg	< 0.05	0.05	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.05	0.05	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.05	0.05	Pass	
Dibromochloromethane	mg/kg	< 0.05	0.05	Pass	
Dibromomethane	mg/kg	< 0.05	0.05	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05	0.05	Pass	
Iodomethane	mg/kg	< 0.05	0.05	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05	0.05	Pass	
Methylene Chloride	mg/kg	< 0.05	0.05	Pass	
o-Xylene	mg/kg	< 0.05	0.05	Pass	
Styrene	mg/kg	< 0.05	0.05	Pass	
Tetrachloroethene	mg/kg	< 0.05	0.05	Pass	
Total m+p-Xylenes	mg/kg	< 0.1	0.10	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.05	0.05	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.05	0.05	Pass	
Trichloroethene	mg/kg	< 0.05	0.05	Pass	
Trichlorofluoromethane	mg/kg	< 0.05	0.05	Pass	
Vinyl chloride	mg/kg	< 0.05	0.05	Pass	
Toluene	mg/kg	< 0.05	0.05	Pass	
Ethylbenzene	mg/kg	< 0.05	0.05	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 0.15	0.15	Pass	
Method Blank					
Explosives MGT200A & USEPA8332 Explosives & NG					
1.3-DNB	mg/kg	< 0.5	0.5	Pass	
1.3.5-TNB	mg/kg	< 1	1	Pass	
2-Nitrotoluene	mg/kg	< 0.5	0.5	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
2,4- & 2,6-DNT	mg/kg	< 1		1	Pass	
3-Nitrotoluene	mg/kg	< 0.5		0.5	Pass	
4-Nitrotoluene	mg/kg	< 0.5		0.5	Pass	
Nitrobenzene	mg/kg	< 0.5		0.5	Pass	
RDX	mg/kg	< 0.5		0.5	Pass	
TNT	mg/kg	< 1		1	Pass	
Method Blank						
Semivolatile Organics USEPA 8270 Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	mg/kg	< 5		5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5		0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5		0.5	Pass	
1,2-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,3-Trichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,3,4-Tetrachlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,3,5-Tetrachlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,4-Trichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,4,5-Tetrachlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,3-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,3,5-Trichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,4-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5		0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5		0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5		0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2		0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5		0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5		0.5	Pass	
2-Nitrophenol	mg/kg	< 1		1.0	Pass	
2-Picoline	mg/kg	< 0.5		0.5	Pass	
2,3,4,6-Tetrachlorophenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5		5	Pass	
2,4-Dinitrotoluene	mg/kg	< 0.5		0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1		1.0	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1		1.0	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5		0.5	Pass	
2,6-Dinitrotoluene	mg/kg	< 0.5		0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4		0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5		0.5	Pass	
3,3'-Dichlorobenzidine	mg/kg	< 0.5		0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5		0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5		0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1		1.0	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5		0.5	Pass	
4-Nitrophenol	mg/kg	< 5		5	Pass	
4,4'-DDD	mg/kg	< 0.5		0.5	Pass	
4,4'-DDE	mg/kg	< 0.5		0.5	Pass	
4,4'-DDT	mg/kg	< 0.5		0.5	Pass	
7,12-Dimethylbenz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
a-BHC	mg/kg	< 0.5		0.5	Pass	
Acenaphthene	mg/kg	< 0.1		0.1	Pass	
Acenaphthylene	mg/kg	< 0.1		0.1	Pass	
Acetophenone	mg/kg	< 0.5		0.5	Pass	
Aldrin	mg/kg	< 0.5		0.5	Pass	
Aniline	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.1		0.1	Pass	
b-BHC	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.1		0.1	Pass	
Benzo(a)pyrene	mg/kg	< 0.1		0.1	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.1		0.1	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.1		0.1	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.1		0.1	Pass	
Benzyl chloride	mg/kg	< 0.5		0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5		0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5		0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5		0.5	Pass	

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Butyl benzyl phthalate	mg/kg	< 0.5	0.5	Pass	
Chrysene	mg/kg	< 0.1	0.1	Pass	
d-BHC	mg/kg	< 0.5	0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5	0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5	0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.1	0.1	Pass	
Dibenz(a,j)acridine	mg/kg	< 0.5	0.5	Pass	
Dibenzofuran	mg/kg	< 0.5	0.5	Pass	
Dieldrin	mg/kg	< 0.5	0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5	0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5	0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5	0.5	Pass	
Diphenylamine	mg/kg	< 0.5	0.5	Pass	
Endosulfan I	mg/kg	< 0.5	0.5	Pass	
Endosulfan II	mg/kg	< 0.5	0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5	0.5	Pass	
Endrin	mg/kg	< 0.5	0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5	0.5	Pass	
Endrin ketone	mg/kg	< 0.5	0.5	Pass	
Fluoranthene	mg/kg	< 0.1	0.1	Pass	
Fluorene	mg/kg	< 0.1	0.1	Pass	
g-BHC (Lindane)	mg/kg	< 0.5	0.5	Pass	
Heptachlor	mg/kg	< 0.5	0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5	0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5	0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5	0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5	0.5	Pass	
Hexachloroethane	mg/kg	< 0.5	0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	0.1	Pass	
Methoxychlor	mg/kg	< 0.5	0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5	0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5	0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5	0.5	Pass	
Naphthalene	mg/kg	< 0.1	0.1	Pass	
Nitrobenzene	mg/kg	< 0.5	0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5	0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5	0.5	Pass	
Pentachlorophenol	mg/kg	< 1	1.0	Pass	
Phenanthrene	mg/kg	< 0.1	0.1	Pass	
Phenol	mg/kg	< 0.5	0.5	Pass	
Pronamide	mg/kg	< 0.5	0.5	Pass	
Pyrene	mg/kg	< 0.1	0.1	Pass	
Trifluralin	mg/kg	< 0.5	0.5	Pass	
Method Blank					
Explosives MGT200A & USEPA8332 Explosives					
1-Chloro-2-nitrobenzene	mg/kg	< 0.5	0.5	Pass	
1-Chloro-3-nitrobenzene	mg/kg	< 0.5	0.5	Pass	
1-Chloro-4-nitrobenzene	mg/kg	< 0.5	0.5	Pass	
Method Blank					
Phenols (Halogenated) USEPA 8270 Phenols					
Tetrachlorophenols - Total	mg/kg	< 5	5.0	Pass	
Method Blank					
Phenols (non-Halogenated) USEPA 8270 Phenols					
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20	20	Pass	
Dinoseb	mg/kg	< 20	20	Pass	
Method Blank					
Antimony	mg/kg	< 10	10	Pass	
Barium	mg/kg	< 10	10	Pass	
Beryllium	mg/kg	< 2	2	Pass	
Boron	mg/kg	< 10	10	Pass	
Cobalt	mg/kg	< 5	5	Pass	
Manganese	mg/kg	< 5	5	Pass	
Mercury	mg/kg	< 0.1	0.1	Pass	
Molybdenum	mg/kg	< 10	10	Pass	
Tin	mg/kg	< 10	10	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
Arsenic	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Nickel	mg/kg	< 4		4	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery						
		Result 1				
Nitrate (as N)	%	88		70-130	Pass	
Sulphate (S)	%	110		70-130	Pass	
LCS - % Recovery						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by		Result 1				
1,1-Dichloroethene	%	109		70-130	Pass	
1,1,1-Trichloroethane	%	102		70-130	Pass	
1,2-Dichloroethane	%	102		70-130	Pass	
Benzene	%	115		70-130	Pass	
Carbon Tetrachloride	%	99		70-130	Pass	
Total m+p-Xylenes	%	107		70-130	Pass	
Trichloroethene	%	104		70-130	Pass	
Toluene	%	117		70-130	Pass	
Ethylbenzene	%	119		70-130	Pass	
Xylenes(ortho.meta and para)	%	105		70-130	Pass	
LCS - % Recovery						
Explosives MGT200A & USEPA8332 Explosives & NG		Result 1				
1,3-DNB	%	95		70-130	Pass	
1,3,5-TNB	%	102		70-130	Pass	
2-Nitrotoluene	%	95		70-130	Pass	
2,4- & 2,6-DNT	%	96		70-130	Pass	
3-Nitrotoluene	%	97		70-130	Pass	
4-Nitrotoluene	%	96		70-130	Pass	
RDX	%	93		70-130	Pass	
TNT	%	85		70-130	Pass	
LCS - % Recovery						
Semivolatile Organics USEPA 8270 Semivolatile Organics		Result 1				
1,2,4-Trichlorobenzene	%	91		70-130	Pass	
2-Chlorophenol	%	105		30-130	Pass	
4-Chloro-3-methylphenol	%	100		30-130	Pass	
4-Nitrophenol	%	63		30-130	Pass	
Acenaphthene	%	94		70-130	Pass	
Pentachlorophenol	%	30		30-130	Pass	
Phenol	%	105		30-130	Pass	
Pyrene	%	90		70-130	Pass	
LCS - % Recovery						
		Result 1				
Antimony	%	99		80-120	Pass	
Barium	%	102		80-120	Pass	
Beryllium	%	102		80-120	Pass	
Boron	%	90		80-120	Pass	
Cobalt	%	102		80-120	Pass	
Manganese	%	106		75-125	Pass	
Mercury	%	99		80-120	Pass	
Molybdenum	%	101		80-120	Pass	
Tin	%	101		80-120	Pass	
Arsenic	%	100		80-120	Pass	
Cadmium	%	99		80-120	Pass	
Chromium	%	103		80-120	Pass	
Copper	%	104		80-120	Pass	
Lead	%	102		80-120	Pass	
Nickel	%	103		80-120	Pass	
Zinc	%	99		80-120	Pass	
[Duplicate of M11-My11169]						
		Result 1	Result 2	RPD		
Cyclohexanone	mg/kg	< 5	< 5	<1	30%	Pass
[Duplicate of M11-My11169]						
Explosives		Result 1	Result 2	RPD		

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1.3-DNB	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-TNB	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4- & 2.6-DNT	mg/kg	< 1	< 1	<1	30%	Pass	
3-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
RDX	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TNT	mg/kg	< 1	< 1	<1	30%	Pass	
[Duplicate of M11-My11169]							
Explosives		Result 1	Result 2	RPD			
1-Chloro-2-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-3-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-4-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My11169]							
		Result 1	Result 2	RPD			
Antimony	mg/kg	< 10	< 10	<1	30%	Pass	
Barium	mg/kg	84	90	7	30%	Pass	
Beryllium	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	mg/kg	< 10	< 10	<1	30%	Pass	
Cobalt	mg/kg	13	11	13	30%	Pass	
Manganese	mg/kg	250	230	9	30%	Pass	
Molybdenum	mg/kg	< 10	< 10	<1	30%	Pass	
Tin	mg/kg	< 10	< 10	<1	30%	Pass	
Arsenic	mg/kg	< 2	< 2	10	30%	Pass	
Cadmium	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	mg/kg	36	38	6	30%	Pass	
Copper	mg/kg	14	14	4	30%	Pass	
Lead	mg/kg	12	11	7	30%	Pass	
Nickel	mg/kg	26	27	5	30%	Pass	
[Duplicate of M11-My11179]							
Volatile Organics		Result 1	Result 2	RPD			
1.1-Dichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dibromoethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Butanone (MEK)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Chlorotoluene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Allyl chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Benzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromochloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromodichloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromoform	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon disulfide	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon Tetrachloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroform	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
cis-1,3-Dichloropropene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromochloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Iodomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methylene Chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
o-Xylene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Styrene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Tetrachloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Total m+p-Xylenes	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichlorofluoromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Vinyl chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toluene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Ethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Xylenes(ortho,meta and para)	mg/kg	< 0.15	< 0.15	<1	30%	Pass	
[Duplicate of M11-My11179]							
Explosives		Result 1	Result 2	RPD			
1,3-DNB	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3,5-TNB	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4- & 2,6-DNT	mg/kg	< 1	< 1	<1	30%	Pass	
3-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
RDX	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TNT	mg/kg	< 1	< 1	<1	30%	Pass	
[Duplicate of M11-My11179]							
Semivolatile Organics		Result 1	Result 2	RPD			
2-Methyl-4,6-dinitrophenol	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2-Dichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3-Trichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3,4-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3,5-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,4-Trichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,4,5-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3-Dichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3,5-Trichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,4-Dichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,3,4,6-Tetrachlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dinitrophenol	mg/kg	< 5	< 5	<1	30%	Pass	
2,4-Dinitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1	< 1	<1	30%	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1	< 1	<1	30%	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,6-Dinitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3,3'-Dichlorobenzidine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
4-Chloro-3-methylphenol	mg/kg	< 1	< 1	< 1	30%	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4-Nitrophenol	mg/kg	< 5	< 5	< 1	30%	Pass	
4,4'-DDD	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4,4'-DDE	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4,4'-DDT	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
7,12-Dimethylbenz(a)anthracene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
a-BHC	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Acenaphthene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Acenaphthylene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Acetophenone	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Aldrin	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Aniline	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Anthracene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
b-BHC	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Benz(a)anthracene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzo(a)pyrene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzyl chloride	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Chrysene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
d-BHC	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Dibenz(a,j)acridine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Dibenzofuran	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Dieldrin	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Diethyl phthalate	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Dimethyl phthalate	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Diphenylamine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Endosulfan I	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Endosulfan II	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Endosulfan sulphate	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Endrin	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Endrin aldehyde	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Endrin ketone	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Fluoranthene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Fluorene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
g-BHC (Lindane)	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Heptachlor	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Heptachlor epoxide	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Hexachlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Hexachlorobutadiene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Hexachloroethane	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Methoxychlor	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Naphthalene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Pentachlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Pentachlorophenol	mg/kg	< 1	< 1	< 1	30%	Pass	
Phenanthrene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Phenol	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Pronamide	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Pyrene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Codes
Trifluralin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My11179]							
Explosives							
1-Chloro-2-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-3-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-4-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My11179]							
Phenols (Halogenated)							
Tetrachlorophenols - Total	mg/kg	< 5	< 5	<1	30%	Pass	
[Duplicate of M11-My11179]							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20	< 20	<1	30%	Pass	
Dinoseb	mg/kg	< 20	< 20	<1	30%	Pass	
[Duplicate of M11-My11179]							
Heavy Metals							
Antimony	mg/kg	< 10	< 10	<1	30%	Pass	
Barium	mg/kg	110	140	21	30%	Pass	
Beryllium	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	mg/kg	< 10	< 10	<1	30%	Pass	
Cobalt	mg/kg	12	12	6	30%	Pass	
Manganese	mg/kg	570	460	20	30%	Pass	
Molybdenum	mg/kg	< 10	< 10	15	30%	Pass	
Tin	mg/kg	< 10	< 10	<1	30%	Pass	
Arsenic	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	mg/kg	27	28	3	30%	Pass	
Copper	mg/kg	12	12	1	30%	Pass	
Lead	mg/kg	21	29	31	30%	Fail	Q15
Nickel	mg/kg	26	26	1	30%	Pass	
[Duplicate of M11-My11190]							
Sulphate (S)							
Sulphate (S)	mg/kg	20	21	3.4	30%	Pass	
[Duplicate of M11-My11191]							
Nitrate (as N)							
Nitrate (as N)	mg/kg	< 5	< 5	<1	30%	Pass	
[Duplicate of M11-My11191]							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dibromoethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Butanone (MEK)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Chlorotoluene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Allyl chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Benzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromochloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromodichloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromoform	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon disulfide	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon Tetrachloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Chlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroform	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1,2-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1,3-Dichloropropene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromochloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Iodomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methylene Chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
o-Xylene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Styrene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Tetrachloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Total m+p-Xylenes	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichlorofluoromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Vinyl chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toluene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Ethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 0.15	< 0.15	<1	30%	Pass	
[Duplicate of M11-My11191]							
Explosives		Result 1	Result 2	RPD			
1,3-DNB	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3,5-TNB	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4- & 2,6-DNT	mg/kg	< 1	< 1	<1	30%	Pass	
3-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
RDX	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TNT	mg/kg	< 1	< 1	<1	30%	Pass	
[Duplicate of M11-My11191]							
Explosives		Result 1	Result 2	RPD			
1-Chloro-2-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-3-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-4-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My11191]							
		Result 1	Result 2	RPD			
Antimony	mg/kg	< 10	< 10	<1	30%	Pass	
Barium	mg/kg	20	34	54	30%	Fail	Q15
Beryllium	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	mg/kg	< 10	< 10	<1	30%	Pass	
Cobalt	mg/kg	12	14	17	30%	Pass	
Manganese	mg/kg	420	520	20	30%	Pass	
Mercury	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	mg/kg	< 10	< 10	<1	30%	Pass	
Tin	mg/kg	< 10	< 10	<1	30%	Pass	
Arsenic	mg/kg	< 2	< 2	10	30%	Pass	
Cadmium	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	mg/kg	8.9	12	31	30%	Fail	Q15
Copper	mg/kg	22	23	4	30%	Pass	
Lead	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	mg/kg	45	52	13	30%	Pass	
Zinc	mg/kg	28	31	12	30%	Pass	
[Duplicate of M11-My11192]							
		Result 1	Result 2	RPD			
Cyclohexanone	mg/kg	< 5	< 5	<1	30%	Pass	
[Spike of M11-My11169] - % Recovery							
Explosives		Result 1					
1,3-DNB	%	85			70 - 130	Pass	
2-Nitrotoluene	%	88			70 - 130	Pass	
2,4- & 2,6-DNT	%	87			70 - 130	Pass	

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
3-Nitrotoluene	%	87	70 - 130	Pass	
4-Nitrotoluene	%	87	70 - 130	Pass	
Nitrobenzene	%	83	70 - 130	Pass	
[Spike of M11-My11169] - % Recovery					
Explosives		Result 1			
1-Chloro-2-nitrobenzene	%	93	70 - 130	Pass	
1-Chloro-3-nitrobenzene	%	89	70 - 130	Pass	
1-Chloro-4-nitrobenzene	%	90	70 - 130	Pass	
[Spike of M11-My11169] - % Recovery					
		Result 1			
Antimony	%	76	70 - 130	Pass	
Barium	%	123	75 - 125	Pass	
Beryllium	%	78	75 - 125	Pass	
Boron	%	92	75 - 125	Pass	
Cobalt	%	77	75 - 125	Pass	
Manganese	%	87	75 - 125	Pass	
Mercury	%	92	70 - 130	Pass	
Molybdenum	%	75	75 - 125	Pass	
Tin	%	79	75 - 125	Pass	
Cadmium	%	78	75 - 125	Pass	
Chromium	%	93	75 - 125	Pass	
Copper	%	92	75 - 125	Pass	
Lead	%	79	75 - 125	Pass	
Nickel	%	90	75 - 125	Pass	
[Spike of M11-My11179] - % Recovery					
Volatile Organics		Result 1			
1,1-Dichloroethene	%	76	70 - 130	Pass	
1,1,1-Trichloroethane	%	80	70 - 130	Pass	
1,2-Dichlorobenzene	%	75	70 - 130	Pass	
1,2-Dichloroethane	%	86	70 - 130	Pass	
Benzene	%	92	70 - 130	Pass	
Carbon Tetrachloride	%	76	70 - 130	Pass	
o-Xylene	%	84	70 - 130	Pass	
Total m+p-Xylenes	%	90	70 - 130	Pass	
Trichloroethene	%	81	70 - 130	Pass	
Toluene	%	93	70 - 130	Pass	
Ethylbenzene	%	124	70 - 130	Pass	
Xylenes(ortho,meta and para)	%	88	70 - 130	Pass	
[Spike of M11-My11179] - % Recovery					
Explosives		Result 1			
1,3-DNB	%	84	70 - 130	Pass	
2-Nitrotoluene	%	85	70 - 130	Pass	
2,4- & 2,6-DNT	%	86	70 - 130	Pass	
3-Nitrotoluene	%	86	70 - 130	Pass	
4-Nitrotoluene	%	86	70 - 130	Pass	
Nitrobenzene	%	82	70 - 130	Pass	
[Spike of M11-My11179] - % Recovery					
Semivolatile Organics		Result 1			
1,2,4-Trichlorobenzene	%	81	70 - 130	Pass	
1,4-Dichlorobenzene	%	75	70 - 130	Pass	
2-Chlorophenol	%	93	30 - 130	Pass	
2,4-Dinitrotoluene	%	79	70 - 130	Pass	
4-Chloro-3-methylphenol	%	40	30 - 130	Pass	
4-Nitrophenol	%	48	30 - 130	Pass	
Acenaphthene	%	88	70 - 130	Pass	
N-Nitrosodipropylamine	%	84	70 - 130	Pass	
Pentachlorophenol	%	40	30 - 130	Pass	
Phenol	%	93	30 - 130	Pass	
Pyrene	%	83	70 - 130	Pass	
[Spike of M11-My11179] - % Recovery					
Explosives		Result 1			
1-Chloro-2-nitrobenzene	%	89	70 - 130	Pass	
1-Chloro-3-nitrobenzene	%	88	70 - 130	Pass	
1-Chloro-4-nitrobenzene	%	89	70 - 130	Pass	
[Spike of M11-My11179] - % Recovery					
		Result 1			

