

Appendix 8.3

Water Quality Data



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Preliminary Report Number : 08-15834

Project / Site name:	White Knights	Samples received on:	11/07/2008
Your job number:		Samples instructed on:	11/07/2008
Your order number:		Analysis completed by:	Not complete
Report Issue Number:	0	Report issued on:	18/07/2008
Samples Analysed:	3 water samples		

Signed:

Russell Jarvis
General Manager
For & on behalf of i2 Analytical Ltd.

Signed:

Kevin Old
Quality Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Preliminary reports provided at the request of the client should be considered as incomplete and have not been through the complete quality control procedure.
Results contained in preliminary reports may be subject to change and therefore should not be used as a basis for decision making, except at the risk of the client.



Analytical Report Number: 08-15834

Project / Site name: White Knights

Lab Sample Number	109410	109411	109412		
Sample Reference	POND 1	POND 2	POND 3		
Sample Number	None Supplied	None Supplied	None Supplied		
Depth	None Supplied	None Supplied	None Supplied		
Date Sampled	None Supplied	None Supplied	None Supplied		
Time Taken	None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

Chemical Oxygen Demand (COD)	mg/l	3	NONE	31	21	26		
BOD (Biological Oxygen Demand)	mg/l	3	NONE	To follow	To follow	To follow		
Dissolved Oxygen	mg/l	1	NONE	To follow	To follow	To follow		

Speciated PAHs

Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Acenaphthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Fluorene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Chrysene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		

Total PAH

Total EPA-16 PAHs	µg/l	0.2	NONE	< 0.2	< 0.2	< 0.2		
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	10	ISO 17025	< 10	< 10	< 10		
Barium (dissolved)	µg/l	5	ISO 17025	28	29	27		
Beryllium (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	1.3		
Boron (dissolved)	µg/l	10	NONE	42	39	41		
Cadmium (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5		
Chromium (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Copper (dissolved)	µg/l	3	ISO 17025	< 3.0	19	3.2		
Lead (dissolved)	µg/l	5	ISO 17025	< 5.0	10	12		
Mercury (dissolved)	µg/l	1.5	ISO 17025	< 1.5	< 1.5	< 1.5		
Nickel (dissolved)	µg/l	1	ISO 17025	2.3	2.5	2.6		
Selenium (dissolved)	µg/l	10	ISO 17025	< 10	< 10	< 10		
Vanadium (dissolved)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0		
Zinc (dissolved)	µg/l	5	ISO 17025	< 5.0	33	< 5.0		



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Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status		
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	ISO 17025	< 10	< 10	< 10		

Petroleum Hydrocarbons



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Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
TPH7 - Aliphatic >C5 - C6	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aliphatic >C6 - C8	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aliphatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aliphatic >C21 - C34	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aliphatic (C5 - C34)	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic >C5 - C7	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic >C7 - C8	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH7 - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10		



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Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	µg/l	10	ISO 17025	< 10	< 10	< 10		
Chloroethane	µg/l	10	ISO 17025	< 10	< 10	< 10		
Bromomethane	µg/l	10	ISO 17025	< 10	< 10	< 10		
Vinyl Chloride	µg/l	10	ISO 17025	< 10	< 10	< 10		
Trichlorofluoromethane	µg/l	10	ISO 17025	< 10	< 10	< 10		
1,1-dichloroethene	µg/l	10	NONE	< 10	< 10	< 10		
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	10	ISO 17025	< 10	< 10	< 10		
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	ISO 17025	< 10	< 10	< 10		
1,1-dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
N-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
P-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,4-dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	µg/l	10	ISO 17025	< 10	< 10	< 10		
1,2,3-Trichlorobenzene	µg/l	10	ISO 17025	< 10	< 10	< 10		



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Depth				None Supplied	None Supplied	None Supplied		
Date Sampled				None Supplied	None Supplied	None Supplied		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)								
	Units	Limit of detection	Accreditation Status					
Microbiological								
Faecal Coliforms	mpn/100ml	N/A	NONE	> 201	165	> 201		
E. Coli	mpn/100ml	1	NONE	16	3.0	15		
Faecal Streptococci	CFU/100ml	N/A	NONE	41	30	34		



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Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Biological oxygen demand of water	Subcontracted to SAL Manchester.	Subcontracted analysis		W	NONE
Boron in water	Determination of boron by acidification followed by ICP-OES.	In-house method based on MEWAM	L039-UK	W	NONE
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS.	In-house method based on USEPA8263	L017-UK	W	ISO 17025
Chemical oxygen demand in water	Determination of COD in water by oxidation with acidified potassium dichromate at 150°C. Reduced chromate ions assayed colorimetrically.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-UK	W	NONE
E.Coli Subcon Stansted Labs	Subcontracted to Stansted Labs.	subcontracted analysis		W	NONE
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-UK	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L009-UK	W	NONE
TPH7 (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L016-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS.	In-house method based on USEPA8260	L036-UK	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.