APPENDIX D

Investigation Derived Waste Analytical Data

INVESTIGATIVE DERIVED WASTE CHARACTERIZATION SUMMARY TABLES, OU NO. 1 TRANSMITTED TO CENAB 13 NOVEMBER 2002

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13 November 2002

Mr. Bhavish Amin
U.S. Army Corps of Engineers
Attn: CENAB-EN-HT, Room 10200
City Crescent Building
10 Howard Street
Baltimore, MD 21201

W.O. #03886.518.013.0290

Subject: Investigative Derived Waste (IDW) Characterization Summary Tables
Operable Unit (OU) No. 1
DuPont Chambers Works, Deepwater, NJ
Contract No. DACA31-00-D-0023, Delivery Order 0013

Dear Bhavish:

As a follow-up to the Action Item discussed by conference call on 31 October 2001, Weston Solutions, Inc. (WESTON®) is submitting the IDW Characterization Summary Tables for OU No. 1. The enclosed tables consist of four sets of tables for each month IDW was generated (June, July and August 2002) during the Remedial Investigation of OU No. 1. The first table of each set summarizes the contents, number of drums, drum numbers and further description of contents for all the IDW generated that month. The second table is a summary of the IDW characteristics for each drum based on RCRA radiological characteristics. The criteria used for the characterization of each drum is provided in the footnotes to the table. The third table list the sample identification associated with each drum and the characterization of the IDW based on each sample. The fourth set of tables for each month consist of a summary by drum of the radiological value corresponding to the criteria for Unimpatant Quantities of Source Material Uniformly Dispersed in soil or other media provided by U.S. Ecology Idaho, Inc. (one of the USACE contracted disposal facilities). As discussed with USACE and identified as a WESTON/Cabrera Action Item, the average of the results for each drum was calculated and is provided in this forth set of tables.

The overall findings of the data presented is that only five (5) drums are RCRA characteristic. These five drums contain purge water and have been moved to the 1-yr storage area on 12 November 2002. These drums were to be treated on-site at the DuPont Treatment facility, however, the concentration of certain radiological parameters exceeded the levels in the treatment facilities permit for the unfiltered samples. WESTON has provided cost estimates for alternative approaches including filtration and solidification of purge water. These alternatives have been discussed with CENAB. All the drums containing soil do not exceed the criteria for the average value and are therefore classified as Low Activity Radioactive Material (LARM) and can be disposed of under the current USACE contracts for this material.

Please call me if you have any questions regarding this submittal.

Very truly yours,

ROY F. WESTON, INC.

David H. Pohl, P.E., Ph.D.
Senior Project Manager

DHP:kmp

cc: J. Mijares (CENAB)
G. Bock (CENAP)
J. Martino (WESTON)
J. Gerhard (WESTON)
File 2.1

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No. 1
Waste Management
June 2002 Containers
Summary

Waste Inventory-June 2002

Contents	Number of Drums	Drum Number(s)	Futher Desciption of Contents
Spent PPE	15	15, 36, 17, 14, 12, 37, 13, 38, 34, 33, 32, 39, 16,11, 35	
Groundwater/Decon water/Purge water	1	95	Purgewater 1BH013/1BH014
Soil Cuttings	2	73, 94	Soil Cuttings/Acetate Liners
Acetate/Plastic/Visqueen/PVC	1	19	
Wood	0	0	
TOTAL	**19**		

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No. 1
Waste Management
June 2002 Containers
Characterization-Summary

Drum Number	Date	Contents	Hazardous[1]	Non-Hazardous	Radiological Characteristics[2]			
					Average < 0.05% by weight (LARM)	Average > 0.05% by weight (LLRM)	Average < 2,000 pCi/g (LARM)	Average > 2,000 pCi/g (LLRM)
94	6/25/2002	Soil Cuttings	No	Yes	Yes 0.17<1	No	Yes 327 pCi/g < 2,000 pCi/g	No
73	6/26/2002	Soil Cuttings	No	Yes	Yes 0.41<1	No	Yes 804 pCi/g < 2,000 pCi/g	No
					Radiological Characteristics[3]			
95	6/25/2002	Purgewater	Yes Benzene 12,000 ug/L Trichloroethene 3,400 ug/L Vinyl Chloride 790 ug/L Lead (Total) 6,450-8,350ug/L Lead (Dissolved) 7,250 - 7,590 u	No	Yes Gross Alpha Total 56.74 pCi/L			

[1] = A yes indicates RCRA characteristic based on Corrosivity, Igniatablity, Reactivity and Toxicity (TCLP)

[2] = Soil Cuttings - A yes indicates an exceedance of the criteria listed for Unimportant Quantities of Source Material Uniformly Dispersed in Soil or Other Media.

[3] = Groundwater (Filtered and nonfiltered samples) - A yes indicates exceedance of current and proposed EPA drinking water regulation limits: Gross Alpha - 15 pCi/l; Gross Beta - 50 pCi/l (not an MCL but an effluent criteria for DuPont's treatment facility (DET)); Radium - 266/228-5 pCi/l; and Total Uranium - 20.3 pCi/l (this limit will be in effect 12/8/03 - assumed activity of 6.77 x 10^{-7} Ci/g for natural uranium). These limits are listed in DET's permit.

USACE-DuPont Chambers Works-FUSRAP Site
Operable Unit No 1
Waste Management
June 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Idx	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characteristics[2&3]
94	6 25 2002	Soil/Cuttings	1BH007-BS-055-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			1BH011-BS-050-0	Metals, TCLP VOCs, RCRA Char., TCL Pest PCB, TCL VOCs	No	Yes	NA
			1BH013-BS-090-0	Metals, TCLP VOCs, RCRA Char., TCL Pest PCB, TCL VOCs	No	Yes	NA
			1BH018-BS-080-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			1BH033-BS-020-0	Gamma Spec and Isotopic Uranium by Alpha Spec, TCLP Metals, TCLP VOCs, RCRA Char., TCL Pest PCB,	No	Yes	NA
			1BH005-BS-040-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH010-BS-000-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH010-BS-020-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH022-BS-000-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH008-BS-010-0	Gamma Spec and Isotopic Uranium by Alpha Spec, TAL Metals	NA	NA	No
			1BH009-BS-000-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH009-BS-020-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH014-BS-040-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH014-SS-000-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH015-BS-000-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH005-BS-040-0	Gamma Spec	NA	NA	No
			1BH007-BS-040-0	Gamma Spec	NA	NA	No
			1BH007-SS-000-0	Gamma Spec	NA	NA	No
			1BH008-BS-010-0	Gamma Spec	NA	NA	No
			1BH009-BS-000-0	Gamma Spec	NA	NA	No
			1BH009-BS-020-0	Gamma Spec	NA	NA	No
			1BH010-BS-000-0	Gamma Spec	NA	NA	No
			1BH010-BS-020-0	Gamma Spec	NA	NA	No
			1BH012-BS-050-0	Gamma Spec	NA	NA	No
			1BH012-SS-000-0	Gamma Spec	NA	NA	No
			1BH013-BS-025-0	Gamma Spec	NA	NA	No
			1BH013-BS-060-0	Gamma Spec	NA	NA	No
			1BH014-BS-040-0	Gamma Spec	NA	NA	No
			1BH014-SS-000-0	Gamma Spec	NA	NA	No
			1BH015-BS-000-0	Gamma Spec	NA	NA	No
			1BH018-BS-055-0	Gamma Spec	NA	NA	No
			1BH018-SS-000-0	Gamma Spec	NA	NA	No
			1BH019-BS-050-0	Gamma Spec	NA	NA	No
			1BH019-SS-000-0	Gamma Spec	NA	NA	No
			1BH020-BS-065-0	Gamma Spec	NA	NA	No
			1BH020-SS-000-0	Gamma Spec	NA	NA	No
			1BH021-BS-085-0	Gamma Spec	NA	NA	No
			1BH021-SS-000-0	Gamma Spec	NA	NA	No
73	6 26 2002	Soil/Cuttings	1BH004-BS-050-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	NA	NA	No
			1BH004-SS-000-0	Gamma Spec	No	Yes	NA
			1BH004-BS-080-0	Gamma Spec	NA	NA	No
			1BH002-BS-050-0	Gamma Spec	NA	NA	No
			1BH002-SS-000-0	Gamma Spec	NA	NA	No
			1BH034-SS-000-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
			1BH034-BS-050-0	Gamma Spec	NA	NA	No
			1BH034-BS-015-0	Gamma Spec and Isotopic Uranium by Alpha Spec	NA	NA	No
95	6 25 2002	Purgewater	1BH013-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis), TCL Pest PCBs, TCLSVOCs, TCL VOCs, TOC	Yes Benzene 12,000 E ug L Trichloroethene 3,400 ug L Vinyl Chloride 790 ug L	No	No
			1BH014-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis)	NA	NA	No
			1BH012-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	Yes Lead (Total) 6,450 ug L Lead (Dissolved) 7,250 ug L	No	No
			1BH014-GW-001-1	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis)	NA	NA	No
			1BH019-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	No	Yes	No
			1BH020-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis)	NA	NA	No
			1BH021-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	No	Yes	No
			1BH007-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis) Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	Yes Lead (Total) 8,350 ug L Lead (Dissolved) 7,590 ug L	No	Yes Gross Alpha Total 56 74 pCi L
			1BH018-GW-001-0	Gamma Spec (Total Dis), Gross Alpha Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis)	NA	NA	No

[1] = A yes indicates RCRA characteristic based on Corrosivity, Ignitablity, Reactivity and Toxicity (TCLP)

[2] = Soil Cuttings - A yes indicates an exceedance of the criteria listed for Unimportant Quantities of Source Material Uniformly Dispersed in Soil or Other Media

[3] Groundwater (Filtered and nonfiltered samples) - A yes indicates exceedance of current and proposed EPA drinking water regulation limits. Gross Alpha - 15 pCi/l. Gross Beta - 50 pCi/l (not an MCL but an effluent criteria for DuPont's treatment facility (DET)). Radium - 266/228-5 pCi Total Uranium - 20 3 pCi l (this limit will be in effect 12 8 03 - assumed activity of 6 77 x 10^{-7} Ci g for natural uranium). These limits are listed in DET's permit

DuPont Chambers Works FUSRAP Site - OU No. 1
IDW Characterization Summaries
Drum 73

FieldSampleID	1BH002-BS-050-0	1BH002-SS-000-0	1BH004-BS-080-0	1BH004-SS-000-0	1BH034-BS-015-0
Samp.Date	26-Jun-02	26-Jun-02	26-Jun-02	26-Jun-02	28-Jun-02
Actinium-228 pCi/g	0.43	0.76	1.24	1.08	0.45
Beryllium-7 pCi/g	0.00	0.00	0.58	0.00	0.00
Bismuth-212 pCi/g	0.00	0.00	1.29	1.53	0.00
Bismuth-214 pCi/g	0.22	0.56	0.67	0.59	0.32
Cesium-137 pCi/g	0.00	0.00	0.00	0.00	0.00
Cobalt-60 pCi/g	0.00	0.00	0.00	0.00	0.00
Lead-212 pCi/g	0.66	0.72	1.49	1.12	0.37
Lead-214 pCi/g	0.42	0.69	0.74	0.63	0.36
Potassium-40 pCi/g	7.24	12.79	17.38	13.13	4.50
Protactinium-234M pCi/g	0.00	84.55	0.00	0.00	39.66
Thallium-208 pCi/g	0.13	0.24	0.48	0.37	0.11
Thorium-234 pCi/g	0.00	54.03	2.14	4.19	24.96
Uranium-234 pCi/g	0.00	0.00	0.00	0.00	58.62
Uranium-235 pCi/g	0.00	3.68	0.00	0.00	4.51
Uranium-238 pCi/g	0.00	0.00	0.00	0.00	59.39
Uranium-Total pCi/g	0.00	111.74	4.54	8.53	127.60

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	0.64	139.83	3.55	5.41	183.31
Thorium 232	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	142.26	2.14	4.19	187.14

For Natural Uranium and Natural Thorium Mixture					
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.99	0.03	0.04	1.30
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	8.96	1957.62	49.7	75.74	2566.34

For Refined Uranium and Thorium Mixture					
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.43	0.01	0.01	0.56
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	711.3	10.7	20.95	935.7

DuPont Chambers Works FUSRAP Site - OU No. 1
IDW Characterization Summaries
Drum 73

FieldSampleID	1BH034-BS-050-0	1BH034-SS-000-0	Min	Max	Avg
Samp.Date	26-Jun-02	26-Jun-02			
Actinium-228 pCi/g	0.65	1.07	0.43	1.24	0.18
Beryllium-7 pCi/g	0.00	0.00	0.00	0.58	0.02
Bismuth-212 pCi/g	0.65	0.00	0.00	1.53	0.11
Bismuth-214 pCi/g	0.42	0.77	0.22	0.77	0.11
Cesium-137 pCi/g	0.00	0.00	0.00	0.00	0.00
Cobalt-60 pCi/g	0.00	0.00	0.00	0.00	0.00
Lead-212 pCi/g	0.72	0.85	0.37	1.49	0.19
Lead-214 pCi/g	0.55	1.06	0.36	1.06	0.14
Potassium-40 pCi/g	7.00	8.63	4.50	17.38	2.21
Protactinium-234M pCi/g	0.00	484.50	0.00	484.50	19.02
Thallium-208 pCi/g	0.21	0.27	0.11	0.48	0.06
Thorium-234 pCi/g	1.69	327.30	0.00	327.30	12.95
Uranium-234 pCi/g	0.00	347.20	0.00	347.20	12.68
Uranium-235 pCi/g	0.19	22.81	0.00	22.81	0.97
Uranium-238 pCi/g	0.00	340.80	0.00	340.80	12.51
Uranium-Total pCi/g	3.56	677.41	0.00	677.41	29.17

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	2.66	1501.63	0.58	1501.63	57.41
Thorium 232	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	1.88	1522.61	0.00	1522.61	58.13

			Min	Max	Avg
For Natural Uranium and Natural Thorium Mixture					
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.02	10.65	0.00	10.65	0.41
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	37.24	21022.82	8.12	21022.8	803.7

			Min	Max	Avg
For Refined Uranium and Thorium Mixture					
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	4.57	0.00	4.57	0.17
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	9.4	7613.05	0	7613.05	290.7

DuPont Chambers Works FUSRAP Site - OU No. 1
IDW Characterization Summaries
Drum 94

FieldSampleID	1BH005-BS-040-0	1BH007-BS-040-0	1BH007-SS-000-0	1BH008-BS-010-0	1BH009-BS-000-0	1BH009-BS-020-0	1BH010-BS-000-0
Samp.Date	14-Jun-02	25-Jun-02	25-Jun-02	19-Jun-02	18-Jun-02	18-Jun-02	17-Jun-02
Actinium-228 pCi/g	0.69	0.44	0.37	0.83	0.76	0.74	0.56
Beryllium-7 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bismuth-212 pCi/g	0.00	0.00	0.82	1.90	2.04	1.02	0.72
Bismuth-214 pCi/g	0.43	0.44	0.26	0.55	0.61	0.59	0.42
Cesium-137 pCi/g	0.00	5.25	0.33	0.00	0.00	0.00	0.00
Cobalt-60 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lead-212 pCi/g	0.72	0.70	0.32	0.76	0.76	0.80	0.49
Lead-214 pCi/g	0.30	0.28	0.25	0.48	0.55	0.64	0.42
Potassium-40 pCi/g	5.98	6.73	6.35	7.75	6.27	7.15	5.59
Protactinium-234M pCi/g	0.00	0.00	0.00	0.00	201.30	0.00	14.54
Thallium-208 pCi/g	0.22	0.10	0.12	0.25	0.10	0.25	0.15
Thorium-234 pCi/g	4.81	0.00	0.00	0.98	105.00	1.63	8.87
Uranium-234 pCi/g	3.11	0.00	0.00	0.91	125.20	1.67	8.17
Uranium-235 pCi/g	0.14	0.00	0.17	0.00	6.06	0.00	0.54
Uranium-238 pCi/g	3.00	0.00	0.00	0.64	130.70	1.55	7.85
Uranium-Total pCi/g	9.66	0.00	0.00	1.99	218.45	3.36	18.46

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	11.65	0.72	0.51	3.56	563.36	6.08	40.27
Thorium 232	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	11.06	0.00	0.17	2.53	568.26	4.85	39.97

For Natural Uranium and Natural Thorium Mixture							
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.08	0.01	0.00	0.03	4.00	0.04	0.29
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	163.1	10.08	7.14	49.84	7887.04	85.12	563.78

For Refined Uranium and Thorium Mixture							
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.03	0.00	0.00	0.01	1.71	0.01	0.12
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	55.3	0	0.85	12.65	2841.3	24.25	199.85

DuPont Chambers Works FUSRAP Site - OU No. 1
IDW Characterization Summaries
Drum 94

FieldSampleID	1BH010-BS-020-0	1BH012-BS-050-0	1BH012-SS-000-0	1BH013-BS-025-0	1BH013-BS-060-0	1BH014-BS-040-0	1BH014-SS-000-0
Samp.Date	17-Jun-02	21-Jun-02	21-Jun-02	21-Jun-02	21-Jun-02	20-Jun-02	20-Jun-02
Actinium-228 pCi/g	0.69	0.47	0.44	0.44	0.97	0.94	0.89
Beryllium-7 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bismuth-212 pCi/g	0.69	0.43	0.36	0.98	0.00	1.13	1.93
Bismuth-214 pCi/g	0.45	0.27	0.41	0.27	0.66	0.55	0.81
Cesium-137 pCi/g	0.00	0.05	0.13	0.00	0.00	0.00	0.00
Cobalt-60 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lead-212 pCi/g	0.56	0.48	0.49	0.37	1.19	0.89	0.91
Lead-214 pCi/g	0.49	0.32	0.38	0.23	0.77	0.58	0.83
Potassium-40 pCi/g	6.39	5.17	13.79	4.87	9.91	6.19	10.52
Protactinium-234M pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	15.56
Thallium-208 pCi/g	0.20	0.17	0.13	0.12	0.23	0.23	0.29
Thorium-234 pCi/g	1.18	0.00	2.40	0.00	0.96	0.00	10.26
Uranium-234 pCi/g	1.11	0.00	0.00	0.00	0.00	1.72	10.04
Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.27
Uranium-238 pCi/g	1.00	0.00	0.00	0.00	0.00	1.26	10.49
Uranium-Total pCi/g	2.44	0.00	0.00	0.00	0.00	0.00	20.99

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	4.23	0.59	3.19	0.50	2.39	4.11	47.99
Thorium 232	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	3.29	0.00	2.40	0.00	0.96	2.98	46.62

For Natural Uranium and Natural Thorium Mixture							
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.03	0.00	0.02	0.00	0.02	0.03	0.34
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	59.22	8.26	44.66	7	33.46	57.54	671.86

For Refined Uranium and Thorium Mixture							
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.00	0.01	0.00	0.00	0.01	0.14
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	16.45	0	12	0	4.8	14.9	233.1

DuPont Chambers Works FUSRAP Site - OU No. 1
IDW Characterization Summaries
Drum 94

FieldSampleID	1BH015-BS-000-0	1BH018-BS-055-0	1BH018-SS-000-0	1BH019-BS-050-0	1BH019-SS-000-0	1BH020-BS-065-0	1BH020-SS-000-0
Samp.Date	19-Jun-02	25-Jun-02	25-Jun-02	25-Jun-02	25-Jun-02	24-Jun-02	24-Jun-02
Actinium-228 pCi/g	0.48	0.79	0.90	0.82	0.57	1.05	0.57
Beryllium-7 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bismuth-212 pCi/g	0.48	1.28	2.29	1.03	1.03	0.93	1.15
Bismuth-214 pCi/g	0.50	0.40	0.67	0.78	0.37	0.42	0.58
Cesium-137 pCi/g	0.00	0.00	0.06	0.00	0.00	0.00	0.00
Cobalt-60 pCi/g	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Lead-212 pCi/g	0.63	0.79	1.05	1.16	0.50	0.89	0.59
Lead-214 pCi/g	0.48	0.29	0.58	0.38	0.39	0.57	0.35
Potassium-40 pCi/g	5.96	12.19	9.42	9.95	9.35	8.17	12.16
Protactinium-234M pCi/g	0.00	0.00	9.14	0.00	0.00	0.00	0.00
Thallium-208 pCi/g	0.15	0.19	0.22	0.35	0.14	0.29	0.15
Thorium-234 pCi/g	2.46	0.00	10.04	2.51	1.25	0.00	0.00
Uranium-234 pCi/g	2.70	0.00	0.00	0.00	0.00	0.00	0.00
Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.31	0.00	0.00
Uranium-238 pCi/g	3.23	0.00	0.00	0.00	0.00	0.00	0.00
Uranium-Total pCi/g	5.04	0.00	0.00	0.00	0.00	0.00	0.00

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	9.37	0.69	20.43	3.67	2.01	0.99	0.93
Thorium 232	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	8.39	0.00	19.18	2.51	1.56	0.00	0.00

For Natural Uranium and Natural Thorium Mixture							
Calc (Conc U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.07	0.00	0.14	0.03	0.01	0.01	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	131.18	9.66	286.02	51.38	28.14	13.86	13.02

For Refined Uranium and Thorium Mixture							
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.03	0.00	0.06	0.01	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	41.95	0	95.9	12.55	7.8	0	0

DuPont Chambers Works FUSRAP Site - OU No. 1
IDW Characterization Summaries
Drum 94

FieldSampleID	1BH021-BS-085-0	1BH021-SS-000-0	1BH022-BS-000-0	1BH033-BS-020-0	Min	Max	Avg
Samp.Date	24-Jun-02	24-Jun-02	17-Jun-02	20-Jun-02			
Actinium-228 pCi/g	0.90	0.60	0.72	0.52	0.37	1.05	0.54
Beryllium-7 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bismuth-212 pCi/g	0.83	0.00	0.69	0.69	0.00	2.29	0.70
Bismuth-214 pCi/g	0.43	0.47	0.39	0.26	0.26	0.81	0.37
Cesium-137 pCi/g	0.00	0.00	0.00	0.00	0.00	5.25	0.18
Cobalt-60 pCi/g	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Lead-212 pCi/g	0.87	1.30	0.87	0.39	0.32	1.30	0.58
Lead-214 pCi/g	0.55	0.34	0.51	0.27	0.23	0.83	0.35
Potassium-40 pCi/g	11.26	11.21	8.05	3.71	3.71	13.79	6.38
Protactinium-234M pCi/g	0.00	0.00	0.00	0.00	0.00	201.30	7.52
Thallium-208 pCi/g	0.24	0.30	0.22	0.11	0.10	0.35	0.15
Thorium-234 pCi/g	0.79	1.81	3.63	0.00	0.00	105.00	4.96
Uranium-234 pCi/g	0.00	0.00	4.32	0.87	0.00	125.20	4.99
Uranium-235 pCi/g	0.00	0.00	0.14	0.00	0.00	6.06	0.24
Uranium-238 pCi/g	0.00	0.00	3.91	0.69	0.00	130.70	5.14
Uranium-Total pCi/g	0.00	0.00	7.33	0.00	0.00	218.45	8.99
Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	1.77	2.62	12.76	2.09	0.49	563.84	23.33
Thorium 232	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.79	1.81	12.00	1.56	0.00	568.26	22.84

					Min	Max	Avg
For Natural Uranium and Natural Thorium Mixture							
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.02	0.09	0.01	0.00	4.00	0.17
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	24.78	36.68	178.64	29.26	6.86	7893.76	326.6

					Min	Max	Avg
For Refined Uranium and Thorium Mixture							
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.01	0.04	0.00	0.00	1.71	0.07
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	3.95	9.05	60	7.8	0	2841.3	114.2

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No. 1
Waste Mangement
July 2002 Containers
Summary

Waste Inventory-July 2002

Contents	Number of Drums	Drum Number(s)	Futher Desciption of Contents
Spent PPE	22	2, 3, 4, 5, 6, 9, 18, 22, 23, 26, 27, 28, 29, 30, 31, 53, 54, 55, 57, 58, 72, 74	Drum 3-Spent PPE/Visqueen
Groundwater/Decon water/Purge water	4	87, 91, 96, 97	Drum 87-Purge GW /DNAPL
Soil Cuttings	6	8, 10, 25, 49, 60, 77	Drum 60-Grout from TrashPump; Drum 77-Soil Sample Drum
Acetate/Plastic/Visqueen/PVC	6	7, 20, 24, 52, 56, 75	Drums 7, 20, 52-Acetate liners; Drum 24-Visqueen/Tubing; Drum 56-Acetate/PVC; Drum 75-Acetate/Visqueen
Wood	0	0	
TOTAL	**38**		

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No. 1
WasteManagement
July 2002 Containers
Characterization-Summary

Drum Number	Date	Contents	Hazardous[1]	Non-Hazardous	Radiological Characteristics[2]			
					Average <0.05% by weight (LARM)	Average >0.05% by weight (LLRM)	Average < 2,000 pCi/g (LARM)	Average >2,000 pCi/g (LLRM)
10	7/3/2002	Soil/Acetate	NA	NA	Yes 0.02<1	No	Yes 41.84 pCig < 2,000 pCi/g	No
8	7/9/2002	Soil/Acetate	NA	NA	Yes 0.02<1	No	Yes 46.42 pCig < 2,000 pCi/g	No
77	7/9/2002	Soil Sample Drum	NA	NA	Same as Drum 8			
25	7/11/2002	Soil Cuttings	No	Yes	Yes 0.09<1	No	Yes 183.22 pCig < 2,000 pCi/g	No
49	7/19/2002	Soil Cuttings	No	Yes	Yes 0.03<1	No	Yes 50.17 pCig < 2,000 pCi/g	No
60	7/25/2002	Grout from trash pump	NA	NA	NA	NA	NA	NA
					Radiological Characteristics[3]			
96	7/9/2002	Purgewater and decontamination water	No	Yes	Yes Gross Alpha (Total) 19.08-20.67 pCi/L			
87	7/10/2002	Purge Groundwater w/DNAPL	No	Yes	Yes Gross Alpha (Total) 96.67 -141.04 pCi/L Gross Beta (Total) 205.51-229.8 pCi/L Radium Total (Total) 9.15 -13.92 pCi/L Uranium Total 18.35-46.33 pCi/L			
97	7/12/2002	Purgewater	Yes Benzene 8,600 ug/L	No	Yes Gross Beta (Dissolved) 61.69 pCi/L			
91	7/19/2002	Decontamination water	Yes Benzene 720 - 3,900 ug/L 1,4 Dichlorobenzene 24,000 ug/L Lead (Total) 13,700 ug/L	No	Yes Gross Alpha 38.057 - 275.9 pCi/L Gross Beta (Total) 51.1-397.74 pCi/L Radium Total (Total) 6.66 - 23.94 pCi/L Uranium Total 18.27-39.86 pCi/L			

[1] = A yes indicates RCRA characteristic based on Corrosivity, Igniatablity, Reactivity and Toxicity (TCLP)

[2] = Soil Cuttings - A yes indicates an exceedance of the criteria listed for Unimportant Quantities of Source Material Uniformly Dispersed in Soil or Other Media.

[3] = Groundwater (Filtered and nonfiltered samples) - A yes indicates exceedance of current and proposed EPA drinking water regulation limits: Gross Alpha - 15 pCi/l; Gross Beta - 50 pCi/l (not an MCL but an effluent criteria for DuPont's treatment facility (DET)); Radium - 266/228-5 pCi/l; and Total Uranium - 20.3 pCi/l (this limit will be in effect 12/8/03 - assumed activity of 6.77 x 10^{-7} Ci/g for natural uranium). These limits are listed in DET's permit.

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No 1
Waste Mangement
July 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Ids	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characteristics[2][3]
10	7/3/2002	Soil/Acetate	1BH006-BS-055-0	Gamma Spec	NA	NA	No
			1BH006-SS-000-0	Gamma Spec	NA	NA	No
			1BH016-BS-050-0	Gamma Spec	NA	NA	No
			1BH017-BS-050-0	Gamma Spec	NA	NA	No
			1BH017-SS-000-0	Gamma Spec	NA	NA	No
			1BH023-BS-050-0	Gamma Spec	NA	NA	No
			1BH023-SS-000-0	Gamma Spec	NA	NA	No
			1BH029-BS-050-0	Gamma Spec	NA	NA	No
			1BH029-SS-000-0	Gamma Spec	NA	NA	No
			1BH016-SS-000-0	Gamma Spec	NA	NA	No
			1BH024-BS-050-0	Gamma Spec	NA	NA	No
			1BH024-SS-000-0	Gamma Spec	NA	NA	No
			1BH025-BS-050-0	Gamma Spec	NA	NA	No
			1BH025-SS-000-0	Gamma Spec	NA	NA	No
8	7/9/2002	Soil/Acetate	1BH011-BS-050-0	Gamma Spec	NA	NA	No
			1BH011-SS-000-0	Gamma Spec	NA	NA	No
77	7/9/2002	Soil Sample Drum	1BH003-BS-050-0	Gamma Spec	NA	NA	No
			1BH003-SS-000-0	Gamma Spec	NA	NA	No
			1BH035-BS-050-0	Gamma Spec	NA	NA	No
			1BH035-SS-000-0	Gamma Spec	NA	NA	No
25	7/11/2002	Soil Cuttings	1BH020-SS-000-0	TCLP Metals	NA	NA	No
			1BH026-SS-000-0	Gamma Spec	NA	NA	No
			1BH026-BS-050-0	Gamma Spec	NA	NA	No
			1BH026-SS-000-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest/PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			2BH020-SS-000-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest/PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			1BH001-BS-050-0	Gamma Spec	NA	NA	No
			1BH001-SS-000-0	Gamma Spec	NA	NA	No
			1BH027-BS-050-0	Gamma Spec	NA	NA	No
			1BH027-SS-000-0	Gamma Spec	NA	NA	No
			1BH028-BS-050-0	Gamma Spec	NA	NA	No
			1BH028-SS-000-0	Gamma Spec	NA	NA	No
			2BH011-BS-050-0	Gamma Spec	NA	NA	No
			2BH011-SS-000-0	Gamma Spec	NA	NA	No
			2BH020-BS-050-0	Gamma Spec	NA	NA	No
			2BH020-SS-000-0	Gamma Spec	NA	NA	Yes 2509.4 pCi/g > 2,000 pCi/g 1.48 >1
			2BH042-BS-050-0	Gamma Spec	NA	NA	No
			2BH042-SS-000-0	Gamma Spec	NA	NA	Yes 5481.56 pCi/g > 2,000 pCi/g 2.99 > 1
49	7/19/2002	Soil Cuttings	2BH001-BS-005-0	Gamma Spec	NA	NA	No
			2BH001-BS-050-0	Gamma Spec	NA	NA	No
			2BH002-BS-005-0	Gamma Spec	NA	NA	No
			2BH002-BS-050-0	Gamma Spec	NA	NA	No
			2BH003-BS-050-0	Gamma Spec	NA	NA	No
			2BH003-SS-000-0	Gamma Spec	NA	NA	No
			2BH008-BS-005-0	Gamma Spec	NA	NA	No
			2BH016-BS-005-0	Gamma Spec	NA	NA	No
			2BH016-BS-050-0	Gamma Spec	NA	NA	No
			2BH004-BS-015-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest/PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			2BH004-SS-000-0	Gamma Spec	NA	NA	No
			2BH004-BS-050-0	Gamma Spec	NA	NA	No
			2BH005-BS-005-0	Gamma Spec	NA	NA	No
			2BH005-BS-050-0	Gamma Spec	NA	NA	No
			2BH006-BS-005-0	Gamma Spec	NA	NA	No
			2BH006-BS-070-0	Gamma Spec	NA	NA	No
			2BH007-BS-005-0	Gamma Spec	NA	NA	No
			2BH007-BS-050-0	Gamma Spec	NA	NA	No
			2BH008-BS-050-0	Gamma Spec	NA	NA	No
			2BH009-BS-005-0	Gamma Spec	NA	NA	No
			2BH009-BS-050-0	Gamma Spec	NA	NA	No
			2BH010-BS-005-R	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest/PCB, TCL SVOCs, TCL VOCs	No	Yes	NA

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No. 1
Waste Mangement
July 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Ids	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characteristics[2][3]
			2BH010-BS-005-0	Gamma Spec	NA	NA	No
			2BH010-BS-050-0	Gamma Spec	NA	NA	No
			2BH014-BS-005-R	Gamma Spec	NA	NA	No
			2BH014-BS-050-0	Gamma Spec	NA	NA	No
			2BH018-BS-015-R	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char., TAL Metals, TCL Pest/PCB, TCL SVOCs, TCL VOCs	No	Yes	No
60	7-25-2002	Grout from trash pump	None	None	NA	NA	NA
96	7-9-2002	Purgewater and decontamination water	1BH023-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 19.08 pCi/L
			1BH024-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
			1BH025-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			1BH016-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			1BH017-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	No	Yes	Yes Uranium Total 20.67 pCi/L
87	7-10-2002	Purge Groundwater w/DNAPL	1BH002-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 141.04 pCi/L Gross Beta (Total) 205.51 pCi/L Radium Total (Total) 9.15 pCi/L
			1BH003-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			1BH004-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 96.67 pCi/L Gross Beta (Total) 229.8 pCi/L Radium Total (Total) 13.92 pCi/L
			1BH011-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
97	7-12-2002	Purgewater	1BH001-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
			1BH006-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			1BH034-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis), TCL Pest/PCBs, TCLSVOCs, TCL VOCs, TOC	Yes Benzene 8.,600 ug/L	No	Yes Gross Beta (Dissolved) 61.69 pCi/L
			1BH035-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
			1BH034-GW-001-1	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No 1
Waste Mangement
July 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Ids	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characteristics[2][3]
91	7 19 2002	Decontamination water	1BH026-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis), TCL Pest/PCBs, TCLSVOCs, TCL VOCs	Yes Benzene 3,900 ug/L 1,4 Dichlorobenzene 24,000 ug/L	No	No
			2BH011-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
			2BH020-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
			2BH042-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	Yes Lead (Total) 13,700 ug/L	No	Yes Gross Alpha 38.057 pCi/L Uranium Total 39.86 pCi/L
			2BH008-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), TCL Pest/PCBs, TCLSVOCs, TCL VOCs, TOC	Yes Benzene 720 ug/L	No	Yes Gross Alpha (Total) 99.65 pCi/L Gross Beta (Total) 174.7 pCi/L Radium Total (Total) 11.12 pCi/L
			2BH003-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 59.5 pCi/L Gross Beta (Total) 133.19 pCi/L Radium Total (Total) 7.27 pCi/L
			2BH016-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 74.92 pCi/L Gross Beta (Total) 90.29 pCi/L Radium Total (Total) 6.66 pCi/L
			2BH006-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 66.33 pCi/L Gross Beta (Total) 51.1 pCi/L Radium Total (Total) 9.2 pCi/L
			2BH001-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			2BH005-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			2BH010-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 252.58 pCi/L Gross Beta (Total) 397.74 pCi/L Radium Total (Total) 23.94 pCi/L Uranium Total (Total) 27.28 pCi/L
			2BH014-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis).	NA	NA	Yes Gross Alpha (Total) 275.9 pCi/L Gross Beta (Total) 328.64 pCi/L Radium Total (Total) 12.49 pCi/L
			2BH007-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis),	NA	NA	No
			2BH004-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No

[1] = A yes indicates RCRA characteristic based on Corrosivity, Igniatablity, Reactivity and Toxicity (TCLP)

[2]= Soil Cuttings - A yes indicates an exceedance of the criteria listed for Unimportant Quantities of Source Material Uniformly Dispersed in Soil or Other Media.