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Barium	%	122	75 - 125	Pass	
Beryllium	%	80	75 - 125	Pass	
Cobalt	%	75	75 - 125	Pass	
Mercury	%	86	70 - 130	Pass	
Molybdenum	%	76	75 - 125	Pass	
Arsenic	%	75	75 - 125	Pass	
Cadmium	%	80	75 - 125	Pass	
Chromium	%	90	75 - 125	Pass	
Copper	%	94	75 - 125	Pass	
Lead	%	76	75 - 125	Pass	
Nickel	%	88	75 - 125	Pass	
[Spike of M11-My11190] - % Recovery					
		Result 1			
Sulphate (S)	%	112	70 - 130	Pass	
[Spike of M11-My11191] - % Recovery					
		Result 1			
Nitrate (as N)	%	84	70 - 130	Pass	
[Spike of M11-My11191] - % Recovery					
Volatile Organics		Result 1			
1.1-Dichloroethene	%	79	70 - 130	Pass	
1.1.1-Trichloroethane	%	79	70 - 130	Pass	
1.2-Dichlorobenzene	%	79	70 - 130	Pass	
1.2-Dichloroethane	%	87	70 - 130	Pass	
Benzene	%	97	70 - 130	Pass	
Carbon Tetrachloride	%	80	70 - 130	Pass	
o-Xylene	%	75	70 - 130	Pass	
Total m+p-Xylenes	%	79	70 - 130	Pass	
Trichloroethene	%	82	70 - 130	Pass	
Toluene	%	87	70 - 130	Pass	
Ethylbenzene	%	123	70 - 130	Pass	
Xylenes(ortho,meta and para)	%	78	70 - 130	Pass	
[Spike of M11-My11191] - % Recovery					
Explosives		Result 1			
1,3-DNB	%	89	70 - 130	Pass	
2-Nitrotoluene	%	89	70 - 130	Pass	
2,4- & 2,6-DNT	%	91	70 - 130	Pass	
3-Nitrotoluene	%	91	70 - 130	Pass	
4-Nitrotoluene	%	90	70 - 130	Pass	
Nitrobenzene	%	86	70 - 130	Pass	
[Spike of M11-My11191] - % Recovery					
Semivolatile Organics		Result 1			
1.2.4-Trichlorobenzene	%	84	70 - 130	Pass	
1,4-Dichlorobenzene	%	80	70 - 130	Pass	
2-Chlorophenol	%	96	30 - 130	Pass	
2,4-Dinitrotoluene	%	77	70 - 130	Pass	
4-Chloro-3-methylphenol	%	90	30 - 130	Pass	
4-Nitrophenol	%	49	30 - 130	Pass	
Acenaphthene	%	91	70 - 130	Pass	
N-Nitrosodipropylamine	%	84	70 - 130	Pass	
Pentachlorophenol	%	38	30 - 130	Pass	
Phenol	%	101	30 - 130	Pass	
Pyrene	%	88	70 - 130	Pass	
[Spike of M11-My11191] - % Recovery					
Explosives		Result 1			
1-Chloro-2-nitrobenzene	%	94	70 - 130	Pass	
1-Chloro-3-nitrobenzene	%	93	70 - 130	Pass	
1-Chloro-4-nitrobenzene	%	93	70 - 130	Pass	
[Spike of M11-My11191] - % Recovery					
		Result 1			
Antimony	%	83	70 - 130	Pass	
Barium	%	104	75 - 125	Pass	
Beryllium	%	79	75 - 125	Pass	
Cobalt	%	82	75 - 125	Pass	
Mercury	%	92	70 - 130	Pass	
Molybdenum	%	76	75 - 125	Pass	
Arsenic	%	78	75 - 125	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Cadmium	%	79			75 - 125	Pass	
Chromium	%	93			75 - 125	Pass	
Copper	%	104			75 - 125	Pass	
Lead	%	75			75 - 125	Pass	
Nickel	%	120			75 - 125	Pass	
Zinc	%	102			75 - 125	Pass	

Comments

NB: Report has been updated to include Chloronitrobenzene and Cyclohexanone results. 20/6/11

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within Holding Time	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in AS-POL-002. Refer to Glossary Page of this report for further details

Authorised By

S 33

S 33

NATA Signatory

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items listed. Unless indicated otherwise, the tests were performed on the samples as received.

GHD Melbourne
Level 8, 180 Lonsdale St
Melbourne
Victoria 3000

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254



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Attention: ≈ 33

Report 300376-W-V1
Client Reference CAIRNLEA VALIDATION SAMPLING 3127640
Received Date May 25, 2011

Client Sample ID			V_TB1	V_RB1
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My11186	M11-My11187
Date Sampled			May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit		
Cyclohexanone	0.5	mg/L	-	< 0.5
Nitrate (as N)	0.02	mg/L	-	< 0.02
pH	0.1	units	-	5.1
Sulphate (S)	5	mg/L	-	< 5
Volatile Organics				
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001
Chloroform	0.001	mg/L	< 0.001	< 0.001
Chloromethane	0.001	mg/L	< 0.001	< 0.001

Client Sample ID			V_TB1	V_RB1
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My11186	M11-My11187
Date Sampled			May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit		
cis-1,2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
cis-1,3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001
Total m+p-Xylenes	0.002	mg/L	< 0.002	< 0.002
trans-1,2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
trans-1,3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
Xylenes(ortho,meta and para)	0.003	mg/L	< 0.003	< 0.003
Fluorobenzene (surr.)	1	%	106	80
4-Bromofluorobenzene (surr.)	1	%	92	68
Explosives				
1,3-DNB	0.05	mg/L	-	< 0.05
1,3,5-TNB	0.05	mg/L	-	< 0.05
2-Nitrotoluene	0.05	mg/L	-	< 0.05
2,4- & 2,6-DNT	0.1	mg/L	-	< 0.1
3-Nitrotoluene	0.05	mg/L	-	< 0.05
4-Nitrotoluene	0.05	mg/L	-	< 0.05
Nitrobenzene	0.05	mg/L	-	< 0.05
RDX	0.05	mg/L	-	< 0.05
TNT	0.05	mg/L	-	< 0.05
Semivolatile Organics				
2-Methyl-4,6-dinitrophenol	0.03	mg/L	-	< 0.03
1-Chloronaphthalene	0.005	mg/L	-	< 0.005
1-Naphthylamine	0.005	mg/L	-	< 0.005
1,2-Dichlorobenzene	0.005	mg/L	-	< 0.005
1,2,3-Trichlorobenzene	0.005	mg/L	-	< 0.005
1,2,3,4-Tetrachlorobenzene	0.005	mg/L	-	< 0.005
1,2,3,5-Tetrachlorobenzene	0.005	mg/L	-	< 0.005
1,2,4-Trichlorobenzene	0.005	mg/L	-	< 0.005
1,2,4,5-Tetrachlorobenzene	0.005	mg/L	-	< 0.005
1,3-Dichlorobenzene	0.005	mg/L	-	< 0.005
1,3,5-Trichlorobenzene	0.005	mg/L	-	< 0.005
1,4-Dichlorobenzene	0.005	mg/L	-	< 0.005
2-Chloronaphthalene	0.005	mg/L	-	< 0.005
2-Chlorophenol	0.003	mg/L	-	< 0.003
2-Methylnaphthalene	0.005	mg/L	-	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	-	< 0.003
2-Naphthylamine	0.005	mg/L	-	< 0.005

Client Sample ID			V_TB1	V_RB1
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My11186	M11-My11187
Date Sampled			May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit		
2-Nitroaniline	0.005	mg/L	-	< 0.005
2-Nitrophenol	0.01	mg/L	-	< 0.01
2-Picoline	0.005	mg/L	-	< 0.005
2,3,4,6-Tetrachlorophenol	0.01	mg/L	-	< 0.01
2,4-Dichlorophenol	0.003	mg/L	-	< 0.003
2,4-Dimethylphenol	0.003	mg/L	-	< 0.003
2,4-Dinitrophenol	0.03	mg/L	-	< 0.03
2,4-Dinitrotoluene	0.005	mg/L	-	< 0.005
2,4,5-Trichlorophenol	0.01	mg/L	-	< 0.01
2,4,6-Trichlorophenol	0.01	mg/L	-	< 0.01
2,6-Dichlorophenol	0.003	mg/L	-	< 0.003
2,6-Dinitrotoluene	0.005	mg/L	-	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	< 0.006
3-Methylcholanthrene	0.005	mg/L	-	< 0.005
3,3'-Dichlorobenzidine	0.005	mg/L	-	< 0.005
4-Aminobiphenyl	0.005	mg/L	-	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	-	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	-	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	-	< 0.005
4-Nitrophenol	0.03	mg/L	-	< 0.03
4,4'-DDD	0.005	mg/L	-	< 0.005
4,4'-DDE	0.005	mg/L	-	< 0.005
4,4'-DDT	0.005	mg/L	-	< 0.005
7,12-Dimethylbenz(a)anthracene	0.005	mg/L	-	< 0.005
a-BHC	0.005	mg/L	-	< 0.005
Acenaphthene	0.001	mg/L	-	< 0.001
Acenaphthylene	0.001	mg/L	-	< 0.001
Acetophenone	0.005	mg/L	-	< 0.005
Aldrin	0.005	mg/L	-	< 0.005
Aniline	0.005	mg/L	-	< 0.005
Anthracene	0.001	mg/L	-	< 0.001
b-BHC	0.005	mg/L	-	< 0.005
Benz(a)anthracene	0.001	mg/L	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	< 0.001
Benzo(b)fluoranthene	0.001	mg/L	-	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	< 0.001
Benzyl chloride	0.005	mg/L	-	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	-	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	-	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	-	< 0.005
Butyl benzyl phthalate	0.005	mg/L	-	< 0.005
Chrysene	0.001	mg/L	-	< 0.001
d-BHC	0.005	mg/L	-	< 0.005
Di-n-butyl phthalate	0.005	mg/L	-	< 0.005
Di-n-octyl phthalate	0.005	mg/L	-	< 0.005
Dibenz(a,h)anthracene	0.001	mg/L	-	< 0.001
Dibenz(a,j)acridine	0.005	mg/L	-	< 0.005
Dibenzofuran	0.005	mg/L	-	< 0.005
Dieldrin	0.005	mg/L	-	< 0.005

Client Sample ID			V_TB1	V_RB1
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My11186	M11-My11187
Date Sampled			May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit		
Diethyl phthalate	0.005	mg/L	-	< 0.005
Dimethyl phthalate	0.005	mg/L	-	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	-	< 0.005
Diphenylamine	0.005	mg/L	-	< 0.005
Endosulfan I	0.005	mg/L	-	< 0.005
Endosulfan II	0.005	mg/L	-	< 0.005
Endosulfan sulphate	0.005	mg/L	-	< 0.005
Endrin	0.005	mg/L	-	< 0.005
Endrin aldehyde	0.005	mg/L	-	< 0.005
Endrin ketone	0.005	mg/L	-	< 0.005
Fluoranthene	0.001	mg/L	-	< 0.001
Fluorene	0.001	mg/L	-	< 0.001
g-BHC (Lindane)	0.005	mg/L	-	< 0.005
Heptachlor	0.005	mg/L	-	< 0.005
Heptachlor epoxide	0.005	mg/L	-	< 0.005
Hexachlorobenzene	0.005	mg/L	-	< 0.005
Hexachlorobutadiene	0.005	mg/L	-	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	-	< 0.005
Hexachloroethane	0.005	mg/L	-	< 0.005
Indeno(1,2,3-cd)pyrene	0.001	mg/L	-	< 0.001
Methoxychlor	0.005	mg/L	-	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	-	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	-	< 0.005
N-Nitrosopiperidine	0.005	mg/L	-	< 0.005
Naphthalene	0.001	mg/L	-	< 0.001
Nitrobenzene	0.05	mg/L	-	< 0.05
Pentachlorobenzene	0.005	mg/L	-	< 0.005
Pentachloronitrobenzene	0.005	mg/L	-	< 0.005
Pentachlorophenol	0.01	mg/L	-	< 0.01
Phenanthrene	0.001	mg/L	-	< 0.001
Phenol	0.003	mg/L	-	< 0.003
Pronamide	0.005	mg/L	-	< 0.005
Pyrene	0.001	mg/L	-	< 0.001
Trifluralin	0.005	mg/L	-	< 0.005
Phenol-d6 (surr.)	1	%	-	33
Nitrobenzene-d5 (surr.)	1	%	-	83
2-Fluorobiphenyl (surr.)	1	%	-	71
2,4,6-Tribromophenol (surr.)	1	%	-	70
Explosives				
1-Chloro-2-nitrobenzene	0.05	mg/L	-	< 0.05
1-Chloro-3-nitrobenzene	0.05	mg/L	-	< 0.05
1-Chloro-4-nitrobenzene	0.05	mg/L	-	< 0.05
Phenols (Halogenated)				
Tetrachlorophenols - Total	0.03	mg/L	-	< 0.03
Total Halogenated Phenol	0.01	mg/L	-	< 0.01
Phenols (non-Halogenated)				
2-Cyclohexyl-4,6-dinitrophenol	0.1	mg/L	-	< 0.1
Dinoseb	0.1	mg/L	-	< 0.1
Total Non-Halogenated Phenol	0.1	mg/L	-	< 0.1
Heavy Metals				

Client Sample ID			V_TB1	V_RB1
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My11186	M11-My11187
Date Sampled			May 24, 2011	May 24, 2011
Test/Reference	LOR	Unit		
Antimony	0.005	mg/L	-	< 0.005
Barium	0.02	mg/L	-	< 0.02
Beryllium	0.001	mg/L	-	< 0.001
Boron	0.05	mg/L	-	< 0.05
Cobalt	0.001	mg/L	-	< 0.001
Manganese	0.005	mg/L	-	< 0.005
Mercury	0.0001	mg/L	-	< 0.0001
Molybdenum	0.005	mg/L	-	< 0.005
Tin	0.005	mg/L	-	< 0.005
Arsenic	0.001	mg/L	-	< 0.001
Cadmium	0.0002	mg/L	-	< 0.0002
Chromium	0.001	mg/L	-	< 0.001
Copper	0.001	mg/L	-	< 0.001
Lead	0.001	mg/L	-	< 0.001
Nickel	0.001	mg/L	-	< 0.001
Zinc	0.001	mg/L	-	< 0.001

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
Cyclohexanone	Melbourne	May 27, 2011	14 Day
Volatile Organics	Melbourne	May 27, 2011	14 Day
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Explosives	Melbourne	May 31, 2011	7 Day
- Method: MGT200A & USEPA8332 Explosives & NG			
Semivolatile Organics	Melbourne	May 31, 2011	7 Day
- Method: USEPA 8270 Semivolatile Organics			
Explosives	Melbourne	May 31, 2011	7 Day
- Method: MGT200A & USEPA8332 Explosives			
Phenols (Halogenated)	Melbourne	May 31, 2011	7 Day
- Method: USEPA 8270 Phenols			
Phenols (non-Halogenated)	Melbourne	May 31, 2011	7 Day
- Method: USEPA 8270 Phenols			
Nitrate (as N)	Melbourne	May 26, 2011	2 Day
- Method: APHA 4500-NO3 Nitrate Nitrogen by FIA			
pH	Melbourne	May 27, 2011	6 Hours
- Method: APHA 4500 pH by Direct Measurement - **pH Holding time 30mins. Samples analysed outside holding time.			
Sulphate (S)	Melbourne	Jun 01, 2011	28 Day
- Method: APHA 4500-SO4 (SO4 by Discrete Analyser)			
Antimony	Melbourne	May 27, 2011	6 Month

Company Name: GHD Pty Ltd VIC
 Address: Level 8, 180 Lonsdale St
 Melbourne
 Victoria 3000

Client Job No.: CAIRNLIFA VALIDATION SAMPLING
 3127640

Order No.: 300376
 Report #: 8687 8000
 Phone: 8687 8111
 Fax:

Received: May 25, 2011 12:00
 Due: Jun 1, 2011 12:28
 Priority: 5 Day
 Contact name: S 33

mgt-LabMark Client Manager: S 33

Sample Detail				Laboratory where analysis is conducted																									
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Phenols (IWRG 621)	Volatile Organics	Semivolatile Organics	Explosives	Zinc	Tin	Sulphate (S)	pH (1:5 Aqueous extract)	Nitrate (as N)	Nickel	Molybdenum	Mercury	Manganese	Lead	Copper	Cobalt	Chromium	Cadmium	Boron	Beryllium	Barium	Arsenic	Antimony	% Moisture	
Laboratory where analysis is conducted																													
Melbourne Laboratory - NATA Site #1261																													
Sydney Laboratory - NATA Site #1645																													
V_3160006_0_2	May 24, 2011		Soil	M11-My11169	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160006_1_0	May 24, 2011		Soil	M11-My11170	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160005_0_2	May 24, 2011		Soil	M11-My11171	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160005_1_0	May 24, 2011		Soil	M11-My11172	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160004_0_2	May 24, 2011		Soil	M11-My11173	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160004_1_0	May 24, 2011		Soil	M11-My11174	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160003_0_2	May 24, 2011		Soil	M11-My11175	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160003_1_0	May 24, 2011		Soil	M11-My11176	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160002_0_2	May 24, 2011		Soil	M11-My11177	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160002_1_0	May 24, 2011		Soil	M11-My11178	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160001_0_2	May 24, 2011		Soil	M11-My11179	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160001_1_0	May 24, 2011		Soil	M11-My11180	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
V_3160021_0_2	May 24, 2011		Soil	M11-My11181	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Company Name: GHD Pty Ltd VIC
Address: Level 8, 180 Lonsdale St
Melbourne
Victoria 3000

Client Job No.: CAIRNILFA VALIDATION SAMPLING
3127640

Order No.: 300376
Report #: 8687 8000
Phone: 8687 8111
Fax:

Received: May 25, 2011 12:00
Due: Jun 1, 2011 12:28
Priority: 5 Day
Contact name: S 33

mgt-LabMark Client Manager: S 33

Sample Detail		Phenols (IWRG 621)	Volatile Organics	Semivolatile Organics	Explosives	Zinc	Tin	Sulphate (S)	pH (1:5 Aqueous extract)	Nitrate (as N)	Nickel	Molybdenum	Mercury	Manganese	Lead	Copper	Cobalt	Chromium	Cadmium	Boron	Beryllium	Barium	Arsenic	Antimony	% Moisture
Laboratory where analysis is conducted																									
Melbourne Laboratory - NATA Site #1261																									
Sydney Laboratory - NATA Site #1645																									
V_3160021_1	May 24, 2011																								
V_3160022_0	May 24, 2011																								
V_3160022_1	May 24, 2011																								
V_QA1	May 24, 2011																								
V_TB1	May 24, 2011																								
V_RB1	May 24, 2011																								
V_3160020_0	May 24, 2011																								
V_3160020_1	May 24, 2011																								
V_3160019_0	May 24, 2011																								
V_3160019_1	May 24, 2011																								
V_3160018_0	May 24, 2011																								
V_3160018_1	May 24, 2011																								
V_QA3	May 24, 2011																								

mgt-LabMark Internal Quality Control Review

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
- All soil results are reported on a dry basis, unless otherwise stated.
- Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg: milligrams per Kilogram	mg/L: milligrams per litre
µg/l: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100ml: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-20%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Quality Control Results

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Method Blank					
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics b					
1.1-Dichloroethane	mg/L	< 0.001	0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001	0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001	0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001	0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001	0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001	0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001	0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001	0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001	0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001	0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001	0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001	0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001	0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001	0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001	0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001	0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001	0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001	0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001	0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001	0.001	Pass	
Allyl chloride	mg/L	< 0.001	0.001	Pass	
Benzene	mg/L	< 0.001	0.001	Pass	
Bromobenzene	mg/L	< 0.001	0.001	Pass	
Bromochloromethane	mg/L	< 0.001	0.001	Pass	
Bromodichloromethane	mg/L	< 0.001	0.001	Pass	
Bromoform	mg/L	< 0.001	0.001	Pass	
Bromomethane	mg/L	< 0.001	0.001	Pass	
Carbon disulfide	mg/L	< 0.001	0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001	0.001	Pass	
Chlorobenzene	mg/L	< 0.001	0.001	Pass	
Chloroethane	mg/L	< 0.001	0.001	Pass	
Chloroform	mg/L	< 0.001	0.001	Pass	
Chloromethane	mg/L	< 0.001	0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001	0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001	0.001	Pass	
Dibromochloromethane	mg/L	< 0.001	0.001	Pass	
Dibromomethane	mg/L	< 0.001	0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001	0.001	Pass	
Iodomethane	mg/L	< 0.001	0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001	0.001	Pass	
Methylene Chloride	mg/L	< 0.001	0.001	Pass	
o-Xylene	mg/L	< 0.001	0.001	Pass	
Styrene	mg/L	< 0.001	0.001	Pass	
Tetrachloroethene	mg/L	< 0.001	0.001	Pass	
Total m+p-Xylenes	mg/L	< 0.002	0.002	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001	0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001	0.001	Pass	
Trichloroethene	mg/L	< 0.001	0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001	0.001	Pass	
Vinyl chloride	mg/L	< 0.001	0.001	Pass	
Toluene	mg/L	< 0.001	0.001	Pass	
Ethylbenzene	mg/L	< 0.001	0.001	Pass	
Xylenes(ortho,meta and para)	mg/L	< 0.003	0.003	Pass	
Method Blank					
Explosives MGT200A & USEPA8332 Explosives & NG					
1.3-DNB	mg/L	< 0.05	0.05	Pass	
1.3.5-TNB	mg/L	< 0.05	0.05	Pass	
2-Nitrotoluene	mg/L	< 0.05	0.05	Pass	
2.4- & 2.6-DNT	mg/L	< 0.1	0.1	Pass	
3-Nitrotoluene	mg/L	< 0.05	0.05	Pass	
4-Nitrotoluene	mg/L	< 0.05	0.05	Pass	
Nitrobenzene	mg/L	< 0.05	0.05	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
RDX	mg/L	< 0.05		0.05	Pass	
TNT	mg/L	< 0.05		0.05	Pass	
Method Blank						
Semivolatile Organics USEPA 8270 Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	mg/L	< 0.03		0.03	Pass	
1-Chloronaphthalene	mg/L	< 0.005		0.005	Pass	
1-Naphthylamine	mg/L	< 0.005		0.005	Pass	
1,2-Dichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,3-Trichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,3,4-Tetrachlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,3,5-Tetrachlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,4-Trichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,4,5-Tetrachlorobenzene	mg/L	< 0.005		0.005	Pass	
1,3-Dichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,3,5-Trichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,4-Dichlorobenzene	mg/L	< 0.005		0.005	Pass	
2-Chloronaphthalene	mg/L	< 0.005		0.005	Pass	
2-Chlorophenol	mg/L	< 0.003		0.003	Pass	
2-Methylnaphthalene	mg/L	< 0.005		0.005	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003		0.003	Pass	
2-Naphthylamine	mg/L	< 0.005		0.005	Pass	
2-Nitroaniline	mg/L	< 0.005		0.005	Pass	
2-Nitrophenol	mg/L	< 0.01		0.01	Pass	
2-Picoline	mg/L	< 0.005		0.005	Pass	
2,3,4,6-Tetrachlorophenol	mg/L	< 0.01		0.01	Pass	
2,4-Dichlorophenol	mg/L	< 0.003		0.003	Pass	
2,4-Dimethylphenol	mg/L	< 0.003		0.003	Pass	
2,4-Dinitrophenol	mg/L	< 0.03		0.03	Pass	
2,4-Dinitrotoluene	mg/L	< 0.005		0.005	Pass	
2,4,5-Trichlorophenol	mg/L	< 0.01		0.01	Pass	
2,4,6-Trichlorophenol	mg/L	< 0.01		0.01	Pass	
2,6-Dichlorophenol	mg/L	< 0.003		0.003	Pass	
2,6-Dinitrotoluene	mg/L	< 0.005		0.005	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006		0.006	Pass	
3-Methylcholanthrene	mg/L	< 0.005		0.005	Pass	
3,3'-Dichlorobenzidine	mg/L	< 0.005		0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.005		0.005	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005		0.005	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01		0.01	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005		0.005	Pass	
4-Nitrophenol	mg/L	< 0.03		0.03	Pass	
4,4'-DDD	mg/L	< 0.005		0.005	Pass	
4,4'-DDE	mg/L	< 0.005		0.005	Pass	
4,4'-DDT	mg/L	< 0.005		0.005	Pass	
7,12-Dimethylbenz(a)anthracene	mg/L	< 0.005		0.005	Pass	
a-BHC	mg/L	< 0.005		0.005	Pass	
Acenaphthene	mg/L	< 0.001		0.001	Pass	
Acenaphthylene	mg/L	< 0.001		0.001	Pass	
Acetophenone	mg/L	< 0.005		0.005	Pass	
Aldrin	mg/L	< 0.005		0.005	Pass	
Aniline	mg/L	< 0.005		0.005	Pass	
Anthracene	mg/L	< 0.001		0.001	Pass	
b-BHC	mg/L	< 0.005		0.005	Pass	
Benz(a)anthracene	mg/L	< 0.001		0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001		0.001	Pass	
Benzo(b)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001		0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzyl chloride	mg/L	< 0.005		0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005		0.005	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005		0.005	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005		0.005	Pass	
Butyl benzyl phthalate	mg/L	< 0.005		0.005	Pass	
Chrysene	mg/L	< 0.001		0.001	Pass	
d-BHC	mg/L	< 0.005		0.005	Pass	
Di-n-butyl phthalate	mg/L	< 0.005		0.005	Pass	

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Di-n-octyl phthalate	mg/L	< 0.005	0.005	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001	0.001	Pass	
Dibenz(a,j)acridine	mg/L	< 0.005	0.005	Pass	
Dibenzofuran	mg/L	< 0.005	0.005	Pass	
Dieldrin	mg/L	< 0.005	0.005	Pass	
Diethyl phthalate	mg/L	< 0.005	0.005	Pass	
Dimethyl phthalate	mg/L	< 0.005	0.005	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005	0.005	Pass	
Diphenylamine	mg/L	< 0.005	0.005	Pass	
Endosulfan I	mg/L	< 0.005	0.005	Pass	
Endosulfan II	mg/L	< 0.005	0.005	Pass	
Endosulfan sulphate	mg/L	< 0.005	0.005	Pass	
Endrin	mg/L	< 0.005	0.005	Pass	
Endrin aldehyde	mg/L	< 0.005	0.005	Pass	
Endrin ketone	mg/L	< 0.005	0.005	Pass	
Fluoranthene	mg/L	< 0.001	0.001	Pass	
Fluorene	mg/L	< 0.001	0.001	Pass	
g-BHC (Lindane)	mg/L	< 0.005	0.005	Pass	
Heptachlor	mg/L	< 0.005	0.005	Pass	
Heptachlor epoxide	mg/L	< 0.005	0.005	Pass	
Hexachlorobenzene	mg/L	< 0.005	0.005	Pass	
Hexachlorobutadiene	mg/L	< 0.005	0.005	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.005	0.005	Pass	
Hexachloroethane	mg/L	< 0.005	0.005	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001	0.001	Pass	
Methoxychlor	mg/L	< 0.005	0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005	0.005	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005	0.005	Pass	
N-Nitrosopiperidine	mg/L	< 0.005	0.005	Pass	
Naphthalene	mg/L	< 0.001	0.001	Pass	
Nitrobenzene	mg/L	< 0.05	0.05	Pass	
Pentachlorobenzene	mg/L	< 0.005	0.005	Pass	
Pentachloronitrobenzene	mg/L	< 0.005	0.005	Pass	
Pentachlorophenol	mg/L	< 0.01	0.01	Pass	
Phenanthrene	mg/L	< 0.001	0.001	Pass	
Phenol	mg/L	< 0.003	0.003	Pass	
Pronamide	mg/L	< 0.005	0.005	Pass	
Pyrene	mg/L	< 0.001	0.001	Pass	
Trifluralin	mg/L	< 0.005	0.005	Pass	
Method Blank					
Explosives MGT200A & USEPA8332 Explosives					
1-Chloro-2-nitrobenzene	mg/L	< 0.05	0.05	Pass	
1-Chloro-3-nitrobenzene	mg/L	< 0.05	0.05	Pass	
1-Chloro-4-nitrobenzene	mg/L	< 0.05	0.05	Pass	
Method Blank					
Phenols (Halogenated) USEPA 8270 Phenols					
Tetrachlorophenols - Total	mg/L	< 0.03	0.03	Pass	
Method Blank					
Phenols (non-Halogenated) USEPA 8270 Phenols					
2-Cyclohexyl-4,6-dinitrophenol	mg/L	< 0.1	0.1	Pass	
Dinoseb	mg/L	< 0.1	0.1	Pass	
Method Blank					
Nitrate (as N)	mg/L	< 0.02	0.02	Pass	
Method Blank					
Antimony	mg/L	< 0.005	0.005	Pass	
Barium	mg/L	< 0.02	0.02	Pass	
Beryllium	mg/L	< 0.001	0.001	Pass	
Boron	mg/L	< 0.05	0.05	Pass	
Cobalt	mg/L	< 0.001	0.001	Pass	
Manganese	mg/L	< 0.005	0.005	Pass	
Molybdenum	mg/L	< 0.005	0.005	Pass	
Tin	mg/L	< 0.005	0.005	Pass	
Arsenic	mg/L	< 0.001	0.001	Pass	
Cadmium	mg/L	< 0.0002	0.0002	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1,2-Dibromoethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,2-Dichlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,2-Dichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,2-Dichloropropane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,2,3-Trichloropropane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,2,4-Trimethylbenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,3-Dichlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,3-Dichloropropane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,3,5-Trimethylbenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1,4-Dichlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1,2-Dichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1,3-Dichloropropene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
o-Xylene	mg/L	0.003	0.003	2	30%	Pass	
Styrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Total m+p-Xylenes	mg/L	0.004	0.004	7	30%	Pass	
trans-1,2-Dichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1,3-Dichloropropene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	mg/L	0.003	0.003	2	30%	Pass	
Ethylbenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes(ortho,meta and para)	mg/L	0.007	0.007	5	30%	Pass	
[Duplicate of M11-My11187]							
Semivolatile Organics							
		Result 1	Result 2	RPD			
2-Methyl-4,6-dinitrophenol	mg/L	< 0.03	< 0.03	<1	30%	Pass	
1-Chloronaphthalene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1-Naphthylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2-Dichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,3-Trichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,3,4-Tetrachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,3,5-Tetrachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,4-Trichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,4,5-Tetrachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,3-Dichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,3,5-Trichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,4-Dichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chloronaphthalene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chlorophenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Methylnaphthalene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Naphthylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
Chromium	mg/L	< 0.001		0.001	Pass	
Copper	mg/L	< 0.001		0.001	Pass	
Lead	mg/L	< 0.001		0.001	Pass	
Nickel	mg/L	< 0.001		0.001	Pass	
Zinc	mg/L	< 0.001		0.001	Pass	
LCS - % Recovery						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by		Result 1				
1.1-Dichloroethene	%	80		70-130	Pass	
1.1.1-Trichloroethane	%	99		70-130	Pass	
1.2-Dichloroethane	%	98		70-130	Pass	
Benzene	%	76		70-130	Pass	
Carbon Tetrachloride	%	75		70-130	Pass	
Total m+p-Xylenes	%	103		70-130	Pass	
Trichloroethene	%	78		70-130	Pass	
Toluene	%	102		70-130	Pass	
Ethylbenzene	%	110		70-130	Pass	
Xylenes(ortho,meta and para)	%	100		70-130	Pass	
LCS - % Recovery						
Explosives MGT200A & USEPA8332 Explosives & NG		Result 1				
1.3-DNB	%	96		70-130	Pass	
1.3.5-TNB	%	102		70-130	Pass	
2-Nitrotoluene	%	98		70-130	Pass	
2.4- & 2.6-DNT	%	98		70-130	Pass	
3-Nitrotoluene	%	100		70-130	Pass	
4-Nitrotoluene	%	98		70-130	Pass	
RDX	%	94		70-130	Pass	
TNT	%	86		70-130	Pass	
LCS - % Recovery						
Semivolatile Organics USEPA 8270 Semivolatile Organics		Result 1				
1.2.4-Trichlorobenzene	%	84		70-130	Pass	
2-Chlorophenol	%	81		30-130	Pass	
4-Chloro-3-methylphenol	%	66		30-130	Pass	
4-Nitrophenol	%	30		30-130	Pass	
Acenaphthene	%	90		70-130	Pass	
Pentachlorophenol	%	46		30-130	Pass	
Phenol	%	35		30-130	Pass	
Pyrene	%	86		70-130	Pass	
LCS - % Recovery						
		Result 1				
Nitrate (as N)	%	95		70-130	Pass	
Sulphate (S)	%	111		70-130	Pass	
LCS - % Recovery						
		Result 1				
Antimony	%	94		80-120	Pass	
Barium	%	101		80-120	Pass	
Beryllium	%	106		80-120	Pass	
Boron	%	96		80-120	Pass	
Cobalt	%	98		80-120	Pass	
Manganese	%	100		80-120	Pass	
Molybdenum	%	100		80-120	Pass	
Tin	%	96		80-120	Pass	
Arsenic	%	105		80-120	Pass	
Cadmium	%	106		80-120	Pass	
Chromium	%	99		80-120	Pass	
Copper	%	99		80-120	Pass	
Lead	%	101		80-120	Pass	
Nickel	%	102		80-120	Pass	
Zinc	%	107		80-120	Pass	
[Duplicate of A11-My80935 - BATCH]						
Volatile Organics		Result 1	Result 2	RPD		
1.1-Dichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
2-Nitroaniline	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitrophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2-Picoline	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2,3,4,6-Tetrachlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2,4-Dichlorophenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2,4-Dimethylphenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2,4-Dinitrophenol	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2,4-Dinitrotoluene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2,4,5-Trichlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2,4,6-Trichlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2,6-Dichlorophenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2,6-Dinitrotoluene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006	< 0.006	<1	30%	Pass	
3-Methylcholanthrene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3,3'-Dichlorobenzidine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Aminobiphenyl	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Nitrophenol	mg/L	< 0.03	< 0.03	<1	30%	Pass	
4,4'-DDD	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4,4'-DDE	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4,4'-DDT	mg/L	< 0.005	< 0.005	<1	30%	Pass	
7,12-Dimethylbenz(a)anthracene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
a-BHC	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Acenaphthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acetophenone	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aldrin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aniline	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Anthracene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
b-BHC	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Benz(a)anthracene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b)fluoranthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzyl chloride	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Butyl benzyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chrysene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
d-BHC	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-butyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-octyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a,j)acridine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenzofuran	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dieldrin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diethyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diphenylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan I	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan II	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan sulphate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin aldehyde	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin ketone	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Fluoranthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
g-BHC (Lindane)	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor epoxide	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Hexachlorobutadiene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachloroethane	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methoxychlor	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosopiperidine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Naphthalene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Nitrobenzene	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Pentachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachloronitrobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Phenanthrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Pronamide	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pyrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trifluralin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
[Duplicate of M11-My11187]							
Phenols (Halogenated)		Result 1	Result 2	RPD			
Tetrachlorophenols - Total	mg/L	< 0.03	< 0.03	<1	30%	Pass	
[Duplicate of M11-My11187]							
Phenols (non-Halogenated)		Result 1	Result 2	RPD			
2-Cyclohexyl-4,6-dinitrophenol	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Dinoseb	mg/L	< 0.1	< 0.1	<1	30%	Pass	
[Duplicate of M11-My11187]							
		Result 1	Result 2	RPD			
Nitrate (as N)	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Sulphate (S)	mg/L	< 5	< 5	<1	30%	Pass	
[Duplicate of M11-My11731 - BATCH]							
		Result 1	Result 2	RPD			
Antimony	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Barium	mg/L	< 0.02	< 0.02	27	30%	Pass	
Beryllium	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Boron	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Cobalt	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Mercury	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Molybdenum	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Tin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Arsenic	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	mg/L	< 0.001	< 0.001	18	30%	Pass	
Copper	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Nickel	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	mg/L	0.003	0.004	14	30%	Pass	
[Spike of A11-My80382 - BATCH] - % Recovery							
Volatile Organics		Result 1					
1,1-Dichloroethene	%	93			70 - 130	Pass	
1,1,1-Trichloroethane	%	87			70 - 130	Pass	
1,2-Dichlorobenzene	%	106			70 - 130	Pass	
1,2-Dichloroethane	%	90			70 - 130	Pass	
Benzene	%	92			70 - 130	Pass	
Carbon Tetrachloride	%	81			70 - 130	Pass	
o-Xylene	%	112			70 - 130	Pass	
Total m+p-Xylenes	%	117			70 - 130	Pass	
Trichloroethene	%	75			70 - 130	Pass	
Toluene	%	114			70 - 130	Pass	
Ethylbenzene	%	116			70 - 130	Pass	
Xylenes(ortho,meta and para)	%	115			70 - 130	Pass	
[Spike of M11-My12457 - BATCH] - % Recovery							
Semivolatile Organics		Result 1					
1,2,4-Trichlorobenzene	%	82			70 - 130	Pass	
1,4-Dichlorobenzene	%	80			70 - 130	Pass	
2-Chlorophenol	%	89			30 - 130	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
2,4-Dinitrotoluene	%	92		70 - 130	Pass	
4-Chloro-3-methylphenol	%	87		30 - 130	Pass	
4-Nitrophenol	%	31		30 - 130	Pass	
Acenaphthene	%	86		70 - 130	Pass	
N-Nitrosodipropylamine	%	77		70 - 130	Pass	
Pentachlorophenol	%	43		30 - 130	Pass	
Phenol	%	34		30 - 130	Pass	
Pyrene	%	87		70 - 130	Pass	
[Spike of M11-My11187] - % Recovery						
		Result 1				
Nitrate (as N)	%	95		70 - 130	Pass	
Sulphate (S)	%	98		70 - 130	Pass	
[Spike of M11-My11731 - BATCH] - % Recovery						
		Result 1				
Antimony	%	89		70 - 130	Pass	
Barium	%	95		75 - 125	Pass	
Beryllium	%	97		75 - 125	Pass	
Boron	%	87		75 - 125	Pass	
Cobalt	%	91		75 - 125	Pass	
Manganese	%	94		75 - 125	Pass	
Mercury	%	96		70 - 130	Pass	
Molybdenum	%	86		75 - 125	Pass	
Tin	%	87		75 - 125	Pass	
Arsenic	%	97		75 - 125	Pass	
Cadmium	%	96		75 - 125	Pass	
Chromium	%	93		75 - 125	Pass	
Copper	%	95		75 - 125	Pass	
Lead	%	95		75 - 125	Pass	
Nickel	%	97		75 - 125	Pass	
Zinc	%	98		75 - 125	Pass	

Comments

NB: Report has been updated to include Chloronitrobenzene and Cyclohexanone results. 20/6/11

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within Holding Time	Yes
Some samples have been subcontracted	No

Authorised By

S 33

S 33

NATA Signatory

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Certificate of Analysis

GHD Melbourne
 Level 8, 180 Lonsdale St
 Melbourne
 Victoria 3000

NATA Accredited
 Accreditation Number 1261
 Site Number 1254



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Attention: 3 53

Report 300644-S-V2
 Client Reference CAIRNLEA VALIDATION SAMPLING 3127640
 Received Date May 26, 2011

Client Sample ID			V_3160008_0.2	V_3160008_1.0	V_3160007_0.2	V_3160007_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12441	M11-My12442	M11-My12443	M11-My12444
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Cyclohexanone	5	mg/kg	< 5	< 5	< 5	< 5
Nitrate (as N)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 Aqueous extract)	0.1	units	9.3	8.9	9.2	9.4
Sulphate (S)	10	mg/kg	400	460	380	170
% Moisture	0.1	%	23	31	18	25
Volatiles Organics						
1.1-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dibromoethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Allyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V_3160008_0.2	V_3160008_1.0	V_3160007_0.2	V_3160007_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12441	M11-My12442	M11-My12443	M11-My12444
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Chloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Iodomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Total m+p-Xylenes	0.10	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.15	mg/kg	< 0.15	< 0.15	< 0.15	< 0.15
Fluorobenzene (surr.)	1	%	62	76	77	73
4-Bromofluorobenzene (surr.)	1	%	98	120	117	116
Explosives						
1,3-DNB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-TNB	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4- & 2,6-DNT	1	mg/kg	< 1	< 1	< 1	< 1
3-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
RDX	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TNT	1	mg/kg	< 1	< 1	< 1	< 1
Semivolatle Organics						
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V_3160008_0.2	V_3160008_1.0	V_3160007_0.2	V_3160007_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12441	M11-My12442	M11-My12443	M11-My12444
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2,4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3,3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4,4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDT	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160008_0.2	V_3160008_1.0	V_3160007_0.2	V_3160007_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12441	M11-My12442	M11-My12443	M11-My12444
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	92	94	94	98
Nitrobenzene-d5 (surr.)	1	%	82	73	88	94
2-Fluorobiphenyl (surr.)	1	%	89	92	104	105
2,4,6-Tribromophenol (surr.)	1	%	40	27	26	22
Explosives						
1-Chloro-2-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-3-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-4-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenols (Halogenated)						
Tetrachlorophenols - Total	5.0	mg/kg	< 5	< 5	< 5	< 5
Total Halogenated Phenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Total Non-Halogenated Phenol	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			V_3160008_0.2	V_3160008_1.0	V_3160007_0.2	V_3160007_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12441	M11-My12442	M11-My12443	M11-My12444
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Barium	10	mg/kg	140	180	240	620
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cobalt	5	mg/kg	11	11	8.3	7.4
Manganese	5	mg/kg	170	160	190	150
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Tin	10	mg/kg	< 10	< 10	< 10	17
Arsenic	2	mg/kg	< 2	< 2	< 2	2.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	30	38	25	23
Copper	5	mg/kg	6.7	7.3	6.8	< 5
Lead	5	mg/kg	14	10	17	5.6
Nickel	4	mg/kg	16	21	17	17
Zinc	5	mg/kg	16	14	15	8.7