[3] Groundwater (Filtered and nonfiltered samples) - A yes indicates exceedance of current and proposed EPA drinking water regulation limits Gross Alpha - 15 pCi/l, Gross Beta - 50 pCi/l (not an MCL but an effluent criteria for DuPont's treatment facility (DET)), Radi 266/228-5 pCi/l, and Total Uranium - 20 3 pCi 1 (this limit will be in effect 12/8/03 - assumed activity of 6 77 x 10^{-7} Ci/g for natural uranium) These limits are listed in DET's permit

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No. 1
Waste Mangement
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July All Data

FieldSampleID	1BH024-SS-000-0	1BH024-BS-050-0	1BH025-SS-000-0	1BH025-BS-050-0	1BH001-BS-050-0	1BH001-SS-000-0	1BH003-BS-050-0	1BH003-SS-000-0	1BH006-BS-055-0	1BH006-SS-000-0
Samp.Date	3-Jul-02	3-Jul-02	3-Jul-02	3-Jul-02	10-Jul-02	10-Jul-02	9-Jul-02	9-Jul-02	2-Jul-02	2-Jul-02
Actinium-228 pCi/g	0.9700	0.5200	0.5800	0.6700	1.0100	0.8600	0.9900	0.7900	1.1700	0.5900
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	1.7500	0.7900	1.0300	0.6000	0.0000	1.2000	0.7400	1.2400	1.1700	0.0000
Bismuth-214 pCi/g	0.8200	0.5800	0.5100	0.4000	0.5500	0.6600	0.6700	0.7100	0.7500	0.6900
Cesium-137 pCi/g	0.0800	0.0000	0.0000	0.0000	0.0000	0.0400	0.0000	0.0000	0.0000	0.0000
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	1.0400	0.7400	0.6700	0.6300	1.1100	0.8000	1.2500	0.8900	1.5000	0.8500
Lead-214 pCi/g	0.9100	0.3600	0.4300	0.3900	0.6100	0.7200	0.5900	0.7600	0.8000	0.6000
Potassium-40 pCi/g	7.0900	5.9700	5.1700	7.5500	13.1100	8.2700	11.9900	6.6400	14.3300	6.8400
Protactinium-234M pCi/g	0.0000	0.0000	13.6500	0.0000	5.9600	15.0200	0.0000	31.3900	0.0000	0.0000
Thallium-208 pCi/g	0.3200	0.2000	0.2100	0.2300	0.2600	0.2900	0.3100	0.2100	0.4400	0.1600
Thorium-234 pCi/g	2.2200	0.0000	4.8500	0.0000	2.1100	9.6300	1.1000	19.6300	3.3000	0.0000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.6500	0.0000	1.4800	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	4.6600	0.0000	9.8600	0.0000	4.3200	19.9000	0.0000	40.4700	6.8100	0.0000
Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	3.95	0.94	19.44	0.79	9.23	26.03	2.36	52.49	4.85	1.29
Thorium 232	0	0	0	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	2.22	0.00	18.50	0.00	8.07	25.30	1.10	52.50	3.30	0.00
For Natural Uranium and Natural Thorium Mixture										
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.03	0.01	0.14	0.01	0.07	0.18	0.02	0.37	0.03	0.01
< or = 1, Highlighted if fails										
Calc (pCi/g U x 14 + pCi/g Th x 10)	55.3	13.16	272.16	11.06	129.22	364.42	33.04	734.86	67.9	18.06
< or = 2,000 pCi/g, Highlighted if fails										
For Refined Uranium and Thorium Mixture										
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.50	0.12	2.47	0.10	1.17	0.08	0.00	0.16	0.01	0.00
< or = 1, Highlighted if fails										
Calc (pCi/g U x 5 + pCi/g Th x 10)	553	131.6	2721.6	110.6	1292.2	126.5	5.5	262.5	16.5	0
< or = 2,000 pCi/g, Highlighted if fails										

USACE-DuPont Chambers Works - FUSRAP Site
Operable Unit No 1
Waste Mangement
July 2002 Containers
July All Data

FieldSampleID	1BH011-BS-050-0	1BH011-SS-000-0	1BH016-BS-050-0	1BH016-SS-000-0	1BH017-BS-050-0	1BH017-SS-000-0	1BH023-BS-050-0	1BH023-SS-000-0	1BH026-BS-050-0	1BH026-SS-000-5
Samp.Date	8-Jul-02	8-Jul-02	1-Jul-02	1-Jul-02	2-Jul-02	2-Jul-02	1-Jul-02	1-Jul-02	11-Jul-02	11-Jul-02
Actinium-228 pCi/g	0.8700	0.5900	0.7500	0.5700	0.5700	0.0000	0.6100	0.7400	0.4600	0.7300
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.9600	0.4700	1.4600	0.9300	0.0000	0.0000	0.9800	0.8000	0.0000	1.5800
Bismuth-214 pCi/g	0.4600	0.6300	0.5500	0.6500	0.2300	0.1700	0.6600	0.6000	0.2900	0.4600
Cesium-137 pCi/g	0.0000	0.0000	0.0000	0.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	0.7900	0.6700	0.8900	0.6000	0.7500	0.0700	0.8300	0.9500	0.2200	0.8000
Lead-214 pCi/g	0.5100	0.4700	0.5800	0.4500	0.3200	0.1700	0.6300	0.6200	0.1900	0.6300
Potassium-40 pCi/g	9.2200	8.4800	7.5000	7.1100	14.8200	11.7700	7.8700	8.2300	3.7500	7.8000
Protactinium-234M pCi/g	0.0000	0.0000	0.0000	41.6700	0.0000	0.0000	4.4600	0.0000	0.0000	48.1200
Thallium-208 pCi/g	0.2500	0.2200	0.3000	0.2000	0.1600	0.0600	0.2400	0.1900	0.1000	0.2200
Thorium-234 pCi/g	0.6200	1.5400	0.0000	29.8600	0.0000	0.0000	1.0000	2.0000	0.0000	37.7700
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.2400	0.0000	1.3600	0.0000	0.0000	0.0000	0.0000	0.0000	2.6700
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	41.7100	44.7900	0.0000	61.0800	0.0000	0.0000	1.8500	3.8900	0.0000	78.2100

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	1.59	2.64	1.13	72.63	0.55	0.34	6.75	3.22	0.48	86.98
Thorium 232	0	0	0	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.62	1.78	0.00	72.89	0.00	0.00	5.46	2.00	0.00	86.56

For Natural Uranium and Natural Thorium Mixture										
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.01	0.02	0.01	0.52	0.00	0.00	0.05	0.02	0.00	0.62
< or = 1, Highlighted if fails										
Calc (pCi/g U x 14 + pCi/g Th x 10)	22.26	36.96	15.82	1016.82	7.7	4.76	94.5	45.08	6.72	1217.72
< or = 2,000 pCi/g, Highlighted if fails										

For Refined Uranium and Thorium Mixture										
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.01	0.00	0.22	0.00	0.00	0.02	0.01	0.00	0.27
< or = 1, Highlighted if fails										
Calc (pCi/g U x 5 + pCi/g Th x 10)	3.1	8.9	0	364.45	0	0	27.3	10	0	442.8
< or = 2,000 pCi/g, Highlighted if fails										

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Waste Mangement
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FieldSampleID	1BH027-BS-050-0	1BH027-SS-000-0	1BH028-BS-050-0	1BH028-SS-000-0	1BH029-BS-050-0	1BH029-SS-000-0	1BH035-BS-050-0	1BH035-SS-000-0	2BH001-BS-005-0	2BH001-BS-050-0
Samp.Date	11-Jul-02	11-Jul-02	11-Jul-02	11-Jul-02	8-Jul-02	8-Jul-02	9-Jul-02	9-Jul-02	19-Jul-02	19-Jul-02
Actinium-228 pCi/g	0.9900	0.5600	0.4600	0.7300	1.1200	0.6000	0.7700	0.8300	0.6400	0.6500
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.0000	1.1900	0.0000	0.6500	0.9800	0.8800	1.7700	1.1100	0.8200	0.0000
Bismuth-214 pCi/g	0.6400	0.3700	0.3700	0.6400	0.7100	0.4300	0.5500	0.7100	0.3000	0.3700
Cesium-137 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0800	0.0000	0.0900	0.0500	0.0000
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	1.0100	0.7700	0.6800	0.9100	1.0500	0.7000	1.2700	0.7800	0.5600	0.6500
Lead-214 pCi/g	0.6300	0.8900	0.3400	0.6700	0.6800	0.5500	0.6200	0.6700	0.4600	0.2300
Potassium-40 pCi/g	9.4000	6.0100	7.4200	9.4800	12.4200	7.4200	14.1700	10.0200	8.0900	12.1600
Protactinium-234M pCi/g	0.0000	43.8700	0.0000	0.0000	10.3900	19.3100	0.0000	68.0400	0.0000	0.0000
Thallium-208 pCi/g	0.2600	0.2000	0.1900	0.2100	0.3300	0.2300	0.2700	0.3100	0.1800	0.1800
Thorium-234 pCi/g	1.6400	41.6800	0.0000	0.7700	2.4000	14.0400	2.1000	50.6000	2.3600	0.0000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	2.3800	0.0000	0.0000	0.0000	1.0600	0.0000	3.1800	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	3.4800	85.7400	0.0000	1.5900	49.6000	77.6800	131.7900	232.9900	4.7600	0.0000

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	2.91	86.81	0.71	2.08	14.18	34.33	3.27	120.02	3.12	0.60
Thorium 232	0	0	0	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	1.64	87.93	0.00	0.77	12.79	34.41	2.10	121.82	2.36	0.00

For Natural Uranium and Natural Thorium Mixture										
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.02	0.62	0.01	0.01	0.10	0.24	0.02	0.85	0.02	0.00
< or = 1, Highlighted if fails										
Calc (pCi/g U x 14 + pCi/g Th x 10)	40.74	1215.34	9.94	29.12	198.52	480.62	45.78	1680.28	43.68	8.4
< or = 2,000 pCi/g, Highlighted if fails										

For Refined Uranium and Thorium Mixture										
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.26	0.00	0.00	0.04	0.10	0.01	0.37	0.01	0.00
< or = 1, Highlighted if fails										
Calc (pCi/g U x 5 + pCi/g Th x 10)	8.2	439.65	0	3.85	63.95	172.05	10.5	609.1	11.8	0
< or = 2,000 pCi/g, Highlighted if fails										

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Waste Mangement
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FieldSampleID	2BH002-BS-005-0	2BH002-BS-050-0	2BH003-BS-050-0	2BH003-SS-000-0	2BH004-BS-050-0	2BH004-SS-000-0	2BH005-BS-005-0	2BH005-BS-050-0	2BH006-BS-005-0	2BH006-BS-070-0
Samp.Date	19-Jul-02	19-Jul-02	19-Jul-02	19-Jul-02	26-Jul-02	26-Jul-02	22-Jul-02	22-Jul-02	22-Jul-02	22-Jul-02
Actinium-228 pCi/g	0.9500	0.5900	1.4000	0.5700	1.3700	0.9100	0.5400	0.6900	0.3500	1.2200
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	1.4200	0.8000	2.7500	0.0000	2.3000	1.3400	0.7000	0.0000	0.0000	1.2500
Bismuth-214 pCi/g	0.6300	0.2800	1.1500	0.5000	1.0700	0.8600	0.5500	0.3700	0.2600	0.7700
Cesium-137 pCi/g	0.0000	0.0000	0.0000	0.0400	0.0000	0.0900	0.0600	0.0000	0.0000	0.0000
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	0.8400	0.7000	1.6600	0.7700	1.5600	1.1100	0.4900	0.7200	0.1700	1.2300
Lead-214 pCi/g	0.5300	0.4200	1.1000	1.3500	1.2700	0.7300	0.5200	0.3300	0.2200	0.7900
Potassium-40 pCi/g	8.9900	10.3500	17.8700	5.1700	18.0500	13.7300	6.6100	10.4300	4.9100	10.7800
Protactinium-234M pCi/g	10.2100	0.0000	0.0000	0.0000	0.0000	5.9200	0.0000	0.0000	0.0000	3.9700
Thallium-208 pCi/g	0.2800	0.2100	0.5100	0.2200	0.4700	0.2900	0.1900	0.1700	0.0600	0.3600
Thorium-234 pCi/g	0.0000	0.6200	0.0000	1.6700	0.0000	5.6800	1.1800	0.0000	0.0000	0.0000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.5500	0.0000	0.0000	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	0.0000	0.0000	0.0000	3.4500	1.8500	11.9100	2.4700	0.0000	0.0000	0.0000
Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	11.37	1.32	2.25	3.52	2.34	13.19	2.25	0.70	0.48	5.53
Thorium 232	0	0	0	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	10.21	0.62	0.00	1.67	0.00	12.15	1.18	0.00	0.00	3.97
For Natural Uranium and Natural Thorium Mixture										
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.08	0.01	0.02	0.02	0.02	0.09	0.02	0.00	0.00	0.04
< or = 1, Highlighted if fails										
Calc (pCi/g U x 14 + pCi/g Th x 10)	159.18	18.48	31.5	49.28	32.76	184.66	31.5	9.8	6.72	77.42
< or = 2,000 pCi/g, Highlighted if fails										
For Refined Uranium and Thorium Mixture										
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.03	0.00	0.00	0.01	0.00	0.04	0.00	0.00	0.00	0.01
< or = 1, Highlighted if fails										
Calc (pCi/g U x 5 + pCi/g Th x 10)	51.05	3.1	0	8.35	0	60.75	5.9	0	0	19.85
< or = 2,000 pCi/g, Highlighted if fails										

USACE-DuPont Chambers Works - FUSRAP Site
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Waste Mangement
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July All Data

FieldSampleID	2BH007-BS-005-0	2BH007-BS-050-0	2BH008-BS-005-0	2BH008-BS-050-0	2BH009-BS-005-0	2BH009-BS-050-0	2BH010-BS-005-0	2BH010-BS-050-0	2BH011-BS-050-0	2BH011-SS-000-0
Samp.Date	22-Jul-02	22-Jul-02	19-Jul-02	24-Jul-02	26-Jul-02	26-Jul-02	26-Jul-02	26-Jul-02	11-Jul-02	11-Jul-02
Actinium-228 pCi/g	0.5300	0.5100	0.4200	0.9900	0.4000	0.6400	0.6800	1.0200	0.2000	0.4500
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.0000	1.0400	0.0000	0.7800	0.0000	0.7700	0.0000	1.1900	0.3700	0.0000
Bismuth-214 pCi/g	0.4400	0.4100	0.4600	0.7600	0.2400	0.3800	0.5500	0.7500	0.1900	0.2300
Cesium-137 pCi/g	0.1100	0.0000	0.0800	0.0900	0.1400	0.1400	0.5200	8.9900	0.0000	0.0000
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	0.5600	0.6000	0.5300	1.0600	0.1800	0.6100	0.9600	1.3400	0.2600	0.5500
Lead-214 pCi/g	0.4000	0.3000	0.4200	0.8000	0.2200	0.5500	0.3800	0.9700	0.1900	0.2700
Potassium-40 pCi/g	7.6500	7.0200	5.9300	9.2100	7.0900	6.0600	7.8200	19.8400	4.1900	4.4400
Protactinium-234M pCi/g	0.0000	0.0000	2.8800	0.0000	0.0000	0.0000	70.1500	0.0000	0.0000	0.0000
Thallium-208 pCi/g	0.1700	0.1700	0.2100	0.3800	0.0700	0.2300	0.2200	0.4100	0.0500	0.1500
Thorium-234 pCi/g	0.0000	0.0000	0.0000	1.2200	2.2600	0.0000	57.6100	1.2000	0.0000	2.6600
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.1800	0.0000	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	0.0000	0.0000	1.5400	2.4700	4.7100	1.2400	119.4000	2.3800	0.0000	5.4200

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	0.84	0.71	3.76	2.78	2.72	0.93	128.69	2.92	0.38	3.16
Thorium 232	0	0	0	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	0.00	2.88	1.22	2.26	0.00	131.94	1.20	0.00	2.66

For Natural Uranium and Natural Thorium Mixture										
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.01	0.01	0.03	0.02	0.02	0.01	0.91	0.02	0.00	0.02
< or = 1, Highlighted if fails										
Calc (pCi/g U x 14 + pCi/g Th x 10)	11.76	9.94	52.64	38.92	38.08	13.02	1801.66	40.88	5.32	44.24
< or = 2,000 pCi/g, Highlighted if fails										

For Refined Uranium and Thorium Mixture										
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.00	0.01	0.00	0.01	0.00	0.40	0.00	0.00	0.01
< or = 1, Highlighted if fails										
Calc (pCi/g U x 5 + pCi/g Th x 10)	0	0	14.4	6.1	11.3	0	659.7	6	0	13.3
< or = 2,000 pCi/g, Highlighted if fails										

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FieldSampleID	2BH014-BS-005-R	2BH014-BS-050-0	2BH016-BS-005-0	2BH016-BS-050-0	2BH020-BS-050-0	2BH020-SS-000-0	2BH042-BS-050-0	2BH042-SS-000-0	2BH018-BS-005-0	2BH018-BS-050-R
Samp.Date	24-Jul-02	24-Jul-02	19-Jul-02	19-Jul-02	11-Jul-02	11-Jul-02	18-Jul-02	18-Jul-02	31-Jul-02	31-Jul-02
Actinium-228 pCi/g	0.2100	0.8200	0.5300	1.0100	0.7600	0.8400	0.9275	0.7271	0.38	1.44
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8445	0	0
Bismuth-212 pCi/g	0.6500	1.1300	0.0000	0.8800	0.0000	1.7000	1.2890	0.0000	0	0
Bismuth-214 pCi/g	0.2400	0.6600	0.2700	0.6200	0.6100	0.7500	0.5262	0.4792	0.27	0.47
Cesium-137 pCi/g	0.0600	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.08	0
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	0.2300	0.9500	0.4300	1.1800	0.8000	1.1000	0.7277	0.8100	0.6	1.56
Lead-214 pCi/g	0.1100	0.7000	0.2500	0.7400	0.4700	0.9300	0.5793	0.5900	0.26	1.04
Potassium-40 pCi/g	6.4200	10.8400	5.1600	10.7400	8.0900	7.8800	10.7400	6.7300	7.71	10.54
Protactinium-234M pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	77.0700	0.0000	225.6000	18.24	452.2
Thallium-208 pCi/g	0.0600	0.2000	0.1200	0.3500	0.2500	0.4100	0.2850	0.1800	0.12	0.26
Thorium-234 pCi/g	0.0000	1.1800	0.7700	1.5700	2.2900	63.3500	1.4900	126.3000	10.34	305.9
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	263.8
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	5.3700	0.0000	11.0800	0.91	20.72
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	282.3
Uranium-Total pCi/g	0.0000	2.5800	0.0000	3.0200	4.4300	132.0700	1.5869	148.4600	21.59	632.52
Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	0.35	2.54	1.29	2.93	3.37	142.10	2.60	352.97	29.11	1305.71
Thorium 232	0	0	0	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	1.18	0.77	1.57	2.29	145.79	1.49	362.98	29.49	1324.92
For Natural Uranium and Natural Thorium Mixture										
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.00	0.02	0.01	0.02	0.02	1.01	0.02	2.50	0.21	9.26
< or = 1, Highlighted if fails										
Calc (pCi/g U x 14 + pCi/g Th x 10)	4.9	35.56	18.06	41.02	47.18	1989.4	36.337	4941.5688	407.54	18279.94
< or = 2,000 pCi/g, Highlighted if fails										
For Refined Uranium and Thorium Mixture										
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.00	0.00	0.00	0.01	0.44	0.00	1.09	0.09	3.98
< or = 1, Highlighted if fails										
Calc (pCi/g U x 5 + pCi/g Th x 10)	0	5.9	3.85	7.85	11.45	728.95	7.45	1814.9	147.45	6624.6
< or = 2,000 pCi/g, Highlighted if fails										

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FieldSampleID	2BH027-BS-005-0	2BH027-BS-020-0	2BH031-BS-005-0	2BH038-BS-005-0	MIN	MAX	AVG
Samp.Date	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02			
Actinium-228 pCi/g	1.13	0.52	0.4	0.43	0.0000	1.4400	0.8390
Beryllium-7 pCi/g	0	0	0	0	0.0000	0.8445	0.0154
Bismuth-212 pCi/g	1.76	0	0	0	0.0000	2.7500	0.8222
Bismuth-214 pCi/g	0.77	0.33	0.21	0.32	0.1700	1.1500	0.6092
Cesium-137 pCi/g	0	0	0	0.16	0.0000	8.9900	0.1991
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	1.03	0.57	0.3	0.31	0.0700	1.6600	0.9260
Lead-214 pCi/g	0.9	0.35	0.22	0.23	0.1100	1.3500	0.6474
Potassium-40 pCi/g	8.07	9.44	5.5	8.47	3.7500	19.8400	10.4104
Protactinium-234M pCi/g	84.23	70.74	0	31.68	0.0000	452.2000	24.6322
Thallium-208 pCi/g	0.32	0.18	0.11	0.13	0.0500	0.5100	0.2677
Thorium-234 pCi/g	65.19	52.34	0	24.21	0.0000	305.9000	17.4591
Uranium-234 pCi/g	0	0	0	0	0.0000	263.8000	4.7964
Uranium-235 pCi/g	4.57	3.97	0	0.6	0.0000	20.7200	1.1813
Uranium-238 pCi/g	0	0	0	0	0.0000	282.3000	5.1327
Uranium-Total pCi/g	134.9	108.65	0	49.02	0.0000	632.5200	41.8336

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	151.09	123.76	0.43	56.44	0.28	1306.70	53.28
Thorium 232	0	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	153.99	127.05	0.00	56.49	0.00	1324.92	53.20

					MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture							
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	1.07	0.88	0.00	0.40	0.00	9.27	0.38
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	2115.26	1732.64	6.02	790.16	3.92	18293.8	745.88

					MIN	MAX	AVG
For Refined Uranium and Thorium Mixture							
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.46	0.38	0.00	0.17	0.00	3.98	0.16
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	769.95	635.25	0	282.45	0	6624.6	266.01

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FieldSampleID	1BH001-BS-050-0	1BH001-SS-000-0	1BH026-BS-050-0	1BH026-SS-000-5	1BH027-BS-050-0	1BH027-SS-000-0
Samp.Date	10-Jul-02	10-Jul-02	11-Jul-02	11-Jul-02	11-Jul-02	11-Jul-02
Actinium-228 pCi/g	1.0100	0.8600	0.4600	0.7300	0.9900	0.5600
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.0000	1.2000	0.0000	1.5800	0.0000	1.1900
Bismuth-214 pCi/g	0.5500	0.6600	0.2900	0.4600	0.6400	0.3700
Cesium-137 pCi/g	0.0000	0.0400	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	1.1100	0.8000	0.2200	0.8000	1.0100	0.7700
Lead-214 pCi/g	0.6100	0.7200	0.1900	0.6300	0.6300	0.8900
Potassium-40 pCi/g	13.1100	8.2700	3.7500	7.8000	9.4000	6.0100
Protactinium-234M pCi/g	5.9600	15.0200	0.0000	48.1200	0.0000	43.8700
Thallium-208 pCi/g	0.2600	0.2900	0.1000	0.2200	0.2600	0.2000
Thorium-234 pCi/g	2.1100	9.6300	0.0000	37.7700	1.6400	41.6800
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.6500	0.0000	2.6700	0.0000	2.3800
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	4.3200	19.9000	0.0000	78.2100	3.4800	85.7400
Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	9.23	26.03	0.48	86.98	2.91	86.81
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	8.07	25.30	0.00	88.56	1.64	87.93
For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.07	0.18	0.00	0.62	0.02	0.62
< or = 1, Highlighted if fails						
Calc (pCi/g U x 14 + pCi/g Th x 10)	129.22	364.42	6.72	1217.72	40.74	1215.34
< or = 2,000 pCi/g, Highlighted if fails						
For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.02	0.08	0.00	0.27	0.00	0.26
< or = 1, Highlighted if fails						
Calc (pCi/g U x 5 + pCi/g Th x 10)	40.35	126.5	0	442.8	8.2	439.65
< or = 2,000 pCi/g, Highlighted if fails						

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FieldSampleID	1BH028-BS-050-0	1BH028-SS-000-0	2BH011-BS-050-0	2BH011-SS-000-0	2BH020-BS-050-0	2BH020-SS-000-0
Samp.Date	11-Jul-02	11-Jul-02	11-Jul-02	11-Jul-02	11-Jul-02	11-Jul-02
Actinium-228 pCi/g	0.4600	0.7300	0.2000	0.4500	0.7600	0.8400
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.0000	0.6500	0.3700	0.0000	0.0000	1.7000
Bismuth-214 pCi/g	0.3700	0.6400	0.1900	0.2300	0.6100	0.7500
Cesium-137 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	0.6800	0.9100	0.2600	0.5500	0.8000	1.1000
Lead-214 pCi/g	0.3400	0.6700	0.1900	0.2700	0.4700	0.9300
Potassium-40 pCi/g	7.4200	9.4800	4.1900	4.4400	8.0900	7.8800
Protactinium-234M pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	77.0700
Thallium-208 pCi/g	0.1900	0.2100	0.0500	0.1500	0.2500	0.4100
Thorium-234 pCi/g	0.0000	0.7700	0.0000	2.6600	2.2900	63.3500
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	5.3700
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	0.0000	1.5900	0.0000	5.4200	4.4300	132.0700

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	0.71	2.08	0.38	3.16	3.37	142.10
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	0.77	0.00	2.66	2.29	145.79

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.01	0.01	0.00	0.02	0.02	1.01
< or = 1, Highlighted if fails	9.94	29.12	5.32	44.24	47.18	1989.4
Calc (pCi/g U x 14 + pCi/g Th x 10)						
< or = 2,000 pCi/g, Highlighted if fails						

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.00	0.00	0.01	0.01	0.44
< or = 1, Highlighted if fails	0	3.85	0	13.3	11.45	728.95
Calc (pCi/g U x 5 + pCi/g Th x 10)						
< or = 2,000 pCi/g, Highlighted if fails						

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FieldSampleID	2BH042-BS-050-0	2BH042-SS-000-0	MIN	MAX	AVG
Samp.Date	18-Jul-02	18-Jul-02			
Actinium-228 pCi/g	0.9275	0.7271	0.2000	1.0100	0.1764
Beryllium-7 pCi/g	0.0000	0.8445	0.0000	0.8445	0.0154
Bismuth-212 pCi/g	1.2890	0.0000	0.0000	1.7000	0.1451
Bismuth-214 pCi/g	0.5262	0.4792	0.1900	0.7500	0.1230
Cesium-137 pCi/g	0.0000	0.0000	0.0000	0.0400	0.0007
Lead-212 pCi/g	0.7277	0.8100	0.2200	1.1100	0.1918
Lead-214 pCi/g	0.5793	0.5900	0.1900	0.9300	0.1402
Potassium-40 pCi/g	10.7400	6.7300	3.7500	13.1100	1.9511
Protactinium-234M pCi/g	0.0000	225.6000	0.0000	225.6000	7.5571
Thallium-208 pCi/g	0.2850	0.1800	0.0500	0.4100	0.0555
Thorium-234 pCi/g	1.4900	126.3000	0.0000	126.3000	5.2671
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	11.0800	0.0000	11.0800	0.4027
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	1.5869	148.4600	0.0000	148.4600	8.8219

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	2.60	352.97	0.38	353.58	13.09
Thorium 232	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	1.49	362.98	0.00	362.98	13.23

			MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture					
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.02	2.50	0.00	2.51	0.09
< or = 1, Highlighted if fails					
Calc (pCi/g U x 14 + pCi/g Th x 10)	36.337	4941.5688	5.32	4950.12	183.22
< or = 2,000 pCi/g, Highlighted if fails					

			MIN	MAX	AVG
For Refined Uranium and Thorium Mixture					
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	1.09	0.00	1.09	0.04
< or = 1, Highlighted if fails					
Calc (pCi/g U x 5 + pCi/g Th x 10)	7.45	1814.9	0	1814.9	66.13
< or = 2,000 pCi/g, Highlighted if fails					

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FieldSampleID	2BH001-BS-005-0	2BH001-BS-050-0	2BH002-BS-005-0	2BH002-BS-050-0	2BH003-BS-050-0	2BH003-SS-000-0
Samp.Date	19-Jul-02	19-Jul-02	19-Jul-02	19-Jul-02	19-Jul-02	19-Jul-02
Actinium-228 pCi/g	0.6400	0.6500	0.9500	0.5900	1.4000	0.5700
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.8200	0.0000	1.4200	0.8000	2.7500	0.0000
Bismuth-214 pCi/g	0.3000	0.3700	0.6300	0.2800	1.1500	0.5000
Cesium-137 pCi/g	0.0500	0.0000	0.0000	0.0000	0.0000	0.0400
Lead-212 pCi/g	0.5600	0.6500	0.8400	0.7000	1.6600	0.7700
Lead-214 pCi/g	0.4600	0.2300	0.5300	0.4200	1.1000	1.3500
Potassium-40 pCi/g	8.0900	12.1600	8.9900	10.3500	17.8700	5.1700
Protactinium-234M pCi/g	0.0000	0.0000	10.2100	0.0000	0.0000	0.0000
Thallium-208 pCi/g	0.1800	0.1800	0.2800	0.2100	0.5100	0.2200
Thorium-234 pCi/g	2.3600	0.0000	0.0000	0.6200	0.0000	1.6700
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	4.7600	0.0000	0.0000	0.0000	0.0000	3.4500

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	3.12	0.60	11.37	1.32	2.25	3.52
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	2.36	0.00	10.21	0.62	0.00	1.67

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.02	0.00	0.08	0.01	0.02	0.02
< or = 1, Highlighted if fails						
Calc (pCi/g U x 14 + pCi/g Th x 10)	43.68	8.4	159.18	18.48	31.5	49.28
< or = 2,000 pCi/g, Highlighted if fails						

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.01	0.00	0.03	0.00	0.00	0.01
< or = 1, Highlighted if fails						
Calc (pCi/g U x 5 + pCi/g Th x 10)	11.8	0	51.05	3.1	0	8.35
< or = 2,000 pCi/g, Highlighted if fails						

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FieldSampleID	2BH004-BS-050-0	2BH004-SS-000-0	2BH005-BS-005-0	2BH005-BS-050-0	2BH006-BS-005-0	2BH006-BS-070-0
Samp.Date	26-Jul-02	26-Jul-02	22-Jul-02	22-Jul-02	22-Jul-02	22-Jul-02
Actinium-228 pCi/g	1.3700	0.9100	0.5400	0.6900	0.3500	1.2200
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	2.3000	1.3400	0.7000	0.0000	0.0000	1.2500
Bismuth-214 pCi/g	1.0700	0.8600	0.5500	0.3700	0.2600	0.7700
Cesium-137 pCi/g	0.0000	0.0900	0.0600	0.0000	0.0000	0.0000
Lead-212 pCi/g	1.5600	1.1100	0.4900	0.7200	0.1700	1.2300
Lead-214 pCi/g	1.2700	0.7300	0.5200	0.3300	0.2200	0.7900
Potassium-40 pCi/g	18.0500	13.7300	6.6100	10.4300	4.9100	10.7800
Protactinium-234M pCi/g	0.0000	5.9200	0.0000	0.0000	0.0000	3.9700
Thallium-208 pCi/g	0.4700	0.2900	0.1900	0.1700	0.0600	0.3600
Thorium-234 pCi/g	0.0000	5.6800	1.1800	0.0000	0.0000	0.0000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.5500	0.0000	0.0000	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	1.8500	11.9100	2.4700	0.0000	0.0000	0.0000

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	2.34	13.19	2.25	0.70	0.48	5.53
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	12.15	1.18	0.00	0.00	3.97

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.02	0.09	0.02	0.00	0.00	0.04
< or = 1, Highlighted if fails						
Calc (pCi/g U x 14 + pCi/g Th x 10)	32.76	184.66	31.5	9.8	6.72	77.42
< or = 2,000 pCi/g, Highlighted if fails						

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.04	0.00	0.00	0.00	0.01
< or = 1, Highlighted if fails						
Calc (pCi/g U x 5 + pCi/g Th x 10)	0	60.75	5.9	0	0	19.85
< or = 2,000 pCi/g, Highlighted if fails						

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FieldSampleID	2BH007-BS-005-0	2BH007-BS-050-0	2BH008-BS-005-0	2BH008-BS-050-0	2BH009-BS-005-0	2BH009-BS-050-0
Samp.Date	22-Jul-02	22-Jul-02	19-Jul-02	24-Jul-02	26-Jul-02	26-Jul-02
Actinium-228 pCi/g	0.5300	0.5100	0.4200	0.9900	0.4000	0.6400
Berytlium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.0000	1.0400	0.0000	0.7800	0.0000	0.7700
Bismuth-214 pCi/g	0.4400	0.4100	0.4600	0.7600	0.2400	0.3800
Cesium-137 pCi/g	0.1100	0.0000	0.0800	0.0900	0.1400	0.1400
Lead-212 pCi/g	0.5600	0.6000	0.5300	1.0600	0.1800	0.6100
Lead-214 pCi/g	0.4000	0.3000	0.4200	0.8000	0.2200	0.5500
Potassium-40 pCi/g	7.6500	7.0200	5.9300	9.2100	7.0900	6.0600
Protactinium-234M pCi/g	0.0000	0.0000	2.8800	0.0000	0.0000	0.0000
Thallium-208 pCi/g	0.1700	0.1700	0.2100	0.3800	0.0700	0.2300
Thorium-234 pCi/g	0.0000	0.0000	0.0000	1.2200	2.2600	0.0000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	0.0000	0.0000	1.5400	2.4700	4.7100	1.2400

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	0.84	0.71	3.76	2.78	2.72	0.93
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	0.00	2.88	1.22	2.26	0.00

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.01	0.01	0.03	0.02	0.02	0.01
< or = 1, Highlighted if fails						
Calc (pCi/g U x 14 + pCi/g Th x 10)	11.76	9.94	52.64	38.92	38.08	13.02
< or = 2,000 pCi/g, Highlighted if fails						

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.00	0.01	0.00	0.01	0.00
< or = 1, Highlighted if fails						
Calc (pCi/g U x 5 + pCi/g Th x 10)	0	0	14.4	6.1	11.3	0
< or = 2,000 pCi/g, Highlighted if fails						

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FieldSampleID	2BH010-BS-005-0	2BH010-BS-050-0	2BH014-BS-005-R	2BH014-BS-050-0	2BH016-BS-005-0	2BH016-BS-050-0
Samp.Date	26-Jul-02	26-Jul-02	24-Jul-02	24-Jul-02	19-Jul-02	19-Jul-02
Actinium-228 pCi/g	0.6800	1.0200	0.2100	0.8200	0.5300	1.0100
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.0000	1.1900	0.6500	1.1300	0.0000	0.8800
Bismuth-214 pCi/g	0.5500	0.7500	0.2400	0.6600	0.2700	0.6200
Cesium-137 pCi/g	0.5200	8.9900	0.0600	0.0000	0.0000	0.0000
Lead-212 pCi/g	0.9600	1.3400	0.2300	0.9500	0.4300	1.1800
Lead-214 pCi/g	0.3800	0.9700	0.1100	0.7000	0.2500	0.7400
Potassium-40 pCi/g	7.8200	19.8400	6.4200	10.8400	5.1600	10.7400
Protactinium-234M pCi/g	70.1500	0.0000	0.0000	0.0000	0.0000	0.0000
Thallium-208 pCi/g	0.2200	0.4100	0.0600	0.2000	0.1200	0.3500
Thorium-234 pCi/g	57.6100	1.2000	0.0000	1.1800	0.7700	1.5700
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	4.1800	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	119.4000	2.3800	0.0000	2.5800	0.0000	3.0200

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	128.69	2.92	0.35	2.54	1.29	2.93
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	131.94	1.20	0.00	1.18	0.77	1.57

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.91	0.02	0.00	0.02	0.01	0.02
< or = 1, Highlighted if fails						
Calc (pCi/g U x 14 + pCi/g Th x 10)	1801.66	40.88	4.9	35.56	18.06	41.02
< or = 2,000 pCi/g, Highlighted if fails						

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.40	0.00	0.00	0.00	0.00	0.00
< or = 1, Highlighted if fails						
Calc (pCi/g U x 5 + pCi/g Th x 10)	659.7	6	0	5.9	3.85	7.85
< or = 2,000 pCi/g, Highlighted if fails						

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FieldSampleID	MIN	MAX	AVG
Samp.Date			
Actinium-228 pCi/g	0.2100	1.4000	0.3207
Beryllium-7 pCi/g	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.0000	2.7500	0.3240
Bismuth-214 pCi/g	0.2400	1.1500	0.2344
Cesium-137 pCi/g	0.0000	8.9900	0.1885
Lead-212 pCi/g	0.1700	1.6600	0.3471
Lead-214 pCi/g	0.1100	1.3500	0.2507
Potassium-40 pCi/g	4.9100	19.8400	4.1985
Protactinium-234M pCi/g	0.0000	70.1500	1.6933
Thallium-208 pCi/g	0.0600	0.5100	0.1038
Thorium-234 pCi/g	0.0000	57.6100	1.4058
Uranium-234 pCi/g	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	4.1800	0.0860
Uranium-238 pCi/g	0.0000	0.0000	0.0000
Uranium-Total pCi/g	0.0000	119.4000	2.9415

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	0.35	130.26	3.58
Thorium 232	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	131.94	3.19

	MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture			
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.00	0.92	0.03
< or = 1, Highlighted if fails			
Calc (pCi/g U x 14 + pCi/g Th x 10)	4.9	1823.64	50.18
< or = 2,000 pCi/g, Highlighted if fails			

	MIN	MAX	AVG
For Refined Uranium and Thorium Mixture			
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.00	0.40	0.01
< or = 1, Highlighted if fails			
Calc (pCi/g U x 5 + pCi/g Th x 10)	0	659.7	15.93
< or = 2,000 pCi/g, Highlighted if fails			

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Drums 8 and 77

FieldSampleID	1BH003-BS-050-0	1BH003-SS-000-0	1BH011-BS-050-0	1BH011-SS-000-0	1BH035-BS-050-0	1BH035-SS-000-0
Samp.Date	9-Jul-02	9-Jul-02	8-Jul-02	8-Jul-02	9-Jul-02	9-Jul-02
Actinium-228 pCi/g	0.9900	0.7900	0.8700	0.5900	0.7700	0.8300
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.7400	1.2400	0.9600	0.4700	1.7700	1.1100
Bismuth-214 pCi/g	0.6700	0.7100	0.4600	0.6300	0.5500	0.7100
Cesium-137 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0900
Lead-212 pCi/g	1.2500	0.8900	0.7900	0.6700	1.2700	0.7800
Lead-214 pCi/g	0.5900	0.7600	0.5100	0.4700	0.6200	0.6700
Potassium-40 pCi/g	11.9900	6.6400	9.2200	8.4800	14.1700	10.0200
Protactinium-234M pCi/g	0.0000	31.3900	0.0000	0.0000	0.0000	68.0400
Thallium-208 pCi/g	0.3100	0.2100	0.2500	0.2200	0.2700	0.3100
Thorium-234 pCi/g	1.1000	19.6300	0.6200	1.5400	2.1000	50.6000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	1.4800	0.0000	0.2400	0.0000	3.1800
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	0.0000	40.4700	41.7100	44.7900	131.7900	232.9900

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	2.36	52.49	1.59	2.64	3.27	120.02
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	1.10	52.50	0.62	1.78	2.10	121.82

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.02	0.37	0.01	0.02	0.02	0.85
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	33.04	734.86	22.26	36.96	45.78	1680.28

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.16	0.00	0.01	0.01	0.37
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	5.5	262.5	3.1	8.9	10.5	609.1

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FieldSampleID	MIN	MAX	AVG
Samp.Date			
Actinium-228 pCi/g	0.5900	0.9900	0.0880
Beryllium-7 pCi/g	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.4700	1.7700	0.1144
Bismuth-214 pCi/g	0.4600	0.7100	0.0678
Cesium-137 pCi/g	0.0000	0.0900	0.0016
Lead-212 pCi/g	0.6700	1.2700	0.1027
Lead-214 pCi/g	0.4700	0.7600	0.0658
Potassium-40 pCi/g	6.6400	14.1700	1.1004
Protactinium-234M pCi/g	0.0000	68.0400	1.8078
Thallium-208 pCi/g	0.2100	0.3100	0.0285
Thorium-234 pCi/g	0.6200	50.6000	1.3744
Uranium-234 pCi/g	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	3.1800	0.0891
Uranium-238 pCi/g	0.0000	0.0000	0.0000
Uranium-Total pCi/g	0.0000	232.9900	8.9409

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	1.55	120.11	3.32
Thorium 232	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.62	121.82	3.27

	MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture			
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.85	0.02
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	21.7	1681.54	46.42

	MIN	MAX	AVG
For Refined Uranium and Thorium Mixture			
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.37	0.01
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	3.1	609.1	16.36

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FieldSampleID	1BH006-BS-055-0	1BH006-SS-000-0	1BH016-BS-050-0	1BH016-SS-000-0	1BH017-BS-050-0	1BH017-SS-000-0
Samp.Date	2-Jul-02	2-Jul-02	1-Jul-02	1-Jul-02	2-Jul-02	2-Jul-02
Actinium-228 pCi/g	1.1700	0.5900	0.7500	0.5700	0.5700	0.0000
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	1.1700	0.0000	1.4600	0.9300	0.0000	0.0000
Bismuth-214 pCi/g	0.7500	0.6900	0.5500	0.6500	0.2300	0.1700
Cesium-137 pCi/g	0.0000	0.0000	0.0000	0.0500	0.0000	0.0000
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Lead-212 pCi/g	1.5000	0.8500	0.8900	0.6000	0.7500	0.0700
Lead-214 pCi/g	0.8000	0.6000	0.5800	0.4500	0.3200	0.1700
Potassium-40 pCi/g	14.3300	6.8400	7.5000	7.1100	14.8200	11.7700
Protactinium-234M pCi/g	0.0000	0.0000	0.0000	41.6700	0.0000	0.0000
Thallium-208 pCi/g	0.4400	0.1600	0.3000	0.2000	0.1600	0.0600
Thorium-234 pCi/g	3.3000	0.0000	0.0000	29.8600	0.0000	0.0000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	1.3600	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	6.8100	0.0000	0.0000	61.0800	0.0000	0.0000

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	4.85	1.29	1.13	72.63	0.55	0.34
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	3.30	0.00	0.00	72.89	0.00	0.00

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.03	0.01	0.01	0.52	0.00	0.00
< or = 1, Highlighted if fails						
Calc (pCi/g U x 14 + pCi/g Th x 10)	67.9	18.06	15.82	1016.82	7.7	4.76
< or = 2,000 pCi/g, Highlighted if fails						

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.01	0.00	0.00	0.22	0.00	0.00
< or = 1, Highlighted if fails						
Calc (pCi/g U x 5 + pCi/g Th x 10)	16.5	0	0	364.45	0	0
< or = 2,000 pCi/g, Highlighted if fails						

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Drum 10

FieldSampleID	1BH024-SS-000-0	1BH024-BS-050-0	1BH025-SS-000-0	1BH025-BS-050-0	1BH023-BS-050-0	1BH023-SS-000-0
Samp.Date	3-Jul-02	3-Jul-02	3-Jul-02	3-Jul-02	1-Jul-02	1-Jul-02
Actinium-228 pCi/g	0.9700	0.5200	0.5800	0.6700	0.8100	0.7400
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	1.7500	0.7900	1.0300	0.6000	0.9800	0.8000
Bismuth-214 pCi/g	0.8200	0.5800	0.5100	0.4000	0.6600	0.6000
Cesium-137 pCi/g	0.0800	0.0000	0.0000	0.0000	0.0000	0.0000
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0400	0.0000	0.0000
Lead-212 pCi/g	1.0400	0.7400	0.6700	0.6300	0.8300	0.9500
Lead-214 pCi/g	0.9100	0.3600	0.4300	0.3900	0.6300	0.6200
Potassium-40 pCi/g	7.0900	5.9700	5.1700	7.5500	7.8700	8.2300
Protactinium-234M pCi/g	0.0000	0.0000	13.6500	0.0000	4.4600	0.0000
Thallium-208 pCi/g	0.3200	0.2000	0.2100	0.2300	0.2400	0.1900
Thorium-234 pCi/g	2.2200	0.0000	4.8500	0.0000	1.0000	2.0000
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	4.6600	0.0000	9.8600	0.0000	1.8500	3.8900

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	3.95	0.94	19.44	0.79	6.75	3.22
Thorium 232	0	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	2.22	0.00	18.50	0.00	5.46	2.00

For Natural Uranium and Natural Thorium Mixture						
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.03	0.01	0.14	0.01	0.05	0.02
< or = 1, Highlighted if fails						
Calc (pCi/g U x 14 + pCi/g Th x 10)	55.3	13.16	272.16	11.06	94.5	45.08
< or = 2,000 pCi/g, Highlighted if fails						

For Refined Uranium and Thorium Mixture						
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.50	0.12	2.47	0.10	0.02	0.01
< or = 1, Highlighted if fails						
Calc (pCi/g U x 5 + pCi/g Th x 10)	553	131.6	2721.6	110.6	27.3	10
< or = 2,000 pCi/g, Highlighted if fails						

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FieldSampleID	1BH029-BS-050-0	1BH029-SS-000-0	MIN	MAX	AVG
Samp.Date	8-Jul-02	8-Jul-02			
Actinium-228 pCi/g	1.1200	0.6000	0.0000	1.1700	0.1756
Beryllium-7 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000
Bismuth-212 pCi/g	0.9800	0.8800	0.0000	1.7500	0.2067
Bismuth-214 pCi/g	0.7100	0.4300	0.1700	0.8200	0.1409
Cesium-137 pCi/g	0.0000	0.0800	0.0000	0.0800	0.0038
Cobalt-60 pCi/g	0.0000	0.0000	0.0000	0.0400	0.0007
Lead-212 pCi/g	1.0500	0.7000	0.0700	1.5000	0.2049
Lead-214 pCi/g	0.6800	0.5500	0.1700	0.9100	0.1362
Potassium-40 pCi/g	12.4200	7.4200	5.1700	14.8200	2.2562
Protactinium-234M pCi/g	10.3900	19.3100	0.0000	41.6700	1.6269
Thallium-208 pCi/g	0.3300	0.2300	0.0600	0.4400	0.0595
Thorium-234 pCi/g	2.4000	14.0400	0.0000	29.8600	1.0849
Uranium-234 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-235 pCi/g	0.0000	1.0600	0.0000	1.3600	0.0440
Uranium-238 pCi/g	0.0000	0.0000	0.0000	0.0000	0.0000
Uranium-Total pCi/g	49.6000	77.6800	0.0000	77.6800	3.9169

Total Uranium Series Present (U238, TH 234, PA 234M, U234, PB 214, BI 214)	14.18	34.33	0.34	73.26	2.99
Thorium 232	0	0	0	0	0
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	12.79	34.41	0.00	72.89	2.76

			MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture					
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g)	0.10	0.24	0.00	0.52	0.02
< or = 1, Highlighted if fails					
Calc (pCi/g U x 14 + pCi/g Th x 10)	198.52	480.62	4.76	1025.64	41.84
< or = 2,000 pCi/g, Highlighted if fails					

			MIN	MAX	AVG
For Refined Uranium and Thorium Mixture					
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g)	0.04	0.10	0.00	0.22	0.01
< or = 1, Highlighted if fails					
Calc (pCi/g U x 5 + pCi/g Th x 10)	63.95	172.05	0	364.45	13.78
< or = 2,000 pCi/g, Highlighted if fails					

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Containers
Summary

Waste Inventory-August 2002

Contents	Number of Drums	Drum Number(s)	Futher Desciption of Contents
Spent PPE	23	1, 40, 41, 47, 48, 63, 64, 66, 67, 68, 69, 70, 71, 82, 109, 111, 114, 116, 117, 119, 120, 121, 122	
Groundwater/Decon water/Purge water	18	85, 86, 88, 89, 90, 92, 93, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108	Drum 89, 90-Drilling Water; Drum 92-Purge/Decon Water
Soil Cuttings	11	21, 42, 43, 44, 45, 46, 59, 61, 62, 76, 79	Drum 61-Grout from TrashPump; Drum 76-Soil Sample Drum; Drum 79-Geotech Samples
Acetate/Plastic/Visqueen/PVC	9	50, 51, 65, 80, 81, 83, 94, 112, 115	Drums 112, 115-Plastic Buckets
Wood	3	110, 113, 118	FUSRAP Wood
TOTAL	**64**		
TOTAL FOR JUNE, JULY & AUGUST	**121**		

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Containers
Characterization Summary

Drum Number	Date	Contents	Hazardous[1]	Non-Hazardous	Radiological Characteristics[2]			
					Average < 0.05% by weight (LARM)	Average > 0.05% by weight (LLRM)	Average < 2,000 pCi/g (LARM)	Average > 2,000 pCi/g (LLRM)
76	8/1/2002	Soil Sample Drum	No	Yes	Yes 0.3<1	No	Yes 597.05 pCi/g< 2,000 pCi/g	No
79	8/1/2002	Geotech Samples	No	Yes	Same as Drum 76			
43	8/14/2002	Soil Cuttings	No	Yes	Yes 0.27<1	No	Yes 541.46 pCi/g< 2,000 pCi/g	No
44	8/14/2002	Soil Cuttings	No	Yes	Same as Drum 43			
45	8/14/2002	Soil Cuttings	No	Yes	Same as Drum 43			
62	8/14/2002	Soil Cuttings	No	Yes	Same as Drum 43			
61	8/14/2002	Grout from TrashPump	NA	NA	NA	NA	NA	NA
46	8/16/2002	Soil Cuttings	NA	NA	Yes 0.01<1	No	Yes 16.29 pCi/g< 2,000 pCi/g	No
59	8/21/2002	Soil Cuttings	NA	NA	Yes 0.02<1	No	Yes 37.78 pCi/g< 2,000 pCi/g	No
21	8/21/2002	Soil Cuttings	NA	NA	Same as Drum 59			
42	8/21/2002	Soil Cuttings	NA	NA	Same as Drum 59			
					Radiological Characteristics[3]			
92	8/2/2002	Purge/Decon water	Yes Benzene 1,200 ug/L	No	Yes Gross Alpha (Total) 16.24 pCi/L - 2,004.14 pCi/L Gross Alpha (Dissolved) 17.61pCi/L - 863.72 pCi/L Gross Beta (Total) 78.01 pCi/L - 2,087.74 pCi/L Gross Beta (Dissolved) 228.68 pCi/L - 769.69 pCi/L Total Radium (Total) 6.37 pCi/L -24.41 pCi/L Total Radium (Dissolved) 6.31 pCi/L -13.32 pCi/L Total Uranium (Total) 10.37 pCi/L - 2,338.08 pCi/L Total Uranium (Dissolved) 13.08 pCi/L - 906.13 pCi/L			
89	8/16/2002	Drilling water	Yes Benzene 5,600 ug/L	No	No			
90	8/16/2002	Drilling water	No	Yes	Yes Gross Alpha (Total) 36.77 pCi/L Total Radium (Total) 5.9 pCi/L			
93	8/16/2002	Decon water	NA	NA	Yes Gross Alpha (Total) 18.05 pCi/L -18.28 pCi/L Total Uranium (Total) 10.27 pCi/L - 11.27 pCi/L Total Uranium (Dissolved) 10.52 pCi/L			
85	8/22/2002	Decon water	NA	NA	NA			
86	8/22/2002	Decon water	NA	NA	NA			
88	8/20/2002	Purged Groundwater	No	Yes	Yes Gross Alpha (Total) 15.4 pCi/L Gross Beta (Total) 224.79 pCi/L Total Uranium (Total) 10.11 pCi/L			
98	8/22/2002	Purged Groundwater						
99	8/22/2002	Purged Groundwater						
100	8/22/2002	Purged Groundwater						
101	8/22/2002	Purged Groundwater						
102	8/22/2002	Purged Groundwater						
103	8/22/2002	Purged Groundwater						
105	8/22/2002	Purged Groundwater						
106	8/22/2002	Purged Groundwater						
107	8/22/2002	Purged Groundwater						
108	8/22/2002	Purged Groundwater						
104	8/22/2002	Purged Groundwater						

[1] = A yes indicates RCRA characteristic based on Corrosivity, Ignitablity, Reactivity and Toxicity (TCLP)

[2] = Soil Cuttings - A yes indicates an exceedance of the criteria listed for Unimportant Quantities of Source Material Uniformly Dispersed in Soil or Other Media.

[3] Groundwater (Filtered and nonfiltered samples) - A yes indicates exceedance of current and proposed EPA drinking water regulation limits Gross Alpha - 15 pCi/l, Gross Beta - 50 pCi/l (not an MCL but an effluent criteria for DuPont's treatment facility (DET)), Radium - 266/228-5 pCi/l, and Total Uranium - 20.3 pCi/l (this limit will be in effect 12/8/03 - assumed activity of 6.77×10^{-7} Ci/g for natural uranium) These limits are listed in DET's permit

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No 1
Waste Management
August 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Ids	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characterization[1][2]
76	8 1 2002	Soil Sample Drum	Samples from August	Total U by Gamma Spec	NA	NA	No
79	8 1 2002	Geotech Samples	Samples from August	Total U by Gamma Spec	NA	NA	No
43	8 14 2002	Soil Cuttings	2BH030-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH030-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH036-BS-050-R	Total U by Gamma Spec	NA	NA	No
			2BH036-BS-005-R	Total U by Gamma Spec	NA	NA	No
			2BH034-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH034-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH038-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH018-BS-050-R	Total U by Gamma Spec, Isotopic Uranium by Alpha Spec	No	Yes	Yes 18,279 94 pCi/g >2,000 pCi/g 9 26 >1
			2BH018-BS-015-R	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char , TAL Metals, TCL Pest/PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			2BH027-BS-020-0	Total U by Gamma Spec	NA	NA	No
			2BH027-BS-005-0	Total U by Gamma Spec	NA	NA	Yes 2,115 26 pCi/g >2,000 pCi/g 1 07 >1
			2BH018-BS-005-0	Total U by Gamma Spec	NA	NA	
			2BH031-BS-005-0	Total U by Gamma Spec	NA	NA	
			2BH041-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH041-SS-000-0	Total U by Gamma Spec	NA	NA	No
			2BH040-SS-000-0	Total U by Gamma Spec	NA	NA	No
			2BH040-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH039-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH039-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH022-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH022-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH029-BS-005-R	Total U by Gamma Spec	NA	NA	No
			2BH029-BS-050-R	Total U by Gamma Spec	NA	NA	No
			2BH035-BS-005-R	Total U by Gamma Spec	NA	NA	No
			2BH035-BS-055-R	Total U by Gamma Spec	NA	NA	No
			2BH037-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH037-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH028-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH028-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH017-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH017-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH025-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH025-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH043-SS-000-0	Total U by Gamma Spec, Isotopic Uranium by Alpha Spec	NA	NA	Yes 6,994 54 pCi/g >2,000 pCi/g 3 54 >1
			2BH012-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH012-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH013-BS-005-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char , TAL Metals, TCL Pest/PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			2BH013-BS-005-R	Total U by Gamma Spec	NA	NA	No
			2BH013-BS-050-R	Total U by Gamma Spec	NA	NA	No
			2BH021-BS-010-R	Total U by Gamma Spec	NA	NA	No
			2BH021-BS-050-R	Total U by Gamma Spec	NA	NA	No
			2BH031-BS-090-R	Total U by Gamma Spec	NA	NA	No
			2BH031-BS-005-R	Total U by Gamma Spec	NA	NA	No

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No 1
Waste Management
August 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Ids	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characterization[2][3]
			2BH024-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH024-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH023-BS-040-R	Total U by Gamma Spec	NA	NA	No
			2BH023-BS-020-R	Total U by Gamma Spec	NA	NA	No
			2BH032-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH032-BS-080-0	Total U by Gamma Spec	NA	NA	No
			2BH044-BS-002-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char , TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
44	8 14 2002	Soil Cuttings	2BH044-BS-004-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char , TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
			2BH044-BS-005-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char , TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
45	8 14 2002	Soil Cuttings	2BH044-BS-001-0	TCLP Metals TCLP SVOCs, TCLP VOCs, RCRA Char , TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
62	8 14 2002	Soil Cuttings	Same as Drum 43, 44 and 45				
61	8 14 2002	Grout from TrashPump	NA	NA	NA	NA	NA
46	8 16 2002	Soil Cuttings	2BH026-BS-040-0	Total U by Gamma Spec	NA	NA	No
			2BH026-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH033-BS-050-0	Total U by Gamma Spec	NA	NA	No
			2BH033-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH026-BS-020-0	Total U by Gamma Spec	NA	NA	No
			2BH044-BS-002-0	TCLP Metals, TCLP SVOCs, TCLP VOCs, RCRA Char , TAL Metals, TCL Pest PCB, TCL SVOCs, TCL VOCs	No	Yes	NA
59	8 21 2002	Soil Cuttings	2BH015-BS-005-R	Total U by Gamma Spec	NA	NA	No
			2BH015-BS-080-R	Total U by Gamma Spec	NA	NA	No
			2BH019-BS-005-0	Total U by Gamma Spec	NA	NA	No
			2BH027-BS-045-R	Total U by Gamma Spec	NA	NA	No
			2BH027-BS-005-R	Total U by Gamma Spec	NA	NA	No
			2BH019-BS-060-R	Total U by Gamma Spec	NA	NA	No
21	8 21 2002	Soil Cuttings	Same as Drum 59				
42	8 21 2002	Soil Cuttings	Same as Drum 59				
92	8 2 2002	Purge Decon water	2BH036-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 36.68 pCi/L
			2BH034-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion/Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			2BH035-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 16.24 pCi/L
			2BH030-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 32.8 pCi/L
			2BH018-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), TAL Metals (Total/Dis), TCL Pest PCBs, TCLSVOCs, TCL VOCs, TOC	Yes Benzene 1,200 ug/l	No	Yes Gross Alpha (Total) 2,004.14 pCi/l Gross Alpha (Dissolved) 863.72 pCi/l Gross Beta (Total) 2,087.74 pCi/L Gross Beta (Dissolved) 769.69 pCi/l Total Radium (Total) 6.37 pCi/l Total Radium (Dissolved) 6.31 pCi/L Total Uranium (Total) 2,338.08 pCi/L Total Uranium (Dissolved) 906.13 pCi/L
			2BH018-GW-001-1	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 451.24 pCi/l Gross Alpha (Dissolved) 1,892.58 pCi/l Gross Beta (Total) 408.89 pCi/l Gross Beta (Dissolved) 1,765.89 pCi/L

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No 1
Waste Management
August 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Ids	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characterization[2,3,4]
							Total Uranium (Total) 1,745 56 pCi/L
							Total Uranium (Dissolved) 746 95 pCi/L
			2BH028-GW-001-0	Gamma Spec (Total Dis), Gross Alpha/Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	No	Yes	Yes Gross Alpha (Total) 59 45 pCi/L Gross Alpha (Dissolved) 17 61 pCi/L
			2BH029-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
			2BH037-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 19 78 J pCi/L
			2BH025-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 24 18 pCi/L
			2BH017-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
			2BH021-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	No
			2BH013-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), TCL Pest/PCBs, TCLSVOCs, TCL VOCs, TOC	No	Yes	Yes Gross Alpha (Total) 663 01 pCi/L Gross Alpha (Dissolved) 231 42 pCi/L Gross Beta (Total) 788 27 pCi/L Gross Beta (Dissolved) 228 68 pCi/L Total Radium (Total) 24 4 1 pCi/L Total Radium (Dissolved) 13 32 pCi/L
			2BH041-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total/Dis)	No	Yes	Yes Gross Alpha (Total) 82 07 pCi/L Gross Beta (Total) 96 54 pCi/L Total Radium (Total) 8 86 pCi/L
			2BH040-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis)	No	Yes	Yes Gross Alpha (Total) 128 92 pCi/L Gross Beta (Total) 78 01 pCi/L
			2BH039-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Toul, Dis), Total Uranium by Isoptopic Uranium (Total Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	No	Yes	No
			2BH022-GW-001-0	Gamma Spec (Total Dis), Gross Alpha/Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis), Anion Alkalinity (Dis), Sulfide (Dis) TAL Metals (Total Dis)	No	Yes	Yes Gross Alpha (Total) 164 73 pCi/L Gross Beta (Total) 267 08 pCi/L
			2BH031-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	No	Yes	Yes Gross Alpha (Total) 32 47 pCi/L

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Containers
Characterization

Drum Number	Date	Contents	Sample Ids	Analyses	Hazardous[1]	Non-Hazardous	Radiological Characterization[2][3]
							Gross Beta (Total) 52.6 pCi/L
			2HH012-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	No
89	8.16.2002	Drilling water	2BH033-GW-001-0	Gamma Spec (Total Dis), Gross Alpha/Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), TCL Pest/PCBs, TCLSVOC's, TCL VOC's, TOC	Yes Benene 5,600 ug/L	No	No
90	8.16.2002	Drilling water	2HH026-GW-001-0	Gamma Spec (Total Dis), Gross Alpha/Beta (Total Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), Anion Alkalinity (Dis), Sulfide (Dis), TAL Metals (Total Dis)	No	Yes	Yes Gross Alpha (Total) 36.77 pCi/L Total Radium (Total) 5.9 pCi/L
93	8.16.2002	Decon water	2BH019-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 18.28 pCi/L
			2BH019-GW-001-1	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis)	NA	NA	Yes Gross Alpha (Total) 18.05 pCi/L
85	8.22.2002	Decon water	NA	NA	NA	NA	NA
86	8.22.2002	Decon water	NA	NA	NA	NA	NA
88	8.20.2002	Purged Groundwater	1BH031-GW-001-0	Gamma Spec (Total/Dis), Gross Alpha/Beta (Total/Dis), Total Radium (Total, Dis), Total Uranium by Isoptopic Uranium (Total/Dis), TCL Pest/PCBs, TCLSVOC's, TCL VOC's, TOC	No	Yes	Yes
98	8.22.2002	Purged Groundwater					
99	8.22.2002	Purged Groundwater					
100	8.22.2002	Purged Groundwater					
101	8.22.2002	Purged Groundwater					
102	8.22.2002	Purged Groundwater					
103	8.22.2002	Purged Groundwater					
105	8.22.2002	Purged Groundwater					
106	8.22.2002	Purged Groundwater					
107	8.22.2002	Purged Groundwater					
108	8.22.2002	Purged Groundwater					
104	8.22.2002	Purged Groundwater					Gross Alpha (Total) 15.4 pCi/L Gross Beta (Total) 224.79 pCi/L

[1] = A yes indicates RCRA characteristic based on Corrosivity, Igniatablity, Reactivity and Toxicity (TCLP)

[2] = Soil Cuttings - A yes indicates an exceedance of the criteria listed for unimportant Quantities of Source Material Uniformly Dispersed in Soil or Other Media

[3] Groundwater (Filtered and nonfiltered samples) - A yes indicates exceedance of current and proposed EPA drinking water regulation limits. Gross Alpha - 15 pCi/l; Gross Beta - 50 pCi/l (not an MCL but an effluent criteria for DuPont's treatment facility (DET)). Radium - 266/228-5 pCi/l; and Total Uranium - 20.3 pCi/l (this limit will be in effect 12/8/03 - assumed activity of 6.77 x 10^{-7} Ci/g for natural uranium). These limits are listed in DET's permit