Client Sample ID			V_3160012_0.2	V_3160012_1.0	V_3160013_0.2	V_3160013_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12445	M11-My12446	M11-My12447	M11-My12448
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Cyclohexanone	5	mg/kg	< 5	< 5	< 5	< 5
Nitrate (as N)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 Aqueous extract)	0.1	units	9.5	8.7	9.6	9.4
Sulphate (S)	10	mg/kg	34	480	52	110
% Moisture	0.1	%	15	14	15	23
Volatile Organics						
1,1-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2,3-Trichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Allyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Iodomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	0.05	mg/kg	< 0.05	< 0.05	0.10	< 0.05
Styrene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V_3160012_0.2	V_3160012_1.0	V_3160013_0.2	V_3160013_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12445	M11-My12446	M11-My12447	M11-My12448
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Total m+p-Xylenes	0.10	mg/kg	< 0.1	< 0.1	0.13	< 0.1
trans-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.15	mg/kg	< 0.15	< 0.15	0.23	< 0.15
Fluorobenzene (surr.)	1	%	77	85	79	72
4-Bromofluorobenzene (surr.)	1	%	118	130	124	115
Explosives						
1,3-DNB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-TNB	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4- & 2,6-DNT	1	mg/kg	< 1	< 1	< 1	< 1
3-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
RDX	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TNT	1	mg/kg	< 1	< 1	< 1	< 1
Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2,4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160012_0.2	V_3160012_1.0	V_3160013_0.2	V_3160013_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12445	M11-My12446	M11-My12447	M11-My12448
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3,3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4,4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDT	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160012_0.2	V_3160012_1.0	V_3160013_0.2	V_3160013_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12445	M11-My12446	M11-My12447	M11-My12448
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	90	105	83	95
Nitrobenzene-d5 (surr.)	1	%	74	94	80	78
2-Fluorobiphenyl (surr.)	1	%	92	106	96	96
2,4,6-Tribromophenol (surr.)	1	%	34	23	40	36
Explosives						
1-Chloro-2-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-3-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-4-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenols (Halogenated)						
Tetrachlorophenols - Total	5.0	mg/kg	< 5	< 5	< 5	< 5
Total Halogenated Phenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Total Non-Halogenated Phenol	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Barium	10	mg/kg	99	170	120	170
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cobalt	5	mg/kg	12	11	8.7	9.0
Manganese	5	mg/kg	220	660	140	120
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	4.0	< 2	3.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	22	21	29	24
Copper	5	mg/kg	17	5.9	9.0	< 5
Lead	5	mg/kg	49	7.0	27	7.2

Client Sample ID			V_3160012_0.2	V_3160012_1.0	V_3160013_0.2	V_3160013_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12445	M11-My12446	M11-My12447	M11-My12448
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Nickel	4	mg/kg	33	18	21	12
Zinc	5	mg/kg	41	11	31	9.7

Client Sample ID			V_3160014_0.2	V_3160014_1.0	V_3160009_0.2	V_3160009_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12449	M11-My12450	M11-My12451	M11-My12452
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Cyclohexanone	5	mg/kg	< 5	< 5	< 5	< 5
Nitrate (as N)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 Aqueous extract)	0.1	units	9.4	8.9	9.6	9.5
Sulphate (S)	10	mg/kg	250	270	72	240
% Moisture	0.1	%	26	23	22	22
Volatile Organics						
1.1-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dibromoethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Allyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1.2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1.3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Iodomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	0.05	mg/kg	< 0.05	< 0.05	0.24	< 0.05
Styrene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V_3160014_0.2	V_3160014_1.0	V_3160009_0.2	V_3160009_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12449	M11-My12450	M11-My12451	M11-My12452
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Total m+p-Xylenes	0.10	mg/kg	< 0.1	< 0.1	0.33	< 0.1
trans-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho,meta and para)	0.15	mg/kg	< 0.15	< 0.15	0.57	< 0.15
Fluorobenzene (surr.)	1	%	72	79	77	71
4-Bromofluorobenzene (surr.)	1	%	116	122	119	119
Explosives						
1,3-DNB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-TNB	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4- & 2,6-DNT	1	mg/kg	< 1	< 1	< 1	< 1
3-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
RDX	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TNT	1	mg/kg	< 1	< 1	< 1	< 1
Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2,4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160014_0.2	V_3160014_1.0	V_3160009_0.2	V_3160009_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12449	M11-My12450	M11-My12451	M11-My12452
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3,3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4,4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDT	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160014_0.2	V_3160014_1.0	V_3160009_0.2	V_3160009_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12449	M11-My12450	M11-My12451	M11-My12452
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	96	99	89	96
Nitrobenzene-d5 (surr.)	1	%	80	74	77	82
2-Fluorobiphenyl (surr.)	1	%	101	102	90	97
2,4,6-Tribromophenol (surr.)	1	%	37	26	36	38
Explosives						
1-Chloro-2-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-3-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-4-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenols (Halogenated)						
Tetrachlorophenols - Total	5.0	mg/kg	< 5	< 5	< 5	< 5
Total Halogenated Phenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Total Non-Halogenated Phenol	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Barium	10	mg/kg	600	110	150	600
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	20
Cobalt	5	mg/kg	15	6.6	12	11
Manganese	5	mg/kg	250	68	260	130
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	< 2	2.4	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	35	28	26	30
Copper	5	mg/kg	6.6	< 5	17	6.8
Lead	5	mg/kg	11	6.6	62	8.2

Client Sample ID			V_3160014_0.2	V_3160014_1.0	V_3160009_0.2	V_3160009_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12449	M11-My12450	M11-My12451	M11-My12452
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Nickel	4	mg/kg	24	11	36	20
Zinc	5	mg/kg	17	10	47	11

Client Sample ID			V_3160010_0.2	V_3160010_1.0	V_3160011_0.2	V_3160011_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12453	M11-My12454	M11-My12455	M11-My12456
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Cyclohexanone	5	mg/kg	< 5	< 5	< 5	< 5
Nitrate (as N)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 Aqueous extract)	0.1	units	8.5	9.2	9.2	9.3
Sulphate (S)	10	mg/kg	350	210	200	500
% Moisture	0.1	%	23	22	26	24
Volatile Organics						
1.1-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dibromoethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Amyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Bromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1.2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
cis-1.3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Iodomethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V_3160010_0.2	V_3160010_1.0	V_3160011_0.2	V_3160011_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12453	M11-My12454	M11-My12455	M11-My12456
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Total m+p-Xylenes	0.10	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho,meta and para)	0.15	mg/kg	< 0.15	< 0.15	< 0.15	< 0.15
Fluorobenzene (surr.)	1	%	77	80	77	76
4-Bromofluorobenzene (surr.)	1	%	114	126	70	70
Explosives						
1,3-DNB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-TNB	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4- & 2,6-DNT	1	mg/kg	< 1	< 1	< 1	< 1
3-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
RDX	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TNT	1	mg/kg	< 1	< 1	< 1	< 1
Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2,4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160010_0.2	V_3160010_1.0	V_3160011_0.2	V_3160011_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12453	M11-My12454	M11-My12455	M11-My12456
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3,3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4,4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDT	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
DI-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
DI-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			V_3160010_0.2	V_3160010_1.0	V_3160011_0.2	V_3160011_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12453	M11-My12454	M11-My12455	M11-My12456
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	96	102	100	87
Nitrobenzene-d5 (surr.)	1	%	90	89	87	84
2-Fluorobiphenyl (surr.)	1	%	104	101	103	98
2,4,6-Tribromophenol (surr.)	1	%	40	25	28	35
Explosives						
1-Chloro-2-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-3-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Chloro-4-nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenols (Halogenated)						
Tetrachlorophenols - Total	5.0	mg/kg	< 5	< 5	< 5	< 5
Total Halogenated Phenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Total Non-Halogenated Phenol	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Barium	10	mg/kg	110	250	130	170
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cobalt	5	mg/kg	9.2	8.5	10	9.2
Manganese	5	mg/kg	100	140	200	100
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	23	20	24	33
Copper	5	mg/kg	7.9	5.1	8.7	5.6
Lead	5	mg/kg	6.1	6.1	20	8.3

Client Sample ID			V_3160010_0.2	V_3160010_1.0	V_3160011_0.2	V_3160011_1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M11-My12453	M11-My12454	M11-My12455	M11-My12456
Date Sampled			May 25, 2011	May 25, 2011	May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit				
Nickel	4	mg/kg	16	14	18	14
Zinc	5	mg/kg	10	8.4	20	14

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
Cyclohexanone	Melbourne	May 30, 2011	14 Day
Nitrate (as N) - Method: APHA 4500-NO3 Nitrate Nitrogen by FIA	Melbourne	May 27, 2011	14 Day
pH (1:5 Aqueous extract) - Method: APHA 4500 pH by Direct Measurement	Melbourne	May 30, 2011	7 Day
Sulphate (S) - Method: APHA 4500-SO4 (SO4 by Discrete Analyser)	Melbourne	May 30, 2011	28 Day
% Moisture - Method: Method 102 - ANZECC - % Moisture	Melbourne	May 30, 2011	14 Day
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	May 30, 2011	14 Day
Explosives - Method: MGT200A & USEPA8332 Explosives & NG	Melbourne	Jun 14, 2011	14 Day
Semivolatile Organics - Method: USEPA 8270 Semivolatile Organics	Melbourne	May 30, 2011	14 Day
Explosives - Method: MGT200A & USEPA8332 Explosives	Melbourne	Jun 14, 2011	14 Day
Phenols (Halogenated) - Method: USEPA 8270 Phenols	Melbourne	Jun 14, 2011	14 Day
Phenols (non-Halogenated) - Method: USEPA 8270 Phenols	Melbourne	May 30, 2011	6 Month
Antimony	Melbourne		

mgt-LabMark Internal Quality Control Review
General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis.
7. This report replaces any Interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)
 For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.
 If the Laboratory did not receive the information in the required timeframes, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg: milligrams per Kilogram	mg/L: milligrams per litre
µg/l: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100ml: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units

TERMS

- Dry:** Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
- LOR:** Limit Of Reporting.
- SPIKE:** Addition of the analyte to the sample and reported as percentage recovery.
- RPD:** Relative Percent Difference between two Duplicate pieces of analysis.
- LCS:** Laboratory Control Sample - reported as percent recovery.
- CRM:** Certified Reference Material - reported as percent recovery.
- Method Blank:** In the case of solid samples these are performed on laboratory certified clean sands.
In the case of water samples these are performed on de-ionised water.
- Surr - Surrogate:** The addition of a like compound to the analyte target and reported as percentage recovery.
- Duplicate:** A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
- Batch Duplicate:** A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
- Batch SPIKE:** Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
- USEPA:** U.S Environmental Protection Agency
- APHA:** American Public Health Association
- ASLP:** Australian Standard Leaching Procedure (AS4439.3)
- TCLP:** Toxicity Characteristic Leaching Procedure
- COC:** Chain Of Custody
- SRA:** Sample Receipt Advice

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:
 Results <10 times the LOR : No Limit
 Results between 10-20 times the LOR : RPD must lie between 0-50%
 Results >20 times the LOR : RPD must lie between 0-20%
 Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD
 - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Quality Control Results

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Method Blank					
Sulphate (S)	mg/kg	< 10	10	Pass	
Method Blank					
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics b					
1.1-Dichloroethane	mg/kg	< 0.05	0.05	Pass	
1.1-Dichloroethene	mg/kg	< 0.05	0.05	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05	0.05	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05	0.05	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05	0.05	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05	0.05	Pass	
1.2-Dibromoethane	mg/kg	< 0.05	0.05	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05	0.05	Pass	
1.2-Dichloroethane	mg/kg	< 0.05	0.05	Pass	
1.2-Dichloropropane	mg/kg	< 0.05	0.05	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05	0.05	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05	0.05	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05	0.05	Pass	
1.3-Dichloropropane	mg/kg	< 0.05	0.05	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05	0.05	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05	0.05	Pass	
2-Butanone (MEK)	mg/kg	< 0.05	0.05	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05	0.05	Pass	
4-Chlorotoluene	mg/kg	< 0.05	0.05	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05	0.05	Pass	
Allyl chloride	mg/kg	< 0.05	0.05	Pass	
Benzene	mg/kg	< 0.05	0.05	Pass	
Bromobenzene	mg/kg	< 0.05	0.05	Pass	
Bromochloromethane	mg/kg	< 0.05	0.05	Pass	
Bromodichloromethane	mg/kg	< 0.05	0.05	Pass	
Bromoform	mg/kg	< 0.05	0.05	Pass	
Bromomethane	mg/kg	< 0.05	0.05	Pass	
Carbon disulfide	mg/kg	< 0.05	0.05	Pass	
Carbon Tetrachloride	mg/kg	< 0.05	0.05	Pass	
Chlorobenzene	mg/kg	< 0.05	0.05	Pass	
Chloroethane	mg/kg	< 0.05	0.05	Pass	
Chloroform	mg/kg	< 0.05	0.05	Pass	
Chloromethane	mg/kg	< 0.05	0.05	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.05	0.05	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.05	0.05	Pass	
Dibromochloromethane	mg/kg	< 0.05	0.05	Pass	
Dibromomethane	mg/kg	< 0.05	0.05	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05	0.05	Pass	
Iodomethane	mg/kg	< 0.05	0.05	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05	0.05	Pass	
Methylene Chloride	mg/kg	< 0.05	0.05	Pass	
o-Xylene	mg/kg	< 0.05	0.05	Pass	
Styrene	mg/kg	< 0.05	0.05	Pass	
Tetrachloroethene	mg/kg	< 0.05	0.05	Pass	
Total m+p-Xylenes	mg/kg	< 0.1	0.10	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.05	0.05	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.05	0.05	Pass	
Trichloroethene	mg/kg	< 0.05	0.05	Pass	
Trichlorofluoromethane	mg/kg	< 0.05	0.05	Pass	
Vinyl chloride	mg/kg	< 0.05	0.05	Pass	
Toluene	mg/kg	< 0.05	0.05	Pass	
Ethylbenzene	mg/kg	< 0.05	0.05	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 0.15	0.15	Pass	
Method Blank					
Explosives MGT200A & USEPA8332 Explosives & NG					
1.3-DNB	mg/kg	< 0.5	0.5	Pass	
1.3.5-TNB	mg/kg	< 1	1	Pass	
2-Nitrotoluene	mg/kg	< 0.5	0.5	Pass	
2.4- & 2.6-DNT	mg/kg	< 1	1	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
3-Nitrotoluene	mg/kg	< 0.5		0.5	Pass	
4-Nitrotoluene	mg/kg	< 0.5		0.5	Pass	
Nitrobenzene	mg/kg	< 0.5		0.5	Pass	
RDX	mg/kg	< 0.5		0.5	Pass	
TNT	mg/kg	< 1		1	Pass	
Method Blank						
Semivolatile Organics USEPA 8270 Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	mg/kg	< 5		5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5		0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5		0.5	Pass	
1,2-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,3-Trichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,3,4-Tetrachlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,3,5-Tetrachlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,4-Trichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,2,4,5-Tetrachlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,3-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,3,5-Trichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1,4-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5		0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5		0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5		0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2		0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5		0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5		0.5	Pass	
2-Nitrophenol	mg/kg	< 1		1.0	Pass	
2-Picoline	mg/kg	< 0.5		0.5	Pass	
2,3,4,6-Tetrachlorophenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5		5	Pass	
2,4-Dinitrotoluene	mg/kg	< 0.5		0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1		1.0	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1		1.0	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5		0.5	Pass	
2,6-Dinitrotoluene	mg/kg	< 0.5		0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4		0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5		0.5	Pass	
3,3'-Dichlorobenzidine	mg/kg	< 0.5		0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5		0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5		0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1		1.0	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5		0.5	Pass	
4-Nitrophenol	mg/kg	< 5		5	Pass	
4,4'-DDD	mg/kg	< 0.5		0.5	Pass	
4,4'-DDE	mg/kg	< 0.5		0.5	Pass	
4,4'-DDT	mg/kg	< 0.5		0.5	Pass	
7,12-Dimethylbenz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
a-BHC	mg/kg	< 0.5		0.5	Pass	
Acenaphthene	mg/kg	< 0.1		0.1	Pass	
Acenaphthylene	mg/kg	< 0.1		0.1	Pass	
Acetophenone	mg/kg	< 0.5		0.5	Pass	
Aldrin	mg/kg	< 0.5		0.5	Pass	
Aniline	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.1		0.1	Pass	
b-BHC	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.1		0.1	Pass	
Benzo(a)pyrene	mg/kg	< 0.1		0.1	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.1		0.1	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.1		0.1	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.1		0.1	Pass	
Benzyl chloride	mg/kg	< 0.5		0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5		0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5		0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5		0.5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5		0.5	Pass	