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Drum RAD
All Drum Samples

FieldSampleID	2BH034-BS-005-0	2BH018-BS-005-0	2BH018-BS-050-R	2BH027-BS-005-0	2BH027-BS-020-0	2BH031-BS-005-0	2BH038-BS-005-0	2BH034-BS-050-0
Samp.Date	1-Aug-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	1-Aug-02
Radionuclides Actinium-228 pCi/g	0.37	0.38	1.44	1.13	0.52	0.4	0.43	0.99
Radionuclides-Beryllium-7 pCi/g		0	0	0	0	0	0	
Radionuclides Bismuth-212 pCi/g		0	0	1.76	0	0	0	
Radionuclides Bismuth-214 pCi/g	0.29	0.27	0.47	0.77	0.33	0.21	0.32	0.96
Radionuclides Cesium-137 pCi/g		0.08	0	0	0	0	0.16	
Radionuclides Cobalt-60 pCi/g		0	0	0	0	0	0	
Radionuclides Lead-212 pCi/g	0.18	0.6	1.56	1.03	0.57	0.3	0.31	1.35
Radionuclides Lead-214 pCi/g	0.15	0.26	1.04	0.9	0.35	0.22	0.23	1.68
Radionuclides Potassium-40 pCi/g	6.78	7.71	10.54	8.07	9.44	5.5	8.47	12.17
Radionuclides Protactinium-234M pCi/g	0.00	16.24	452.2	84.23	70.74	0	31.68	0.00
Radionuclides Thallium-208 pCi/g		0.12	0.26	0.32	0.18	0.11	0.13	0.41
Radionuclides Thorium-234 pCi/g	0.00	10.34	305.9	65.19	52.34	0	24.21	2.27
Radionuclides Uranium-234 pCi/g	0.00	0	263.8	0	0	0	0	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.91	20.72	4.57	3.97	0	0.6	0.00
Radionuclides Uranium-238 pCi/g	0.00	0	282.3	0	0	0	0	0.00
Radionuclides Uranium-Total pCi/g		21.59	632.52	134.9	108.65	0	49.02	4.64
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	0.44	29.11	1305.71	151.09	123.76	0.43	56.44	4.91
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	29.49	1324.92	153.99	127.05	0.00	56.49	2.27
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.21	**9.26**	1.07	0.88	0.00	0.40	0.03
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	6.16	407.54	**18279.94**	2115.26	1732.64	6.02	790.16	68.74
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.09	**3.98**	0.46	0.38	0.00	0.17	0.01
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	147.45	**6624.6**	769.95	635.25	0	282.45	11.35

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Samp.Date	1-Aug-02	1-Aug-02	1-Aug-02	1-Aug-02	2-Aug-02	2-Aug-02	2-Aug-02	2-Aug-02
Radionuclides Actinium-228 pCi/g	0.25	0.90	0.94	0.42	0.65	0.55	0.66	0.62
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g		1.18			1.20	1.39	1.06	0.54
Radionuclides Bismuth-214 pCi/g	0.29	0.70	0.50	0.21	0.85	0.48	0.65	0.31
Radionuclides Cesium-137 pCi/g							0.07	0.08
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.37	1.26	1.03	0.40	0.84	0.86	0.90	0.55
Radionuclides Lead-214 pCi/g	0.19	0.52	0.69	0.20	1.06	0.28	0.58	0.33
Radionuclides Potassium-40 pCi/g	7.48	13.74	10.11	8.15	8.42	7.87	7.40	8.37
Radionuclides Protactinium-234M pCi/g	0.00	7.19	0.00	0.00	169.20	6.42	15.21	0.00
Radionuclides Thallium-208 pCi/g	0.08	0.32	0.25	0.09	0.16	0.22	0.24	0.14
Radionuclides Thorium-234 pCi/g	0.00	4.70	3.41	0.00	114.50	5.69	13.96	1.26
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	103.50	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	8.75	0.00	0.80	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	110.50	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g	1.00	9.62	6.75	0.76	237.75	11.67	28.72	2.51
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	0.48	13.11	4.60	0.41	499.61	12.87	30.40	1.90
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	11.89	3.41	0.00	506.45	12.11	29.97	1.26
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.09	0.03	0.00	3.54	0.09	0.22	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	6.72	183.54	64.4	5.74	6994.54	180.18	425.6	26.6
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.04	0.01	0.00	1.52	0.04	0.09	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	59.45	17.05	0	2532.25	60.55	149.85	6.3

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Samp.Date	2-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02
Radionuclides Actinium-228 pCi/g	0.93	0.81	0.48	1.41	0.54	0.90	0.29	1.01
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g		0.90	1.52	1.28	0.79	1.03		
Radionuclides Bismuth-214 pCi/g	0.49	0.50	0.24	0.76	0.47	0.77	0.54	0.37
Radionuclides Cesium-137 pCi/g								
Radionuclides Cobalt-60 pCi/g	0.10							
Radionuclides Lead-212 pCi/g	1.32	1.06	0.57	1.26	0.85	0.96	0.55	1.02
Radionuclides Lead-214 pCi/g	0.65	0.55	0.46	0.81	0.42	0.82	0.33	0.34
Radionuclides Potassium-40 pCi/g	11.66	10.15	9.24	14.38	10.24	10.69	5.89	12.92
Radionuclides Protactinium-234M pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.30	0.29	0.18	0.37	0.18	0.29	0.19	0.26
Radionuclides Thorium-234 pCi/g	0.00	4.59	1.54	1.42	0.00	0.96	0.00	0.00
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		9.37	3.15	3.00		1.86		
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.14	5.64	2.24	2.99	0.89	2.55	0.87	0.71
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	4.59	1.54	1.42	0.00	0.96	0.00	0.00
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.04	0.02	0.02	0.01	0.02	0.01	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	15.96	78.96	31.36	41.86	12.46	35.7	12.18	9.94
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	22.95	7.7	7.1	0	4.8	0	0

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Samp Date	5-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02
Radionuclides Actinium-228 pCi/g	0.52	0.96	0.72	1.41	0.61	0.82	1.87	0.58
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.01	1.44	1.32	2.32		1.10	1.68	
Radionuclides Bismuth-214 pCi/g	0.59	0.67	0.61	0.85	0.84	0.62	0.97	0.44
Radionuclides Cesium-137 pCi/g			0.06		0.08	0.08		0.06
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.67	1.03	0.97	1.51	0.87	0.93	1.79	0.62
Radionuclides Lead-214 pCi/g	0.47	0.76	0.73	0.87	0.45	0.72	1.15	0.44
Radionuclides Potassium-40 pCi/g	8.13	9.94	5.85	13.04	8.91	9.98	18.22	10.97
Radionuclides Protactinium-234M pCi/g	0.00	5.11	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.22	0.24	0.26	0.42	0.31	0.19	0.58	0.13
Radionuclides Thorium-234 pCi/g	0.00	2.91	3.89	1.57	1.10	0.00	0.00	0.89
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		5.84	7.83	3.18	2.10			
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.06	9.45	5.23	3.29	2.39	1.34	2.12	1.77
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	8.02	3.89	1.57	1.10	0.00	0.00	0.89
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.07	0.04	0.02	0.02	0.01	0.02	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	14.84	132.3	73.22	46.06	33.46	18.76	29.68	24.78
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	40.1	19.45	7.85	5.5	0	0	4.45

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Samp.Date	6-Aug-02	7-Aug-02	7-Aug-02	7-Aug-02	8-Aug-02	8-Aug-02	8-Aug-02	12-Aug-02
Radionuclides Actinium-228 pCi/g	1.04	0.83	0.95	0.54	1.25	0.83	0.75	0.61
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.24	1.32	1.22	0.80	1.03	1.67		1.35
Radionuclides Bismuth-214 pCi/g	0.75	0.50	0.71	0.38	0.87	0.48	0.59	0.46
Radionuclides Cesium-137 pCi/g								0.04
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	1.43	0.83	1.10	0.58	1.41	0.86	1.23	0.79
Radionuclides Lead-214 pCi/g	0.61	0.54	0.71	0.35	0.96	0.33	0.54	0.45
Radionuclides Potassium-40 pCi/g	12.63	13.79	10.78	12.99	7.33	13.19	11.03	9.07
Radionuclides Protactinium-234M pCi/g	9.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.40	0.28	0.29	0.19	0.26	0.28	0.28	0.20
Radionuclides Thorium-234 pCi/g	1.68	0.00	0.00	0.00	1.85	0.00	0.00	1.56
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g	3.50	0.87	1.67	0.76	3.79		1.62	3.17
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	12.98	1.04	1.42	0.73	3.68	0.81	1.13	2.47
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	11.62	0.00	0.00	0.00	1.85	0.00	0.00	1.56
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.09	0.01	0.01	0.01	0.03	0.01	0.01	0.02
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	181.72	14.56	19.88	10.22	51.52	11.34	15.82	34.58

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	58.1	0	0	0	9.25	0	0	7.8

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Samp.Date	12-Aug-02	13-Aug-02	13-Aug-02	13-Aug-02	13-Aug-02	15-Aug-02	15-Aug-02	16-Aug-02
Radionuclides Actinium-228 pCi/g	1.23	0.30	0.42	0.29	0.77	0.22	0.82	0.44
Radionuclides Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.58		0.81	0.71	1.45			0.90
Radionuclides Bismuth-214 pCi/g	0.69	0.20	0.22	0.22	0.71	0.14	0.69	0.34
Radionuclides Cesium-137 pCi/g					0.04			
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.46	0.36	0.43	0.34	0.86	0.12	1.23	0.41
Radionuclides Lead-214 pCi/g	0.56	0.32	0.23	0.23	0.72	0.17	0.50	0.29
Radionuclides Potassium-40 pCi/g	11.78	7.28	10.97	4.41	9.28	6.92	9.23	6.45
Radionuclides Protactinium-234M pCi/g	0.00	5.74	4.72	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.33	0.10	0.15	0.10	0.27	0.08	0.31	0.14
Radionuclides Thorium-234 pCi/g	0.00	0.00	0.00	0.00	1.26	0.00	0.00	0.00
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g			0.68		2.60			
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.25	6.26	5.17	0.45	2.69	0.31	1.19	0.63
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	5.74	4.72	0.00	1.26	0.00	0.00	0.00
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.04	0.04	0.00	0.02	0.00	0.01	0.00
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	17.5	87.64	72.38	6.3	37.66	4.34	16.66	8.82
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	28.7	23.6	0	6.3	0	0	0

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Samp Date	16-Aug-02	16-Aug-02	16-Aug-02	16-Aug-02	19-Aug-02	19-Aug-02	19-Aug-02	19-Aug-02
Radionuclides Actinium-228 pCi/g	0.76	0.46	0.36	0.55	0.77	1.40	0.35	1.28
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.67		0.98	0.81	1.02			
Radionuclides Bismuth-214 pCi/g	0.52	0.47	0.42	0.52	0.43	1.00	0.45	0.65
Radionuclides Cesium-137 pCi/g		0.05		0.31				
Radionuclides Cobalt-60 pCi/g		0.06						
Radionuclides Lead-212 pCi/g	1.08	0.63	0.74	0.71	0.88	1.65	0.70	1.28
Radionuclides Lead-214 pCi/g	0.56	0.44	0.43	0.48	0.56	1.05	0.36	0.52
Radionuclides Potassium-40 pCi/g	7.53	7.63	5.94	7.59	7.19	14.16	6.88	9.81
Radionuclides Protactinium-234M pCi/g	0.00	8.24	8.78	23.20	69.33	0.00	7.77	0.00
Radionuclides Thallium-208 pCi/g	0.30	0.11	0.12	0.22	0.20	0.42	0.10	0.28
Radionuclides Thorium-234 pCi/g	0.00	4.06	9.69	11.38	69.03	8.04	1.12	0.00
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	4.43	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		8.32	19.72	23.18	142.49	16.62	2.20	2.27
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.08	13.21	19.32	35.58	139.35	10.09	9.70	1.17
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	12.30	18.47	34.58	142.79	8.04	8.89	0.00
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.09	0.14	0.25	0.99	0.07	0.07	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	15.12	184.94	270.48	498.12	1950.9	141.26	135.8	16.38
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.04	0.06	0.10	0.43	0.02	0.03	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	61.5	92.35	172.9	713.95	40.2	44.45	0

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Drum RAD
All Drum Samples

FieldSampleID	2BH015-BS-080-R	2BH015-BS-005-R	1BH031-BS-065-0	1TP002-BS-015-007-0	1TP003-BS-010-001-0	1TP005-BS-020-002-0	Min	Max	Avg
Samp.Date	20-Aug-02	20-Aug-02	22-Aug-02	23-Aug-02	26-Aug-02	26-Aug-02			
Radionuclides Actinium-228 pCi/g	1.04	0.22	0.70	0.67	1.04	0.77	0.22	1.87	0.77
Radionuclides-Beryllium-7 pCi/g									
Radionuclides Bismuth-212 pCi/g		0.55	1.79	1.45	1.09	0.88	0.00	2.32	0.76
Radionuclides Bismuth-214 pCi/g	0.62	0.15	0.29	0.74	4.11	0.59	0.14	4.11	0.60
Radionuclides Cesium-137 pCi/g				0.20			0.00	0.31	0.02
Radionuclides Cobalt-60 pCi/g							0.00	0.10	0.00
Radionuclides Lead-212 pCi/g	1.16	0.31	0.80	0.67	0.99	0.82	0.12	1.79	0.88
Radionuclides Lead-214 pCi/g	0.63	0.21	0.33	0.97	4.77	0.43	0.15	4.77	0.63
Radionuclides Potassium-40 pCi/g	13.60	5.90	9.10	11.60	9.33	8.26	4.41	18.22	9.87
Radionuclides Protactinium-234M pCi/g	0.00	0.00	41.08	100.70	346.70	7.35	0.00	452.20	24.90
Radionuclides Thallium-208 pCi/g	0.37	0.06	0.29	0.18	0.43	0.18	0.06	0.58	0.24
Radionuclides Thorium-234 pCi/g	0.00	0.00	28.21	63.65	208.60	6.66	0.00	305.90	17.33
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	58.76	166.50	0.00	0.00	263.80	9.88
Radionuclides Uranium-235 pCi/g	0.00	0.00	1.78	4.93	14.91	0.00	0.00	20.72	1.11
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	53.20	154.20	0.00	0.00	282.30	10.00
Radionuclides Uranium-Total pCi/g	1.48	0.76	58.20	132.63	432.11	13.76	0.00	632.52	35.98
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.25	0.36	69.91	278.22	884.88	15.03	0.29	1313.08	63.34
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	0.00	71.07	281.44	890.91	14.01	0.00	1324.92	63.21
Thorium (232)	0	0	0	0	0	0	0	0	0.00

							MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture									
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.00	0.50	1.97	6.28	0.11	0.00	9.31	0.45
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	17.5	5.04	978.74	3895.08	12388.32	210.42	4.06	18383.12	866.74

							MIN	MAX	AVG
For Refined Uranium and Thorium Mixture									
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.00	0.21	0.85	2.68	0.04	0.00	9.40	0.45
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	0	355.35	1407.2	4454.55	70.05	0	6624.6	316.04

USACE-DuPont Chambers Works -FUSRAP Site
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Waste Management
August 2002 Drum RAD
Drums 76 and 79

FieldSampleID	2BH034-BS-005-0	2BH018-BS-005-0	2BH018-BS-050-R	2BH027-BS-005-0	2BH027-BS-020-0	2BH031-BS-005-0	2BH038-BS-005-0	2BH034-BS-050-0
Samp.Date	1-Aug-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	1-Aug-02
Radionuclides Actinium-228 pCi/g	0.37	0.38	1.44	1.13	0.52	0.4	0.43	0.99
Radionuclides-Beryllium-7 pCi/g		0	0	0	0	0	0	
Radionuclides Bismuth-212 pCi/g		0	0	1.76	0	0	0	
Radionuclides Bismuth-214 pCi/g	0.29	0.27	0.47	0.77	0.33	0.21	0.32	0.96
Radionuclides Cesium-137 pCi/g		0.08	0	0	0	0	0.16	
Radionuclides Cobalt-60 pCi/g		0	0	0	0	0	0	
Radionuclides Lead-212 pCi/g	0.18	0.6	1.56	1.03	0.57	0.3	0.31	1.35
Radionuclides Lead-214 pCi/g	0.15	0.26	1.04	0.9	0.35	0.22	0.23	1.68
Radionuclides Potassium-40 pCi/g	6.78	7.71	10.54	8.07	9.44	5.5	8.47	12.17
Radionuclides Protactinium-234M pCi/g	0.00	18.24	452.2	84.23	70.74	0	31.68	0.00
Radionuclides Thallium-208 pCi/g		0.12	0.26	0.32	0.18	0.11	0.13	0.41
Radionuclides Thorium-234 pCi/g	0.00	10.34	305.9	65.19	52.34	0	24.21	2.27
Radionuclides Uranium-234 pCi/g	0.00	0	263.8	0	0	0	0	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.91	20.72	4.57	3.97	0	0.6	0.00
Radionuclides Uranium-238 pCi/g	0.00	0	282.3	0	0	0	0	0.00
Radionuclides Uranium-Total pCi/g		21.59	632.52	134.9	108.65	0	49.02	4.64

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	0.44	29.11	1305.71	151.09	123.76	0.43	56.44	4.91
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	29.49	1324.92	153.99	127.05	0.00	56.49	2.27
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.21	9.26	1.07	0.88	0.00	0.40	0.03
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	6.16	407.54	18279.94	2115.26	1732.64	6.02	790.16	68.74

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.09	3.98	0.46	0.38	0.00	0.17	0.01
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	147.45	6624.6	769.95	635.25	0	282.45	11.35

USACE-DuPont Chambers Works -FUSRAP Site
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Waste Management
August 2002 Drum RAD
Drums 76 and 79

FieldSampleID	2BH036-BS-005-R	2BH036-BS-050-R	2BH030-BS-050-0	2BH030-BS-005-0	2BH043-SS-000-0	2BH025-BS-050-0	2BH025-BS-005-0	2BH017-BS-005-0
Samp.Date	1-Aug-02	1-Aug-02	1-Aug-02	1-Aug-02	2-Aug-02	2-Aug-02	2-Aug-02	2-Aug-02
Radionuclides Actinium-228 pCi/g	0.25	0.90	0.94	0.42	0.65	0.55	0.66	0.62
Radionuclides Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g		1.18			1.20	1.39	1.06	0.54
Radionuclides Bismuth-214 pCi/g	0.29	0.70	0.50	0.21	0.85	0.48	0.65	0.31
Radionuclides Cesium-137 pCi/g							0.07	0.08
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.37	1.26	1.03	0.40	0.84	0.86	0.90	0.55
Radionuclides Lead-214 pCi/g	0.19	0.52	0.69	0.20	1.06	0.28	0.58	0.33
Radionuclides Potassium-40 pCi/g	7.48	13.74	10.11	8.15	8.42	7.87	7.40	8.37
Radionuclides Protactinium-234M pCi/g	0.00	7.19	0.00	0.00	169.20	6.42	15.21	0.00
Radionuclides Thallium-208 pCi/g	0.08	0.32	0.25	0.09	0.16	0.22	0.24	0.14
Radionuclides Thorium-234 pCi/g	0.00	4.70	3.41	0.00	114.50	5.69	13.96	1.26
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	103.50	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	8.75	0.00	0.80	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	110.50	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g	1.00	9.62	6.75	0.76	237.75	11.67	28.72	2.51
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	0.48	13.11	4.60	0.41	499.61	12.87	30.40	1.90
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	11.89	3.41	0.00	506.45	12.11	29.97	1.26
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.09	0.03	0.00	3.54	0.09	0.22	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	6.72	183.54	64.4	5.74	6994.54	180.18	425.6	26.6

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.04	0.01	0.00	1.52	0.04	0.09	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	59.45	17.05	0	2532.25	60.55	149.85	6.3

USACE-DuPont Chambers Works -FUSRAP Site
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August 2002 Drum RAD
Drums 76 and 79

FieldSampleID	2BH017-BS-050-0	2BH037-BS-050-0	2BH037-BS-005-0	2BH035-BS-055-R	2BH035-BS-005-R	2BH029-BS-005-R	2BH029-BS-050-R	2BH028-BS-050-0
Samp.Date	2-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02
Radionuclides Actinium-228 pCi/g	0.93	0.81	0.48	1.41	0.54	0.90	0.29	1.01
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g		0.90	1.52	1.28	0.79	1.03		
Radionuclides Bismuth-214 pCi/g	0.49	0.50	0.24	0.76	0.47	0.77	0.54	0.37
Radionuclides Cesium-137 pCi/g								
Radionuclides Cobalt-60 pCi/g	0.10							
Radionuclides Lead-212 pCi/g	1.32	1.06	0.57	1.26	0.65	0.96	0.55	1.02
Radionuclides Lead-214 pCi/g	0.65	0.55	0.46	0.81	0.42	0.82	0.33	0.34
Radionuclides Potassium-40 pCi/g	11.66	10.15	9.24	14.38	10.24	10.69	5.89	12.92
Radionuclides Protactinium-234M pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.30	0.29	0.18	0.37	0.18	0.29	0.19	0.26
Radionuclides Thorium-234 pCi/g	0.00	4.59	1.54	1.42	0.00	0.96	0.00	0.00
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		9.37	3.15	3.00		1.86		

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.14	5.64	2.24	2.99	0.89	2.55	0.87	0.71
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	4.59	1.54	1.42	0.00	0.96	0.00	0.00
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.04	0.02	0.02	0.01	0.02	0.01	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	15.96	78.96	31.36	41.86	12.46	35.7	12.18	9.94

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	22.95	7.7	7.1	0	4.8	0	0

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Waste Management
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Drums 76 and 79

FieldSampleID	2BH028-BS-005-0	2BH039-BS-050-0	2BH039-BS-005-0	2BH040-BS-050-0	2BH040-SS-000-0	2BH041-SS-000-0	2BH041-BS-050-0	2BH022-BS-005-0
Samp.Date	5-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02
Radionuclides Actinium-228 pCi/g	0.52	0.96	0.72	1.41	0.61	0.82	1.87	0.58
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.01	1.44	1.32	2.32		1.10	1.68	
Radionuclides Bismuth-214 pCi/g	0.59	0.67	0.61	0.85	0.84	0.62	0.97	0.44
Radionuclides Cesium-137 pCi/g			0.06		0.08	0.08		0.06
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.67	1.03	0.97	1.51	0.87	0.93	1.79	0.62
Radionuclides Lead-214 pCi/g	0.47	0.76	0.73	0.87	0.45	0.72	1.15	0.44
Radionuclides Potassium-40 pCi/g	8.13	9.94	5.85	13.04	8.91	9.98	18.22	10.97
Radionuclides Protactinium-234M pCi/g	0.00	5.11	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.22	0.24	0.26	0.42	0.31	0.19	0.58	0.13
Radionuclides Thorium-234 pCi/g	0.00	2.91	3.89	1.57	1.10	0.00	0.00	0.89
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		5.84	7.83	3.18	2.10			

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.06	9.45	5.23	3.29	2.39	1.34	2.12	1.77
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	8.02	3.89	1.57	1.10	0.00	0.00	0.89
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.07	0.04	0.02	0.02	0.01	0.02	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	14.84	132.3	73.22	46.06	33.46	18.76	29.68	24.78

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	40.1	19.45	7.85	5.5	0	0	4.45

USACE-DuPont Chambers Works -FUSRAP Site
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August 2002 Drum RAD
Drums 76 and 79

FieldSampleID	2BH022-BS-050-0	2BH021-BS-050-R	2BH021-BS-010-R	2BH013-BS-050-R	2BH012-BS-005-0	2BH012-BS-050-0	2BH013-BS-005-R	2BH023-BS-020-R
Samp.Date	6-Aug-02	7-Aug-02	7-Aug-02	7-Aug-02	8-Aug-02	8-Aug-02	8-Aug-02	12-Aug-02
Radionuclides Actinium-228 pCi/g	1.04	0.83	0.95	0.54	1.25	0.83	0.75	0.61
Radionuclides Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.24	1.32	1.22	0.80	1.03	1.67		1.35
Radionuclides Bismuth-214 pCi/g	0.75	0.50	0.71	0.38	0.87	0.48	0.59	0.46
Radionuclides Cesium-137 pCi/g								0.04
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	1.43	0.83	1.10	0.58	1.41	0.86	1.23	0.79
Radionuclides Lead-214 pCi/g	0.61	0.54	0.71	0.35	0.96	0.33	0.54	0.45
Radionuclides Potassium-40 pCi/g	12.63	13.79	10.78	12.99	7.33	13.19	11.03	9.07
Radionuclides Protactinium-234M pCi/g	9.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.40	0.28	0.29	0.19	0.26	0.28	0.28	0.20
Radionuclides Thorium-234 pCi/g	1.68	0.00	0.00	0.00	1.85	0.00	0.00	1.56
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g	3.50	0.87	1.67	0.76	3.79		1.62	3.17
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	12.98	1.04	1.42	0.73	3.68	0.81	1.13	2.47
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	11.62	0.00	0.00	0.00	1.85	0.00	0.00	1.56
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.09	0.01	0.01	0.01	0.03	0.01	0.01	0.02
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	181.72	14.56	19.88	10.22	51.52	11.34	15.82	34.58

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	58.1	0	0	0	9.25	0	0	7.8

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No 1
Waste Management
August 2002 Drum RAD
Drums 76 and 79

FieldSampleID	2BH023-BS-040-R	2BH031-BS-005-R	2BH031-BS-090-R	2BH024-BS-005-0	2BH024-BS-050-0	2BH032-BS-005-0	2BH032-BS-080-0	2BH033-BS-005-0
Samp.Date	12-Aug-02	13-Aug-02	13-Aug-02	13-Aug-02	13-Aug-02	15-Aug-02	15-Aug-02	16-Aug-02
Radionuclides Actinium-228 pCi/g	1.23	0.30	0.42	0.29	0.77	0.22	0.82	0.44
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.58		0.81	0.71	1.45			0.90
Radionuclides Bismuth-214 pCi/g	0.69	0.20	0.22	0.22	0.71	0.14	0.69	0.34
Radionuclides Cesium-137 pCi/g					0.04			
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.46	0.36	0.43	0.34	0.86	0.12	1.23	0.41
Radionuclides Lead-214 pCi/g	0.56	0.32	0.23	0.23	0.72	0.17	0.50	0.29
Radionuclides Potassium-40 pCi/g	11.78	7.28	10.97	4.41	9.28	6.92	9.23	6.45
Radionuclides Protactinium-234M pCi/g	0.00	5.74	4.72	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.33	0.10	0.15	0.10	0.27	0.08	0.31	0.14
Radionuclides Thorium-234 pCi/g	0.00	0.00	0.00	0.00	1.26	0.00	0.00	0.00
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g			0.68		2.60			
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.25	6.26	5.17	0.45	2.69	0.31	1.19	0.63
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	5.74	4.72	0.00	1.26	0.00	0.00	0.00
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.04	0.04	0.00	0.02	0.00	0.01	0.00
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	17.5	87.64	72.38	6.3	37.66	4.34	16.66	8.82
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	28.7	23.6	0	6.3	0	0	0

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FieldSampleID	2BH033-BS-050-0	2BH026-BS-005-0	2BH026-BS-020-0	2BH026-BS-040-0	2BH027-BS-005-R	2BH027-BS-045-R	2BH019-BS-005-0	2BH019-BS-060-R
Samp.Date	16-Aug-02	16-Aug-02	16-Aug-02	16-Aug-02	19-Aug-02	19-Aug-02	19-Aug-02	19-Aug-02
Radionuclides Actinium-228 pCi/g	0.76	0.46	0.36	0.55	0.77	1.40	0.35	1.28
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.67		0.98	0.81	1.02			
Radionuclides Bismuth-214 pCi/g	0.52	0.47	0.42	0.52	0.43	1.00	0.45	0.65
Radionuclides Cesium-137 pCi/g		0.05		0.31				
Radionuclides Cobalt-60 pCi/g		0.06						
Radionuclides Lead-212 pCi/g	1.08	0.63	0.74	0.71	0.88	1.65	0.70	1.28
Radionuclides Lead-214 pCi/g	0.56	0.44	0.43	0.48	0.56	1.05	0.36	0.52
Radionuclides Potassium-40 pCi/g	7.53	7.63	5.94	7.59	7.19	14.16	6.88	9.81
Radionuclides Protactinium-234M pCi/g	0.00	8.24	8.78	23.20	69.33	0.00	7.77	0.00
Radionuclides Thallium-208 pCi/g	0.30	0.11	0.12	0.22	0.20	0.42	0.10	0.28
Radionuclides Thorium-234 pCi/g	0.00	4.06	9.69	11.38	69.03	8.04	1.12	0.00
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	4.43	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		8.32	19.72	23.18	142.49	16.62	2.20	2.27

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.08	13.21	19.32	35.58	139.35	10.09	9.70	1.17
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	12.30	18.47	34.58	142.79	8.04	8.89	0.00
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.09	0.14	0.25	0.99	0.07	0.07	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	15.12	184.94	270.48	498.12	1950.9	141.26	135.8	16.38

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.04	0.06	0.10	0.43	0.02	0.03	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	61.5	92.35	172.9	713.95	40.2	44.45	0

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FieldSampleID	2BH015-BS-080-R	2BH015-BS-005-R			
Samp.Date	20-Aug-02	20-Aug-02	Min	Max	Avg
Radionuclides Actinium-228 pCi/g	1.04	0.22	0.22	1.87	0.72
Radionuclides-Beryllium-7 pCi/g					
Radionuclides Bismuth-212 pCi/g		0.55	0.00	2.32	0.68
Radionuclides Bismuth-214 pCi/g	0.62	0.15	0.14	1.00	0.51
Radionuclides Ceslum-137 pCi/g			0.00	0.31	0.02
Radionuclides Cobalt-60 pCi/g			0.00	0.10	0.00
Radionuclides Lead-212 pCi/g	1.16	0.31	0.12	1.79	0.83
Radionuclides Lead-214 pCi/g	0.63	0.21	0.15	1.68	0.52
Radionuclides Potassium-40 pCi/g	13.60	5.90	4.41	18.22	9.23
Radionuclides Protactinium-234M pCi/g	0.00	0.00	0.00	452.20	16.63
Radionuclides Thallium-208 pCi/g	0.37	0.06	0.06	0.58	0.22
Radionuclides Thorium-234 pCi/g	0.00	0.00	0.00	305.90	12.21
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	263.80	6.12
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	20.72	0.75
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	282.30	6.55
Radionuclides Uranium-Total pCi/g	1.48	0.76	0.00	632.52	25.37

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2.000 pCi/g	1.25	0.36	0.29	1306.88	42.54
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	0.00	0.00	1324.92	42.25
Thorium (232)	0	0	0	0	0.00

			MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture					
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.00	0.00	9.27	0.30
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	17.5	5.04	4.06	18296.32	595.53

			MIN	MAX	AVG
For Refined Uranium and Thorium Mixture					
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.00	0.00	9.40	0.30
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	0	0	6624.6	24.26

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FieldSampleID	2BH034-BS-005-0	2BH018-BS-005-0	2BH018-BS-050-R	2BH027-BS-005-0	2BH027-BS-020-0	2BH031-BS-005-0	2BH038-BS-005-0	2BH034-BS-050-0
Samp.Date	1-Aug-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	31-Jul-02	1-Aug-02
Radionuclides Actinium-228 pCi/g	0.37	0.38	1.44	1.13	0.52	0.4	0.43	0.99
Radionuclides-Beryllium-7 pCi/g		0	0	0	0	0	0	
Radionuclides Bismuth-212 pCi/g		0	0	1.76	0	0	0	
Radionuclides Bismuth-214 pCi/g	0.29	0.27	0.47	0.77	0.33	0.21	0.32	0.96
Radionuclides Cesium-137 pCi/g		0.08	0	0	0	0	0.16	
Radionuclides Cobalt-60 pCi/g		0	0	0	0	0	0	
Radionuclides Lead-212 pCi/g	0.18	0.6	1.56	1.03	0.57	0.3	0.31	1.35
Radionuclides Lead-214 pCi/g	0.15	0.26	1.04	0.9	0.35	0.22	0.23	1.68
Radionuclides Potassium-40 pCi/g	6.78	7.71	10.54	8.07	9.44	5.5	8.47	12.17
Radionuclides Protactinium-234M pCi/g	0.00	18.24	452.2	84.23	70.74	0	31.68	0.00
Radionuclides Thallium-208 pCi/g		0.12	0.26	0.32	0.18	0.11	0.13	0.41
Radionuclides Thorium-234 pCi/g	0.00	10.34	305.9	65.19	52.34	0	24.21	2.27
Radionuclides Uranium-234 pCi/g	0.00	0	263.8	0	0	0	0	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.91	20.72	4.57	3.97	0	0.6	0.00
Radionuclides Uranium-238 pCi/g	0.00	0	282.3	0	0	0	0	0.00
Radionuclides Uranium-Total pCi/g		21.59	632.52	134.9	108.65	0	49.02	4.64

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	0.44	29.11	1305.71	151.09	123.76	0.43	56.44	4.91
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	29.49	1324.92	153.99	127.05	0.00	56.49	2.27
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.21	**9.26**	**1.07**	0.88	0.00	0.40	0.03
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	6.16	407.54	**18279.94**	**2115.26**	1732.64	6.02	790.16	68.74

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.09	**3.98**	0.46	0.38	0.00	0.17	0.01
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	147.45	**6624.6**	769.95	635.25	0	282.45	11.35

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FieldSampleID	2BH036-BS-005-R	2BH036-BS-050-R	2BH030-BS-050-0	2BH030-BS-005-0	2BH043-SS-000-0	2BH025-BS-050-0	2BH025-BS-005-0	2BH017-BS-005-0
Samp.Date	1-Aug-02	1-Aug-02	1-Aug-02	1-Aug-02	2-Aug-02	2-Aug-02	2-Aug-02	2-Aug-02
Radionuclides Actinium-228 pCi/g	0.25	0.90	0.94	0.42	0.65	0.55	0.66	0.62
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g		1.18			1.20	1.39	1.06	0.54
Radionuclides Bismuth-214 pCi/g	0.29	0.70	0.50	0.21	0.85	0.48	0.65	0.31
Radionuclides Cesium-137 pCi/g							0.07	0.08
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.37	1.26	1.03	0.40	0.84	0.86	0.90	0.55
Radionuclides Lead-214 pCi/g	0.19	0.52	0.69	0.20	1.06	0.28	0.58	0.33
Radionuclides Potassium-40 pCi/g	7.48	13.74	10.11	8.15	8.42	7.87	7.40	8.37
Radionuclides Protactinium-234M pCi/g	0.00	7.19	0.00	0.00	169.20	6.42	15.21	0.00
Radionuclides Thallium-208 pCi/g	0.08	0.32	0.25	0.09	0.16	0.22	0.24	0.14
Radionuclides Thorium-234 pCi/g	0.00	4.70	3.41	0.00	114.50	5.69	13.96	1.26
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	103.50	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	8.75	0.00	0.80	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	110.50	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g	1.00	9.62	6.75	0.76	237.75	11.67	28.72	2.51
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	0.48	13.11	4.60	0.41	499.61	12.87	30.40	1.90
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	11.89	3.41	0.00	506.45	12.11	29.97	1.26
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.09	0.03	0.00	3.54	0.09	0.22	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	6.72	183.54	64.4	5.74	6894.54	180.18	425.6	26.6
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.04	0.01	0.00	1.52	0.04	0.09	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	59.45	17.05	0	2532.25	60.55	149.85	6.3

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FieldSampleID	2BH017-BS-050-0	2BH037-BS-050-0	2BH037-BS-005-0	2BH035-BS-055-R	2BH035-BS-005-R	2BH029-BS-005-R	2BH029-BS-050-R	2BH028-BS-050-0
Samp.Date	2-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02	5-Aug-02
Radionuclides Actinium-228 pCi/g	0.93	0.81	0.48	1.41	0.54	0.90	0.29	1.01
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g		0.90	1.52	1.28	0.79	1.03		
Radionuclides Bismuth-214 pCi/g	0.49	0.50	0.24	0.76	0.47	0.77	0.54	0.37
Radionuclides Cesium-137 pCi/g								
Radionuclides Cobalt-60 pCi/g	0.10							
Radionuclides Lead-212 pCi/g	1.32	1.06	0.57	1.26	0.85	0.96	0.55	1.02
Radionuclides Lead-214 pCi/g	0.65	0.55	0.46	0.81	0.42	0.82	0.33	0.34
Radionuclides Potassium-40 pCi/g	11.66	10.15	9.24	14.38	10.24	10.69	5.89	12.92
Radionuclides Protactinium-234M pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.30	0.29	0.18	0.37	0.18	0.29	0.19	0.26
Radionuclides Thorium-234 pCi/g	0.00	4.59	1.54	1.42	0.00	0.96	0.00	0.00
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		9.37	3.15	3.00		1.86		
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.14	5.64	2.24	2.99	0.89	2.55	0.87	0.71
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	4.59	1.54	1.42	0.00	0.96	0.00	0.00
Thorium (232)	0	0	0	0	0	0	0	0
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.04	0.02	0.02	0.01	0.02	0.01	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	15.96	78.96	31.36	41.86	12.46	35.7	12.18	9.94
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	22.95	7.7	7.1	0	4.8	0	0

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FieldSampleID	2BH028-BS-005-0	2BH039-BS-050-0	2BH039-BS-005-0	2BH040-BS-050-0	2BH040-SS-000-0	2BH041-SS-000-0	2BH041-BS-050-0	2BH022-BS-005-0
Samp.Date	5-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02	6-Aug-02
Radionuclides Actinium-228 pCi/g	0.52	0.96	0.72	1.41	0.61	0.82	1.87	0.58
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.01	1.44	1.32	2.32		1.10	1.68	
Radionuclides Bismuth-214 pCi/g	0.59	0.67	0.61	0.85	0.84	0.62	0.97	0.44
Radionuclides Cesium-137 pCi/g			0.06		0.08	0.08		0.06
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	0.67	1.03	0.97	1.51	0.87	0.93	1.79	0.62
Radionuclides Lead-214 pCi/g	0.47	0.76	0.73	0.87	0.45	0.72	1.15	0.44
Radionuclides Potassium-40 pCi/g	8.13	9.94	5.85	13.04	8.91	9.98	18.22	10.97
Radionuclides Protactinium-234M pCi/g	0.00	5.11	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.22	0.24	0.26	0.42	0.31	0.19	0.58	0.13
Radionuclides Thorium-234 pCi/g	0.00	2.91	3.89	1.57	1.10	0.00	0.00	0.89
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g		5.84	7.83	3.18	2.10			

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.06	9.45	5.23	3.29	2.39	1.34	2.12	1.77
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	8.02	3.89	1.57	1.10	0.00	0.00	0.89
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.07	0.04	0.02	0.02	0.01	0.02	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	14.84	132.3	73.22	46.06	33.46	18.76	29.68	24.78

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	40.1	19.45	7.85	5.5	0	0	4.45

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Drum RAD
Drums 43, 44, 45, 62

FieldSampleID	2BH022-BS-050-0	2BH021-BS-050-R	2BH021-BS-010-R	2BH013-BS-050-R	2BH012-BS-005-0	2BH012-BS-050-0	2BH013-BS-005-R	2BH023-BS-020-R
Samp.Date	6-Aug-02	7-Aug-02	7-Aug-02	7-Aug-02	8-Aug-02	8-Aug-02	8-Aug-02	12-Aug-02
Radionuclides Actinium-228 pCi/g	1.04	0.83	0.95	0.54	1.25	0.83	0.75	0.61
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	1.24	1.32	1.22	0.80	1.03	1.67		1.35
Radionuclides Bismuth-214 pCi/g	0.75	0.50	0.71	0.38	0.67	0.48	0.59	0.46
Radionuclides Cesium-137 pCi/g								0.04
Radionuclides Cobalt-60 pCi/g								
Radionuclides Lead-212 pCi/g	1.43	0.83	1.10	0.58	1.41	0.86	1.23	0.79
Radionuclides Lead-214 pCi/g	0.61	0.54	0.71	0.35	0.96	0.33	0.54	0.45
Radionuclides Potassium-40 pCi/g	12.63	13.79	10.78	12.99	7.33	13.19	11.03	9.07
Radionuclides Protactinium-234M pCi/g	9.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Thallium-208 pCi/g	0.40	0.28	0.29	0.19	0.26	0.28	0.28	0.20
Radionuclides Thorium-234 pCi/g	1.68	0.00	0.00	0.00	1.85	0.00	0.00	1.56
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g	3.50	0.87	1.67	0.76	3.79		1.62	3.17
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	12.98	1.04	1.42	0.73	3.68	0.81	1.13	2.47
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	11.62	0.00	0.00	0.00	1.85	0.00	0.00	1.56
Thorium (232)	0	0	0	0	0	0	0	0

For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.09	0.01	0.01	0.01	0.03	0.01	0.01	0.02
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	181.72	14.56	19.88	10.22	51.52	11.34	15.82	34.58

For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	58.1	0	0	0	9.25	0	0	7.8

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No 1
Waste Management
August 2002 Drum RAD
Drums 43, 44, 45, 62

FieldSampleID	2BH023-BS-040-R	2BH031-BS-005-R	2BH031-BS-090-R	2BH024-BS-005-0	2BH024-BS-050-0	2BH032-BS-005-0	2BH032-BS-080-0			
Samp.Date	12-Aug-02	13-Aug-02	13-Aug-02	13-Aug-02	13-Aug-02	15-Aug-02	15-Aug-02	Min	Max	Avg
Radionuclides Actinium-228 pCi/g	1.23	0.30	0.42	0.29	0.77	0.22	0.82	0.22	1.87	0.59
Radionuclides-Beryllium-7 pCi/g										
Radionuclides Bismuth-212 pCi/g	1.58		0.81	0.71	1.45			0.00	2.32	0.58
Radionuclides Bismuth-214 pCi/g	0.69	0.20	0.22	0.22	0.71	0.14	0.69	0.14	0.97	0.42
Radionuclides Cesium-137 pCi/g					0.04			0.00	0.16	0.01
Radionuclides Cobalt-60 pCi/g								0.00	0.10	0.00
Radionuclides Lead-212 pCi/g	0.46	0.36	0.43	0.34	0.86	0.12	1.23	0.12	1.79	0.67
Radionuclides Lead-214 pCi/g	0.56	0.32	0.23	0.23	0.72	0.17	0.50	0.15	1.68	0.43
Radionuclides Potassium-40 pCi/g	11.78	7.28	10.97	4.41	9.28	6.92	9.23	4.41	18.22	7.69
Radionuclides Protactinium-234M pCi/g	0.00	5.74	4.72	0.00	0.00	0.00	0.00	0.00	452.20	14.68
Radionuclides Thallium-208 pCi/g	0.33	0.10	0.15	0.10	0.27	0.08	0.31	0.08	0.58	0.18
Radionuclides Thorium-234 pCi/g	0.00	0.00	0.00	0.00	1.26	0.00	0.00	0.00	305.90	10.48
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	263.80	6.12
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.72	0.67
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	282.30	6.55
Radionuclides Uranium-Total pCi/g			0.68		2.60			0.00	632.52	21.75

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	1.25	6.26	5.17	0.45	2.69	0.31	1.19	0.29	1306.85	38.68
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	5.74	4.72	0.00	1.26	0.00	0.00	0.00	1324.92	38.50
Thorium (232)	0	0	0	0	0	0	0	0	0	0.00

								MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture										
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.01	0.04	0.04	0.00	0.02	0.00	0.01	0.00	9.27	0.27
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	17.5	87.64	72.38	6.3	37.66	4.34	16.66	4.06	18295.9	541.46

								MIN	MAX	AVG
For Refined Uranium and Thorium Mixture										
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	9.40	0.27
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	28.7	23.6	0	6.3	0	0	0	6624.6	192.5

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Drum RAD
Drum 46

FieldSampleID	2BH033-BS-005-0	2BH033-BS-050-0	2BH026-BS-005-0	2BH026-BS-020-0	2BH026-BS-040-0			
Samp.Date	16-Aug-02	16-Aug-02	16-Aug-02	16-Aug-02	16-Aug-02	Min	Max	Avg
Radionuclides Actinium-228 pCi/g	0.44	0.76	0.46	0.36	0.55	0.36	0.76	0.04
Radionuclides-Beryllium-7 pCi/g								
Radionuclides Bismuth-212 pCi/g	0.90	1.67		0.98	0.81	0.81	1.67	0.07
Radionuclides Bismuth-214 pCi/g	0.34	0.52	0.47	0.42	0.52	0.34	0.52	0.04
Radionuclides Cesium-137 pCi/g			0.05		0.31	0.05	0.31	0.01
Radionuclides Cobalt-60 pCi/g			0.06			0.06	0.06	0.00
Radionuclides Lead-212 pCi/g	0.41	1.08	0.63	0.74	0.71	0.41	1.08	0.06
Radionuclides Lead-214 pCi/g	0.29	0.56	0.44	0.43	0.48	0.29	0.56	0.04
Radionuclides Potassium-40 pCi/g	6.45	7.53	7.63	5.94	7.59	5.94	7.63	0.59
Radionuclides Protactinium-234M pCi/g	0.00	0.00	8.24	8.78	23.20	0.00	23.20	0.67
Radionuclides Thallium-208 pCi/g	0.14	0.30	0.11	0.12	0.22	0.11	0.30	0.01
Radionuclides Thorium-234 pCi/g	0.00	0.00	4.06	9.69	11.38	0.00	11.38	0.42
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g			8.32	19.72	23.18	8.32	23.18	0.85

Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	0.63	1.08	13.21	19.32	35.58	0.63	35.66	1.16
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	0.00	0.00	12.30	18.47	34.58	0.00	34.58	1.09
Thorium (232)	0	0	0	0	0	0	0	0.00

						MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture								
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.01	0.09	0.14	0.25	0.00	0.25	0.01
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	8.82	15.12	184.94	270.48	498.12	8.82	499.24	16.29

						MIN	MAX	AVG
For Refined Uranium and Thorium Mixture								
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.00	0.00	0.04	0.06	0.10	0.00	0.25	0.01
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	0	0	61.5	92.35	172.9	0	172.9	5.46

USACE-DuPont Chambers Works -FUSRAP Site
Operable Unit No. 1
Waste Management
August 2002 Drum RAD
Drums 59, 21, 42

FieldSampleID	2BH027-BS-005-R	2BH027-BS-045-R	2BH019-BS-005-0	2BH019-BS-060-R	2BH015-BS-080-R	2BH015-BS-005-R	Min	Max	Avg
Samp.Date	19-Aug-02	19-Aug-02	19-Aug-02	19-Aug-02	20-Aug-02	20-Aug-02			
Radionuclides Actinium-228 pCi/g	0.77	1.40	0.35	1.28	1.04	0.22	0.22	1.40	0.08
Radionuclides-Beryllium-7 pCi/g									
Radionuclides Bismuth-212 pCi/g	1.02					0.55	0.55	1.02	0.03
Radionuclides Bismuth-214 pCi/g	0.43	1.00	0.45	0.65	0.62	0.15	0.15	1.00	0.06
Radionuclides Cesium-137 pCi/g							0.00	0.00	0.00
Radionuclides Cobalt-60 pCi/g							0.00	0.00	0.00
Radionuclides Lead-212 pCi/g	0.88	1.65	0.70	1.28	1.16	0.31	0.31	1.65	0.10
Radionuclides Lead-214 pCi/g	0.56	1.05	0.36	0.52	0.63	0.21	0.21	1.05	0.06
Radionuclides Potassium-40 pCi/g	7.19	14.16	6.88	9.81	13.60	5.90	5.90	14.16	0.96
Radionuclides Protactinium-234M pCi/g	69.33	0.00	7.77	0.00	0.00	0.00	0.00	69.33	1.29
Radionuclides Thallium-208 pCi/g	0.20	0.42	0.10	0.28	0.37	0.06	0.06	0.42	0.02
Radionuclides Thorium-234 pCi/g	69.03	8.04	1.12	0.00	0.00	0.00	0.00	69.03	1.30
Radionuclides Uranium-234 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-235 pCi/g	4.43	0.00	0.00	0.00	0.00	0.00	0.00	4.43	0.07
Radionuclides Uranium-238 pCi/g	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Radionuclides Uranium-Total pCi/g	142.49	16.62	2.20	2.27	1.48	0.76	0.76	142.49	2.76
Total Uranium Series Present (U238, Th234, PA234M, U234, 214 PB, 214 BI) 2,000 pCi/g	139.35	10.09	9.70	1.17	1.25	0.36	0.36	140.41	2.70
Uranium (238, 235, 234) + Thorium (234) + Protactinium (234M)	142.79	8.04	8.89	0.00	0.00	0.00	0.00	142.79	2.66
Thorium (232)	0	0	0	0	0	0	0	0	0.00

							MIN	MAX	AVG
For Natural Uranium and Natural Thorium Mixture									
Calc (Conc. U/141 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.99	0.07	0.07	0.01	0.01	0.00	0.00	1.00	0.02
Calc (pCi/g U x 14 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	1950.9	141.26	135.8	16.38	17.5	5.04	5.04	1965.74	37.78

							MIN	MAX	AVG
For Refined Uranium and Thorium Mixture									
Calc (Conc. U/333 pCi/g + Conc. Th/110 pCi/g) < or = 1, Highlighted if fails	0.43	0.02	0.03	0.00	0.00	0.00	0.00	1.01	0.02
Calc (pCi/g U x 5 + pCi/g Th x 10) < or = 2,000 pCi/g, Highlighted if fails	713.95	40.2	44.45	0	0	0	0	713.95	13.31

INVESTIGATIVE DERIVED WASTE CHARACTERIZATION SUMMARY TABLES FOR CHEMICAL DATA

IDW CHARACTERIZATION DATA FLAG CODES

Flag Code	Definition
B	Result found in associated method blank.
BD	Result found in associated method blank.
BJ	Result found in associated method blank and result was less than the reporting limit.
D	Sample was diluted.
E	Result exceeded the calibration range.
I	Interference.
J	Result was less than the reporting limit.
JB	Result found in associated method blank and result was less than the reporting limit.
JBD	Result found in associated method blank. Result was less than the reporting limit and the sample was diluted.
JD	Result was less than the reporting limit and the sample was diluted.
U	The compound was not detected.

Table H-1 Appendix H IDW Characterization Data
June 2002 Soil Data

				Field Sample ID	1BH004-BS-050-0	1BH007-BS-055-0	1BH013-BS-050-0	1BH013-BS-090-0	1BH018-BS-080-0
				Sample Date	6/26/2002	6/25/2002	6/21/2002	6/21/2002	6/25/2002
				Location ID	1BH004	1BH007	1BH013	1BH013	1BH018
				Depth	5 - 7	5.5 - 6.5	5 - 6	9 - 9.5	8 - 9
Method	**CAS #**	**Parameter**	**Result Units**						
D2216-80		% Solids	%		82.7	86.5	85.5	87.7	88.6
Metals (Total)									
SW6010B		Aluminum (Total)	mg/kg		9150	6020	6240	7360	9160
SW6010B		Antimony (Total)	mg/kg		0.27 U	0.21 U	0.26 U	0.25 U	0.25 U
SW6010B		Arsenic (Total)	mg/kg		3.9	2.8	2.7	8.1	2.4
SW6010B		Barium (Total)	mg/kg		29.1	16.8	18.5	23.3	45.7
SW6010B		Beryllium (Total)	mg/kg		0.34	0.24	0.18	0.3	0.39
SW6010B		Cadmium (Total)	mg/kg		0.04 U	0.03 U	0.06	0.03 U	0.03 U
SW6010B		Calcium (Total)	mg/kg		240	235	1670	236	153
SW6010B		Chromium (Total)	mg/kg		15.8	10.8	10.1	15	35.1
SW6010B		Cobalt (Total)	mg/kg		8.4	4.1	2.6	3.7	10.9
SW6010B		Copper (Total)	mg/kg		4.6	3.2	7.5	8.6	10.6
SW6010B		Iron (Total)	mg/kg		12900	6900	8790	24200	46700
SW6010B		Lead (Total)	mg/kg		4	3.9	11.8	6.4	7.7
SW6010B		Magnesium (Total)	mg/kg		813	758	937	1020	1460
SW6010B		Manganese (Total)	mg/kg		71.7	31.3	48.6	85.2	325
SW6010B		Nickel (Total)	mg/kg		10.3	6.4	7.2	7	13.1
SW6010B		Potassium (Total)	mg/kg		681	647	730	1010	1310
SW6010B		Selenium (Total)	mg/kg		0.42 U	0.34 U	0.43	0.4 U	0.39 U
SW6010B		Silver (Total)	mg/kg		0.06 U	0.05 U	0.06 U	0.06 U	0.06 U
SW6010B		Sodium (Total)	mg/kg		187	103	83.9	116	97.3
SW6010B		Thallium (Total)	mg/kg		0.37 U	0.3 U	0.36 U	0.35 U	0.35 U
SW6010B		Vanadium (Total)	mg/kg		18.5	12.8	14.5	26.7	45.9
SW6010B		Zinc (Total)	mg/kg		20	11.9	16.6	19.3	29.1
SW7471A		Mercury (Total)	mg/kg		0.02	0.02	0.05	0.02	0.03
Pesticides									
SW8081A		4,4'-DDD	ug/kg		24 U	23 U	290 U		23 U
SW8081A		4,4'-DDE	ug/kg		24 U	23 U	290 U		23 U
SW8081A		4,4'-DDT	ug/kg		24 U	23 U	290 U		23 U
SW8081A		Aldrin	ug/kg		12 U	12 U	150 U		11 U
SW8081A		Alpha-BHC	ug/kg		12 U	12 U	150 U		11 U
SW8081A		alpha-Chlordane	ug/kg		12 U	12 U	150 U		11 U
SW8081A		Beta-BHC	ug/kg		12 U	12 U	150 U		11 U
SW8081A		Delta-BHC	ug/kg		12 U	12 U	150 U		11 U
SW8081A		Dieldrin	ug/kg		24 U	23 U	290 U		23 U
SW8081A		Endosulfan I	ug/kg		12 U	12 U	150 U		11 U
SW8081A		Endosulfan II	ug/kg		24 U	23 U	290 U		23 U
SW8081A		Endosulfan sulfate	ug/kg		24 U	23 U	290 U		23 U
SW8081A		Endrin	ug/kg		24 U	23 U	290 U		23 U
SW8081A		Endrin aldehyde	ug/kg		24 U	23 U	290 U		23 U
SW8081A		Endrin ketone	ug/kg		24 U	23 U	290 U		23 U
SW8081A		gamma-BHC (Lindane)	ug/kg		12 U	12 U	150 U		11 U
SW8081A		gamma-Chlordane	ug/kg		12 U	12 U	150 U		11 U

Table H-1 Appendix H IDW Characterization Data
June 2002 Soil Data

				Field Sample ID	1BH004-BS-050-0	1BH007-BS-055-0	1BH013-BS-050-0	1BH013-BS-090-0	1BH018-BS-080-0
				Sample Date	6/26/2002	6/25/2002	6/21/2002	6/21/2002	6/25/2002
				Location ID	1BH004	1BH007	1BH013	1BH013	1BH018
				Depth	5 - 7	5.5 - 6.5	5 - 6	9 - 9.5	8 - 9
SW8081A		Heptachlor	ug/kg		12 U	12 U	150 U		11 U
SW8081A		Heptachlor epoxide	ug/kg		12 U	12 U	150 U		11 U
SW8081A		Methoxychlor	ug/kg		120 U	120 U	1500 U		110 U
SW8081A		Toxaphene	ug/kg		1200 U	1200 U	15000 U		1100 U
PCBs									
SW8082		Aroclor-1016	ug/kg		240 U	230 U	580 U		230 U
SW8082		Aroclor-1221	ug/kg		480 U	460 U	1200 U		450 U
SW8082		Aroclor-1232	ug/kg		240 U	230 U	580 U		230 U
SW8082		Aroclor-1242	ug/kg		240 U	230 U	580 U		230 U
SW8082		Aroclor-1248	ug/kg		240 U	230 U	580 U		230 U
SW8082		Aroclor-1254	ug/kg		240 U	230 U	580 U		230 U
SW8082		Aroclor-1260	ug/kg		240 U	230 U	580 U		230 U
SW8082		Aroclor-1268	ug/kg		240 U	230 U	580 U		230 U
Volatiles									
SW8260B		1,1,1-Trichloroethane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		1,1,2,2-Tetrachloroethane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		1,1,2-Trichloroethane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		1,1-Dichloroethane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		1,1-Dichloroethene	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		1,2-Dichloroethane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		1,2-Dichloroethene (total)	ug/kg		520 U	1500	4500 J		430 U
SW8260B		1,2-Dichloropropane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		2-Butanone	ug/kg		1000 U	930 U	10000 U		860 U
SW8260B		2-Hexanone	ug/kg		1000 U	930 U	10000 U		860 U
SW8260B		4-Methyl-2-pentanone	ug/kg		1000 U	930 U	10000 U		860 U
SW8260B		Acetone	ug/kg		1000 U	930 U	10000 U		860 U
SW8260B		Benzene	ug/kg		740 J	470 J	5100 U		6800 J
SW8260B		Bromodichloromethane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Bromoform	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Bromomethane	ug/kg		1000 U	930 U	10000 U		860 U
SW8260B		Carbon Disulfide	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Carbon Tetrachloride	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Chlorobenzene	ug/kg		4600	470 U	5100 U		5900 J
SW8260B		Chloroethane	ug/kg		1000 U	930 U	10000 U		860 U
SW8260B		Chloroform	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Chloromethane	ug/kg		1000 U	930 U	10000 U		860 U
SW8260B		cis-1,3-Dichloropropene	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Dibromochloromethane	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Ethylbenzene	ug/kg		490 J	5000	20000		50000
SW8260B		Methylene Chloride	ug/kg		1200	1100	3400 J		13000 B
SW8260B		Styrene	ug/kg		520 U	470 U	5100 U		21000
SW8260B		Tetrachloroethene	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Toluene	ug/kg		520 U	2500	7800 J		15000
SW8260B		Trans-1,3-Dichloropropene	ug/kg		520 U	470 U	5100 U		430 U
SW8260B		Trichloroethene	ug/kg		520 U	370 J	1300 J		430 U
SW8260B		Vinyl Chloride	ug/kg		1000 U	930 U	10000 U		860 U

Table H-1 Appendix H IDW Characterization Data
June 2002 Soil Data

				Field Sample ID	1BH004-BS-050-0	1BH007-BS-055-0	1BH013-BS-050-0	1BH013-BS-090-0	1BH018-BS-080-0
				Sample Date	6/26/2002	6/25/2002	6/21/2002	6/21/2002	6/25/2002
				Location ID	1BH004	1BH007	1BH013	1BH013	1BH018
				Depth	5 - 7	5.5 - 6.5	5 - 6	9 - 9.5	8 - 9
SW8260B		Xylene (total)	ug/kg		170 J	17000	61000		240000
Semivolatiles									
SW8270C		1,2,4-Trichlorobenzene	ug/kg		12000 U	220000 U	950000	1200000	110000 U
SW8270C		1,2-Dichlorobenzene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		1,3-Dichlorobenzene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		1,4-Dichlorobenzene	ug/kg		12000 U	220000 U	720000	190000 U	110000 U
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2,4,5-Trichlorophenol	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		2,4,6-Trichlorophenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2,4-Dichlorophenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2,4-Dimethylphenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2,4-Dinitrophenol	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		2,4-Dinitrotoluene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2,6-Dinitrotoluene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2-Chloronaphthalene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2-Chlorophenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2-Methylphenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		2-Nitroaniline	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		2-Nitrophenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		3,3'-Dichlorobenzidine	ug/kg		24000 U	440000 U	470000 U	380000 U	210000 U
SW8270C		3-Nitroaniline	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		4,6-Dinitro-2-methylphenol	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		4-Bromophenyl-phenylether	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		4-Chloro-3-methylphenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		4-Chloroaniline	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		4-Chlorophenyl-phenylether	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		4-Methylphenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		4-Nitroaniline	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		4-Nitrophenol	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		Acenaphthene	ug/kg		2500 J	26000 J	170000 J	76000 J	26000 J
SW8270C		Acenaphthylene	ug/kg		12000 U	220000 U	24000 J	13000 J	110000 U
SW8270C		Anthracene	ug/kg		2400 J	14000 J	190000 J	62000 J	14000 J
SW8270C		Benzo(a)anthracene	ug/kg		1300 J	220000 U	72000 J	24000 J	5300 J
SW8270C		Benzo(a)pyrene	ug/kg		710 J	220000 U	38000 J	190000 U	110000 U
SW8270C		Benzo(b)fluoranthene	ug/kg		12000 U	220000 U	25000 J	190000 U	110000 U
SW8270C		Benzo(g,h,i)perylene	ug/kg		12000 U	220000 U	16000 J	190000 U	110000 U
SW8270C		Benzo(k)fluoranthene	ug/kg		12000 U	220000 U	30000 J	190000 U	110000 U
SW8270C		bis(2-Chloroethoxy)methane	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		bis(2-Chloroethyl)ether	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		bis(2-Ethylhexyl)phthalate	ug/kg		690 JB	220000 U	230000 U	190000 U	110000 U
SW8270C		Butylbenzylphthalate	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Carbazole	ug/kg		12000 U	220000 U	82000 J	25000 J	110000 U
SW8270C		Chrysene	ug/kg		3400 J	16000 J	160000 J	49000 J	7600 J
SW8270C		Dibenz(a,h)anthracene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Dibenzofuran	ug/kg		12000 U	220000 U	110000 J	36000 J	16000 J
SW8270C		Diethylphthalate	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U

Table H-1 Appendix H IDW Characterization Data
June 2002 Soil Data

				Field Sample ID	1BH004-BS-050-0	1BH007-BS-055-0	1BH013-BS-050-0	1BH013-BS-090-0	1BH018-BS-080-0
				Sample Date	6/26/2002	6/25/2002	6/21/2002	6/21/2002	6/25/2002
				Location ID	1BH004	1BH007	1BH013	1BH013	1BH018
				Depth	5 - 7	5.5 - 6.5	5 - 6	9 - 9.5	8 - 9
SW8270C		Dimethylphthalate	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Di-n-butylphthalate	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Di-n-octyl phthalate	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Fluoranthene	ug/kg		2100 J	16000 J	160000 J	55000 J	18000 J
SW8270C		Fluorene	ug/kg		2800 J	24000 J	290000	100000 J	27000 J
SW8270C		Hexachlorobenzene	ug/kg		9500 U	170000 U	190000 U	150000 U	85000 U
SW8270C		Hexachlorobutadiene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Hexachlorocyclopentadiene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Hexachloroethane	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Indeno(1,2,3-cd)pyrene	ug/kg		12000 U	220000 U	14000 J	190000 U	110000 U
SW8270C		Isophorone	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Naphthalene	ug/kg		690 J	1600000	1400000	1200000	370000
SW8270C		Nitrobenzene	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		N-Nitroso-di-n-propylamine	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		N-Nitrosodiphenylamine (1)	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Pentachlorophenol	ug/kg		30000 U	540000 U	580000 U	480000 U	270000 U
SW8270C		Phenanthrene	ug/kg		7800 J	63000 J	740000	250000	62000 J
SW8270C		Phenol	ug/kg		12000 U	220000 U	230000 U	190000 U	110000 U
SW8270C		Pyrene	ug/kg		3100 J	18000 J	190000 J	59000 J	15000 J
RCRA Char.									
SW9014		Cyanide, Reactive	mg/kg		0.49 U	0.48 U	0.5 U		0.5 U
SW9030B		Sulfide, Reactive	mg/kg		39.2 U	39.9 U	39 U		39.9 U
SW9045		Corrosivity by pH	su		7.2	7.1	8.4		6.4
SW9060		Total Organic Carbon	mg/kg					15900	
TCLP Metals									
TCLPSW6010B		Arsenic (Total)	ug/l		15 U	15 U	15 U	15 U	15 U
TCLPSW6010B		Barium (Total)	ug/l		244	84.1	43.9	127	160
TCLPSW6010B		Cadmium (Total)	ug/l		1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
TCLPSW6010B		Chromium (Total)	ug/l		7.3	4	4.2	3 U	4.3
TCLPSW6010B		Copper (Total)	ug/l		4.5	3.4	20.3	3.8	6.7
TCLPSW6010B		Lead (Total)	ug/l		10.2 U	10.2 U	12.8	10.2 U	10.2 U
TCLPSW6010B		Nickel (Total)	ug/l		5.4 U	16.5	5.4 U	13.6	5.4 U
TCLPSW6010B		Selenium (Total)	ug/l		21 U	21 U	21 U	21 U	21 U
TCLPSW6010B		Silver (Total)	ug/l		3 U	3 U	3 U	3 U	3 U
TCLPSW6010B		Zinc (Total)	ug/l		38.5	28.9	44.2	30	47.6
TCLPSW7470A		Mercury (Total)	ug/l		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
TCLP Volatiles									
TCLPSW8260B		1,1-Dichloroethene	mg/l		0.025 U	0.025 U	0.025 U		0.025 U
TCLPSW8260B		1,2-Dichloroethane	mg/l		0.025 U	0.025 U	0.025 U		0.025 U
TCLPSW8260B		2-Butanone	mg/l		0.05 U	0.05 U	0.05 U		0.05 U
TCLPSW8260B		Benzene	mg/l		0.018 J	0.023 J	0.047		0.039
TCLPSW8260B		Carbon Tetrachloride	mg/l		0.025 U	0.025 U	0.025 U		0.025 U
TCLPSW8260B		Chlorobenzene	mg/l		0.11	0.025 U	0.076		0.061
TCLPSW8260B		Chloroform	mg/l		0.025 U	0.025 U	0.025 U		0.025 U
TCLPSW8260B		Tetrachloroethene	mg/l		0.048	0.014 J	0.008 J		0.009 J
TCLPSW8260B		Trichloroethene	mg/l		0.025 U	0.031	0.01 J		0.025 U

Table H-1 Appendix H IDW Characterization Data
June 2002 Soil Data

				Field Sample ID	1BH004-BS-050-0	1BH007-BS-055-0	1BH013-BS-050-0	1BH013-BS-090-0	1BH018-BS-080-0
				Sample Date	6/26/2002	6/25/2002	6/21/2002	6/21/2002	6/25/2002
				Location ID	1BH004	1BH007	1BH013	1BH013	1BH018
				Depth	5 - 7	5.5 - 6.5	5 - 6	9 - 9.5	8 - 9
TCLPSW8260B		Vinyl Chloride	mg/l		0.05 U	0.05 U	0.05 U		0.05 U
TCLP Semivolatiles									
TCLPSW8270C		1,4-Dichlorobenzene	mg/l		0.003 J	0.05 U	0.18	0.003 J	0.003 J
TCLPSW8270C		2,4,5-Trichlorophenol	mg/l		0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
TCLPSW8270C		2,4,6-Trichlorophenol	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TCLPSW8270C		2,4-Dinitrotoluene	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TCLPSW8270C		2-Methylphenol	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TCLPSW8270C		3- and/or 4-Methylphenol	mg/l		0.05 U	0.003 J	0.05 U	0.05 U	0.05 U
TCLPSW8270C		Hexachlorobenzene	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TCLPSW8270C		Hexachlorobutadiene	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TCLPSW8270C		Hexachloroethane	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TCLPSW8270C		Nitrobenzene	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TCLPSW8270C		Pentachlorophenol	mg/l		0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
TCLPSW8270C		Pyridine	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Table H-2 Appendix H IDW Characterzation Data
July 2002 Soil Data