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Chrysene	mg/kg	< 0.1	0.1	Pass	
d-BHC	mg/kg	< 0.5	0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5	0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5	0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.1	0.1	Pass	
Dibenz(a,j)acridine	mg/kg	< 0.5	0.5	Pass	
Dibenzofuran	mg/kg	< 0.5	0.5	Pass	
Dieldrin	mg/kg	< 0.5	0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5	0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5	0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5	0.5	Pass	
Diphenylamine	mg/kg	< 0.5	0.5	Pass	
Endosulfan I	mg/kg	< 0.5	0.5	Pass	
Endosulfan II	mg/kg	< 0.5	0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5	0.5	Pass	
Endrin	mg/kg	< 0.5	0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5	0.5	Pass	
Endrin ketone	mg/kg	< 0.5	0.5	Pass	
Fluoranthene	mg/kg	< 0.1	0.1	Pass	
Fluorene	mg/kg	< 0.1	0.1	Pass	
g-BHC (Lindane)	mg/kg	< 0.5	0.5	Pass	
Heptachlor	mg/kg	< 0.5	0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5	0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5	0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5	0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5	0.5	Pass	
Hexachloroethane	mg/kg	< 0.5	0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	0.1	Pass	
Methoxychlor	mg/kg	< 0.5	0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5	0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5	0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5	0.5	Pass	
Naphthalene	mg/kg	< 0.1	0.1	Pass	
Nitrobenzene	mg/kg	< 0.5	0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5	0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5	0.5	Pass	
Pentachlorophenol	mg/kg	< 1	1.0	Pass	
Phenanthrene	mg/kg	< 0.1	0.1	Pass	
Phenol	mg/kg	< 0.5	0.5	Pass	
Pronamide	mg/kg	< 0.5	0.5	Pass	
Pyrene	mg/kg	< 0.1	0.1	Pass	
Trifluralin	mg/kg	< 0.5	0.5	Pass	
Method Blank					
Explosives MGT200A & USEPA8332 Explosives					
1-Chloro-2-nitrobenzene	mg/kg	< 0.5	0.5	Pass	
1-Chloro-3-nitrobenzene	mg/kg	< 0.5	0.5	Pass	
1-Chloro-4-nitrobenzene	mg/kg	< 0.5	0.5	Pass	
Method Blank					
Phenols (Halogenated) USEPA 8270 Phenols					
Tetrachlorophenols - Total	mg/kg	< 5	5.0	Pass	
Method Blank					
Phenols (non-Halogenated) USEPA 8270 Phenols					
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20	20	Pass	
Dinoseb	mg/kg	< 20	20	Pass	
Method Blank					
Antimony	mg/kg	< 10	10	Pass	
Barium	mg/kg	< 10	10	Pass	
Beryllium	mg/kg	< 2	2	Pass	
Boron	mg/kg	< 10	10	Pass	
Cobalt	mg/kg	< 5	5	Pass	
Manganese	mg/kg	< 5	5	Pass	
Mercury	mg/kg	< 0.1	0.1	Pass	
Molybdenum	mg/kg	< 10	10	Pass	
Tin	mg/kg	< 10	10	Pass	
Arsenic	mg/kg	< 2	2	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Nickel	mg/kg	< 4		4	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery						
		Result 1				
Sulphate (S)	%	108		70-130	Pass	
LCS - % Recovery						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics b)		Result 1				
1,1-Dichloroethene	%	86		70-130	Pass	
1,1,1-Trichloroethane	%	75		70-130	Pass	
1,2-Dichloroethane	%	90		70-130	Pass	
Benzene	%	87		70-130	Pass	
Total m+p-Xylenes	%	84		70-130	Pass	
Trichloroethene	%	82		70-130	Pass	
Toluene	%	87		70-130	Pass	
Ethylbenzene	%	93		70-130	Pass	
Xylenes(ortho,meta and para)	%	84		70-130	Pass	
LCS - % Recovery						
Explosives MGT200A & USEPA8332 Explosives & NG		Result 1				
1,3-DNB	%	92		70-130	Pass	
1,3,5-TNB	%	97		70-130	Pass	
2-Nitrotoluene	%	92		70-130	Pass	
2,4- & 2,6-DNT	%	94		70-130	Pass	
3-Nitrotoluene	%	94		70-130	Pass	
4-Nitrotoluene	%	92		70-130	Pass	
RDX	%	91		70-130	Pass	
TNT	%	81		70-130	Pass	
LCS - % Recovery						
Semivolatile Organics USEPA 8270 Semivolatile Organics		Result 1				
1,2,4-Trichlorobenzene	%	78		70-130	Pass	
2-Chlorophenol	%	94		30-130	Pass	
4-Chloro-3-methylphenol	%	83		30-130	Pass	
4-Nitrophenol	%	56		30-130	Pass	
Acenaphthene	%	85		70-130	Pass	
Pentachlorophenol	%	39		30-130	Pass	
Phenol	%	91		30-130	Pass	
Pyrene	%	79		70-130	Pass	
LCS - % Recovery						
		Result 1				
Antimony	%	107		80-120	Pass	
Barium	%	111		80-120	Pass	
Beryllium	%	106		80-120	Pass	
Boron	%	114		80-120	Pass	
Cobalt	%	108		80-120	Pass	
Manganese	%	104		80-120	Pass	
Mercury	%	103		75-125	Pass	
Molybdenum	%	104		80-120	Pass	
Tin	%	107		80-120	Pass	
Arsenic	%	107		80-120	Pass	
Cadmium	%	104		80-120	Pass	
Chromium	%	107		80-120	Pass	
Copper	%	106		80-120	Pass	
Lead	%	107		80-120	Pass	
Nickel	%	109		80-120	Pass	
Zinc	%	112		80-120	Pass	
[Duplicate of M11-My12441]						
		Result 1	Result 2	RPD		
Nitrate (as N)	mg/kg	< 5	< 5	<1	30%	Pass
Sulphate (S)	mg/kg	130	140	5.6	30%	Pass
[Duplicate of M11-My12441]						
		Result 1	Result 2	RPD		
Volatile Organics		Result 1	Result 2	RPD		
1,1-Dichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass
1,1-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1.1.1-Trichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dibromoethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2-Dichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichloropropane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Butanone (MEK)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Chlorotoluene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Allyl chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Benzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromochloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromodichloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromofom	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon disulfide	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon Tetrachloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlorobenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroform	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1,2-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1,3-Dichloropropene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromochloromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Iodomethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methylene Chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
o-Xylene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Styrene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Tetrachloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Total m+p-Xylenes	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichloroethene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichlorofluoromethane	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Vinyl chloride	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toluene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Ethylbenzene	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Xylenes(ortho,meta and para)	mg/kg	< 0.15	< 0.15	<1	30%	Pass	
[Duplicate of M11-My12441]							
Explosives		Result 1	Result 2	RPD			
1,3-DNB	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3,5-TNB	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4- & 2,6-DNT	mg/kg	< 1	< 1	<1	30%	Pass	
3-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
RDX	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TNT	mg/kg	< 1	< 1	<1	30%	Pass	
[Duplicate of M11-My12441]							
Semivolatile Organics		Result 1	Result 2	RPD			
2-Methyl-4,6-dinitrophenol	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1-Naphthylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrophenol	mg/kg	< 5	< 5	<1	30%	Pass	
4.4'-DDD	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Acenaphthylene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Acetophenone	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
b-BHC	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Benzo(a)pyrene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Benzyl chloride	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
d-BHC	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Dibenz(a,i)acridine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Dimethyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Fluorene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
g-BHC (Lindane)	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Methoxychlor	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	mg/kg	< 1	< 1	<1	30%	Pass	
Phenanthrene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Phenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Trifluralin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My12441]							
Explosives		Result 1	Result 2	RPD			
1-Chloro-2-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-3-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-4-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My12441]							
Phenols (Halogenated)		Result 1	Result 2	RPD			
Tetrachlorophenols - Total	mg/kg	< 5	< 5	<1	30%	Pass	
[Duplicate of M11-My12441]							
Phenols (non-Halogenated)		Result 1	Result 2	RPD			
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20	< 20	<1	30%	Pass	
Dinoseb	mg/kg	< 20	< 20	<1	30%	Pass	
[Duplicate of M11-My12441]							
		Result 1	Result 2	RPD			
Antimony	mg/kg	< 10	< 10	<1	30%	Pass	
Barium	mg/kg	140	140	1	30%	Pass	
Beryllium	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	mg/kg	< 10	< 10	<1	30%	Pass	
Cobalt	mg/kg	11	11	1	30%	Pass	
Manganese	mg/kg	170	160	2	30%	Pass	
Mercury	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	mg/kg	< 10	< 10	<1	30%	Pass	
Tin	mg/kg	< 10	< 10	<1	30%	Pass	
Arsenic	mg/kg	< 2	2.5	81	30%	Fail	Q15
Cadmium	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	mg/kg	30	30	<1	30%	Pass	
Copper	mg/kg	6.7	6.7	<1	30%	Pass	
Lead	mg/kg	14	13	6	30%	Pass	
Nickel	mg/kg	16	16	2	30%	Pass	
Zinc	mg/kg	16	16	1	30%	Pass	
[Duplicate of M11-My12448]							
		Result 1	Result 2	RPD			
Cyclohexanone	mg/kg	< 5	< 5	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Codes
[Duplicate of M11-My12451]							
Explosives							
1.3-DNB	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1.3.5-TNB	mg/kg	< 1	< 1	< 1	30%	Pass	
2-Nitrotoluene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2.4- & 2.6-DNT	mg/kg	< 1	< 1	< 1	30%	Pass	
3-Nitrotoluene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4-Nitrotoluene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
RDX	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
TNT	mg/kg	< 1	< 1	< 1	30%	Pass	
[Duplicate of M11-My12451]							
Semivolatile Organics							
2-Methyl-4,6-dinitrophenol	mg/kg	< 5	< 5	< 1	30%	Pass	
1-Chloronaphthalene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1-Naphthylamine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,2-Dichlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,2,3-Trichlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,2,3,4-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,2,3,5-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,2,4-Trichlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,2,4,5-Tetrachlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,3-Dichlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,3,5-Trichlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
1,4-Dichlorobenzene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2-Chloronaphthalene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2-Chlorophenol	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2-Methylnaphthalene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2	< 0.2	< 1	30%	Pass	
2-Naphthylamine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2-Nitroaniline	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2-Nitrophenol	mg/kg	< 1	< 1	< 1	30%	Pass	
2-Picoline	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2,3,4,6-Tetrachlorophenol	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2,4-Dinitrophenol	mg/kg	< 5	< 5	< 1	30%	Pass	
2,4-Dinitrotoluene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1	< 1	< 1	30%	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1	< 1	< 1	30%	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
2,6-Dinitrotoluene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4	< 0.4	< 1	30%	Pass	
3-Methylcholanthrene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
3,3'-Dichlorobenzidine	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4-Aminobiphenyl	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1	< 1	< 1	30%	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4-Nitrophenol	mg/kg	< 5	< 5	< 1	30%	Pass	
4,4'-DDD	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4,4'-DDE	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
4,4'-DDT	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
7,12-Dimethylbenz(a)anthracene	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
a-BHC	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Acenaphthene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Acenaphthylene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Acetophenone	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Aldrin	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Aniline	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Anthracene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
b-BHC	mg/kg	< 0.5	< 0.5	< 1	30%	Pass	
Benz(a)anthracene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzo(a)pyrene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.1	< 0.1	< 1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Benzo(k)fluoranthene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Benzyl chloride	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
d-BHC	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Dibenz(a,j)acridine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Fluorene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
g-BHC (Lindane)	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Methoxychlor	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	mg/kg	< 1	< 1	<1	30%	Pass	
Phenanthrene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Phenol	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Trifluralin	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My12451]							
Explosives		Result 1	Result 2	RPD			
1-Chloro-2-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-3-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Chloro-4-nitrobenzene	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
[Duplicate of M11-My12451]							
Phenols (Halogenated)		Result 1	Result 2	RPD			
Tetrachlorophenols - Total	mg/kg	< 5	< 5	<1	30%	Pass	
[Duplicate of M11-My12451]							
Phenols (non-Halogenated)		Result 1	Result 2	RPD			
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20	< 20	<1	30%	Pass	
Dinoseb	mg/kg	< 20	< 20	<1	30%	Pass	
[Duplicate of M11-My12451]							
		Result 1	Result 2	RPD			
Antimony	mg/kg	< 10	< 10	<1	30%	Pass	
Barium	mg/kg	150	150	<1	30%	Pass	
Beryllium	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	mg/kg	< 10	< 10	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Cobalt	mg/kg	12	12	1	30%	Pass	
Manganese	mg/kg	260	260	<1	30%	Pass	
Molybdenum	mg/kg	< 10	< 10	<1	30%	Pass	
Tin	mg/kg	< 10	< 10	<1	30%	Pass	
Arsenic	mg/kg	2.4	< 2	67	30%	Fail	Q15
Cadmium	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	mg/kg	26	26	2	30%	Pass	
Copper	mg/kg	17	17	1	30%	Pass	
Lead	mg/kg	62	63	1	30%	Pass	
Nickel	mg/kg	36	37	1	30%	Pass	
Zinc	mg/kg	47	47	<1	30%	Pass	
[Spike of M11-My12112 - BATCH] - % Recovery							
		Result 1					
Nitrate (as N)	%	74			70 - 130	Pass	
Sulphate (S)	%	106			70 - 130	Pass	
[Spike of A11-My82406 - BATCH] - % Recovery							
Volatile Organics		Result 1					
1.1-Dichloroethene	%	79			70 - 130	Pass	
1.1.1-Trichloroethane	%	75			70 - 130	Pass	
1.2-Dichlorobenzene	%	77			70 - 130	Pass	
1.2-Dichloroethane	%	93			70 - 130	Pass	
Benzene	%	88			70 - 130	Pass	
o-Xylene	%	90			70 - 130	Pass	
Total m+p-Xylenes	%	89			70 - 130	Pass	
Trichloroethene	%	83			70 - 130	Pass	
Toluene	%	90			70 - 130	Pass	
Ethylbenzene	%	98			70 - 130	Pass	
Xylenes(ortho,meta and para)	%	89			70 - 130	Pass	
[Spike of M11-My12441] - % Recovery							
Explosives		Result 1					
1.3-DNB	%	89			70 - 130	Pass	
2-Nitrotoluene	%	89			70 - 130	Pass	
2.4- & 2.6-DNT	%	90			70 - 130	Pass	
3-Nitrotoluene	%	91			70 - 130	Pass	
4-Nitrotoluene	%	89			70 - 130	Pass	
Nitrobenzene	%	86			70 - 130	Pass	
[Spike of M11-My12441] - % Recovery							
Semivolatile Organics		Result 1					
1.2.4-Trichlorobenzene	%	79			70 - 130	Pass	
1.4-Dichlorobenzene	%	76			70 - 130	Pass	
2-Chlorophenol	%	82			30 - 130	Pass	
2.4-Dinitrotoluene	%	84			70 - 130	Pass	
4-Chloro-3-methylphenol	%	91			30 - 130	Pass	
4-Nitrophenol	%	63			30 - 130	Pass	
Acenaphthene	%	91			70 - 130	Pass	
N-Nitrosodipropylamine	%	89			70 - 130	Pass	
Pentachlorophenol	%	41			30 - 130	Pass	
Phenol	%	99			30 - 130	Pass	
Pyrene	%	88			70 - 130	Pass	
[Spike of M11-My12441] - % Recovery							
Explosives		Result 1					
1-Chloro-2-nitrobenzene	%	93			70 - 130	Pass	
1-Chloro-3-nitrobenzene	%	93			70 - 130	Pass	
1-Chloro-4-nitrobenzene	%	93			70 - 130	Pass	
[Spike of M11-My12441] - % Recovery							
		Result 1					
Antimony	%	83			70 - 130	Pass	
Barium	%	83			75 - 125	Pass	
Beryllium	%	86			75 - 125	Pass	
Boron	%	92			75 - 125	Pass	
Cobalt	%	94			75 - 125	Pass	
Mercury	%	74			70 - 130	Pass	
Molybdenum	%	79			75 - 125	Pass	
Tin	%	81			75 - 125	Pass	
Arsenic	%	80			75 - 125	Pass	
Cadmium	%	84			75 - 125	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
Chromium	%	109		75 - 125	Pass	
Copper	%	95		75 - 125	Pass	
Lead	%	87		75 - 125	Pass	
Nickel	%	96		75 - 125	Pass	
Zinc	%	87		75 - 125	Pass	
[Spike of M11-My12448] - % Recovery						
		Result 1				
Cyclohexanone	%	111		70 - 130	Pass	
[Spike of M11-My12451] - % Recovery						
		Result 1				
Semivolatile Organics						
1,2,4-Trichlorobenzene	%	95		70 - 130	Pass	
1,4-Dichlorobenzene	%	92		70 - 130	Pass	
2-Chlorophenol	%	76		30 - 130	Pass	
2,4-Dinitrotoluene	%	81		70 - 130	Pass	
4-Chloro-3-methylphenol	%	91		30 - 130	Pass	
4-Nitrophenol	%	52		30 - 130	Pass	
Acenaphthene	%	100		70 - 130	Pass	
N-Nitrosodipropylamine	%	83		70 - 130	Pass	
Pentachlorophenol	%	50		30 - 130	Pass	
Phenol	%	88		30 - 130	Pass	
Pyrene	%	87		70 - 130	Pass	
[Spike of M11-My12451] - % Recovery						
		Result 1				
Antimony	%	75		70 - 130	Pass	
Beryllium	%	77		75 - 125	Pass	
Manganese	%	110		75 - 125	Pass	
Mercury	%	82		70 - 130	Pass	
Arsenic	%	77		75 - 125	Pass	
Cadmium	%	75		75 - 125	Pass	
Chromium	%	99		75 - 125	Pass	
Copper	%	90		75 - 125	Pass	

Comments

NB: Report has been updated to include Cyclohexanone and Chloronitrobenzene results 21/6/11
 NB: SVOC and Phenols extraction date is 01/06/11

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in AS-POL-002. Refer to Glossary Page of this report for further details

Authorised By

S 33

S 33

NATA Signatory

Final report - (this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

GHD Melbourne
 Level 8, 180 Lonsdale St
 Melbourne
 Victoria 3000

Attention: | 5 333

Report
 Client Reference
 Received Date

300644-W-V2
 CAIRNLEA VALIDATION SAMPLING 3127640
 May 26, 2011

Certificate of Analysis



NATA Accredited
 Accreditation Number 1261
 Site Number 1254

This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Client Sample ID			V_TB2	V_RB2
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My12457	M11-My12458
Date Sampled			May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit		
Cyclohexanone	0.5	mg/L	-	< 0.5
Nitrate (as N)	0.02	mg/L	-	< 0.02
pH	0.1	units	-	5.4
Sulphate (S)	5	mg/L	-	< 5
Volatile Organics				
1,1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1,1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
1,1,1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1,1,1,2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1,1,2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1,2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001
1,2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1,2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1,2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1,2,3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001
1,2,4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1,3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1,3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1,3,5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1,4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001
Chloroform	0.001	mg/L	< 0.001	< 0.001
Chloromethane	0.001	mg/L	< 0.001	< 0.001

Client Sample ID			V_TB2	V_RB2
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My12457	M11-My12458
Date Sampled			May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit		
cis-1,2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
cis-1,3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001
Total m+p-Xylenes	0.002	mg/L	< 0.002	< 0.002
trans-1,2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
trans-1,3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
Xylenes(ortho,meta and para)	0.003	mg/L	< 0.003	< 0.003
Fluorobenzene (surr.)	1	%	98	76
4-Bromofluorobenzene (surr.)	1	%	79	86
Explosives				
1,3-DNB	0.05	mg/L	-	< 0.05
1,3,5-TNB	0.05	mg/L	-	< 0.05
2-Nitrotoluene	0.05	mg/L	-	< 0.05
2,4- & 2,6-DNT	0.1	mg/L	-	< 0.1
3-Nitrotoluene	0.05	mg/L	-	< 0.05
4-Nitrotoluene	0.05	mg/L	-	< 0.05
Nitrobenzene	0.05	mg/L	-	< 0.05
RDX	0.05	mg/L	-	< 0.05
TNT	0.05	mg/L	-	< 0.05
Semivolatile Organics				
2-Methyl-4,6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005
1,2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,2,3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,2,3,4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,2,3,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,2,4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,2,4,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,3,5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005
1,4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005

Client Sample ID			V_TB2	V_RB2
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My12457	M11-My12458
Date Sampled			May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit		
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01
2-Picoline	0.005	mg/L	< 0.005	< 0.005
2,3,4,6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01
2,4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003
2,4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003
2,4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03
2,4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005
2,4,5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01
2,4,6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01
2,6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003
2,6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005
3,3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03
4,4'-DDD	0.005	mg/L	< 0.005	< 0.005
4,4'-DDE	0.005	mg/L	< 0.005	< 0.005
4,4'-DDT	0.005	mg/L	< 0.005	< 0.005
7,12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005
a-BHC	0.005	mg/L	< 0.005	< 0.005
Acenaphthene	0.001	mg/L	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001
Acetophenone	0.005	mg/L	< 0.005	< 0.005
Aldrin	0.005	mg/L	< 0.005	< 0.005
Aniline	0.005	mg/L	< 0.005	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001
b-BHC	0.005	mg/L	< 0.005	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001
Benzo(b)fluoranthene	0.001	mg/L	< 0.001	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005
Chrysene	0.001	mg/L	< 0.001	< 0.001
d-BHC	0.005	mg/L	< 0.005	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	< 0.001
Dibenz(a,j)acridine	0.005	mg/L	< 0.005	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005
Dieldrin	0.005	mg/L	< 0.005	< 0.005

Client Sample ID			V_TB2	V_RB2
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My12457	M11-My12458
Date Sampled			May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit		
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005
Diphenylamine	0.005	mg/L	< 0.005	< 0.005
Endosulfan I	0.005	mg/L	< 0.005	< 0.005
Endosulfan II	0.005	mg/L	< 0.005	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005
Endrin	0.005	mg/L	< 0.005	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005
Endrin ketone	0.005	mg/L	< 0.005	< 0.005
Fluoranthene	0.001	mg/L	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001
g-BHC (Lindane)	0.005	mg/L	< 0.005	< 0.005
Heptachlor	0.005	mg/L	< 0.005	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001
Methoxychlor	0.005	mg/L	< 0.005	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005
Naphthalene	0.001	mg/L	< 0.001	< 0.001
Nitrobenzene	0.05	mg/L	< 0.05	< 0.05
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01
Phenanthrene	0.001	mg/L	< 0.001	< 0.001
Phenol	0.003	mg/L	< 0.003	< 0.003
Pronamide	0.005	mg/L	< 0.005	< 0.005
Pyrene	0.001	mg/L	< 0.001	< 0.001
Trifluralin	0.005	mg/L	< 0.005	< 0.005
Phenol-d6 (surr.)	1	%	34	32
Nitrobenzene-d5 (surr.)	1	%	87	93
2-Fluorobiphenyl (surr.)	1	%	91	96
2,4,6-Tribromophenol (surr.)	1	%	78	84
Explosives				
1-Chloro-2-nitrobenzene	0.05	mg/L	-	< 0.05
1-Chloro-3-nitrobenzene	0.05	mg/L	-	< 0.05
1-Chloro-4-nitrobenzene	0.05	mg/L	-	< 0.05
Phenols (Halogenated)				
Tetrachlorophenols - Total	0.03	mg/L	-	< 0.03
Total Halogenated Phenol	0.01	mg/L	-	< 0.01
Phenols (non-Halogenated)				
2-Cyclohexyl-4,6-dinitrophenol	0.1	mg/L	-	< 0.1
Dinoseb	0.1	mg/L	-	< 0.1
Total Non-Halogenated Phenol	0.1	mg/L	-	< 0.1
Heavy Metals				

Client Sample ID			V_TB2	V_RB2
Sample Matrix			Water	Water
mgt-LabMark Sample No.			M11-My12457	M11-My12458
Date Sampled			May 25, 2011	May 25, 2011
Test/Reference	LOR	Unit		
Antimony (filtered)	0.005	mg/L	-	< 0.005
Arsenic (filtered)	0.001	mg/L	-	< 0.001
Barium (filtered)	0.02	mg/L	-	< 0.02
Beryllium (filtered)	0.001	mg/L	-	< 0.001
Boron (filtered)	0.05	mg/L	-	< 0.05
Cadmium (filtered)	0.0002	mg/L	-	< 0.0002
Chromium (filtered)	0.001	mg/L	-	< 0.001
Cobalt (filtered)	0.001	mg/L	-	< 0.001
Copper (filtered)	0.001	mg/L	-	< 0.001
Lead (filtered)	0.001	mg/L	-	< 0.001
Manganese (filtered)	0.005	mg/L	-	< 0.005
Molybdenum (filtered)	0.005	mg/L	-	< 0.005
Nickel (filtered)	0.001	mg/L	-	< 0.001
Tin (filtered)	0.005	mg/L	-	< 0.005
Zinc (filtered)	0.001	mg/L	-	< 0.001
Mercury (filtered)	0.0001	mg/L	-	< 0.0001

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
Cyclohexanone	Melbourne	May 30, 2011	14 Day
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	May 30, 2011	14 Day
Explosives - Method: MGT200A & USEPA8332 Explosives & NG	Melbourne	Jun 01, 2011	7 Day
Semivolatile Organics - Method: USEPA 8270 Semivolatile Organics	Melbourne	Jun 14, 2011	7 Day
Explosives - Method: MGT200A & USEPA8332 Explosives	Melbourne	May 31, 2011	7 Day
Phenols (Halogenated) - Method: USEPA 8270 Phenols	Melbourne	Jun 14, 2011	7 Day
Phenols (non-Halogenated) - Method: USEPA 8270 Phenols	Melbourne	Jun 14, 2011	7 Day
Nitrate (as N) - Method: APHA 4500-NO3 Nitrate Nitrogen by FIA	Melbourne	May 27, 2011	2 Day
pH - Method: APHA 4500 pH by Direct Measurement - **pH Holding time 30mins. Samples analysed outside holding time.	Melbourne	May 30, 2011	6 Hours
Sulphate (S) - Method: APHA 4500-SO4 (SO4 by Discrete Analyser)	Melbourne	May 30, 2011	28 Day
Antimony (filtered)	Melbourne	May 30, 2011	6 Month