				Field Sample ID	1BH020-SS-000-0	1BH026-SS-000-0	2BH004-BS-015-0	2BH010-BS-005-R	2BH020-SS-000-0
				Sample Date	7/11/2002	7/11/2002	7/26/2002	7/29/2002	7/11/2002
				Location ID	1BH020	1BH026	2BH004	2BH010	2BH020
				Depth	0 - 1.5	0 - 1.5	1.5 - 2.5	0.5 - 1.5	0 - 1.5
Method	**CAS #**	**Parameter**	**Result Units**						
D2216-80		% Solids	%			85.2	81.8	85.1	86.2
SW1010		Ignitability	Degree				0 U		
SW1010		Ignitablity	Degree					0 u	
Metals (Total)									
SW6010B		Aluminum (Total)	mg/kg			5620	14200	7790	8130
SW6010B		Antimony (Total)	mg/kg			0.21 U	0.27 U	8	3
SW6010B		Arsenic (Total)	mg/kg			1.3	1.2	5.9	5
SW6010B		Barium (Total)	mg/kg			15.9	36	55.9	40.4
SW6010B		Beryllium (Total)	mg/kg			0.25	0.65	0.86	0.36
SW6010B		Cadmium (Total)	mg/kg			0.03 U	0.04 U	0.97	0.04
SW6010B		Calcium (Total)	mg/kg			346	397	68900	1890
SW6010B		Chromium (Total)	mg/kg			11.2	30.8	21.2	14.7
SW6010B		Cobalt (Total)	mg/kg			2.4	4	4.3	3
SW6010B		Copper (Total)	mg/kg			2.8	9	122	17.3
SW6010B		Iron (Total)	mg/kg			7850	9400	14800	15600
SW6010B		Lead (Total)	mg/kg			15.7	12.5	141	62.8
SW6010B		Magnesium (Total)	mg/kg			964	2520	37900	1040
SW6010B		Manganese (Total)	mg/kg			40.7	80.3	148	62.4
SW6010B		Nickel (Total)	mg/kg			5.8	10.5	13.7	8.4
SW6010B		Potassium (Total)	mg/kg			444	1320	1300	693
SW6010B		Selenium (Total)	mg/kg			0.33 U	0.42 U	0.46 U	0.4 U
SW6010B		Silver (Total)	mg/kg			0.05 U	0.06 U	0.12 U	4.4
SW6010B		Sodium (Total)	mg/kg			32.7	259	110	84.9
SW6010B		Thallium (Total)	mg/kg			0.3 U	0.57	0.74 U	0.36 U
SW6010B		Vanadium (Total)	mg/kg			12.6	28.4	17.2	18.8
SW6010B		Zinc (Total)	mg/kg			20.9	42.5	171	44.4
SW7471A		Mercury (Total)	mg/kg			0.02 U	0.02	4.1	0.34
Pesticides									
SW8081A		4,4'-DDD	ug/kg			3.9 U	8.2 U	20 U	19 U
SW8081A		4,4'-DDE	ug/kg			3.9 U	8.2 U	20 U	19 U
SW8081A		4,4'-DDT	ug/kg			3.9 U	55	20 U	19 U
SW8081A		Aldrin	ug/kg			2 U	4.1	9.8 U	9.7 U
SW8081A		Alpha-BHC	ug/kg			2 U	260	9.8 U	9.7 U
SW8081A		alpha-Chlordane	ug/kg			2 U	4.1 U	9.8 U	9.7 U
SW8081A		Beta-BHC	ug/kg			2 U	140	9.8 U	9.7 U
SW8081A		Delta-BHC	ug/kg			2 U	7.7	9.8 U	9.7 U
SW8081A		Dieldrin	ug/kg			3.9 U	11	20 U	19 U
SW8081A		Endosulfan I	ug/kg			2 U	4.1 U	9.8 U	9.7 U
SW8081A		Endosulfan II	ug/kg			3.9 U	9.8	20 U	19 U
SW8081A		Endosulfan sulfate	ug/kg			3.9 U	8.2 U	20 U	19 U
SW8081A		Endrin	ug/kg			3.9 U	8.2 U	20 U	19 U
SW8081A		Endrin aldehyde	ug/kg			3.9 U	82 I	20 U	19 U
SW8081A		Endrin ketone	ug/kg			3.9 U	8.2 U	20 U	19 U

Table H-2 Appendix H IDW Characterzation Data
July 2002 Soil Data

				Field Sample ID	1BH020-SS-000-0	1BH026-SS-000-0	2BH004-BS-015-0	2BH010-BS-005-R	2BH020-SS-000-0
				Sample Date	7/11/2002	7/11/2002	7/26/2002	7/29/2002	7/11/2002
				Location ID	1BH020	1BH026	2BH004	2BH010	2BH020
				Depth	0 - 1.5	0 - 1.5	1.5 - 2.5	0.5 - 1.5	0 - 1.5
SW8081A		gamma-BHC (Lindane)	ug/kg			2 U	110	9.8 U	9.7 U
SW8081A		gamma-Chlordane	ug/kg			2 U	4.1 U	9.8 U	9.7 U
SW8081A		Heptachlor	ug/kg			2 U	4.1 U	9.8 U	9.7 U
SW8081A		Heptachlor epoxide	ug/kg			2 U	4.1 U	9.8 U	9.7 U
SW8081A		Methoxychlor	ug/kg			20 U	41 U	98 U	97 U
SW8081A		Toxaphene	ug/kg			200 U	410 U	980 U	970 U
PCBs									
SW8082		Aroclor-1016	ug/kg			39 U	8200 U	39 U	39 U
SW8082		Aroclor-1221	ug/kg			78 U	18000	78 U	77 U
SW8082		Aroclor-1232	ug/kg			39 U	8200 U	39 U	39 U
SW8082		Aroclor-1242	ug/kg			39 U	8200 U	39 U	39 U
SW8082		Aroclor-1248	ug/kg			39 U	8200 U	39 U	39 U
SW8082		Aroclor-1254	ug/kg			39 U	8200 U	39 U	39 U
SW8082		Aroclor-1260	ug/kg			39 U	8200 U	46	39 U
SW8082		Aroclor-1268	ug/kg			39 U	8200 U	39 U	39 U
Volatiles									
SW8260B		1,1,1-Trichloroethane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		1,1,2,2-Tetrachloroethane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		1,1,2-Trichloroethane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		1,1-Dichloroethane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		1,1-Dichloroethene	ug/kg			5 U	250 U	5 U	5 U
SW8260B		1,2-Dichloroethane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		1,2-Dichloroethene (total)	ug/kg			5 U	250 U	5 U	4 J
SW8260B		1,2-Dichloropropane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		2-Butanone	ug/kg			10 U	120 J	10 U	10 U
SW8260B		2-Hexanone	ug/kg			10 U	500 U	10 U	10 U
SW8260B		4-Methyl-2-pentanone	ug/kg			10 U	500 U	10 U	10 U
SW8260B		Acetone	ug/kg			10 B	500 U	16 B	28 B
SW8260B		Benzene	ug/kg			2 J	930	4 J	5 U
SW8260B		Bromodichloromethane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Bromoform	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Bromomethane	ug/kg			10 U	500 U	10 U	10 U
SW8260B		Carbon Disulfide	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Carbon Tetrachloride	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Chlorobenzene	ug/kg			65	9500	E	5 U
SW8260B		Chloroethane	ug/kg			10 U	500 U	10 U	10 U
SW8260B		Chloroform	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Chloromethane	ug/kg			10 U	500 U	10 U	10 U
SW8260B		cis-1,3-Dichloropropene	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Dibromochloromethane	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Ethylbenzene	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Methylene Chloride	ug/kg			5 U	350 JB	5 U	5 U
SW8260B		Styrene	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Tetrachloroethene	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Toluene	ug/kg			5 U	250 U	5 U	5 U
SW8260B		Trans-1,3-Dichloropropene	ug/kg			5 U	250 U	5 U	5 U

Table H-2 Appendix H IDW Characterzation Data
July 2002 Soil Data

				Field Sample ID	1BH020-SS-000-0	1BH026-SS-000-0	2BH004-BS-015-0	2BH010-BS-005-R	2BH020-SS-000-0
				Sample Date	7/11/2002	7/11/2002	7/26/2002	7/29/2002	7/11/2002
				Location ID	1BH020	1BH026	2BH004	2BH010	2BH020
				Depth	0 - 1.5	0 - 1.5	1.5 - 2.5	0.5 - 1.5	0 - 1.5
SW8260B		Trichloroethene	ug/kg			5 U	250 U	5 U	6
SW8260B		Vinyl Chloride	ug/kg			10 U	500 U	10 U	10 U
SW8260B		Xylene (total)	ug/kg			5 U	250 U	5 U	5 U
Semivolatiles									
SW8270C		1,2,4-Trichlorobenzene	ug/kg			390 U	10000	310 J	20 J
SW8270C		1,2-Dichlorobenzene	ug/kg			390 U	240000 D	330 J	390 U
SW8270C		1,3-Dichlorobenzene	ug/kg			390 U	14000 JD	3900 U	390 U
SW8270C		1,4-Dichlorobenzene	ug/kg			390 U	390000 D	240 J	21 J
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2,4,5-Trichlorophenol	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		2,4,6-Trichlorophenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2,4-Dichlorophenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2,4-Dimethylphenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2,4-Dinitrophenol	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		2,4-Dinitrotoluene	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2,6-Dinitrotoluene	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2-Chloronaphthalene	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2-Chlorophenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2-Methylphenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		2-Nitroaniline	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		2-Nitrophenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		3,3'-Dichlorobenzidine	ug/kg			780 U	8200 U	7800 U	770 U
SW8270C		3-Nitroaniline	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		4,6-Dinitro-2-methylphenol	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		4-Bromophenyl-phenylether	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		4-Chloro-3-methylphenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		4-Chloroaniline	ug/kg			390 U	6900	3900 U	390 U
SW8270C		4-Chlorophenyl-phenylether	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		4-Methylphenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		4-Nitroaniline	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		4-Nitrophenol	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		Acenaphthene	ug/kg			390 U	4100 U	830 J	55 J
SW8270C		Acenaphthylene	ug/kg			390 U	4100 U	3900 U	110 J
SW8270C		Anthracene	ug/kg			390 U	4100 U	380 J	450
SW8270C		Benzo(a)anthracene	ug/kg			390 U	4100 U	330 J	550
SW8270C		Benzo(a)pyrene	ug/kg			390 U	4100 U	240 J	280 J
SW8270C		Benzo(b)fluoranthene	ug/kg			390 U	4100 U	240 J	310 J
SW8270C		Benzo(g,h,i)perylene	ug/kg			390 U	4100 U	3900 U	280 J
SW8270C		Benzo(k)fluoranthene	ug/kg			390 U	4100 U	260 J	260 J
SW8270C		bis(2-Chloroethoxy)methane	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		bis(2-Chloroethyl)ether	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		bis(2-Ethylhexyl)phthalate	ug/kg			72 J	4100 U	310 JB	150 J
SW8270C		Butylbenzylphthalate	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Carbazole	ug/kg			390 U	4100 U	3900 U	180 J
SW8270C		Chrysene	ug/kg			390 U	4100 U	890 J	2600
SW8270C		Dibenz(a,h)anthracene	ug/kg			390 U	4100 U	3900 U	120 J

Table H-2 Appendix H IDW Characterzation Data
July 2002 Soil Data

				Field Sample ID	1BH020-SS-000-0	1BH026-SS-000-0	2BH004-BS-015-0	2BH010-BS-005-R	2BH020-SS-000-0
				Sample Date	7/11/2002	7/11/2002	7/26/2002	7/29/2002	7/11/2002
				Location ID	1BH020	1BH026	2BH004	2BH010	2BH020
				Depth	0 - 1.5	0 - 1.5	1.5 - 2.5	0.5 - 1.5	0 - 1.5
SW8270C		Dibenzofuran	ug/kg			390 U	4100 U	660 J	96 J
SW8270C		Diethylphthalate	ug/kg			390 U	4100 U	3900 U	33 J
SW8270C		Dimethylphthalate	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Di-n-butylphthalate	ug/kg			23 J	4100 U	3900 U	390 U
SW8270C		Di-n-octyl phthalate	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Fluoranthene	ug/kg			390 U	4100 U	920 J	500
SW8270C		Fluorene	ug/kg			390 U	4100 U	670 J	180 J
SW8270C		Hexachlorobenzene	ug/kg			310 U	3300 U	3100 U	310 U
SW8270C		Hexachlorobutadiene	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Hexachlorocyclopentadiene	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Hexachloroethane	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Indeno(1,2,3-cd)pyrene	ug/kg			390 U	4100 U	3900 U	230 J
SW8270C		Isophorone	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Naphthalene	ug/kg			390 U	420 J	1500 J	990
SW8270C		Nitrobenzene	ug/kg			390 U	520 J	3900 U	390 U
SW8270C		N-Nitroso-di-n-propylamine	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		N-Nitrosodiphenylamine (1)	ug/kg			390 U	1100 J	3900 U	390 U
SW8270C		Pentachlorophenol	ug/kg			980 U	10000 U	9800 U	970 U
SW8270C		Phenanthrene	ug/kg			390 U	4100 U	1000 J	840
SW8270C		Phenol	ug/kg			390 U	4100 U	3900 U	390 U
SW8270C		Pyrene	ug/kg			390 U	4100 U	880 J	550
RCRA Char.									
SW9014		Cyanide, Reactive	mg/kg			0.53 U	0.49 U	0.62 U	0.49 U
SW9030B		Sulfide, Reactive	mg/kg			42.6 U	39.2 U	49.7 U	39.5 U
SW9045		Corrosivity by pH	su			6.8	4.5	7.6	7
SW9060		Total Organic Carbon	mg/kg						22000
SW9095A		Paint Filter	su				0 U	0 u	
TCLP Metals									
TCLPSW6010B		Arsenic (Total)	ug/l		38.3 U	38.3 U	38.3 U	19.8 U	
TCLPSW6010B		Barium (Total)	ug/l		377	146	143	1050	
TCLPSW6010B		Cadmium (Total)	ug/l		5.3 U	5.3 U	5.3 U	4.5	
TCLPSW6010B		Chromium (Total)	ug/l		5.7	4.6 U	4.6 U	6	
TCLPSW6010B		Copper (Total)	ug/l		29.7	5.3	164	5530	
TCLPSW6010B		Lead (Total)	ug/l		582	92.9	33.9 U	201	
TCLPSW6010B		Nickel (Total)	ug/l		33.5	16.5 U	22	51	
TCLPSW6010B		Selenium (Total)	ug/l		65.5 U	65.5 U	65.5 U	24.6 U	
TCLPSW6010B		Silver (Total)	ug/l		3 U	3 U	4.4	6.6 U	
TCLPSW6010B		Zinc (Total)	ug/l		625	28.6	105	554	
TCLPSW7470A		Mercury (Total)	ug/l		0.1 U	0.1 U	0.1 U	0.1 U	
TCLP Volatiles									
TCLPSW8260B		1,1-Dichloroethene	mg/l			0.025 U	0.025 U	0.025 U	0.025 U
TCLPSW8260B		1,2-Dichloroethane	mg/l			0.025 U	0.025 U	0.025 U	0.025 U
TCLPSW8260B		2-Butanone	mg/l			0.05 U	0.058	0.05 U	0.058
TCLPSW8260B		Benzene	mg/l			0.025 U	0.009 J	0.022 J	0.025 U
TCLPSW8260B		Carbon Tetrachloride	mg/l			0.025 U	0.025 U	0.025 U	0.025 U
TCLPSW8260B		Chlorobenzene	mg/l			0.025 U	0.92	0.71	0.025 U

Table H-2 Appendix H IDW Characterzation Data
July 2002 Soil Data

				Field Sample ID	1BH020-SS-000-0	1BH026-SS-000-0	2BH004-BS-015-0	2BH010-BS-005-R	2BH020-SS-000-0
				Sample Date	7/11/2002	7/11/2002	7/26/2002	7/29/2002	7/11/2002
				Location ID	1BH020	1BH026	2BH004	2BH010	2BH020
				Depth	0 - 1.5	0 - 1.5	1.5 - 2.5	0.5 - 1.5	0 - 1.5
TCLPSW8260B		Chloroform	mg/l			0.025 U	0.025 U	0.025 U	0.025 U
TCLPSW8260B		Tetrachloroethene	mg/l			0.037	0.025 U	0.025 U	0.025 U
TCLPSW8260B		Trichloroethene	mg/l			0.025 U	0.025 U	0.025 U	0.025 U
TCLPSW8260B		Vinyl Chloride	mg/l			0.05 U	0.05 U	0.05 U	0.05 U
TCLP Semivolatiles									
TCLPSW8270C		1,4-Dichlorobenzene	mg/l		0.05 U	0.05 U	0.12	0.05 U	
TCLPSW8270C		2,4,5-Trichlorophenol	mg/l		0.12 U	0.12 U	0.12 U	0.12 U	
TCLPSW8270C		2,4,6-Trichlorophenol	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	
TCLPSW8270C		2,4-Dinitrotoluene	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	
TCLPSW8270C		2-Methylphenol	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	
TCLPSW8270C		3- and/or 4-Methylphenol	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	
TCLPSW8270C		Hexachlorobenzene	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	
TCLPSW8270C		Hexachlorobutadiene	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	
TCLPSW8270C		Hexachloroethane	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	
TCLPSW8270C		Nitrobenzene	mg/l		0.05 U	0.05 U	0.004 J	0.05 U	
TCLPSW8270C		Pentachlorophenol	mg/l		0.12 U	0.12 U	0.12 U	0.12 U	
TCLPSW8270C		Pyridine	mg/l		0.05 U	0.05 U	0.05 U	0.05 U	

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH013-BS-005-0	2BH018-BS-015-R	2BH044-BS-003-0	2BH044-BS-001-0	2BH044-BS-002-0
				Sample Date	8/8/2002	7/31/2002	7/31/2002	8/28/2002	8/28/2002
				Location ID	2BH013	2BH018	2BH044	2BH044	2BH044
				Depth	0.5 - 2	1.5 - 2.5	0 - 15	0 - 15	0 - 15
Method	**CAS #**	**Parameter**	**Result Units**						
D2216-80		% Solids	%		90.1	92.4		77.2	66.4
SW1010		Ignitability	Degree		0 u				
SW1010		Ignitablity	Degree			0 u	0 u	0 u	0 u
Metals (Total)									
SW6010B		Aluminum (Total)	mg/kg		11600	7780		11900	7880
SW6010B		Antimony (Total)	mg/kg		0.39 U	0.24		0.42 U	0.47 U
SW6010B		Arsenic (Total)	mg/kg		1.9	3.2		4.3	3.5
SW6010B		Barium (Total)	mg/kg		34.1	20.4		54.5	148
SW6010B		Beryllium (Total)	mg/kg		0.36	0.3		0.38	0.55
SW6010B		Cadmium (Total)	mg/kg		0.03 U	0.03 U		0.11	0.09
SW6010B		Calcium (Total)	mg/kg		1640	631		20300	5610
SW6010B		Chromium (Total)	mg/kg		12.6	10.6		67.1	12.6
SW6010B		Cobalt (Total)	mg/kg		3.9	0.91		6.2	3
SW6010B		Copper (Total)	mg/kg		7	7		12.8	8
SW6010B		Iron (Total)	mg/kg		12500	3320		15900	8890
SW6010B		Lead (Total)	mg/kg		9.7	20.6		39.3	18.9
SW6010B		Magnesium (Total)	mg/kg		1320	279		2590	1640
SW6010B		Manganese (Total)	mg/kg		88.8	19.1		190	196
SW6010B		Nickel (Total)	mg/kg		4.9	5.1		12.3	7.4
SW6010B		Potassium (Total)	mg/kg		1000	354		1410	1040
SW6010B		Selenium (Total)	mg/kg		0.46 U	0.33 U		0.55	0.56 U
SW6010B		Silver (Total)	mg/kg		0.12 U	0.05 U		0.13 U	0.15 U
SW6010B		Sodium (Total)	mg/kg		9930	89.4		601	4130
SW6010B		Thallium (Total)	mg/kg		0.73 U	0.29 U		0.8 U	0.9 U
SW6010B		Vanadium (Total)	mg/kg		23.8	8.1		25.5	13.4
SW6010B		Zinc (Total)	mg/kg		20.9	13.8		35.6	39.5
SW7471A		Mercury (Total)	mg/kg		0.02	0.07		0.1	0.05
Pesticides									
SW8081A		4,4'-DDD	ug/kg		37 U	7.2 U		86 U	50 U
SW8081A		4,4'-DDE	ug/kg		37 U	7.2 U		86 U	50 U
SW8081A		4,4'-DDT	ug/kg		37 U	66		86 U	50 U
SW8081A		Aldrin	ug/kg		18 U	3.6 U		43 U	23
SW8081A		Alpha-BHC	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		alpha-Chlordane	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		Beta-BHC	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		Delta-BHC	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		Dieldrin	ug/kg		37 U	7.2 U		86 U	50 U
SW8081A		Endosulfan I	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		Endosulfan II	ug/kg		37 U	7.2 U		86 U	50 U
SW8081A		Endosulfan sulfate	ug/kg		37 U	7.2 U		86 U	50 U
SW8081A		Endrin	ug/kg		37 U	7.2 U		86 U	50 U
SW8081A		Endrin aldehyde	ug/kg		37 U	7.2 U		86 U	33
SW8081A		Endrin ketone	ug/kg		37 U	7.2 U		86 U	50 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH013-BS-005-0	2BH018-BS-015-R	2BH044-BS-003-0	2BH044-BS-001-0	2BH044-BS-002-0
				Sample Date	8/8/2002	7/31/2002	7/31/2002	8/28/2002	8/28/2002
				Location ID	2BH013	2BH018	2BH044	2BH044	2BH044
				Depth	0.5 - 2	1.5 - 2.5	0 - 15	0 - 15	0 - 15
SW8081A		gamma-BHC (Lindane)	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		gamma-Chlordane	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		Heptachlor	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		Heptachlor epoxide	ug/kg		18 U	3.6 U		43 U	25 U
SW8081A		Methoxychlor	ug/kg		180 U	36 U		430 U	250 U
SW8081A		Toxaphene	ug/kg		1800 U	360 U		4300 U	2500 U
PCBs									
SW8082		Aroclor-1016	ug/kg		37 U	360 U		430 U	50 U
SW8082		Aroclor-1221	ug/kg		74 U	720 U		860 U	100 U
SW8082		Aroclor-1232	ug/kg		37 U	360 U		430 U	50 U
SW8082		Aroclor-1242	ug/kg		37 U	360 U		430 U	50 U
SW8082		Aroclor-1248	ug/kg		37 U	360 U		430 U	50 U
SW8082		Aroclor-1254	ug/kg		37 U	360 U		430 U	50 U
SW8082		Aroclor-1260	ug/kg		37 U	990		660	310
SW8082		Aroclor-1268	ug/kg		37 U	360 U		430 U	50 U
Volatiles									
SW8260B		1,1,1-Trichloroethane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		1,1,2,2-Tetrachloroethane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		1,1,2-Trichloroethane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		1,1-Dichloroethane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		1,1-Dichloroethene	ug/kg		6 U	4 U		6 U	8 U
SW8260B		1,2-Dichloroethane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		1,2-Dichloroethene (total)	ug/kg		6 U	4 U		6 U	8 U
SW8260B		1,2-Dichloropropane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		2-Butanone	ug/kg		380 J	9 U		22	15 U
SW8260B		2-Hexanone	ug/kg		11 U	9 U		12 U	15 U
SW8260B		4-Methyl-2-pentanone	ug/kg		11 U	9 U		12 U	15 U
SW8260B		Acetone	ug/kg		200 JB	16 B		230	28
SW8260B		Benzene	ug/kg		2 J	4 U		6 U	8 U
SW8260B		Bromodichloromethane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Bromoform	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Bromomethane	ug/kg		11 U	9 U		12 U	15 U
SW8260B		Carbon Disulfide	ug/kg		3200 E	4 U		2 J	3 J
SW8260B		Carbon Tetrachloride	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Chlorobenzene	ug/kg		5 J	7		6 U	8 U
SW8260B		Chloroethane	ug/kg		11 U	9 U		12 U	15 U
SW8260B		Chloroform	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Chloromethane	ug/kg		11 U	9 U		12 U	15 U
SW8260B		cis-1,3-Dichloropropene	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Dibromochloromethane	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Ethylbenzene	ug/kg		6 U	4 U		6 U	7 J
SW8260B		Methylene Chloride	ug/kg		2 J	3 J		48 B	17 B
SW8260B		Styrene	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Tetrachloroethene	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Toluene	ug/kg		1 J	4 U		6 U	8 U
SW8260B		Trans-1,3-Dichloropropene	ug/kg		6 U	4 U		6 U	8 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH013-BS-005-0	2BH018-BS-015-R	2BH044-BS-003-0	2BH044-BS-001-0	2BH044-BS-002-0
				Sample Date	8/8/2002	7/31/2002	7/31/2002	8/28/2002	8/28/2002
				Location ID	2BH013	2BH018	2BH044	2BH044	2BH044
				Depth	0.5 - 2	1.5 - 2.5	0 - 15	0 - 15	0 - 15
SW8260B		Trichloroethene	ug/kg		6 U	4 U		6 U	8 U
SW8260B		Vinyl Chloride	ug/kg		11 U	9 U		12 U	15 U
SW8260B		Xylene (total)	ug/kg		6 U	4 U		6 U	6 J
Semivolatiles									
SW8270C		1,2,4-Trichlorobenzene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		1,2-Dichlorobenzene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		1,3-Dichlorobenzene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		1,4-Dichlorobenzene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2,4,5-Trichlorophenol	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		2,4,6-Trichlorophenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2,4-Dichlorophenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2,4-Dimethylphenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2,4-Dinitrophenol	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		2,4-Dinitrotoluene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2,6-Dinitrotoluene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2-Chloronaphthalene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2-Chlorophenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2-Methylphenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		2-Nitroaniline	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		2-Nitrophenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		3,3'-Dichlorobenzidine	ug/kg		3700 U	3600 U		8600 U	10000 U
SW8270C		3-Nitroaniline	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		4,6-Dinitro-2-methylphenol	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		4-Bromophenyl-phenylether	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		4-Chloro-3-methylphenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		4-Chloroaniline	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		4-Chlorophenyl-phenylether	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		4-Methylphenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		4-Nitroaniline	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		4-Nitrophenol	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		Acenaphthene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Acenaphthylene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Anthracene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Benzo(a)anthracene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Benzo(a)pyrene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Benzo(b)fluoranthene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Benzo(g,h,i)perylene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Benzo(k)fluoranthene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		bis(2-Chloroethoxy)methane	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		bis(2-Chloroethyl)ether	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		bis(2-Ethylhexyl)phthalate	ug/kg		140 J	230 J		3300 JB	3900 JB
SW8270C		Butylbenzylphthalate	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Carbazole	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Chrysene	ug/kg		93 J	100 J		290 J	5000 U
SW8270C		Dibenz(a,h)anthracene	ug/kg		1800 U	1800 U		4300 U	5000 U