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis.
7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg: milligrams per Kilogram	mg/L: milligrams per litre
µg/l: micrograms per litre	ppm: Parts per million
ppb: Parts per billion	%: Percentage
org/100ml: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-20%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD
- eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Quality Control Results

Sample, Test, Result Reference	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Codes
Method Blank					
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics b					
1.1-Dichloroethane	mg/L	< 0.001	0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001	0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001	0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001	0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001	0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001	0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001	0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001	0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001	0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001	0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001	0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001	0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001	0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001	0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001	0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001	0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001	0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001	0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001	0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001	0.001	Pass	
Allyl chloride	mg/L	< 0.001	0.001	Pass	
Benzene	mg/L	< 0.001	0.001	Pass	
Bromobenzene	mg/L	< 0.001	0.001	Pass	
Bromochloromethane	mg/L	< 0.001	0.001	Pass	
Bromodichloromethane	mg/L	< 0.001	0.001	Pass	
Bromoform	mg/L	< 0.001	0.001	Pass	
Bromomethane	mg/L	< 0.001	0.001	Pass	
Carbon disulfide	mg/L	< 0.001	0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001	0.001	Pass	
Chlorobenzene	mg/L	< 0.001	0.001	Pass	
Chloroethane	mg/L	< 0.001	0.001	Pass	
Chloroform	mg/L	< 0.001	0.001	Pass	
Chloromethane	mg/L	< 0.001	0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001	0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001	0.001	Pass	
Dibromochloromethane	mg/L	< 0.001	0.001	Pass	
Dibromomethane	mg/L	< 0.001	0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001	0.001	Pass	
Iodomethane	mg/L	< 0.001	0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001	0.001	Pass	
Methylene Chloride	mg/L	< 0.001	0.001	Pass	
o-Xylene	mg/L	< 0.001	0.001	Pass	
Styrene	mg/L	< 0.001	0.001	Pass	
Tetrachloroethene	mg/L	< 0.001	0.001	Pass	
Total m+p-Xylenes	mg/L	< 0.002	0.002	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001	0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001	0.001	Pass	
Trichloroethene	mg/L	< 0.001	0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001	0.001	Pass	
Vinyl chloride	mg/L	< 0.001	0.001	Pass	
Toluene	mg/L	< 0.001	0.001	Pass	
Ethylbenzene	mg/L	< 0.001	0.001	Pass	
Xylenes(ortho,meta and para)	mg/L	< 0.003	0.003	Pass	
Method Blank					
Explosives MGT200A & USEPA8332 Explosives & NG					
1.3-DNB	mg/L	< 0.05	0.05	Pass	
1.3.5-TNB	mg/L	< 0.05	0.05	Pass	
2-Nitrotoluene	mg/L	< 0.05	0.05	Pass	
2.4- & 2.6-DNT	mg/L	< 0.1	0.1	Pass	
3-Nitrotoluene	mg/L	< 0.05	0.05	Pass	
4-Nitrotoluene	mg/L	< 0.05	0.05	Pass	
Nitrobenzene	mg/L	< 0.05	0.05	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
RDX	mg/L	< 0.05		0.05	Pass	
TNT	mg/L	< 0.05		0.05	Pass	
Method Blank						
Semivolatile Organics USEPA 8270 Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	mg/L	< 0.03		0.03	Pass	
1-Chloronaphthalene	mg/L	< 0.005		0.005	Pass	
1-Naphthylamine	mg/L	< 0.005		0.005	Pass	
1,2-Dichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,3-Trichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,3,4-Tetrachlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,3,5-Tetrachlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,4-Trichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,2,4,5-Tetrachlorobenzene	mg/L	< 0.005		0.005	Pass	
1,3-Dichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,3,5-Trichlorobenzene	mg/L	< 0.005		0.005	Pass	
1,4-Dichlorobenzene	mg/L	< 0.005		0.005	Pass	
2-Chloronaphthalene	mg/L	< 0.005		0.005	Pass	
2-Chlorophenol	mg/L	< 0.003		0.003	Pass	
2-Methylnaphthalene	mg/L	< 0.005		0.005	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003		0.003	Pass	
2-Naphthylamine	mg/L	< 0.005		0.005	Pass	
2-Nitroaniline	mg/L	< 0.005		0.005	Pass	
2-Nitrophenol	mg/L	< 0.01		0.01	Pass	
2-Picoline	mg/L	< 0.005		0.005	Pass	
2,3,4,6-Tetrachlorophenol	mg/L	< 0.01		0.01	Pass	
2,4-Dichlorophenol	mg/L	< 0.003		0.003	Pass	
2,4-Dimethylphenol	mg/L	< 0.003		0.003	Pass	
2,4-Dinitrophenol	mg/L	< 0.03		0.03	Pass	
2,4-Dinitrotoluene	mg/L	< 0.005		0.005	Pass	
2,4,5-Trichlorophenol	mg/L	< 0.01		0.01	Pass	
2,4,6-Trichlorophenol	mg/L	< 0.01		0.01	Pass	
2,6-Dichlorophenol	mg/L	< 0.003		0.003	Pass	
2,6-Dinitrotoluene	mg/L	< 0.005		0.005	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006		0.006	Pass	
3-Methylcholanthrene	mg/L	< 0.005		0.005	Pass	
3,3'-Dichlorobenzidine	mg/L	< 0.005		0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.005		0.005	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005		0.005	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01		0.01	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005		0.005	Pass	
4-Nitrophenol	mg/L	< 0.03		0.03	Pass	
4,4'-DDD	mg/L	< 0.005		0.005	Pass	
4,4'-DDE	mg/L	< 0.005		0.005	Pass	
4,4'-DDT	mg/L	< 0.005		0.005	Pass	
7,12-Dimethylbenz(a)anthracene	mg/L	< 0.005		0.005	Pass	
a-BHC	mg/L	< 0.005		0.005	Pass	
Acenaphthene	mg/L	< 0.001		0.001	Pass	
Acenaphthylene	mg/L	< 0.001		0.001	Pass	
Acetophenone	mg/L	< 0.005		0.005	Pass	
Aldrin	mg/L	< 0.005		0.005	Pass	
Aniline	mg/L	< 0.005		0.005	Pass	
Anthracene	mg/L	< 0.001		0.001	Pass	
b-BHC	mg/L	< 0.005		0.005	Pass	
Benz(a)anthracene	mg/L	< 0.001		0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001		0.001	Pass	
Benzo(b)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001		0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzyl chloride	mg/L	< 0.005		0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005		0.005	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005		0.005	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005		0.005	Pass	
Butyl benzyl phthalate	mg/L	< 0.005		0.005	Pass	
Chrysene	mg/L	< 0.001		0.001	Pass	
d-BHC	mg/L	< 0.005		0.005	Pass	
Di-n-butyl phthalate	mg/L	< 0.005		0.005	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
Di-n-octyl phthalate	mg/L	< 0.005		0.005	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001		0.001	Pass	
Dibenz(a,j)acridine	mg/L	< 0.005		0.005	Pass	
Dibenzofuran	mg/L	< 0.005		0.005	Pass	
Dieldrin	mg/L	< 0.005		0.005	Pass	
Diethyl phthalate	mg/L	< 0.005		0.005	Pass	
Dimethyl phthalate	mg/L	< 0.005		0.005	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005		0.005	Pass	
Diphenylamine	mg/L	< 0.005		0.005	Pass	
Endosulfan I	mg/L	< 0.005		0.005	Pass	
Endosulfan II	mg/L	< 0.005		0.005	Pass	
Endosulfan sulphate	mg/L	< 0.005		0.005	Pass	
Endrin	mg/L	< 0.005		0.005	Pass	
Endrin aldehyde	mg/L	< 0.005		0.005	Pass	
Endrin ketone	mg/L	< 0.005		0.005	Pass	
Fluoranthene	mg/L	< 0.001		0.001	Pass	
Fluorene	mg/L	< 0.001		0.001	Pass	
g-BHC (Lindane)	mg/L	< 0.005		0.005	Pass	
Heptachlor	mg/L	< 0.005		0.005	Pass	
Heptachlor epoxide	mg/L	< 0.005		0.005	Pass	
Hexachlorobenzene	mg/L	< 0.005		0.005	Pass	
Hexachlorobutadiene	mg/L	< 0.005		0.005	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.005		0.005	Pass	
Hexachloroethane	mg/L	< 0.005		0.005	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001		0.001	Pass	
Methoxychlor	mg/L	< 0.005		0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005		0.005	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005		0.005	Pass	
N-Nitrosopiperidine	mg/L	< 0.005		0.005	Pass	
Naphthalene	mg/L	< 0.001		0.001	Pass	
Nitrobenzene	mg/L	< 0.05		0.05	Pass	
Pentachlorobenzene	mg/L	< 0.005		0.005	Pass	
Pentachloronitrobenzene	mg/L	< 0.005		0.005	Pass	
Pentachlorophenol	mg/L	< 0.01		0.01	Pass	
Phenanthrene	mg/L	< 0.001		0.001	Pass	
Phenol	mg/L	< 0.003		0.003	Pass	
Pronamide	mg/L	< 0.005		0.005	Pass	
Pyrene	mg/L	< 0.001		0.001	Pass	
Trifluralin	mg/L	< 0.005		0.005	Pass	
Method Blank						
Explosives MGT200A & USEPA8332 Explosives						
1-Chloro-2-nitrobenzene	mg/L	< 0.05		0.05	Pass	
1-Chloro-3-nitrobenzene	mg/L	< 0.05		0.05	Pass	
1-Chloro-4-nitrobenzene	mg/L	< 0.05		0.05	Pass	
Method Blank						
Phenols (Halogenated) USEPA 8270 Phenols						
Tetrachlorophenols - Total	mg/L	< 0.03		0.03	Pass	
Method Blank						
Phenols (non-Halogenated) USEPA 8270 Phenols						
2-Cyclohexyl-4,6-dinitrophenol	mg/L	< 0.1		0.1	Pass	
Dinoseb	mg/L	< 0.1		0.1	Pass	
Method Blank						
Nitrate (as N)	mg/L	< 0.02		0.02	Pass	
Sulphate (S)	mg/L	< 5		5	Pass	
Method Blank						
Antimony (filtered)	mg/L	< 0.005		0.005	Pass	
Arsenic (filtered)	mg/L	< 0.001		0.001	Pass	
Barium (filtered)	mg/L	< 0.02		0.02	Pass	
Beryllium (filtered)	mg/L	< 0.001		0.001	Pass	
Boron (filtered)	mg/L	< 0.05		0.05	Pass	
Cadmium (filtered)	mg/L	< 0.0002		0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001		0.001	Pass	
Cobalt (filtered)	mg/L	< 0.001		0.001	Pass	
Copper (filtered)	mg/L	< 0.001		0.001	Pass	

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
Lead (filtered)	mg/L	< 0.001		0.001	Pass	
Manganese (filtered)	mg/L	< 0.005		0.005	Pass	
Molybdenum (filtered)	mg/L	< 0.005		0.005	Pass	
Nickel (filtered)	mg/L	< 0.001		0.001	Pass	
Tin (filtered)	mg/L	< 0.005		0.005	Pass	
Zinc (filtered)	mg/L	< 0.001		0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001		0.0001	Pass	
LCS - % Recovery						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by		Result 1				
1.1-Dichloroethene	%	96		70-130	Pass	
1.1.1-Trichloroethane	%	108		70-130	Pass	
1.2-Dichloroethane	%	102		70-130	Pass	
Benzene	%	103		70-130	Pass	
Carbon Tetrachloride	%	99		70-130	Pass	
Total m+p-Xylenes	%	107		70-130	Pass	
Trichloroethene	%	82		70-130	Pass	
Toluene	%	116		70-130	Pass	
Ethylbenzene	%	104		70-130	Pass	
Xylenes(ortho,meta and para)	%	105		70-130	Pass	
LCS - % Recovery						
Explosives MGT200A & USEPA8332 Explosives & NG		Result 1				
1.3-DNB	%	96		70-130	Pass	
1.3.5-TNB	%	102		70-130	Pass	
2-Nitrotoluene	%	98		70-130	Pass	
2.4- & 2.6-DNT	%	98		70-130	Pass	
3-Nitrotoluene	%	100		70-130	Pass	
4-Nitrotoluene	%	98		70-130	Pass	
RDX	%	94		70-130	Pass	
TNT	%	86		70-130	Pass	
LCS - % Recovery						
Semivolatile Organics USEPA 8270 Semivolatile Organics		Result 1				
1.2.4-Trichlorobenzene	%	84		70-130	Pass	
2-Chlorophenol	%	81		30-130	Pass	
4-Chloro-3-methylphenol	%	66		30-130	Pass	
4-Nitrophenol	%	30		30-130	Pass	
Acenaphthene	%	90		70-130	Pass	
Pentachlorophenol	%	46		30-130	Pass	
Phenol	%	35		30-130	Pass	
Pyrene	%	86		70-130	Pass	
LCS - % Recovery						
		Result 1				
Nitrate (as N)	%	90		70-130	Pass	
Sulphate (S)	%	104		70-130	Pass	
LCS - % Recovery						
		Result 1				
Lead (filtered)	%	95		80-120	Pass	
Mercury (filtered)	%	97		70-130	Pass	
[Duplicate of M11-My14022 - BATCH]						
Volatile Organics		Result 1	Result 2	RPD		
1.1-Dichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	mg/L	< 0.001	< 0.001	<1	30%	Pass

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
2-Propanone (Acetone)	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1,2-Dichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1,3-Dichloropropene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
o-Xylene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Total m+p-Xylenes	mg/L	< 0.002	< 0.002	<1	30%	Pass	
trans-1,2-Dichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1,3-Dichloropropene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes(ortho,meta and para)	mg/L	< 0.003	< 0.003	<1	30%	Pass	
[Duplicate of M11-My11187 - BATCH]							
Semivolatle Organics		Result 1	Result 2	RPD			
2-Methyl-4,6-dinitrophenol	mg/L	< 0.03	< 0.03	<1	30%	Pass	
1-Chloronaphthalene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1-Naphthylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2-Dichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,3-Trichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,3,4-Tetrachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,3,5-Tetrachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,4-Trichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,2,4,5-Tetrachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,3-Dichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,3,5-Trichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1,4-Dichlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chloronaphthalene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chlorophenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Methylnaphthalene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Naphthylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitroaniline	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitrophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2-Picoline	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2,3,4,6-Tetrachlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2,4-Dichlorophenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2,4-Dimethylphenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2,4-Dinitrophenol	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2,4-Dinitrotoluene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2,4,5-Trichlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2,4,6-Trichlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2,6-Dichlorophenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
2,6-Dinitrotoluene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006	< 0.006	<1	30%	Pass	
3-Methylcholanthrene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3,3'-Dichlorobenzidine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Aminobiphenyl	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Nitrophenol	mg/L	< 0.03	< 0.03	<1	30%	Pass	
4,4'-DDD	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4,4'-DDE	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4,4'-DDT	mg/L	< 0.005	< 0.005	<1	30%	Pass	
7,12-Dimethylbenz(a)anthracene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
a-BHC	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Acenaphthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acetophenone	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aldrin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aniline	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Anthracene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
b-BHC	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Benz(a)anthracene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b)fluoranthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzyl chloride	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Butyl benzyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chrysene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
d-BHC	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-butyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-octyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a,j)acridine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenzofuran	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dieldrin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diethyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethyl phthalate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diphenylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan I	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan II	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan sulphate	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin aldehyde	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin ketone	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Fluoranthene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
g-BHC (Lindane)	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor epoxide	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobutadiene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachloroethane	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methoxychlor	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosopiperidine	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Naphthalene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Nitrobenzene	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Pentachlorobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Pentachloronitrobenzene	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorophenol	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Phenanthrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenol	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Pronamide	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pyrene	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trifluralin	mg/L	< 0.005	< 0.005	<1	30%	Pass	
[Duplicate of M11-My11187 - BATCH]							
Phenols (Halogenated)		Result 1	Result 2	RPD			
Tetrachlorophenols - Total	mg/L	< 0.03	< 0.03	<1	30%	Pass	
[Duplicate of M11-My11187 - BATCH]							
Phenols (non-Halogenated)		Result 1	Result 2	RPD			
2-Cyclohexyl-4,6-dinitrophenol	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Dinoseb	mg/L	< 0.1	< 0.1	<1	30%	Pass	
[Duplicate of M11-My12810 - BATCH]							
		Result 1	Result 2	RPD			
Nitrate (as N)	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Sulphate (S)	mg/L	< 5	< 5	<1	30%	Pass	
[Duplicate of M11-My13244 - BATCH]							
		Result 1	Result 2	RPD			
Mercury (filtered)	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
[Spike of M11-My14023 - BATCH] - % Recovery							
Volatile Organics		Result 1					
1.1-Dichloroethene	%	94			70 - 130	Pass	
1.1.1-Trichloroethane	%	100			70 - 130	Pass	
1.2-Dichlorobenzene	%	91			70 - 130	Pass	
1.2-Dichloroethane	%	100			70 - 130	Pass	
Benzene	%	91			70 - 130	Pass	
Carbon Tetrachloride	%	101			70 - 130	Pass	
o-Xylene	%	87			70 - 130	Pass	
Total m+p-Xylenes	%	89			70 - 130	Pass	
Trichloroethene	%	82			70 - 130	Pass	
Toluene	%	94			70 - 130	Pass	
Ethylbenzene	%	95			70 - 130	Pass	
Xylenes(ortho.meta and para)	%	88			70 - 130	Pass	
[Spike of M11-My12457] - % Recovery							
Semivolatile Organics		Result 1					
1.2.4-Trichlorobenzene	%	82			70 - 130	Pass	
1.4-Dichlorobenzene	%	80			70 - 130	Pass	
2-Chlorophenol	%	89			30 - 130	Pass	
2.4-Dinitrotoluene	%	92			70 - 130	Pass	
4-Chloro-3-methylphenol	%	87			30 - 130	Pass	
4-Nitrophenol	%	31			30 - 130	Pass	
Acenaphthene	%	86			70 - 130	Pass	
N-Nitrosodipropylamine	%	77			70 - 130	Pass	
Pentachlorophenol	%	64			30 - 130	Pass	
Phenol	%	34			30 - 130	Pass	
Pyrene	%	87			70 - 130	Pass	
[Spike of M11-My12662 - BATCH] - % Recovery							
		Result 1					
Nitrate (as N)	%	90			70 - 130	Pass	
Sulphate (S)	%	98			70 - 130	Pass	
[Spike of M11-My12668 - BATCH] - % Recovery							
		Result 1					
Antimony (filtered)	%	77			70 - 130	Pass	
Arsenic (filtered)	%	95			70 - 130	Pass	
Barium (filtered)	%	96			70 - 130	Pass	
Beryllium (filtered)	%	97			70 - 130	Pass	
Boron (filtered)	%	99			70 - 130	Pass	
Cadmium (filtered)	%	93			70 - 130	Pass	
Chromium (filtered)	%	92			70 - 130	Pass	
Cobalt (filtered)	%	93			70 - 130	Pass	
Copper (filtered)	%	93			70 - 130	Pass	
Lead (filtered)	%	93			70 - 130	Pass	
Manganese (filtered)	%	94			70 - 130	Pass	
Molybdenum (filtered)	%	74			70 - 130	Pass	

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
Nickel (filtered)	%	93			70 - 130	Pass	
Tin (filtered)	%	90			70 - 130	Pass	
Zinc (filtered)	%	97			70 - 130	Pass	
Mercury (filtered)	%	100			70 - 130	Pass	

Comments

NB: Report has been updated to include Cyclohexanone and Chloronitrobenzene results 21/6/11
NB: SVOC and Phenols extraction date is 30/05/11

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within Holding Time	Yes
Some samples have been subcontracted	No

Authorised By

S 33

S 33

NATA Signatory

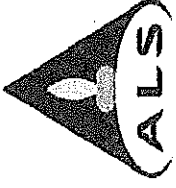
Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Environmental Division

CERTIFICATE OF ANALYSIS

Work Order : EM1105517
 Client : GHD SERVICES PTY LTD
 Contact : S 33
 Address : LEVEL 8, 180 LONSDALE ST
 MELBOURNE VIC, AUSTRALIA 3001
 E-mail : S 33
 Telephone : +61 03 8687 8000
 Facsimile : +61 03 8687 8111
 Project : 3127640 CAIRNLEA VALIDATION SAMPLING
 Order number : ---
 C-O-C number : ---
 Sampler : TS-A
 Site : ---
 Quote number : EN/006/10
 Page : 1 of 10
 Laboratory : Environmental Division Melbourne
 Contact : S 33
 Address : 4 Westall Rd Springvale VIC Australia 3171
 E-mail : S 33
 Telephone : +61-3- 5 33
 Facsimile : +61-3-8649 9601
 QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement
 Date Samples Received : 25-MAY-2011
 Issue Date : 10-JUN-2011
 No. of samples received : 2
 No. of samples analysed : 2

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
S 33	S 33	Melbourne Inorganics
S 33	S 33	Melbourne Inorganics
S 33	S 33	Sydney Organics
S 33	S 33	Melbourne Inorganics
S 33	S 33	Melbourne Organics



Page : 2 of 10
Work Order : EM1105517
Client : GHD SERVICES PTY LTD
Project : 3127640 CAIRNLEA VALIDATION SAMPLING