Table H-3 Appendix H IDW Characterization Data
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				Field Sample ID	2BH013-BS-005-0	2BH018-BS-015-R	2BH044-BS-003-0	2BH044-BS-001-0	2BH044-BS-002-0
				Sample Date	8/8/2002	7/31/2002	7/31/2002	8/28/2002	8/28/2002
				Location ID	2BH013	2BH018	2BH044	2BH044	2BH044
				Depth	0.5 - 2	1.5 - 2.5	0 - 15	0 - 15	0 - 15
SW8270C		Dibenzofuran	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Diethylphthalate	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Dimethylphthalate	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Di-n-butylphthalate	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Di-n-octyl phthalate	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Fluoranthene	ug/kg		1800 U	1800 U		230 J	5000 U
SW8270C		Fluorene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Hexachlorobenzene	ug/kg		1500 U	1400 U		3500 U	4000 U
SW8270C		Hexachlorobutadiene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Hexachlorocyclopentadiene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Hexachloroethane	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Indeno(1,2,3-cd)pyrene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Isophorone	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Naphthalene	ug/kg		370 J	400 J		800 J	5000 U
SW8270C		Nitrobenzene	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		N-Nitroso-di-n-propylamine	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		N-Nitrosodiphenylamine (1)	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Pentachlorophenol	ug/kg		4600 U	4500 U		11000 U	13000 U
SW8270C		Phenanthrene	ug/kg		140 J	160 J		440 J	360 J
SW8270C		Phenol	ug/kg		1800 U	1800 U		4300 U	5000 U
SW8270C		Pyrene	ug/kg		130 J	1800 U		2600 JB	2900 JB
Waste Char.									
SW9014		Cyanide, Reactive	mg/kg		0.44 U	0.55 U		0.51 U	0.48 U
SW9030B		Sulfide, Reactive	mg/kg		37.1 U	43.8 U		40.7 U	28.5 U
SW9045		Corrosivity by pH	su		8.1	8		11.2	9.6
SW9095A		Paint Filter	su		0 u	0 u	0 u	0 u	0 u
TCLP Metals									
TCLPSW6010B		Arsenic (Total)	ug/l		19.8 U	15 U		21.5	19.8 U
TCLPSW6010B		Barium (Total)	ug/l		25.3	641		419	417
TCLPSW6010B		Cadmium (Total)	ug/l		1.8 U	1.8 U		1.8 U	4.3
TCLPSW6010B		Chromium (Total)	ug/l		10.3	12.6		9.2	10.5
TCLPSW6010B		Copper (Total)	ug/l		6 U	73.1		13.4	65.1
TCLPSW6010B		Lead (Total)	ug/l		14.4 U	382		20.8	78.5
TCLPSW6010B		Nickel (Total)	ug/l		9.6 U	19.1		48.4	23.7
TCLPSW6010B		Selenium (Total)	ug/l		24.6 U	21 U		24.6 U	24.6 U
TCLPSW6010B		Silver (Total)	ug/l		6.6 U	3 U		6.6 U	40
TCLPSW6010B		Zinc (Total)	ug/l		53.9	322		120	675
TCLPSW7470A		Mercury (Total)	ug/l		0.1 U	0.1 U		0.1 U	0.1 U
TCLP Volatiles									
TCLPSW8260B		1,1-Dichloroethene	mg/l		0.025 U	0.025 U		0.025 U	0.025 U
TCLPSW8260B		1,2-Dichloroethane	mg/l		0.025 U	0.025 U		0.025 U	0.025 U
TCLPSW8260B		2-Butanone	mg/l		0.57	0.05 U		0.05 U	0.05 U
TCLPSW8260B		Benzene	mg/l		0.032	0.025 U		0.025 U	0.025 U
TCLPSW8260B		Carbon Tetrachloride	mg/l		0.025 U	0.025 U		0.025 U	0.025 U
TCLPSW8260B		Chlorobenzene	mg/l		0.025 U	0.025 U		0.025 U	0.025 U
TCLPSW8260B		Chloroform	mg/l		0.025 U	0.025 U		0.025 U	0.025 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH013-BS-005-0	2BH018-BS-015-R	2BH044-BS-003-0	2BH044-BS-001-0	2BH044-BS-002-0
				Sample Date	8/8/2002	7/31/2002	7/31/2002	8/28/2002	8/28/2002
				Location ID	2BH013	2BH018	2BH044	2BH044	2BH044
				Depth	0.5 - 2	1.5 - 2.5	0 - 15	0 - 15	0 - 15
TCLPSW8260B		Tetrachloroethene	mg/l		0.025 U	0.025 U		0.025 U	0.025 U
TCLPSW8260B		Trichloroethene	mg/l		0.025 U	0.025 U		0.025 U	0.025 U
TCLPSW8260B		Vinyl Chloride	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLP Semivolatiles									
TCLPSW8270C		1,4-Dichlorobenzene	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		2,4,5-Trichlorophenol	mg/l		0.12 U	0.12 U		0.12 U	0.12 U
TCLPSW8270C		2,4,6-Trichlorophenol	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		2,4-Dinitrotoluene	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		2-Methylphenol	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		3- and/or 4-Methylphenol	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		Hexachlorobenzene	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		Hexachlorobutadiene	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		Hexachloroethane	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		Nitrobenzene	mg/l		0.05 U	0.05 U		0.05 U	0.05 U
TCLPSW8270C		Pentachlorophenol	mg/l		0.12 U	0.12 U		0.12 U	0.12 U
TCLPSW8270C		Pyridine	mg/l		0.05 U	0.05 U		0.05 U	0.05 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH044-BS-003-0	2BH044-BS-004-0	2BH044-BS-005-0
				Sample Date	8/28/2002	8/28/2002	8/28/2002
				Location ID	2BH044	2BH044	2BH044
				Depth	0 - 15	0 - 15	0 - 15
Method	**CAS #**	**Parameter**	**Result Units**				
D2216-80		% Solids	%		63.3	86.3	93.6
SW1010		Ignitability	Degree				
SW1010		Ignitablity	Degree			0 u	0 u
Metals (Total)							
SW6010B		Aluminum (Total)	mg/kg		9910	8400	8370
SW6010B		Antimony (Total)	mg/kg		0.54 U	0.37 U	0.37 U
SW6010B		Arsenic (Total)	mg/kg		4.1	3.7	3.8
SW6010B		Barium (Total)	mg/kg		134	25.4	37.3
SW6010B		Beryllium (Total)	mg/kg		0.49	0.25	0.26
SW6010B		Cadmium (Total)	mg/kg		0.23	0.03 U	0.03 U
SW6010B		Calcium (Total)	mg/kg		5920	12700	10600
SW6010B		Chromium (Total)	mg/kg		16.4	15.9	16.6
SW6010B		Cobalt (Total)	mg/kg		4.8	3.1	3.3
SW6010B		Copper (Total)	mg/kg		11.9	6.4	7.2
SW6010B		Iron (Total)	mg/kg		14500	13500	14100
SW6010B		Lead (Total)	mg/kg		38	10.7	15.4
SW6010B		Magnesium (Total)	mg/kg		1600	1420	1360
SW6010B		Manganese (Total)	mg/kg		255	140	176
SW6010B		Nickel (Total)	mg/kg		9.7	6.6	6.9
SW6010B		Potassium (Total)	mg/kg		905	942	880
SW6010B		Selenium (Total)	mg/kg		0.64 U	0.44 U	0.43 U
SW6010B		Silver (Total)	mg/kg		0.17 U	0.12 U	0.12 U
SW6010B		Sodium (Total)	mg/kg		2290	759	906
SW6010B		Thallium (Total)	mg/kg		1 U	1	1.1
SW6010B		Vanadium (Total)	mg/kg		21.2	19.1	20.3
SW6010B		Zinc (Total)	mg/kg		48.2	18.2	19.3
SW7471A		Mercury (Total)	mg/kg		0.07	0.04	0.03
Pesticides							
SW8081A		4,4'-DDD	ug/kg		53 U	39 U	36 U
SW8081A		4,4'-DDE	ug/kg		53 U	75	64
SW8081A		4,4'-DDT	ug/kg		53 U	39 U	36 U
SW8081A		Aldrin	ug/kg		26 U	19 U	18 U
SW8081A		Alpha-BHC	ug/kg		26 U	19 U	18 U
SW8081A		alpha-Chlordane	ug/kg		26 U	19 U	18 U
SW8081A		Beta-BHC	ug/kg		26 U	19 U	18 U
SW8081A		Delta-BHC	ug/kg		26 U	19 U	18 U
SW8081A		Dieldrin	ug/kg		53 U	39 U	36 U
SW8081A		Endosulfan I	ug/kg		26 U	19 U	18 U
SW8081A		Endosulfan II	ug/kg		53 U	20	36 U
SW8081A		Endosulfan sulfate	ug/kg		53 U	39 U	36 U
SW8081A		Endrin	ug/kg		53 U	39 U	36 U
SW8081A		Endrin aldehyde	ug/kg		53 U	39 U	36 U
SW8081A		Endrin ketone	ug/kg		53 U	39 U	36 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH044-BS-003-0	2BH044-BS-004-0	2BH044-BS-005-0
				Sample Date	8/28/2002	8/28/2002	8/28/2002
				Location ID	2BH044	2BH044	2BH044
				Depth	0 - 15	0 - 15	0 - 15
SW8081A		gamma-BHC (Lindane)	ug/kg		26 U	19 U	18 U
SW8081A		gamma-Chlordane	ug/kg		26 U	19 U	18 U
SW8081A		Heptachlor	ug/kg		26 U	19 U	18 U
SW8081A		Heptachlor epoxide	ug/kg		26 U	19 U	18 U
SW8081A		Methoxychlor	ug/kg		260 U	190 U	180 U
SW8081A		Toxaphene	ug/kg		2600 U	1900 U	1800 U
PCBs							
SW8082		Aroclor-1016	ug/kg		53 U	190 U	180 U
SW8082		Aroclor-1221	ug/kg		110 U	390 U	360 U
SW8082		Aroclor-1232	ug/kg		53 U	190 U	180 U
SW8082		Aroclor-1242	ug/kg		53 U	190 U	180 U
SW8082		Aroclor-1248	ug/kg		53 U	190 U	180 U
SW8082		Aroclor-1254	ug/kg		53 U	190 U	180 U
SW8082		Aroclor-1260	ug/kg		130	190 U	180 U
SW8082		Aroclor-1268	ug/kg		53 U	190 U	180 U
Volatiles							
SW8260B		1,1,1-Trichloroethane	ug/kg		8 U	280 U	220 U
SW8260B		1,1,2,2-Tetrachloroethane	ug/kg		8 U	280 U	220 U
SW8260B		1,1,2-Trichloroethane	ug/kg		8 U	280 U	220 U
SW8260B		1,1-Dichloroethane	ug/kg		8 U	280 U	220 U
SW8260B		1,1-Dichloroethene	ug/kg		8 U	280 U	220 U
SW8260B		1,2-Dichloroethane	ug/kg		8 U	280 U	220 U
SW8260B		1,2-Dichloroethene (total)	ug/kg		8 U	280 U	220 U
SW8260B		1,2-Dichloropropane	ug/kg		8 U	280 U	220 U
SW8260B		2-Butanone	ug/kg		15 U	570 U	440 U
SW8260B		2-Hexanone	ug/kg		15 U	570 U	440 U
SW8260B		4-Methyl-2-pentanone	ug/kg		15 U	570 U	440 U
SW8260B		Acetone	ug/kg		20	1300 BJ	440 U
SW8260B		Benzene	ug/kg		8 U	3300	1500
SW8260B		Bromodichloromethane	ug/kg		8 U	280 U	220 U
SW8260B		Bromoform	ug/kg		8 U	280 U	220 U
SW8260B		Bromomethane	ug/kg		15 U	570 U	440 U
SW8260B		Carbon Disulfide	ug/kg		8 U	280 U	220 U
SW8260B		Carbon Tetrachloride	ug/kg		8 U	280 U	220 U
SW8260B		Chlorobenzene	ug/kg		8 U	4400	2400
SW8260B		Chloroethane	ug/kg		15 U	570 U	440 U
SW8260B		Chloroform	ug/kg		8 U	280 U	220 U
SW8260B		Chloromethane	ug/kg		15 U	570 U	440 U
SW8260B		cis-1,3-Dichloropropene	ug/kg		8 U	280 U	220 U
SW8260B		Dibromochloromethane	ug/kg		8 U	280 U	220 U
SW8260B		Ethylbenzene	ug/kg		8 U	17000	10000
SW8260B		Methylene Chloride	ug/kg		17 B	830 B	170 JB
SW8260B		Styrene	ug/kg		8 U	4400	3100
SW8260B		Tetrachloroethene	ug/kg		8 U	280 U	220 U
SW8260B		Toluene	ug/kg		8 U	11000	7200
SW8260B		Trans-1,3-Dichloropropene	ug/kg		8 U	280 U	220 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH044-BS-003-0	2BH044-BS-004-0	2BH044-BS-005-0
				Sample Date	8/28/2002	8/28/2002	8/28/2002
				Location ID	2BH044	2BH044	2BH044
				Depth	0 - 15	0 - 15	0 - 15
SW8260B		Trichloroethene	ug/kg		8 U	100 J	49 J
SW8260B		Vinyl Chloride	ug/kg		15 U	570 U	440 U
SW8260B		Xylene (total)	ug/kg		8 U	68000	46000
Semivolatiles							
SW8270C		1,2,4-Trichlorobenzene	ug/kg		5300 U	77000 U	71000 U
SW8270C		1,2-Dichlorobenzene	ug/kg		5300 U	77000 U	71000 U
SW8270C		1,3-Dichlorobenzene	ug/kg		5300 U	77000 U	71000 U
SW8270C		1,4-Dichlorobenzene	ug/kg		5300 U	77000 U	71000 U
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/kg		5300 U	77000 U	71000 U
SW8270C		2,4,5-Trichlorophenol	ug/kg		13000 U	190000 U	180000 U
SW8270C		2,4,6-Trichlorophenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		2,4-Dichlorophenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		2,4-Dimethylphenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		2,4-Dinitrophenol	ug/kg		13000 U	190000 U	180000 U
SW8270C		2,4-Dinitrotoluene	ug/kg		5300 U	77000 U	71000 U
SW8270C		2,6-Dinitrotoluene	ug/kg		5300 U	77000 U	71000 U
SW8270C		2-Chloronaphthalene	ug/kg		5300 U	77000 U	71000 U
SW8270C		2-Chlorophenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		2-Methylphenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		2-Nitroaniline	ug/kg		13000 U	190000 U	180000 U
SW8270C		2-Nitrophenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		3,3'-Dichlorobenzidine	ug/kg		11000 U	150000 U	140000 U
SW8270C		3-Nitroaniline	ug/kg		13000 U	190000 U	180000 U
SW8270C		4,6-Dinitro-2-methylphenol	ug/kg		13000 U	190000 U	180000 U
SW8270C		4-Bromophenyl-phenylether	ug/kg		5300 U	77000 U	71000 U
SW8270C		4-Chloro-3-methylphenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		4-Chloroaniline	ug/kg		5300 U	77000 U	71000 U
SW8270C		4-Chlorophenyl-phenylether	ug/kg		5300 U	77000 U	71000 U
SW8270C		4-Methylphenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		4-Nitroaniline	ug/kg		13000 U	190000 U	180000 U
SW8270C		4-Nitrophenol	ug/kg		13000 U	190000 U	180000 U
SW8270C		Acenaphthene	ug/kg		5300 U	72000 J	66000 J
SW8270C		Acenaphthylene	ug/kg		5300 U	60000 J	56000 J
SW8270C		Anthracene	ug/kg		5300 U	74000 J	69000 J
SW8270C		Benzo(a)anthracene	ug/kg		5300 U	7300 J	7500 J
SW8270C		Benzo(a)pyrene	ug/kg		5300 U	4600 J	71000 U
SW8270C		Benzo(b)fluoranthene	ug/kg		5300 U	77000 U	71000 U
SW8270C		Benzo(g,h,i)perylene	ug/kg		5300 U	77000 U	71000 U
SW8270C		Benzo(k)fluoranthene	ug/kg		5300 U	77000 U	71000 U
SW8270C		bis(2-Chloroethoxy)methane	ug/kg		5300 U	77000 U	71000 U
SW8270C		bis(2-Chloroethyl)ether	ug/kg		5300 U	77000 U	71000 U
SW8270C		bis(2-Ethylhexyl)phthalate	ug/kg		4200 JB	77000 U	71000 U
SW8270C		Butylbenzylphthalate	ug/kg		5300 U	77000 U	71000 U
SW8270C		Carbazole	ug/kg		5300 U	60000 J	55000 J
SW8270C		Chrysene	ug/kg		5300 U	12000 J	12000 J
SW8270C		Dibenz(a,h)anthracene	ug/kg		5300 U	77000 U	71000 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH044-BS-003-0	2BH044-BS-004-0	2BH044-BS-005-0
				Sample Date	8/28/2002	8/28/2002	8/28/2002
				Location ID	2BH044	2BH044	2BH044
				Depth	0 - 15	0 - 15	0 - 15
SW8270C		Dibenzofuran	ug/kg		5300 U	67000 J	62000 J
SW8270C		Diethylphthalate	ug/kg		5300 U	77000 U	71000 U
SW8270C		Dimethylphthalate	ug/kg		5300 U	77000 U	71000 U
SW8270C		Di-n-butylphthalate	ug/kg		5300 U	77000 U	71000 U
SW8270C		Di-n-octyl phthalate	ug/kg		5300 U	77000 U	71000 U
SW8270C		Fluoranthene	ug/kg		5300 U	62000 J	58000 J
SW8270C		Fluorene	ug/kg		5300 U	75000 J	71000
SW8270C		Hexachlorobenzene	ug/kg		4200 U	62000 U	57000 U
SW8270C		Hexachlorobutadiene	ug/kg		5300 U	77000 U	71000 U
SW8270C		Hexachlorocyclopentadiene	ug/kg		5300 U	77000 U	71000 U
SW8270C		Hexachloroethane	ug/kg		5300 U	77000 U	71000 U
SW8270C		Indeno(1,2,3-cd)pyrene	ug/kg		5300 U	77000 U	71000 U
SW8270C		Isophorone	ug/kg		5300 U	77000 U	71000 U
SW8270C		Naphthalene	ug/kg		5300 U	300000	340000
SW8270C		Nitrobenzene	ug/kg		5300 U	77000 U	71000 U
SW8270C		N-Nitroso-di-n-propylamine	ug/kg		5300 U	77000 U	71000 U
SW8270C		N-Nitrosodiphenylamine (1)	ug/kg		5300 U	77000 U	71000 U
SW8270C		Pentachlorophenol	ug/kg		13000 U	190000 U	180000 U
SW8270C		Phenanthrene	ug/kg		410 J	100000	100000
SW8270C		Phenol	ug/kg		5300 U	77000 U	71000 U
SW8270C		Pyrene	ug/kg		3000 JB	72000 JB	68000 JB
Waste Char.							
SW9014		Cyanide, Reactive	mg/kg		0.42 U	0.49 U	0.42 U
SW9030B		Sulfide, Reactive	mg/kg		33.3 U	39 U	33.5 U
SW9045		Corrosivity by pH	su		10.7	11.6	11.2
SW9095A		Paint Filter	su			0 u	0 u
TCLP Metals							
TCLPSW6010B		Arsenic (Total)	ug/l		19.8 U	19.8 U	19.8 U
TCLPSW6010B		Barium (Total)	ug/l		816	308	297
TCLPSW6010B		Cadmium (Total)	ug/l		1.9	1.8 U	1.8 U
TCLPSW6010B		Chromium (Total)	ug/l		11.4	6 U	7.7
TCLPSW6010B		Copper (Total)	ug/l		33.1	14.2	11.4
TCLPSW6010B		Lead (Total)	ug/l		60.6	23.9	24.6
TCLPSW6010B		Nickel (Total)	ug/l		18.7	27	23
TCLPSW6010B		Selenium (Total)	ug/l		24.6 U	24.6 U	24.6 U
TCLPSW6010B		Silver (Total)	ug/l		6.6 U	6.6 U	6.6 U
TCLPSW6010B		Zinc (Total)	ug/l		239	42.8	46.4
TCLPSW7470A		Mercury (Total)	ug/l		0.1 U	0.1 U	0.1 U
TCLP Volatiles							
TCLPSW8260B		1,1-Dichloroethene	mg/l		0.025 U	0.025 U	0.025 U
TCLPSW8260B		1,2-Dichloroethane	mg/l		0.025 U	0.025 U	0.025 U
TCLPSW8260B		2-Butanone	mg/l		0.074	0.05 U	0.05 U
TCLPSW8260B		Benzene	mg/l		0.025 U	0.085	0.098
TCLPSW8260B		Carbon Tetrachloride	mg/l		0.025 U	0.025 U	0.025 U
TCLPSW8260B		Chlorobenzene	mg/l		0.025 U	0.19	0.24
TCLPSW8260B		Chloroform	mg/l		0.025 U	0.025 U	0.025 U

Table H-3 Appendix H IDW Characterization Data
August 2002 Soil Data

				Field Sample ID	2BH044-BS-003-0	2BH044-BS-004-0	2BH044-BS-005-0
				Sample Date	8/28/2002	8/28/2002	8/28/2002
				Location ID	2BH044	2BH044	2BH044
				Depth	0 - 15	0 - 15	0 - 15
TCLPSW8260B		Tetrachloroethene	mg/l		0.025 U	0.025 U	0.025 U
TCLPSW8260B		Trichloroethene	mg/l		0.025 U	0.025 U	0.025 U
TCLPSW8260B		Vinyl Chloride	mg/l		0.05 U	0.05 U	0.05 U
TCLP Semivolatiles							
TCLPSW8270C		1,4-Dichlorobenzene	mg/l		0.05 U	0.004 J	0.003 J
TCLPSW8270C		2,4,5-Trichlorophenol	mg/l		0.12 U	0.12 U	0.12 U
TCLPSW8270C		2,4,6-Trichlorophenol	mg/l		0.05 U	0.05 U	0.05 U
TCLPSW8270C		2,4-Dinitrotoluene	mg/l		0.05 U	0.05 U	0.05 U
TCLPSW8270C		2-Methylphenol	mg/l		0.05 U	0.05 U	0.05 U
TCLPSW8270C		3- and/or 4-Methylphenol	mg/l		0.05 U	0.011 J	0.01 J
TCLPSW8270C		Hexachlorobenzene	mg/l		0.05 U	0.05 U	0.05 U
TCLPSW8270C		Hexachlorobutadiene	mg/l		0.05 U	0.05 U	0.05 U
TCLPSW8270C		Hexachloroethane	mg/l		0.05 U	0.05 U	0.05 U
TCLPSW8270C		Nitrobenzene	mg/l		0.05 U	0.05 U	0.05 U
TCLPSW8270C		Pentachlorophenol	mg/l		0.12 U	0.12 U	0.12 U
TCLPSW8270C		Pyridine	mg/l		0.05 U	0.05 U	0.05 U

Table H-4 Appendix H IDW Characterization Data
June 2002 Groundwater Data

				Field Sample ID	1BH007-GW-001-0	1BH012-GW-001-0	1BH013-GW-001-0	1BH019-GW-001-0	1BH021-GW-001-0
				Sample Date	7/1/2002	6/28/2002	6/28/2002	6/28/2002	6/28/2002
				Location ID	1BH007	1BH012	1BH013	1BH019	1BH021
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Method	**CAS #**	**Parameter**	**Result Units**						
Anions									
E300.0		Chloride	mg/l		174	138	265	34.4	68.6
E300.0		Nitrate	mg/l		0.03	0.032	0.02 U	0.02 U	0.091
E300.0		Nitrite	mg/l		0.02 U	0.026	0.02 U	0.066	0.051
E300.0		Sulfate	mg/l		48.4	68.8	4.1	43.5	1.4
E300.0		Sulfide	mg/l		1 U	1 U	1.8	1 U	1 U
E310.1		Bicarbonate	mg/l		183	141	234	199	156
E310.1		Carbonate	mg/l		2 U	2 U	2 U	2 U	2 U
Metals (Total)									
SW6010B		Aluminum (Total)	ug/l		19300	7090	1430	5120	673
SW6010B		Antimony (Total)	ug/l		3.7	2.2 U	2.2 U	2.2 U	2.2 U
SW6010B		Arsenic (Total)	ug/l		87.5	13.4	6	4.3	2.5 U
SW6010B		Barium (Total)	ug/l		168	105	115	56.3	51.2
SW6010B		Beryllium (Total)	ug/l		1.4	0.62	0.1 U	0.46	0.1 U
SW6010B		Cadmium (Total)	ug/l		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW6010B		Calcium (Total)	ug/l		12400	25200	27400	11100	8110
SW6010B		Chromium (Total)	ug/l		65.8	19.4	4	10.3	3.2
SW6010B		Cobalt (Total)	ug/l		24.1	24.5	0.99	15.4	0.7 U
SW6010B		Copper (Total)	ug/l		37.8	16.8	2.9	11.5	1.5
SW6010B		Iron (Total)	ug/l		124000	50300	24400	40200	14900
SW6010B		Lead (Total)	ug/l		8350	6540	3.8	12.1	5.1
SW6010B		Magnesium (Total)	ug/l		15500	12700	14900	10600	7810
SW6010B		Manganese (Total)	ug/l		2650	3870	938	5710	1620
SW6010B		Nickel (Total)	ug/l		37.6	17.3	2.8	350	0.9 U
SW6010B		Potassium (Total)	ug/l		8060	8320	11000	17200	1820
SW6010B		Selenium (Total)	ug/l		3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
SW6010B		Silver (Total)	ug/l		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW6010B		Sodium (Total)	ug/l		171000	113000	195000	88300	82800
SW6010B		Thallium (Total)	ug/l		4.1	5.7	3.1 U	4	6.1
SW6010B		Vanadium (Total)	ug/l		59.7	23.2	3	18.8	3.3
SW6010B		Zinc (Total)	ug/l		161	162	15.5	30	13.6
Metals (Dissolved)									
SW6010B-D		Aluminum (Dissolved)	ug/l		81	52.5	33.3	166	65
SW6010B-D		Antimony (Dissolved)	ug/l		7.4	2.2 U	2.2 U	2.2 U	2.2 U
SW6010B-D		Arsenic (Dissolved)	ug/l		83	9.1	8.6	2.7	2.7
SW6010B-D		Barium (Dissolved)	ug/l		88.3	82.3	104	36.7	55.6
SW6010B-D		Beryllium (Dissolved)	ug/l		0.18	0.27	0.1 U	0.14	0.1
SW6010B-D		Cadmium (Dissolved)	ug/l		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW6010B-D		Calcium (Dissolved)	ug/l		12300	23400	23800	10800	8600
SW6010B-D		Chromium (Dissolved)	ug/l		0.88	0.83	0.5 U	0.5 U	0.86
SW6010B-D		Cobalt (Dissolved)	ug/l		4.8	21.8	0.7 U	12.2	0.7 U
SW6010B-D		Copper (Dissolved)	ug/l		0.38	0.3 U	0.3 U	0.3 U	0.3 U

Table H-4 Appendix H IDW Characterization Data
June 2002 Groundwater Data

				Field Sample ID	1BH007-GW-001-0	1BH012-GW-001-0	1BH013-GW-001-0	1BH019-GW-001-0	1BH021-GW-001-0
				Sample Date	7/1/2002	6/28/2002	6/28/2002	6/28/2002	6/28/2002
				Location ID	1BH007	1BH012	1BH013	1BH019	1BH021
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW6010B-D		Iron (Dissolved)	ug/l		45000	41200	22600	31500	15100
SW6010B-D		Lead (Dissolved)	ug/l		7590	7250	1.7 U	5.3	4.2
SW6010B-D		Magnesium (Dissolved)	ug/l		13500	10900	14500	10400	8380
SW6010B-D		Manganese (Dissolved)	ug/l		2390	4000	838	5960	1760
SW6010B-D		Nickel (Dissolved)	ug/l		4.4	8.5	0.9 U	202	0.9 U
SW6010B-D		Potassium (Dissolved)	ug/l		5560	7510	8790	14400	1820
SW6010B-D		Selenium (Dissolved)	ug/l		3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
SW6010B-D		Silver (Dissolved)	ug/l		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW6010B-D		Sodium (Dissolved)	ug/l		182000	134000	194000	90700	89300
SW6010B-D		Thallium (Dissolved)	ug/l		3.1 U	3.1 U	5.5	3.1 U	3.1 U
SW6010B-D		Vanadium (Dissolved)	ug/l		0.7 U	0.7	0.7 U	0.7 U	1.2
SW6010B-D		Zinc (Dissolved)	ug/l		8.4	67.9	3.4	14.3	3.1
SW7470A		Mercury (Total)	ug/l		0.19	0.1 U	0.1 U	0.1 U	0.1 U
SW7470A-D		Mercury (Dissolved)	ug/l		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pesticides									
SW8081A		4,4'-DDD	ug/l				1 U		
SW8081A		4,4'-DDE	ug/l				1 U		
SW8081A		4,4'-DDT	ug/l				1 U		
SW8081A		Aldrin	ug/l				0.5 U		
SW8081A		Alpha-BHC	ug/l				0.5 U		
SW8081A		alpha-Chlordane	ug/l				0.5 U		
SW8081A		Beta-BHC	ug/l				0.5 U		
SW8081A		Delta-BHC	ug/l				0.5 U		
SW8081A		Dieldrin	ug/l				1 U		
SW8081A		Endosulfan I	ug/l				0.5 U		
SW8081A		Endosulfan II	ug/l				1 U		
SW8081A		Endosulfan sulfate	ug/l				1 U		
SW8081A		Endrin	ug/l				1 U		
SW8081A		Endrin aldehyde	ug/l				1 U		
SW8081A		Endrin ketone	ug/l				1 U		
SW8081A		gamma-BHC (Lindane)	ug/l				0.5 U		
SW8081A		gamma-Chlordane	ug/l				0.5 U		
SW8081A		Heptachlor	ug/l				0.5 U		
SW8081A		Heptachlor epoxide	ug/l				0.5 U		
SW8081A		Methoxychlor	ug/l				5 U		
SW8081A		Toxaphene	ug/l				50 U		
PCBs									
SW8082		Aroclor-1016	ug/l				10 U		
SW8082		Aroclor-1221	ug/l				20 U		
SW8082		Aroclor-1232	ug/l				10 U		
SW8082		Aroclor-1242	ug/l				10 U		
SW8082		Aroclor-1248	ug/l				10 U		
SW8082		Aroclor-1254	ug/l				10 U		
SW8082		Aroclor-1260	ug/l				10 U		
SW8082		Aroclor-1268	ug/l				10 U		
Volatiles									

Table H-4 Appendix H IDW Characterization Data
June 2002 Groundwater Data

				Field Sample ID	1BH007-GW-001-0	1BH012-GW-001-0	1BH013-GW-001-0	1BH019-GW-001-0	1BH021-GW-001-0
				Sample Date	7/1/2002	6/28/2002	6/28/2002	6/28/2002	6/28/2002
				Location ID	1BH007	1BH012	1BH013	1BH019	1BH021
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW8260B		1,1,1-Trichloroethane	ug/l				250 U		
SW8260B		1,1,2,2-Tetrachloroethane	ug/l				250 U		
SW8260B		1,1,2-Trichloroethane	ug/l				250 U		
SW8260B		1,1-Dichloroethane	ug/l				250 U		
SW8260B		1,1-Dichloroethene	ug/l				250 U		
SW8260B		1,2-Dichloroethane	ug/l				250 U		
SW8260B		1,2-Dichloroethene (total)	ug/l				2600		
SW8260B		1,2-Dichloropropane	ug/l				250 U		
SW8260B		2-Butanone	ug/l				500 U		
SW8260B		2-Hexanone	ug/l				500 U		
SW8260B		4-Methyl-2-pentanone	ug/l				500 U		
SW8260B		Acetone	ug/l				500 U		
SW8260B		Benzene	ug/l				12000 D		
SW8260B		Bromodichloromethane	ug/l				250 U		
SW8260B		Bromoform	ug/l				250 U		
SW8260B		Bromomethane	ug/l				500 U		
SW8260B		Carbon Disulfide	ug/l				250 U		
SW8260B		Carbon Tetrachloride	ug/l				250 U		
SW8260B		Chlorobenzene	ug/l				690		
SW8260B		Chloroethane	ug/l				500 U		
SW8260B		Chloroform	ug/l				68 J		
SW8260B		Chloromethane	ug/l				500 U		
SW8260B		cis-1,3-Dichloropropene	ug/l				250 U		
SW8260B		Dibromochloromethane	ug/l				250 U		
SW8260B		Ethylbenzene	ug/l				2400		
SW8260B		Methylene Chloride	ug/l				2700 BD		
SW8260B		Styrene	ug/l				250 J		
SW8260B		Tetrachloroethene	ug/l				250 U		
SW8260B		Toluene	ug/l				2800		
SW8260B		Trans-1,3-Dichloropropene	ug/l				250 U		
SW8260B		Trichloroethene	ug/l				3400		
SW8260B		Vinyl Chloride	ug/l				790		
SW8260B		Xylene (total)	ug/l				5600		
Semivolatiles									
SW8270C		1,2,4-Trichlorobenzene	ug/l				590 JD		
SW8270C		1,2-Dichlorobenzene	ug/l				540 U		
SW8270C		1,3-Dichlorobenzene	ug/l				540 U		
SW8270C		1,4-Dichlorobenzene	ug/l				250 JD		
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/l				540 U		
SW8270C		2,4,5-Trichlorophenol	ug/l				1400 U		
SW8270C		2,4,6-Trichlorophenol	ug/l				540 U		
SW8270C		2,4-Dichlorophenol	ug/l				540 U		
SW8270C		2,4-Dimethylphenol	ug/l				340 JD		
SW8270C		2,4-Dinitrophenol	ug/l				1400 U		
SW8270C		2,4-Dinitrotoluene	ug/l				540 U		
SW8270C		2,6-Dinitrotoluene	ug/l				540 U		

Table H-4 Appendix H IDW Characterization Data
June 2002 Groundwater Data

				Field Sample ID	1BH007-GW-001-0	1BH012-GW-001-0	1BH013-GW-001-0	1BH019-GW-001-0	1BH021-GW-001-0
				Sample Date	7/1/2002	6/28/2002	6/28/2002	6/28/2002	6/28/2002
				Location ID	1BH007	1BH012	1BH013	1BH019	1BH021
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW8270C		2-Chloronaphthalene	ug/l				540 U		
SW8270C		2-Chlorophenol	ug/l				540 U		
SW8270C		2-Methylphenol	ug/l				120 JD		
SW8270C		2-Nitroaniline	ug/l				1400 U		
SW8270C		2-Nitrophenol	ug/l				540 U		
SW8270C		3,3'-Dichlorobenzidine	ug/l				1100 U		
SW8270C		3-Nitroaniline	ug/l				1400 U		
SW8270C		4,6-Dinitro-2-methylphenol	ug/l				1400 U		
SW8270C		4-Bromophenyl-phenylether	ug/l				540 U		
SW8270C		4-Chloro-3-methylphenol	ug/l				540 U		
SW8270C		4-Chloroaniline	ug/l				540 U		
SW8270C		4-Chlorophenyl-phenylether	ug/l				540 U		
SW8270C		4-Methylphenol	ug/l				160 JD		
SW8270C		4-Nitroaniline	ug/l				1400 U		
SW8270C		4-Nitrophenol	ug/l				1400 U		
SW8270C		Acenaphthene	ug/l				230 JD		
SW8270C		Acenaphthylene	ug/l				29 J		
SW8270C		Anthracene	ug/l				160 JD		
SW8270C		Benzo(a)anthracene	ug/l				58 J		
SW8270C		Benzo(a)pyrene	ug/l				30 J		
SW8270C		Benzo(b)fluoranthene	ug/l				20 J		
SW8270C		Benzo(g,h,i)perylene	ug/l				540 U		
SW8270C		Benzo(k)fluoranthene	ug/l				25 J		
SW8270C		bis(2-Chloroethoxy)methane	ug/l				540 U		
SW8270C		bis(2-Chloroethyl)ether	ug/l				540 U		
SW8270C		bis(2-Ethylhexyl)phthalate	ug/l				400 JBD		
SW8270C		Butylbenzylphthalate	ug/l				540 U		
SW8270C		Carbazole	ug/l				77 J		
SW8270C		Chrysene	ug/l				180 JD		
SW8270C		Dibenz(a,h)anthracene	ug/l				540 U		
SW8270C		Dibenzofuran	ug/l				67 J		
SW8270C		Diethylphthalate	ug/l				540 U		
SW8270C		Dimethylphthalate	ug/l				540 U		
SW8270C		Di-n-butylphthalate	ug/l				540 U		
SW8270C		Di-n-octyl phthalate	ug/l				540 U		
SW8270C		Fluoranthene	ug/l				140 JD		
SW8270C		Fluorene	ug/l				250 JD		
SW8270C		Hexachlorobenzene	ug/l				540 U		
SW8270C		Hexachlorobutadiene	ug/l				540 U		
SW8270C		Hexachlorocyclopentadiene	ug/l				540 U		
SW8270C		Hexachloroethane	ug/l				540 U		
SW8270C		Indeno(1,2,3-cd)pyrene	ug/l				540 U		
SW8270C		Isophorone	ug/l				540 U		
SW8270C		Naphthalene	ug/l				14000 D		
SW8270C		Nitrobenzene	ug/l				540 U		
SW8270C		N-Nitroso-di-n-propylamine	ug/l				540 U		

Table H-4 Appendix H IDW Characterization Data
June 2002 Groundwater Data

				Field Sample ID	1BH007-GW-001-0	1BH012-GW-001-0	1BH013-GW-001-0	1BH019-GW-001-0	1BH021-GW-001-0
				Sample Date	7/1/2002	6/28/2002	6/28/2002	6/28/2002	6/28/2002
				Location ID	1BH007	1BH012	1BH013	1BH019	1BH021
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW8270C		N-Nitrosodiphenylamine (1)	ug/l				540 U		
SW8270C		Pentachlorophenol	ug/l				1400 U		
SW8270C		Phenanthrene	ug/l				630 JD		
SW8270C		Phenol	ug/l				47 J		
SW8270C		Pyrene	ug/l				160 JD		
TOC									
SW9060		Total Organic Carbon	mg/l				42		