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

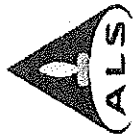
When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

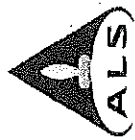
Δ = This result is computed from individual analyte detections at or above the level of reporting

- EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- Explosive analysis conducted by ALS Sydney, NATA accreditation no. 825, site no 10911



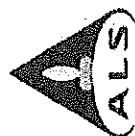
Analytical Results

Compound	CAS Number	LOR	Unit	Client sample ID	V_QA2	V_QA4
Sub-Matrix: SOIL				Client sampling date / time		
EA002: pH (Soils)		0.1	pH Unit		8.6	8.3
EA055: Moisture Content			%		23.2	27.6
ED040N: Sulfate - Calcium Phosphate Soluble (NEP,II)		1.0	%			
Sulfate as SO4 2-	14808-79-8	50	mg/kg		<50	<50
EG005T: Total Metals by ICP-AES						
Antimony	7440-38-0	5	mg/kg		<5	<5
Barium	7440-39-3	10	mg/kg		200	350
Beryllium	7440-41-7	1	mg/kg		1	1
Boron	7440-42-8	50	mg/kg		60	50
Cobalt	7440-48-4	2	mg/kg		14	16
Manganese	7439-96-5	5	mg/kg		307	480
Molybdenum	7439-98-7	2	mg/kg		<2	<2
Tin	7440-31-5	5	mg/kg		<5	<5
Arsenic	7440-38-2	5	mg/kg		<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1
Chromium	7440-47-3	2	mg/kg		32	36
Copper	7440-50-8	5	mg/kg		13	15
Lead	7439-92-1	5	mg/kg		13	13
Nickel	7440-02-0	2	mg/kg		23	32
Zinc	7440-66-6	5	mg/kg		23	35
EG035T: Total Recoverable Mercury by FIMS						
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1
EK058G: Nitrate as N by Discrete Analyser						
Nitrate as N (SoL)		0.1	mg/kg		2.7	1.0
EP074A: Monocyclic Aromatic Hydrocarbons						
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg		<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg		<0.5	<0.5
n-Propylbenzene	103-85-1	0.5	mg/kg		<0.5	<0.5
1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg		<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg		<0.5	<0.5
1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg		<0.5	<0.5



Analytical Results

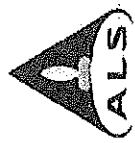
Sub-Matrix: SOIL	Client sample ID		V_QA2	V_QA4
	Client sampling date / time	Unit		
Compound	CAS Number	LOR	EM1105517-001	EM1105517-002
EP074A: Monocyclic Aromatic Hydrocarbons - Continued				
tert-Butylbenzene	98-06-6	0.5	<0.5	<0.5
p-Isopropyltoluene	98-87-6	0.5	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	<0.5	<0.5
EP074B: Oxygenated Compounds				
Vinyl Acetate	108-05-4	5	<5	<5
2-Butanone (MEK)	78-93-3	5	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	<5	<5
2-Hexanone (MBK)	591-78-6	5	<5	<5
EP074C: Sulfonated Compounds				
Carbon disulfide	75-15-0	0.5	<0.5	<0.5
EP074D: Fumigants				
2,2-Dichloropropane	594-20-7	0.5	<0.5	<0.5
1,2-Dichloropropane	78-87-5	0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	10061-01-5	0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	10061-02-6	0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds				
Dichlorodifluoromethane	75-71-8	5	<5	<5
Chloromethane	74-87-3	5	<5	<5
Vinyl chloride	75-01-4	5	<5	<5
Bromomethane	74-83-9	5	<5	<5
Chloroethane	75-00-3	5	<5	<5
Trichlorofluoromethane	75-69-4	5	<5	<5
1,1-Dichloroethene	75-35-4	0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.5	<0.5	<0.5
1,1-Dichloroethane	75-34-3	0.5	<0.5	<0.5
cis-1,2-Dichloroethene	156-59-2	0.5	<0.5	<0.5
1,1,1-Trichloroethane	71-55-5	0.5	<0.5	<0.5
1,1-Dichloropropylene	563-58-6	0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	<0.5	<0.5
1,2-Dichloroethane	107-06-2	0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	<0.5	<0.5
1,1,2-Trichloroethane	79-00-5	0.5	<0.5	<0.5
1,3-Dichloropropane	142-28-9	0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	630-20-6	0.5	<0.5	<0.5
trans-1,4-Dichloro-2-butene	110-57-6	0.5	<0.5	<0.5



Page : 5 of 10
 Work Order : EM1105517
 Client : GHD SERVICES PTY LTD
 Project : 3127640 CAIRNIEA VALIDATION SAMPLING

Analytical Results

Sub-Matrix: SOIL	Client sample ID		Client sampling date / time		
	V_QA2	V_QA4	24-MAY-2011 10:00	24-MAY-2011 10:00	
Compound	CAS Number	LOR	Unit	EM1105517-001	EM1105517-002
EP0741E: Halogenated Aliphatic Compounds - Continued					
cis-1,4-Dichloro-2-butene	1478-11-5	0.5	mg/kg	<0.5	<0.5
1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5
1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5
1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5
EP0741F: Halogenated Aromatic Compounds					
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5
1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5
EP0741G: Trihalomethanes					
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5
EP075A: Phenolic Compounds					
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5
4-Chloro-3-Methylphenol	89-50-7	0.5	mg/kg	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5
2,4,5-Trichlorophenol	85-95-4	0.5	mg/kg	<0.5	<0.5
Pentachlorophenol	87-86-5	1	mg/kg	<1	<1
EP075B: Polynuclear Aromatic Hydrocarbons					
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5



Analytical Results

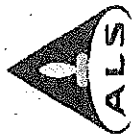
Compound	CAS Number	LOR	Client sample ID	
			Client sampling date / time	Unit
Sub-Matrix: SOIL				
EP075B: Polynuclear Aromatic Hydrocarbons - Continued				
Fluoranthene	206-44-0	0.5	mg/kg	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5
Benzo(b) & 205-99-2	207-08-9	1	mg/kg	<1
7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5
3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5
Benzo(g,h)perylene	191-24-2	0.5	mg/kg	<0.5
Σ Sum of PAHs	—	0.5	mg/kg	<0.5
EP075C: Phthalate Esters				
Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5
Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5
bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<0.5
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5
EP075D: Nitrosamines				
N-Nitrosomethylethylamine	10565-95-6	0.5	mg/kg	<0.5
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5
N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5
N-Nitrosomorpholine	58-89-2	0.5	mg/kg	<0.5
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6	122-39-4	mg/kg	<0.5
Methapyriline	91-80-5	0.5	mg/kg	<0.5
EP075E: Nitroaromatics and Ketones				
2-Picoline	109-06-8	0.5	mg/kg	<0.5
Acetophenone	98-86-2	0.5	mg/kg	<0.5
Nitrobenzene	98-95-3	0.5	mg/kg	<0.5
Isophorone	78-59-1	0.5	mg/kg	<0.5
2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5



Page : 7 of 10
 Work Order : EM1105517
 Client : GHD SERVICES PTY LTD
 Project : 3127640 CAIRNLEA VALIDATION SAMPLING

Analytical Results

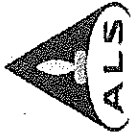
Compound	CAS Number	LOR	Unit	Client sample ID	
				V_QA2	V_QA4
Sub-Matrix: SOIL				24-MAY-2011 10:00	24-MAY-2011 10:00
				EM1105517-001	EM1105517-002
EP075E: Nitroaromatics and Ketones - Continued					
2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	<0.5
1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5
Azobenzene	103-33-3	1	mg/kg	<1	<1
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5
Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5
Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5
Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5
EP075E: Halobethers					
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5
EP075G: Chlorinated Hydrocarbons					
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5
Hexachlorocyclopentadiene	77-47-4	0.5	mg/kg	<0.5	<0.5
Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	<0.5
EP075H: Anilines and Benzimidazoles					
Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5
4-Chloroaniline	106-47-6	0.5	mg/kg	<0.5	<0.5
2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	<0.5
3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	<0.5
Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5
4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5
Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5
3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5
EP075I: Organochlorine Pesticides					



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 Client : GHD SERVICES PTY LTD
 Project : 3127640 CAIRNLEA VALIDATION SAMPLING

Analytical Results

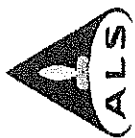
Compound	CAS Number	LOR	Client sample ID	
			Client sampling date / time	Unit
Sub-Matrix: SOIL				
EP075I: Organochlorine Pesticides - Continued				
alpha-BHC	319-84-6	0.5	mg/kg	<0.5
beta-BHC	319-85-7	0.5	mg/kg	<0.5
gamma-BHC	58-89-9	0.5	mg/kg	<0.5
delta-BHC	319-86-8	0.5	mg/kg	<0.5
Heptachlor	76-44-8	0.5	mg/kg	<0.5
Aldrin	309-00-2	0.5	mg/kg	<0.5
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5
4,4'-DDE	72-55-9	0.5	mg/kg	<0.5
Dieldrin	50-57-1	0.5	mg/kg	<0.5
Endrin	72-20-8	0.5	mg/kg	<0.5
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5
4,4'-DDD	72-54-8	0.5	mg/kg	<0.5
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5
4,4'-DDT	50-29-3	0.5	mg/kg	<0.5
EP075J: Organophosphorus Pesticides				
Dichlorvos	62-73-7	0.5	mg/kg	<0.5
Dimethoate	60-51-5	0.5	mg/kg	<0.5
Diazinon	333-41-5	0.5	mg/kg	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5
Malathion	121-75-5	0.5	mg/kg	<0.5
Fenthion	65-38-9	0.5	mg/kg	<0.5
Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5
Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5
Prothiofos	34543-46-4	0.5	mg/kg	<0.5
Ethion	563-12-2	0.5	mg/kg	<0.5
EP075K: Miscellaneous Compounds				
2,3,4,6-Tetrachlorophenol	58-90-2	0.5	mg/kg	<0.5
EP203A: Explosives				
HMX	2691-41-0	0.1	mg/kg	<0.1
RDX	—	0.1	mg/kg	<0.1
1,3,5-Trinitrobenzene	99-35-4	0.1	mg/kg	<0.1
1,3-Dinitrobenzene	99-65-0	0.1	mg/kg	<0.1
Tetryl	479-45-8	0.1	mg/kg	<0.1
2,4,6-TNT	118-96-7	0.1	mg/kg	<0.1
4-Amino-2,6-DNT	19408-51-0	0.1	mg/kg	<0.1
2-Amino-4,6-DNT	35572-78-2	0.1	mg/kg	<0.1



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Analytical Results

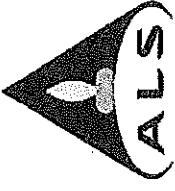
Compound	CAS Number	LOR	Unit	Client sample ID	V_QA2	V_QA4
				Client sampling date / time	24-MAY-2011 10:00	24-MAY-2011 10:00
					EM1105517-001	EM1105517-002
EP203A: Explosives - Continued						
4-& 2-AM-DNT(Isomeric Mixture)		0.1	mg/kg		<0.1	<0.1
2,4-Dinitrotoluene	121-14-2	0.1	mg/kg		<0.1	<0.1
2,6-Dinitrotoluene	606-20-2	0.1	mg/kg		<0.1	<0.1
2,4-& 2,6-DNT(Isomeric Mixture)	51-28-5/606-20-2	0.1	mg/kg		<0.1	<0.1
Nitrobenzene	98-95-3	0.1	mg/kg		<0.1	<0.1
2-Nitrotoluene	88-72-2	0.1	mg/kg		<0.1	<0.1
3-Nitrotoluene	99-08-1	0.1	mg/kg		<0.1	<0.1
4-Nitrotoluene	99-99-0	0.1	mg/kg		<0.1	<0.1
Nitroglycerine	55-83-0	1.0	mg/kg		<1.0	<1.0
PETN	78-11-5	1.0	mg/kg		<1.0	<1.0
EP074S: VOC Surrogates						
1,2-Dichloroethane-D4	17060-07-0	0.1	%		109	108
Toluene-D8	2037-26-5	0.1	%		108	106
4-Bromofluorobenzene	460-00-4	0.1	%		108	104
EP075S: Acid Extractable Surrogates						
2-Fluorophenol	367-12-4	0.1	%		42.3	45.2
Phenol-d6	13127-86-3	0.1	%		46.2	47.8
2-Chlorophenol-D4	93951-73-6	0.1	%		44.7	50.9
2,4,6-Tribromophenol	118-78-6	0.1	%		52.7	54.0
EP075T: Base/Neutral Extractable Surrogates						
Nitrobenzene-D5	4185-60-0	0.1	%		42.5	44.3
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%		40.6	43.2
2-Fluorobiphenyl	321-60-6	0.1	%		45.4	45.5
Anthracene-d10	1719-06-8	0.1	%		63.0	65.6
4-Terphenyl-d14	1718-51-0	0.1	%		62.6	63.8
EP203S: Explosives Surrogate						
o-Dinitrobenzene	528-23-0	0.1	%		116	103



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Project : 3127640 CAIRNLEA VALIDATION SAMPLING

Surrogate Control Limits

Sub-Matrix: SOIL	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	14	126
Phenol-d6	13127-88-3	10	122
2-Chlorophenol-D4	93951-73-6	13.2	127
2,4,6-Tribromophenol	118-79-6	10	133
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D6	4165-90-0	10	128
1,2-Dichlorobenzene-D4	2199-69-1	10	108
2-Fluorobiphenyl	321-60-8	10	127
Anthracene-d10	1719-06-8	14.5	142
4-Terphenyl-d14	1718-51-0	12.4	138
EP203S: Explosives Surrogate			
o-Dinitrobenzene	528-29-0	70	130



Environmental Division

QUALITY CONTROL REPORT

Work Order	: EM1105517	Page	: 1 of 15
Client	: GHD SERVICES PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: S 33	Contact	: S 33
Address	: LEVEL 8, 180 LONSDALE ST MELBOURNE VIC, AUSTRALIA 3001	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: S 33	E-mail	: S 33
Telephone	: +61 03 8687 8000	Telephone	: +61-3- S 33
Facsimile	: +61 03 8687 8111	Facsimile	: +61-3-8549 9601
Project	: 3127640 CAIRNLEA VALIDATION SAMPLING	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ---	Date Samples Received	: 25-MAY-2011
C-O-C number	: ---	Issue Date	: 10-JUN-2011
Sampler	: TSA	No. of samples received	: 2
Order number	: ---	No. of samples analysed	: 2
Quote number	: EN/005/10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825
This document is issued in accordance with NATA accreditation requirements.
Accredited for compliance with ISO/IEC 17025.

WORLD RECOGNISED ACCREDITATION

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
S 33	S 33	Melbourne Inorganics
S 33	S 33	Melbourne Inorganics
S 33	S 33	Sydney Organics
S 33	S 33	Melbourne Inorganics
S 33	S 33	Melbourne Organics



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Project : 3127640 CAIRNLEA VALIDATION SAMPLING

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :

Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC



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Laboratory Duplicate (DUP) Report

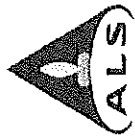
The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EA002: pH (Solids) (QC Lot: 1808925)											
EM1105505-004	Anonymous	EA002: pH Value		0.1	pH Unit	9.5	9.5	0.0	0% - 20%		
EM1105581-007	Anonymous	EA002: pH Value		0.1	pH Unit	9.8	9.8	0.0	0% - 20%		
EA055: Moisture Content (QC Lot: 1806703)											
EM1105516-001	Anonymous	EA055-103: Moisture Content (dried @ 103°C)		1.0	%	30.1	30.4	0.8	0% - 20%		
EM1105516-010	Anonymous	EA055-103: Moisture Content (dried @ 103°C)		1.0	%	18.2	15.6	3.7	0% - 50%		
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM) (QC Lot: 1806712)											
EM1105448-004	Anonymous	ED040N: Sulfate as SO4 2-	14808-79-8	50	mg/kg	80	90	12.1	No Limit		
EG005T: Total Metals by ICP-AES (QC Lot: 1821163)											
V_QA2											
EM1105517-001	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	1	<1	0.0	No Limit		
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Barium	7440-39-3	10	mg/kg	200	200	0.0	0% - 20%		
		EG005T: Chromium	7440-47-3	2	mg/kg	32	28	23.0	0% - 50%		
		EG005T: Cobalt	7440-48-4	2	mg/kg	14	11	28.0	No Limit		
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit		
		EG005T: Nickel	7440-02-0	2	mg/kg	23	18	23.6	No Limit		
		EG005T: Antimony	7440-36-0	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Copper	7440-50-8	5	mg/kg	13	13	0.0	No Limit		
		EG005T: Lead	7439-92-1	5	mg/kg	13	11	15.4	No Limit		
		EG005T: Manganese	7439-96-5	5	mg/kg	307	298	3.1	0% - 20%		
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Zinc	7440-66-6	5	mg/kg	23	17	29.9	No Limit		
		EG005T: Boron	7440-42-8	50	mg/kg	60	50	17.2	No Limit		
EM1105706-021	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Barium	7440-39-3	10	mg/kg	<10	<10	0.0	No Limit		
		EG005T: Chromium	7440-47-3	2	mg/kg	10	6	64.2	No Limit		
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit		
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit		
		EG005T: Nickel	7440-02-0	2	mg/kg	3	<2	0.0	No Limit		
		EG005T: Antimony	7440-36-0	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Manganese	7439-96-5	5	mg/kg	<5	<5	0.0	No Limit		



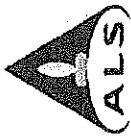
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Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 1821163) - continued									
EM1105706-021	Anonymous	EG005T: Tin	7440-31-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-86-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1821164)									
EM1105517-001	V_QA2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM1105706-021	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 1806097)									
EM1105505-001	Anonymous								
		EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-98-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Styrene	100-42-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM1105505-031									
	Anonymous								
		EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Styrene	100-42-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	98-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 1806097)									
EM1105505-001	Anonymous	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit



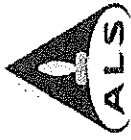
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 Client : GHD SERVICES PTY LTD
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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074B: Oxygenated Compounds (QC Lot: 1806097) - continued									
EM1105505-001	Anonymous	EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
EM1105505-031	Anonymous	EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 1806097)									
EM1105505-001	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM1105505-031	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 1806097)									
EM1105505-001	Anonymous	EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 1806097)									
EM1105505-001	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-85-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1478-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



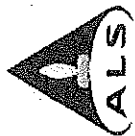
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 Work Order : EM1105517
 Client : GHD SERVICES PTY LTD
 Project : 3127840 CAIRNLEA VALIDATION SAMPLING

Sub-Matrix: SOIL		Laboratory Duplicate (DuP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Loc: 180609) - continued								
EM1105505-001	Anonymous	EP074: Pentachloroethane	76-01-7	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-35-4	mg/kg	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	mg/kg	<5	<5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	mg/kg	<5	<5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-38-6	mg/kg	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	58-23-5	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	mg/kg	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	mg/kg	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	<5	<5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	<5	<5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	mg/kg	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	mg/kg	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Loc: 180609)								
EM1105505-001	Anonymous	EP074: Chlorobenzene	108-90-7	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	mg/kg	<0.5	<0.5	0.0	No Limit



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 Work Order : EM1105517
 Client : GHD SERVICES PTY LTD
 Project : 3127640 CAIRNLEA VALIDATION SAMPLING

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP074F: Halogenated Aromatic Compounds (QC Lot: 1816331) - continued											
EM1105505-001	Anonymous	EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 2-Chlorotoluene	85-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP074G: Trihalomethanes (QC Lot: 1806097)											
EM1105505-001	Anonymous	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075A: Phenolic Compounds (QC Lot: 1816331)											
EM1105517-001	V_QA2	EP075: Phenol	106-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,6-Dichlorophenol	87-85-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,5-Trichlorophenol	96-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit		
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1816331)											
EM1105517-001	V_QA2	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



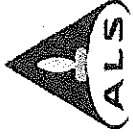
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 Work Order : EM1105517
 Client : GHD SERVICES PTY LTD
 Project : 3127640 CAIRNLEA VALIDATION SAMPLING

Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
Sub-Matrix: SOIL										
EP075B: Polynuclear Aromatic-Hydrocarbons (QC-Lot: 1816331) - continued										
EM1105517-001	V_QA2		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-2-Fluorenyl Acetamide	53-86-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Benz(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Sum of PAHs	---	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0	No Limit
				207-08-9						
EP075C: Phthalate Esters (QC-Lot: 1816331)										
EM1105517-001	V_QA2		EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075D: Nitrosamines (QC-Lot: 1816331)										
EM1105517-001	V_QA2		EP075: N-Nitrosomethylethylamine	10594-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-Nitrosodimethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-Nitrosod-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
				122-39-4						
			EP075: Methapyllene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC-Lot: 1816331)										
EM1105517-001	V_QA2		EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



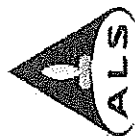
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 Work Order : EM1105517
 Client : GHD SERVICES PTY LTD
 Project : 3127640 CAIRNLEA VALIDATION SAMPLING

Sub-Matrix: SOIL		Laboratory Duplicates (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075E: Nitroaromatics and Ketones (QC Lot: 1816331) - continued									
EM1105517-001	V_QA2	EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 5-Nitro-o-tolidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit
EP075F: Halobethers (QC Lot: 1816331)									
EM1105517-001	V_QA2	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 1816331)									
EM1105517-001	V_QA2	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloropropylene	1886-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 1816331)									
EM1105517-001	V_QA2	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 1816331)									
EM1105517-001	V_QA2	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



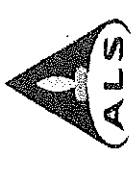
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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075: Organochlorine Pesticides (QC Lot: 1816331) - continued											
EM1105517-001	V_QA2	EP075: delta-BHC	319-66-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4,4'-DDE	72-59-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4,4'-DDD	72-54-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4,4'-DDT	50-29-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075J: Organophosphorus Pesticides (QC Lot: 1816331)											
EM1105517-001	V_QA2	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Prethiotos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075K: Miscellaneous Compounds (QC Lot: 1816331)											
EM1105517-001	V_QA2	EP075: 2,3,4,6-Tetrachlorophenol	58-90-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP203A: Explosives (QC Lot: 1812369)											
EM1105517-001	V_QA2	EP203: HMX	2691-41-0	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: RDX	—	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 1,3,5-Trinitrobenzene	99-35-4	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 1,3-Dinitrobenzene	99-65-0	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: Tetlyl	479-45-8	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 2,4,6-TNT	118-96-7	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 4-Amino-2,6-DNT	19406-51-0	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 2-Amino-4,6-DNT	35572-78-2	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 4- & 2-AM-DNT(Isomeric Mixture)	—	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 2,4-Dinitrotoluene	121-14-2	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EP203: 2,6-Dinitrotoluene	606-20-2	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		



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Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			
EM1105517-001		V_QA2	EP203A: Explosives (QC Lot: 1812369) - continued	51-28-5/606-20	0.1	mg/kg	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
			EP203: 2,4- & 2,6-DNT (isomeric Mixture)	-2			<0.1	<0.1	0.0	No Limit
			EP203: Nitrobenzene	98-95-3	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
			EP203: 2-Nitrotoluene	88-72-2	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
			EP203: 3-Nitrotoluene	99-08-1	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
			EP203: 4-Nitrotoluene	99-99-0	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
			EP203: Nitroglycerine	55-63-0	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
			EP203: PETN	78-11-5	1.0	mg/kg	<1.0	<1.0	0.0	No Limit

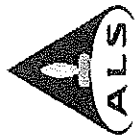


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Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: SOIL	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
	Result	Unit	Concentration	LCS	Low	High
Method: Composite						
ED040N: Sulfate - Calcium Phosphate Soluble (NEPIII) (QCLot: 1803712)						
ED040N: Sulfate as SO4 2-	14808-79-8	50	3000 mg/kg	87.1	79	123
EG005T: Total Metals by ICP-AES (QCLot: 1821163)						
EG005T: Antimony	7440-36-0	5	---	---	---	---
EG005T: Arsenic	7440-38-2	5	13.6 mg/kg	104	74	132
EG005T: Barium	7440-39-3	10	139 mg/kg	104	72	126
EG005T: Beryllium	7440-41-7	1	6.2 mg/kg	103	70	119
EG005T: Boron	7440-42-8	50	---	---	---	---
EG005T: Cadmium	7440-43-9	1	2.6 mg/kg	84.1	71	123
EG005T: Chromium	7440-47-3	2	60.9 mg/kg	104	73	125
EG005T: Cobalt	7440-48-4	2	25.4 mg/kg	94.9	70	124
EG005T: Copper	7440-50-8	5	55.1 mg/kg	109	74	124
EG005T: Lead	7439-92-1	5	54.9 mg/kg	93.7	74	126
EG005T: Manganese	7439-96-5	5	137 mg/kg	94.3	72	126
EG005T: Molybdenum	7439-98-7	2	8.5 mg/kg	100	70	126
EG005T: Nickel	7440-02-0	2	55.1 mg/kg	96.9	74	128
EG005T: Tin	7440-31-5	5	26.3 mg/kg	83.5	70	130
EG005T: Zinc	7440-56-6	5	105 mg/kg	88.5	74	124
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1821164)						
EG035T: Mercury	7439-97-6	0.1	1.47 mg/kg	90.1	64	116
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1806097)						
EP074: Benzene	71-43-2	0.2	1 mg/kg	97.8	75	121
EP074: Toluene	108-88-3	0.5	1 mg/kg	102	76	124
EP074: Ethylbenzene	100-41-4	0.5	1 mg/kg	92.5	74	120
EP074: meta- & para-Xylene	108-98-3	0.5	2 mg/kg	96.1	75	125
EP074: Styrene	106-42-3	0.5	1 mg/kg	93.4	64	120
EP074: ortho-Xylene	95-47-6	0.5	1 mg/kg	94.4	77	123
EP074: Isopropylbenzene	98-82-8	0.5	1 mg/kg	94.4	74	120
EP074: n-Propylbenzene	103-69-1	0.5	1 mg/kg	88.6	65	117
EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	1 mg/kg	94.0	65	117
EP074: sec-Butylbenzene	135-98-8	0.5	1 mg/kg	93.9	67	117
EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	1 mg/kg	92.3	66	118
EP074: tert-Butylbenzene	98-06-6	0.5	1 mg/kg	91.9	68	116
EP074: p-Isopropyltoluene	99-87-6	0.5	1 mg/kg	91.3	64	118



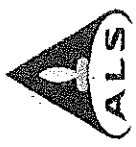
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Sub-Matrix: SOIL		Method Blank (MB) Report				Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1806097) - continued									
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	84.8	59	117	
EP074B: Oxygenated Compounds (QCLot: 1806097)									
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	92.6	40	138	
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	86.3	61	143	
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	89.7	63	137	
EP074: 2-Hexanone (MEK)	591-78-6	5	mg/kg	<5	10 mg/kg	65.3	63	133	
EP074C: Sulfonated Compounds (QCLot: 1806097)									
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	96.1	57	121	
EP074D: Fumigants (QCLot: 1806097)									
EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	88.0	51	135	
EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	98.6	73	121	
EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	75.4	59	109	
EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	74.5	52	110	
EP074E: Halogenated Aliphatic Compounds (QCLot: 1806097)									
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	102	34	140	
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	107	52	142	
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	112	47	141	
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	69.5	39	127	
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	108	43	143	
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	102	61	131	
EP074: 1,1-Dichloroethane	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	103	62	122	
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	72.6	47	119	
EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	100	69	119	
EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	100	70	120	
EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	103	72	120	
EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	86.5	64	112	
EP074: 1,1-Dichloropropylene	563-68-6	0.5	mg/kg	<0.5	1 mg/kg	100	71	117	
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	79.0	51	107	
EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	105	70	126	
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	98.6	71	121	
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	93.5	70	122	
EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	91.3	73	125	
EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	92.5	75	125	
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	94.8	71	121	
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	78.4	54	106	
EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	77.0	46	114	
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	51.8	21.8	122	
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	82.2	71	131	



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Method: Compound	CAS Number	LOR	Unit	Result	Method Blank (MB) Report			Laboratory Control Spike (LCS) Report		
					Concentration	Spike Recovery (%)	LCS	Low	High	
EP074E: Halogenated Aliphatic Compounds (QCLot: 1806097) - continued										
EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	92.0	70	134		
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	60.0	40	94		
EP074: 1,2-Dibromo-3-chloropropane	96-12-6	0.5	mg/kg	<0.5	1 mg/kg	71.5	41	113		
EP074F: Halogenated Aromatic Compounds (QCLot: 1806097)										
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	96.5	78	120		
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	88.8	68	116		
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	93.8	67	117		
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	90.6	67	115		
EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	84.8	60	120		
EP074G: Trihalomethanes (QCLot: 1806097)										
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	97.1	71	121		
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	83.7	60	108		
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	67.3	48	104		
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	72.7	40	100		
EP203A: Explosives (QCLot: 1812669)										
EP203: HMX	2691-41-0	0.1	mg/kg	<0.1	1 mg/kg	120	58.4	141		
EP203: RDX	—	0.1	mg/kg	<0.1	—	—	—	—		
EP203: 1,3,5-Trinitrobenzene	99-35-4	0.1	mg/kg	<0.1	—	—	—	—		
EP203: 1,3-Dinitrobenzene	99-65-0	0.1	mg/kg	<0.1	—	—	—	—		
EP203: Tetyl	479-45-8	0.1	mg/kg	<0.1	—	—	—	—		
EP203: 2,4,6-TNT	118-96-7	0.1	mg/kg	<0.1	1 mg/kg	105	57.8	139		
EP203: 4-Amino-2,6-DNT	19406-51-0	0.1	mg/kg	<0.1	1 mg/kg	80.5	59	135		
EP203: 2-Amino-4,6-DNT	35572-78-2	0.1	mg/kg	<0.1	—	—	—	—		
EP203: 2,4-Dinitrotoluene	121-14-2	0.1	mg/kg	<0.1	1 mg/kg	120	67.4	137		
EP203: 2,6-Dinitrotoluene	806-20-2	0.1	mg/kg	<0.1	—	—	—	—		
EP203: Nitrobenzene	98-95-3	0.1	mg/kg	<0.1	1 mg/kg	100	60.3	138		
EP203: 2-Nitrotoluene	88-72-2	0.1	mg/kg	<0.1	—	—	—	—		
EP203: 3-Nitrotoluene	99-08-1	0.1	mg/kg	<0.1	—	—	—	—		
EP203: 4-Nitrotoluene	99-99-0	0.1	mg/kg	<0.1	—	—	—	—		
EP203: Nitroglycerine	55-63-0	1.0	mg/kg	<1.0	—	—	—	—		
EP203: PETN	78-11-5	1.0	mg/kg	<1.0	1 mg/kg	90.6	58.7	136		

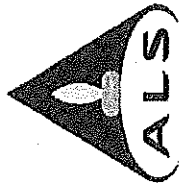


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Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Recovery Limits (%)	
				MS	Low	High
ED040N: Sulfate - Calcium Phosphate Soluble (NEPI) (QCLot: 1805712)						
EM1105448-005	Anonymous	ED040N: Sulfate as SO4 2-	14808-79-8	3000 mg/kg	117	63 143
EG005T: Total Metals by ICP-AES (QCLot: 1821163)						
EM1105517-002	V_QA4					
		EG005T: Arsenic	7440-38-2	50 mg/kg	91.8	70 130
		EG005T: Barium	7440-39-3	50 mg/kg	# Not Determined	70 130
		EG005T: Beryllium	7440-41-7	50 mg/kg	113	70 130
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.8	70 130
		EG005T: Chromium	7440-47-3	50 mg/kg	110	70 130
		EG005T: Copper	7440-50-8	50 mg/kg	111	70 130
		EG005T: Lead	7439-92-1	50 mg/kg	92.3	70 130
		EG005T: Manganese	7439-96-5	50 mg/kg	# Not Determined	70 130
		EG005T: Molybdenum	7439-98-7	50 mg/kg	106	70 130
		EG005T: Nickel	7440-02-0	50 mg/kg	96.7	70 130
		EG005T: Zinc	7440-66-6	50 mg/kg	85.4	70 130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1821154)						
EM1105517-002	V_QA4	EG035T: Mercury	7439-97-6	5.0 mg/kg	103	56 122
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1806097)						
EM1105505-003	Anonymous	EP074: Benzene	71-43-2	2 mg/kg	92.9	64 126
		EP074: Toluene	108-88-3	2 mg/kg	91.5	65 131
EP074E: Halogenated Aliphatic Compounds (QCLot: 1806097)						
EM1105505-003	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	2 mg/kg	91.8	50 124
		EP074: Trichloroethene	79-01-8	2 mg/kg	87.6	60 122
EP074F: Halogenated Aromatic Compounds (QCLot: 1806097)						
EM1105505-003	Anonymous	EP074: Chlorobenzene	108-90-7	2 mg/kg	92.8	69 129
EP203A: Explosives (QCLot: 1812369)						
EM1105517-001	V_QA2	EP203: HMX	2691-41-0	1 mg/kg	119	60 130
		EP203: 2,4,6-TNT	118-96-7	1 mg/kg	122	60 130
		EP203: 4-Amino-2,6-DNT	19406-51-0	1 mg/kg	95.2	60 130
		EP203: 2,4-Dinitrotoluene	121-14-2	1 mg/kg	107	60 130
		EP203: Nitrobenzene	98-95-3	1 mg/kg	106	60 130
		EP203: PETN	78-11-5	1 mg/kg	109	60 130



Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1105517	Page	: 1 of 8
Client	: GHD SERVICES PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: S 33	Contact	: S 33
Address	: LEVEL 8, 180 LONGDALE ST MELBOURNE VIC, AUSTRALIA 3001	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: S 33	E-mail	: S 33
Telephone	: +61 03 8687 8000	Telephone	: +61-3- 573
Facsimile	: +61 03 8687 8111	Facsimile	: +61-3-8549 9601
Project	: 3127640 CAIRNLEA VALIDATION SAMPLING	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ---	Date Samples Received	: 25-MAY-2011
C-O-C number	: ---	Issue Date	: 10-JUN-2011
Sampler	: TS-A	No. of samples received	: 2
Order number	: ---	No. of samples analysed	: 2
Quote number	: EN/005/10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

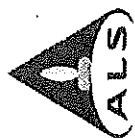
- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Environmental Division Melbourne

Part of the **ALS Laboratory Group**

4 Westall Rd Springvale VIC Australia 3171
Tel. +61-3-8549 9600 Fax. +61-3-8549 9601 www.alsglobal.com

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 Project : 3127640 CAIRNLEA VALIDATION SAMPLING

Analysis Holding Time Compliance

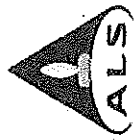
The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period, from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: SOIL

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EA002: pH (Soils)					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	30-MAY-2011	31-MAY-2011	30-MAY-2011	30-MAY-2011
				✓	✓
EA055: Moisture Content					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	---	---	---	---
				---	---
EP040N: Sulfate - Calcium Phosphate Soluble (NEPM)					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	27-MAY-2011	20-NOV-2011	30-MAY-2011	20-NOV-2011
				✓	✓
EG005T: Total Metals by ICP-AES					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	09-JUN-2011	20-NOV-2011	10-JUN-2011	20-NOV-2011
				✓	✓
EG035T: Total Recoverable Mercury by FIMS					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	09-JUN-2011	21-JUN-2011	09-JUN-2011	21-JUN-2011
				✓	✓
EP074A: Monocyclic Aromatic Hydrocarbons					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	26-MAY-2011	07-JUN-2011	28-MAY-2011	07-JUN-2011
				✓	✓
EP074B: Oxygenated Compounds					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	26-MAY-2011	07-JUN-2011	28-MAY-2011	07-JUN-2011
				✓	✓
EP074C: Sulfonated Compounds					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	26-MAY-2011	07-JUN-2011	28-MAY-2011	07-JUN-2011
				✓	✓
EP074D: Fumigants					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	26-MAY-2011	07-JUN-2011	28-MAY-2011	07-JUN-2011
				✓	✓
EP074E: Halogenated Aliphatic Compounds					
Soil Glass Jar - Unpreserved V_QA2	24-MAY-2011	26-MAY-2011	07-JUN-2011	28-MAY-2011	07-JUN-2011
				✓	✓



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Matrix: SOIL

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Evaluation	Due for analysis
EP074F: Halogenated Aromatic Compounds					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	26-MAY-2011	07-JUN-2011	✓	07-JUN-2011
V_QA4					
EP074G: Trihalomethanes					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	26-MAY-2011	07-JUN-2011	✓	07-JUN-2011
V_QA4					
EP075A: Phenolic Compounds					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075B: Polynuclear Aromatic Hydrocarbons					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075C: Phthalate Esters					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075D: Nitrosamines					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075E: Nitroaromatics and Ketones					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075F: Haloethers					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075G: Chlorinated Hydrocarbons					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075H: Anilines and Benzidines					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP076I: Organochlorine Pesticides					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075J: Organophosphorus Pesticides					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					
EP075K: Miscellaneous Compounds					
Soil Glass Jar - Unpreserved V_QA2,	24-MAY-2011	03-JUN-2011	07-JUN-2011	✓	13-JUL-2011
V_QA4					

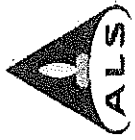


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 Project : 3127840 CAIRNLEA VALIDATION SAMPLING

Matrix: SOIL

Evaluation: x = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis			
			Date extracted	Due for extraction	Date analysed	Due for analysis	Evaluation	
EP203A: Explosives								
Soil Glass Jar - Unpreserved V_QA2	V_QA4	24-MAY-2011	01-JUN-2011	07-JUN-2011	01-JUN-2011	11-JUL-2011	✓	✓



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 Project : 3127840 CAIRNLEA VALIDATION SAMPLING

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: SOIL

Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count			Rate (%)		Evaluation	Quality Control Specification
		QC	Regular	Actual	Expected			
Laboratory Duplicates (DUP)								
Explosives	EP203	1	2	50.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Moisture Content	EA055-103	2	18	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
pH (1:5)	EA002	2	19	10.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	1	2	50.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Sulfate - Calcium Phosphate Soluble	ED040N	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Volatile Organic Compounds	EP074	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Laboratory Control Samples (LCS)								
Explosives	EP203	1	2	50.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	1	2	50.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Sulfate - Calcium Phosphate Soluble	ED040N	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Volatile Organic Compounds	EP074	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Method Blanks (MB)								
Explosives	EP203	1	2	50.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	1	2	50.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Sulfate - Calcium Phosphate Soluble	ED040N	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Volatile Organic Compounds	EP074	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Matrix Spikes (MS)								
Explosives	EP203	1	2	50.0	5.0	✓	ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	1	2	50.0	5.0	✓	ALS QCS3 requirement	
Sulfate - Calcium Phosphate Soluble	ED040N	1	8	12.5	5.0	✓	ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	1	20	5.0	5.0	✓	ALS QCS3 requirement	
Volatile Organic Compounds	EP074	1	12	8.3	5.0	✓	ALS QCS3 requirement	



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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Matrix	Method	Method Descriptions
pH (1:5)	SOIL	EA002	(APHA 21st ed., 4500H+) pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM (1999) Schedule B(3) (Method 103)
Moisture Content	SOIL	EA055-103	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Sulfate - Calcium Phosphate Soluble	SOIL	ED040N	The sample is extracted with a calcium phosphate solution. The phosphate ion displaces the adsorbed sulfate while calcium ions depress the extraction of interfering S from soil organic matter. SO4 in the extract is determined by ICPAES and reported as dry weight in the original soil. This method is compliant with NEPM (1999) Schedule B(3) (Method 406)
Total Metals by ICP-AES	SOIL	EG005T	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	SOIL	EG035T	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Nitrite as N - Soluble by Discrete Analyser	SOIL	EK057G	APHA 21st ed., 4500 NO3-B. Nitrite in a water extract is determined by direct colourimetry by Discrete Analyser.
Nitrate as N - Soluble by Discrete Analyser	SOIL	EK058G	APHA 21st ed., 4500 NO3-F. Nitrate in the 1:5 soil/water extract is reduced to nitrite by way of a cadmium reduction column followed by quantification by Discrete Analyser. Nitrite is determined separately by direct colourimetry and result for Nitrate calculated as the difference between the two results.
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	SOIL	EK059G	APHA 21st ed., 4500 NO3- F. Combined oxidised Nitrogen (NO2+NO3) in a water extract is determined by Cadmium Reduction, and direct colourimetry by Discrete Analyser.
Volatile Scan for Unknowns	SOIL	EP072	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS and unknowns are identified by comparison of peaks with the NIST library. Semi-quantification is by comparison with the closest eluting internal standard.
Volatile Organic Compounds	SOIL	EP074	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Semivolatile Organic Compounds	SOIL	EP075	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 502)
Explosives	SOIL	EP203	USEPA 8330, Modified In-House, UV-DAD, LCMS (APCI in negative mode). Residues of explosives are extracted from air-dried soil samples with acetonitrile. An aliquot of the organic phase is taken and diluted with water for LC/MS determination.
Preparation Methods	Matrix	Method	Method Descriptions



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Preparation Methods	Method	Matrix	Method Descriptors
Calcium Phosphate Extraction for Sulphate as SO4 2-	ED040NPR	SOIL	The sample is extracted with a calcium phosphate solution. The phosphate ion displaces the adsorbed sulphate while calcium ions depress the extraction of interfering S from soil organic matter. SO4 in the extract is determined by ICPAES and reported as dry weight in the original soil. This method is compliant with NEPM (1999) Schedule B(3) (Method 406)
1:5 solid / water leach for soluble analytes	EN84	SOIL	10 g of soil is mixed with 50 mL of distilled water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
Tumbler Extraction for Explosives.	EP203-PR	SOIL	In-house variation of USEPA8330. Sample extractions are performed using end over end tumbling in place of sonic bath extraction.
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.



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Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QW/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	EM1105517-002	V_QA4	Barium	7440-39-3	Not Determined	---	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005T: Total Metals by ICP-AES	EM1105517-002	V_QA4	Manganese	7439-96-5	Not Determined	---	MS recovery not determined, background level greater than or equal to 4x spike level.

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- No Quality Control Sample Frequency Outliers exist.



GHD

180 Lonsdale Street

Melbourne, Victoria 3000

T: (03) 8687 8000 F: (03) 8687 8111 E: melmail@ghd.com.au

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Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	S 33	S 33	S 33	S 33	S 33	25/7/11