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH003-GW-001-0	1BH004-GW-001-0	1BH006-GW-001-0	1BH016-GW-001-0	1BH025-GW-001-0
				Sample Date	7/10/2002	7/10/2002	7/12/2002	7/8/2002	7/9/2002
				Location ID	1BH003	1BH004	1BH006	1BH016	1BH025
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Method	**CAS #**	**Parameter**	**Result Units**						
Anions									
E300.0		Chloride	mg/l		44.9	220	91.4	367	355
E300.0		Nitrate	mg/l		0.02 U	0.02 U	0.13	0.02 U	0.095
E300.0		Nitrite	mg/l		0.02 U	0.02 U	0.02 U	0.02 U	0.026
E300.0		Sulfate	mg/l		4.2	3.3	1.7	1.1	21.1
E300.0		Sulfide	mg/l		1 U	2.4	1 U	1 U	1 U
E310.1		Bicarbonate	mg/l		210	339	238	184	168
E310.1		Carbonate	mg/l		2 U	2 U	2 U	2 U	2 U
E415.1		Total Organic Carbon	mg/l						
Metals (Total)									
SW6010B		Aluminum (Total)	ug/l		324	5320	2460	1520	1370
SW6010B		Antimony (Total)	ug/l		2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
SW6010B		Arsenic (Total)	ug/l		10.5	6.5	6.2	4.6	3.3
SW6010B		Barium (Total)	ug/l		114	322	101	302	333
SW6010B		Beryllium (Total)	ug/l		0.15	0.43	0.25	0.3	0.28
SW6010B		Cadmium (Total)	ug/l		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW6010B		Calcium (Total)	ug/l		62800	15300	10100	26200	38100
SW6010B		Chromium (Total)	ug/l		1.2	16.1	8.2	5.1	7
SW6010B		Cobalt (Total)	ug/l		0.99	3.5	1.7	1.1	1.3
SW6010B		Copper (Total)	ug/l		0.3 U	7.9	7.9	2.2	6.8
SW6010B		Iron (Total)	ug/l		35000	69800	25100	43000	63200
SW6010B		Lead (Total)	ug/l		3.4	12.4	5.7	1.7 U	25.6
SW6010B		Magnesium (Total)	ug/l		13800	10200	10200	27400	34000
SW6010B		Manganese (Total)	ug/l		1030	4330	1860	4120	3990
SW6010B		Nickel (Total)	ug/l		1.2	5.6	4.2	3.2	5.4
SW6010B		Potassium (Total)	ug/l		8000	7960	4080	6150	4500
SW6010B		Selenium (Total)	ug/l		3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
SW6010B		Silver (Total)	ug/l		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW6010B		Sodium (Total)	ug/l		25800	249000	135000	186000	153000
SW6010B		Thallium (Total)	ug/l		3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
SW6010B		Vanadium (Total)	ug/l		0.7 U	15	6.8	3.3	4.2
SW6010B		Zinc (Total)	ug/l		8.7	19.4	36.1	16.6	34.7
Metals (Dissolved)									
SW6010B-D		Aluminum (Dissolved)	ug/l		56.4	59.3	69.2	37.2	35.7
SW6010B-D		Antimony (Dissolved)	ug/l		2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
SW6010B-D		Arsenic (Dissolved)	ug/l		12.4	3.7	6.5	2.9	2.5 U
SW6010B-D		Barium (Dissolved)	ug/l		113	295	90.4	304	342
SW6010B-D		Beryllium (Dissolved)	ug/l		0.18	0.26	0.11	0.25	0.22
SW6010B-D		Cadmium (Dissolved)	ug/l		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW6010B-D		Calcium (Dissolved)	ug/l		64100	15700	9540	26000	34200
SW6010B-D		Chromium (Dissolved)	ug/l		0.67	0.71	0.73	0.81	0.83
SW6010B-D		Cobalt (Dissolved)	ug/l		0.76	0.95	0.7 U	0.7 U	1
SW6010B-D		Copper (Dissolved)	ug/l		0.3 U	0.3 U	0.61	0.3 U	0.3 U

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH003-GW-001-0	1BH004-GW-001-0	1BH006-GW-001-0	1BH016-GW-001-0	1BH025-GW-001-0
				Sample Date	7/10/2002	7/10/2002	7/12/2002	7/8/2002	7/9/2002
				Location ID	1BH003	1BH004	1BH006	1BH016	1BH025
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW6010B-D		Iron (Dissolved)	ug/l		34700	51700	22600	40800	61400
SW6010B-D		Lead (Dissolved)	ug/l		1.7 U	11.8	2.8	2.2	1.9
SW6010B-D		Magnesium (Dissolved)	ug/l		13900	9990	9770	27700	34600
SW6010B-D		Manganese (Dissolved)	ug/l		1040	4450	1940	4430	4060
SW6010B-D		Nickel (Dissolved)	ug/l		1.2	0.9 U	0.9 U	0.9 U	3.1
SW6010B-D		Potassium (Dissolved)	ug/l		8020	7580	3350	5980	4420
SW6010B-D		Selenium (Dissolved)	ug/l		3.5 U	3.5 U	3.5 U	3.5 U	3.9
SW6010B-D		Silver (Dissolved)	ug/l		0.5 U	0.5 U	1.7	0.5 U	0.5 U
SW6010B-D		Sodium (Dissolved)	ug/l		26300	257000	141000	204000	160000
SW6010B-D		Thallium (Dissolved)	ug/l		3.1 U	3.1 U	3.7	3.1 U	3.1 U
SW6010B-D		Vanadium (Dissolved)	ug/l		0.7 U	0.7 U	1.2	0.7 U	0.7 U
SW6010B-D		Zinc (Dissolved)	ug/l		3	3.1	22.2	6	22
SW7470A		Mercury (Total)	ug/l		0.1 U	0.1 U	0.1 U	0.1 U	0.13
SW7470A-D		Mercury (Dissolved)	ug/l		0.1 U	0.1 U	0.1 U	0.1 U	0.1
Pesticides									
SW8081A		4,4'-DDD	ug/l						
SW8081A		4,4'-DDE	ug/l						
SW8081A		4,4'-DDT	ug/l						
SW8081A		Aldrin	ug/l						
SW8081A		Alpha-BHC	ug/l						
SW8081A		alpha-Chlordane	ug/l						
SW8081A		Beta-BHC	ug/l						
SW8081A		Delta-BHC	ug/l						
SW8081A		Dieldrin	ug/l						
SW8081A		Endosulfan I	ug/l						
SW8081A		Endosulfan II	ug/l						
SW8081A		Endosulfan sulfate	ug/l						
SW8081A		Endrin	ug/l						
SW8081A		Endrin aldehyde	ug/l						
SW8081A		Endrin ketone	ug/l						
SW8081A		gamma-BHC (Lindane)	ug/l						
SW8081A		gamma-Chlordane	ug/l						
SW8081A		Heptachlor	ug/l						
SW8081A		Heptachlor epoxide	ug/l						
SW8081A		Methoxychlor	ug/l						
SW8081A		Toxaphene	ug/l						
PCBs									
SW8082		Aroclor-1016	ug/l						
SW8082		Aroclor-1221	ug/l						
SW8082		Aroclor-1232	ug/l						
SW8082		Aroclor-1242	ug/l						
SW8082		Aroclor-1248	ug/l						
SW8082		Aroclor-1254	ug/l						
SW8082		Aroclor-1260	ug/l						
SW8082		Aroclor-1268	ug/l						
Volatiles									

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH003-GW-001-0	1BH004-GW-001-0	1BH006-GW-001-0	1BH016-GW-001-0	1BH025-GW-001-0
				Sample Date	7/10/2002	7/10/2002	7/12/2002	7/8/2002	7/9/2002
				Location ID	1BH003	1BH004	1BH006	1BH016	1BH025
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW8260B		1,1,1-Trichloroethane	ug/l						
SW8260B		1,1,2,2-Tetrachloroethane	ug/l						
SW8260B		1,1,2-Trichloroethane	ug/l						
SW8260B		1,1-Dichloroethane	ug/l						
SW8260B		1,1-Dichloroethene	ug/l						
SW8260B		1,2-Dichloroethane	ug/l						
SW8260B		1,2-Dichloroethene (total)	ug/l						
SW8260B		1,2-Dichloropropane	ug/l						
SW8260B		2-Butanone	ug/l						
SW8260B		2-Hexanone	ug/l						
SW8260B		4-Methyl-2-pentanone	ug/l						
SW8260B		Acetone	ug/l						
SW8260B		Benzene	ug/l						
SW8260B		Bromodichloromethane	ug/l						
SW8260B		Bromoform	ug/l						
SW8260B		Bromomethane	ug/l						
SW8260B		Carbon Disulfide	ug/l						
SW8260B		Carbon Tetrachloride	ug/l						
SW8260B		Chlorobenzene	ug/l						
SW8260B		Chloroethane	ug/l						
SW8260B		Chloroform	ug/l						
SW8260B		Chloromethane	ug/l						
SW8260B		cis-1,3-Dichloropropene	ug/l						
SW8260B		Dibromochloromethane	ug/l						
SW8260B		Ethylbenzene	ug/l						
SW8260B		Methylene Chloride	ug/l						
SW8260B		Styrene	ug/l						
SW8260B		Tetrachloroethene	ug/l						
SW8260B		Toluene	ug/l						
SW8260B		Trans-1,3-Dichloropropene	ug/l						
SW8260B		Trichloroethene	ug/l						
SW8260B		Vinyl Chloride	ug/l						
SW8260B		Xylene (total)	ug/l						
Semivolatiles									
SW8270C		1,2,4-Trichlorobenzene	ug/l						
SW8270C		1,2-Dichlorobenzene	ug/l						
SW8270C		1,3-Dichlorobenzene	ug/l						
SW8270C		1,4-Dichlorobenzene	ug/l						
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/l						
SW8270C		2,4,5-Trichlorophenol	ug/l						
SW8270C		2,4,6-Trichlorophenol	ug/l						
SW8270C		2,4-Dichlorophenol	ug/l						
SW8270C		2,4-Dimethylphenol	ug/l						
SW8270C		2,4-Dinitrophenol	ug/l						
SW8270C		2,4-Dinitrotoluene	ug/l						
SW8270C		2,6-Dinitrotoluene	ug/l						

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH003-GW-001-0	1BH004-GW-001-0	1BH006-GW-001-0	1BH016-GW-001-0	1BH025-GW-001-0
				Sample Date	7/10/2002	7/10/2002	7/12/2002	7/8/2002	7/9/2002
				Location ID	1BH003	1BH004	1BH006	1BH016	1BH025
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW8270C		2-Chloronaphthalene	ug/l						
SW8270C		2-Chlorophenol	ug/l						
SW8270C		2-Methylphenol	ug/l						
SW8270C		2-Nitroaniline	ug/l						
SW8270C		2-Nitrophenol	ug/l						
SW8270C		3,3'-Dichlorobenzidine	ug/l						
SW8270C		3-Nitroaniline	ug/l						
SW8270C		4,6-Dinitro-2-methylphenol	ug/l						
SW8270C		4-Bromophenyl-phenylether	ug/l						
SW8270C		4-Chloro-3-methylphenol	ug/l						
SW8270C		4-Chloroaniline	ug/l						
SW8270C		4-Chlorophenyl-phenylether	ug/l						
SW8270C		4-Methylphenol	ug/l						
SW8270C		4-Nitroaniline	ug/l						
SW8270C		4-Nitrophenol	ug/l						
SW8270C		Acenaphthene	ug/l						
SW8270C		Acenaphthylene	ug/l						
SW8270C		Anthracene	ug/l						
SW8270C		Benzo(a)anthracene	ug/l						
SW8270C		Benzo(a)pyrene	ug/l						
SW8270C		Benzo(b)fluoranthene	ug/l						
SW8270C		Benzo(g,h,i)perylene	ug/l						
SW8270C		Benzo(k)fluoranthene	ug/l						
SW8270C		bis(2-Chloroethoxy)methane	ug/l						
SW8270C		bis(2-Chloroethyl)ether	ug/l						
SW8270C		bis(2-Ethylhexyl)phthalate	ug/l						
SW8270C		Butylbenzylphthalate	ug/l						
SW8270C		Carbazole	ug/l						
SW8270C		Chrysene	ug/l						
SW8270C		Dibenz(a,h)anthracene	ug/l						
SW8270C		Dibenzofuran	ug/l						
SW8270C		Diethylphthalate	ug/l						
SW8270C		Dimethylphthalate	ug/l						
SW8270C		Di-n-butylphthalate	ug/l						
SW8270C		Di-n-octyl phthalate	ug/l						
SW8270C		Fluoranthene	ug/l						
SW8270C		Fluorene	ug/l						
SW8270C		Hexachlorobenzene	ug/l						
SW8270C		Hexachlorobutadiene	ug/l						
SW8270C		Hexachlorocyclopentadiene	ug/l						
SW8270C		Hexachloroethane	ug/l						
SW8270C		Indeno(1,2,3-cd)pyrene	ug/l						
SW8270C		Isophorone	ug/l						
SW8270C		Naphthalene	ug/l						
SW8270C		Nitrobenzene	ug/l						
SW8270C		N-Nitroso-di-n-propylamine	ug/l						

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH003-GW-001-0	1BH004-GW-001-0	1BH006-GW-001-0	1BH016-GW-001-0	1BH025-GW-001-0
				Sample Date	7/10/2002	7/10/2002	7/12/2002	7/8/2002	7/9/2002
				Location ID	1BH003	1BH004	1BH006	1BH016	1BH025
				Depth	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
SW8270C		N-Nitrosodiphenylamine (1)	ug/l						
SW8270C		Pentachlorophenol	ug/l						
SW8270C		Phenanthrene	ug/l						
SW8270C		Phenol	ug/l						
SW8270C		Pyrene	ug/l						
TOC									
SW9060		Total Organic Carbon	mg/l						

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH026-GW-001-0	1BH034-GW-001-0	2BH001-GW-001-0	2BH003-GW-001-0	2BH005-GW-001-0
				Sample Date	7/15/2002	7/12/2002	7/22/2002	7/22/2002	7/23/2002
				Location ID	1BH026	1BH034	2BH001	2BH003	2BH005
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0	0 - 0
Method	**CAS #**	**Parameter**	**Result Units**						
Anions									
E300.0		Chloride	mg/l		388	547	493	848	57.4
E300.0		Nitrate	mg/l		0.02 U	0.02 U	0.083	0.026	0.02 U
E300.0		Nitrite	mg/l		0.02 U	0.024	0.025	0.047	0.02 U
E300.0		Sulfate	mg/l		54.6	0.25 U	32.8	110	39.7
E300.0		Sulfide	mg/l		1.8	1 U	2.5	7.3	2.5
E310.1		Bicarbonate	mg/l		144	204	318	163	441
E310.1		Carbonate	mg/l		2 U	2 U	2 U	2 U	2 U
E415.1		Total Organic Carbon	mg/l						
Metals (Total)									
SW6010B		Aluminum (Total)	ug/l		357	950	10300	59200	46900
SW6010B		Antimony (Total)	ug/l		2.2 U	2.2 U	2.2 U	4	2.2 U
SW6010B		Arsenic (Total)	ug/l		34	6.3	26.3	26.6	5.3
SW6010B		Barium (Total)	ug/l		82.3	331	118	317	183
SW6010B		Beryllium (Total)	ug/l		0.28	0.17	0.6	3	1.9
SW6010B		Cadmium (Total)	ug/l		0.3 U	0.3 U	0.53	0.87	0.3 U
SW6010B		Calcium (Total)	ug/l		10000	29300	27800	64000	76800
SW6010B		Chromium (Total)	ug/l		1.8	3.8	35.9	275	121
SW6010B		Cobalt (Total)	ug/l		2	0.82	43.1	77.1	11.4
SW6010B		Copper (Total)	ug/l		1.5	2.6	73.3	93.3	37.7
SW6010B		Iron (Total)	ug/l		8820	42200	70300	272000	55600
SW6010B		Lead (Total)	ug/l		1920	5.7	31.4	102	139
SW6010B		Magnesium (Total)	ug/l		11100	31100	10100	27300	5990
SW6010B		Manganese (Total)	ug/l		1700	10600	1950	7960	252
SW6010B		Nickel (Total)	ug/l		3.5	1.5	53.7	111	33.6
SW6010B		Potassium (Total)	ug/l		8100	5230	21400	40900	26100
SW6010B		Selenium (Total)	ug/l		3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
SW6010B		Silver (Total)	ug/l		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW6010B		Sodium (Total)	ug/l		332000	297000	315000	377000	131000
SW6010B		Thallium (Total)	ug/l		3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
SW6010B		Vanadium (Total)	ug/l		1.5	3.4	26.5	250	171
SW6010B		Zinc (Total)	ug/l		23.1	25.7	586	335	190
Metals (Dissolved)									
SW6010B-D		Aluminum (Dissolved)	ug/l		76.7	86.5	252	104	134
SW6010B-D		Antimony (Dissolved)	ug/l		2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
SW6010B-D		Arsenic (Dissolved)	ug/l		33.7	5.2	23.1	5.8	2.5 U
SW6010B-D		Barium (Dissolved)	ug/l		83.1	342	87.7	81.1	53.2
SW6010B-D		Beryllium (Dissolved)	ug/l		0.15	0.19	0.39	0.25	0.13
SW6010B-D		Cadmium (Dissolved)	ug/l		0.3 U	0.3 U	0.58	0.3 U	0.3 U
SW6010B-D		Calcium (Dissolved)	ug/l		10500	30300	23300	61900	66000
SW6010B-D		Chromium (Dissolved)	ug/l		1.1	0.55	8.8	1.2	3.6
SW6010B-D		Cobalt (Dissolved)	ug/l		2.1	0.7 U	30.8	36.8	0.7 U
SW6010B-D		Copper (Dissolved)	ug/l		0.56	0.3 U	1.7	0.3 U	0.3 U

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH026-GW-001-0	1BH034-GW-001-0	2BH001-GW-001-0	2BH003-GW-001-0	2BH005-GW-001-0
				Sample Date	7/15/2002	7/12/2002	7/22/2002	7/22/2002	7/23/2002
				Location ID	1BH026	1BH034	2BH001	2BH003	2BH005
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0	0 - 0
SW6010B-D		Iron (Dissolved)	ug/l		7500	42800	29900	97800	318
SW6010B-D		Lead (Dissolved)	ug/l		2380	5.7	1.7 U	2.4	1.7 U
SW6010B-D		Magnesium (Dissolved)	ug/l		11600	32200	8070	19300	2760
SW6010B-D		Manganese (Dissolved)	ug/l		1760	10900	1430	6630	79.6
SW6010B-D		Nickel (Dissolved)	ug/l		3.7	0.9 U	33.4	29.7	2.4
SW6010B-D		Potassium (Dissolved)	ug/l		8360	5350	19800	35500	22000
SW6010B-D		Selenium (Dissolved)	ug/l		3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
SW6010B-D		Silver (Dissolved)	ug/l		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW6010B-D		Sodium (Dissolved)	ug/l		384000	271000	318000	386000	144000
SW6010B-D		Thallium (Dissolved)	ug/l		3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
SW6010B-D		Vanadium (Dissolved)	ug/l		0.7 U	0.99	10.1	1.6	6
SW6010B-D		Zinc (Dissolved)	ug/l		2.8	1.9	382	81.7	7.1
SW7470A		Mercury (Total)	ug/l		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
SW7470A-D		Mercury (Dissolved)	ug/l		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pesticides									
SW8081A		4,4'-DDD	ug/l		0.1 U	0.1 U			
SW8081A		4,4'-DDE	ug/l		0.1 U	0.1 U			
SW8081A		4,4'-DDT	ug/l		0.1 U	0.1 U			
SW8081A		Aldrin	ug/l		0.05 U	0.052 U			
SW8081A		Alpha-BHC	ug/l		4.3	0.052 U			
SW8081A		alpha-Chlordane	ug/l		0.05 U	0.052 U			
SW8081A		Beta-BHC	ug/l		4.5	0.052 U			
SW8081A		Delta-BHC	ug/l		0.39	0.052 U			
SW8081A		Dieldrin	ug/l		0.1 U	0.1 U			
SW8081A		Endosulfan I	ug/l		0.05 U	0.052 U			
SW8081A		Endosulfan II	ug/l		0.1 U	0.1 U			
SW8081A		Endosulfan sulfate	ug/l		0.1 U	0.1 U			
SW8081A		Endrin	ug/l		0.1 U	0.1 U			
SW8081A		Endrin aldehyde	ug/l		0.1 U	0.1 U			
SW8081A		Endrin ketone	ug/l		0.1 U	0.1 U			
SW8081A		gamma-BHC (Lindane)	ug/l		0.05 U	0.052 U			
SW8081A		gamma-Chlordane	ug/l		0.05 U	0.052 U			
SW8081A		Heptachlor	ug/l		0.18 I	0.052 U			
SW8081A		Heptachlor epoxide	ug/l		0.05 U	0.052 U			
SW8081A		Methoxychlor	ug/l		0.5 U	0.52 U			
SW8081A		Toxaphene	ug/l		5 U	5.2 U			
PCBs									
SW8082		Aroclor-1016	ug/l		1 U	1 U			
SW8082		Aroclor-1221	ug/l		2 U	2.1 U			
SW8082		Aroclor-1232	ug/l		1 U	1 U			
SW8082		Aroclor-1242	ug/l		1 U	1 U			
SW8082		Aroclor-1248	ug/l		1 U	1 U			
SW8082		Aroclor-1254	ug/l		1 U	1 U			
SW8082		Aroclor-1260	ug/l		1 U	1 U			
SW8082		Aroclor-1268	ug/l		1 U	1 U			
Volatiles									

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH026-GW-001-0	1BH034-GW-001-0	2BH001-GW-001-0	2BH003-GW-001-0	2BH005-GW-001-0
				Sample Date	7/15/2002	7/12/2002	7/22/2002	7/22/2002	7/23/2002
				Location ID	1BH026	1BH034	2BH001	2BH003	2BH005
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0	0 - 0
SW8260B		1,1,1-Trichloroethane	ug/l		120 U	5 U			
SW8260B		1,1,2,2-Tetrachloroethane	ug/l		120 U	5 U			
SW8260B		1,1,2-Trichloroethane	ug/l		120 U	5 U			
SW8260B		1,1-Dichloroethane	ug/l		120 U	3 J			
SW8260B		1,1-Dichloroethene	ug/l		120 U	5 U			
SW8260B		1,2-Dichloroethane	ug/l		670 JD	5 U			
SW8260B		1,2-Dichloroethene (total)	ug/l		53 J	15			
SW8260B		1,2-Dichloropropane	ug/l		120 U	5 U			
SW8260B		2-Butanone	ug/l		250 U	10 U			
SW8260B		2-Hexanone	ug/l		250 U	10 U			
SW8260B		4-Methyl-2-pentanone	ug/l		250 U	2 J			
SW8260B		Acetone	ug/l		250 U	8 J			
SW8260B		Benzene	ug/l		3900	8600			
SW8260B		Bromodichloromethane	ug/l		120 U	5 U			
SW8260B		Bromoform	ug/l		120 U	5 U			
SW8260B		Bromomethane	ug/l		250 U	10 U			
SW8260B		Carbon Disulfide	ug/l		48 J	5 U			
SW8260B		Carbon Tetrachloride	ug/l		120 U	5 U			
SW8260B		Chlorobenzene	ug/l		49000 D	4100 D			
SW8260B		Chloroethane	ug/l		250 U	17			
SW8260B		Chloroform	ug/l		3500	6			
SW8260B		Chloromethane	ug/l		250 U	10 U			
SW8260B		cis-1,3-Dichloropropene	ug/l		120 U	5 U			
SW8260B		Dibromochloromethane	ug/l		120 U	5 U			
SW8260B		Ethylbenzene	ug/l		970	3200 D			
SW8260B		Methylene Chloride	ug/l		4200 BD	18			
SW8260B		Styrene	ug/l		120 U	39			
SW8260B		Tetrachloroethene	ug/l		120 U	5 U			
SW8260B		Toluene	ug/l		220	380 JD			
SW8260B		Trans-1,3-Dichloropropene	ug/l		120 U	5 U			
SW8260B		Trichloroethene	ug/l		120 U	8			
SW8260B		Vinyl Chloride	ug/l		250 U	16			
SW8260B		Xylene (total)	ug/l		1100	3700 D			
Semivolatiles									
SW8270C		1,2,4-Trichlorobenzene	ug/l		5000 U	1000 U			
SW8270C		1,2-Dichlorobenzene	ug/l		13000	1000 U			
SW8270C		1,3-Dichlorobenzene	ug/l		690 J	1000 U			
SW8270C		1,4-Dichlorobenzene	ug/l		24000	140 J			
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/l		5000 U	1000 U			
SW8270C		2,4,5-Trichlorophenol	ug/l		13000 U	2600 U			
SW8270C		2,4,6-Trichlorophenol	ug/l		5000 U	1000 U			
SW8270C		2,4-Dichlorophenol	ug/l		5000 U	1000 U			
SW8270C		2,4-Dimethylphenol	ug/l		5000 U	1000 U			
SW8270C		2,4-Dinitrophenol	ug/l		13000 U	2600 U			
SW8270C		2,4-Dinitrotoluene	ug/l		5000 U	1000 U			
SW8270C		2,6-Dinitrotoluene	ug/l		5000 U	1000 U			

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH026-GW-001-0	1BH034-GW-001-0	2BH001-GW-001-0	2BH003-GW-001-0	2BH005-GW-001-0
				Sample Date	7/15/2002	7/12/2002	7/22/2002	7/22/2002	7/23/2002
				Location ID	1BH026	1BH034	2BH001	2BH003	2BH005
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0	0 - 0
SW8270C		2-Chloronaphthalene	ug/l		5000 U	1000 U			
SW8270C		2-Chlorophenol	ug/l		5000 U	1000 U			
SW8270C		2-Methylphenol	ug/l		5000 U	1000 U			
SW8270C		2-Nitroaniline	ug/l		13000 U	2600 U			
SW8270C		2-Nitrophenol	ug/l		5000 U	1000 U			
SW8270C		3,3'-Dichlorobenzidine	ug/l		10000 U	2100 U			
SW8270C		3-Nitroaniline	ug/l		13000 U	2600 U			
SW8270C		4,6-Dinitro-2-methylphenol	ug/l		13000 U	2600 U			
SW8270C		4-Bromophenyl-phenylether	ug/l		5000 U	1000 U			
SW8270C		4-Chloro-3-methylphenol	ug/l		5000 U	1000 U			
SW8270C		4-Chloroaniline	ug/l		8400	1000 U			
SW8270C		4-Chlorophenyl-phenylether	ug/l		5000 U	1000 U			
SW8270C		4-Methylphenol	ug/l		5000 U	1000 U			
SW8270C		4-Nitroaniline	ug/l		13000 U	2600 U			
SW8270C		4-Nitrophenol	ug/l		13000 U	2600 U			
SW8270C		Acenaphthene	ug/l		5000 U	1000 U			
SW8270C		Acenaphthylene	ug/l		5000 U	1000 U			
SW8270C		Anthracene	ug/l		5000 U	1000 U			
SW8270C		Benzo(a)anthracene	ug/l		5000 U	1000 U			
SW8270C		Benzo(a)pyrene	ug/l		5000 U	1000 U			
SW8270C		Benzo(b)fluoranthene	ug/l		5000 U	1000 U			
SW8270C		Benzo(g,h,i)perylene	ug/l		5000 U	1000 U			
SW8270C		Benzo(k)fluoranthene	ug/l		5000 U	1000 U			
SW8270C		bis(2-Chloroethoxy)methane	ug/l		5000 U	1000 U			
SW8270C		bis(2-Chloroethyl)ether	ug/l		5000 U	1000 U			
SW8270C		bis(2-Ethylhexyl)phthalate	ug/l		5000 U	1000 U			
SW8270C		Butylbenzylphthalate	ug/l		5000 U	1000 U			
SW8270C		Carbazole	ug/l		5000 U	1000 U			
SW8270C		Chrysene	ug/l		5000 U	1000 U			
SW8270C		Dibenz(a,h)anthracene	ug/l		5000 U	1000 U			
SW8270C		Dibenzofuran	ug/l		5000 U	1000 U			
SW8270C		Diethylphthalate	ug/l		5000 U	1000 U			
SW8270C		Dimethylphthalate	ug/l		5000 U	1000 U			
SW8270C		Di-n-butylphthalate	ug/l		5000 U	1000 U			
SW8270C		Di-n-octyl phthalate	ug/l		5000 U	1000 U			
SW8270C		Fluoranthene	ug/l		5000 U	1000 U			
SW8270C		Fluorene	ug/l		5000 U	1000 U			
SW8270C		Hexachlorobenzene	ug/l		5000 U	1000 U			
SW8270C		Hexachlorobutadiene	ug/l		5000 U	1000 U			
SW8270C		Hexachlorocyclopentadiene	ug/l		5000 U	1000 U			
SW8270C		Hexachloroethane	ug/l		5000 U	1000 U			
SW8270C		Indeno(1,2,3-cd)pyrene	ug/l		5000 U	1000 U			
SW8270C		Isophorone	ug/l		5000 U	1000 U			
SW8270C		Naphthalene	ug/l		1200 J	4100			
SW8270C		Nitrobenzene	ug/l		5000 U	1000 U			
SW8270C		N-Nitroso-di-n-propylamine	ug/l		5000 U	1000 U			

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	1BH026-GW-001-0	1BH034-GW-001-0	2BH001-GW-001-0	2BH003-GW-001-0	2BH005-GW-001-0
				Sample Date	7/15/2002	7/12/2002	7/22/2002	7/22/2002	7/23/2002
				Location ID	1BH026	1BH034	2BH001	2BH003	2BH005
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0	0 - 0
SW8270C		N-Nitrosodiphenylamine (1)	ug/l		5000 U	1000 U			
SW8270C		Pentachlorophenol	ug/l		13000 U	2600 U			
SW8270C		Phenanthrene	ug/l		5000 U	1000 U			
SW8270C		Phenol	ug/l		5000 U	1000 U			
SW8270C		Pyrene	ug/l		5000 U	1000 U			
TOC									
SW9060		Total Organic Carbon	mg/l		68.2	22			

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	2BH008-GW-001-0	2BH010-GW-001-0	2BH016-GW-001-0	2BH042-GW-001-0
				Sample Date	7/25/2002	7/30/2002	7/22/2002	7/19/2002
				Location ID	2BH008	2BH010	2BH016	2BH042
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0
Method	**CAS #**	**Parameter**	**Result Units**					
Anions								
E300.0		Chloride	mg/l			423	264	78
E300.0		Nitrate	mg/l			0.02 U	0.02 U	0.02 U
E300.0		Nitrite	mg/l			0.02 U	0.02 U	0.02 U
E300.0		Sulfate	mg/l			15.9	8.8	3.8
E300.0		Sulfide	mg/l			4.8	3.4	1.6
E310.1		Bicarbonate	mg/l			432	997	197
E310.1		Carbonate	mg/l			2 U	2 U	2 U
E415.1		Total Organic Carbon	mg/l		220			
Metals (Total)								
SW6010B		Aluminum (Total)	ug/l			2990	109000	24000
SW6010B		Antimony (Total)	ug/l			3.5 U	5.5	5.9
SW6010B		Arsenic (Total)	ug/l			20.4	55.4	36.7
SW6010B		Barium (Total)	ug/l			157	400	141
SW6010B		Beryllium (Total)	ug/l			0.5	3.7	0.68
SW6010B		Cadmium (Total)	ug/l			0.3 U	0.63	1.1
SW6010B		Calcium (Total)	ug/l			38300	83100	17400
SW6010B		Chromium (Total)	ug/l			12.2	238	53.5
SW6010B		Cobalt (Total)	ug/l			2.1	32.1	15.2
SW6010B		Copper (Total)	ug/l			8.7	271	123
SW6010B		Iron (Total)	ug/l			35700	185000	34600
SW6010B		Lead (Total)	ug/l			35.6	142	13700
SW6010B		Magnesium (Total)	ug/l			25800	27400	7390
SW6010B		Manganese (Total)	ug/l			1000	3010	1260
SW6010B		Nickel (Total)	ug/l			4	71.3	34.5
SW6010B		Potassium (Total)	ug/l			19500	35200	4760
SW6010B		Selenium (Total)	ug/l			4.1 U	3.9	3.5 U
SW6010B		Silver (Total)	ug/l			1.1 U	0.5 U	3.7
SW6010B		Sodium (Total)	ug/l			345000	422000	92700
SW6010B		Thallium (Total)	ug/l			6.6 U	3.1 U	3.2
SW6010B		Vanadium (Total)	ug/l			8.5	341	48.5
SW6010B		Zinc (Total)	ug/l			41.2	239	220
Metals (Dissolved)								
SW6010B-D		Aluminum (Dissolved)	ug/l			41.3	127	113
SW6010B-D		Antimony (Dissolved)	ug/l			3.5 U	2.2 U	2.2 U
SW6010B-D		Arsenic (Dissolved)	ug/l			20.5	10.4	28.4
SW6010B-D		Barium (Dissolved)	ug/l			140	96.4	38.9
SW6010B-D		Beryllium (Dissolved)	ug/l			0.14	0.18	0.13
SW6010B-D		Cadmium (Dissolved)	ug/l			0.3 U	0.3 U	0.3 U
SW6010B-D		Calcium (Dissolved)	ug/l			39100	71100	5690
SW6010B-D		Chromium (Dissolved)	ug/l			1.3	8.7	3.6
SW6010B-D		Cobalt (Dissolved)	ug/l			1.4 U	2.2	2.3
SW6010B-D		Copper (Dissolved)	ug/l			1.2	1.8	0.3 U

Table H-5 Appendix H IDW Characterization Data
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				Field Sample ID	2BH008-GW-001-0	2BH010-GW-001-0	2BH016-GW-001-0	2BH042-GW-001-0
				Sample Date	7/25/2002	7/30/2002	7/22/2002	7/19/2002
				Location ID	2BH008	2BH010	2BH016	2BH042
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0
SW6010B-D		Iron (Dissolved)	ug/l			26700	17600	2860
SW6010B-D		Lead (Dissolved)	ug/l			2.4 U	1.7 U	1700
SW6010B-D		Magnesium (Dissolved)	ug/l			26000	19400	4180
SW6010B-D		Manganese (Dissolved)	ug/l			992	2130	861
SW6010B-D		Nickel (Dissolved)	ug/l			1.6 U	6.4	1.7
SW6010B-D		Potassium (Dissolved)	ug/l			19600	23500	2760
SW6010B-D		Selenium (Dissolved)	ug/l			4.1 U	3.5 U	3.5 U
SW6010B-D		Silver (Dissolved)	ug/l			1.1 U	0.5 U	0.5 U
SW6010B-D		Sodium (Dissolved)	ug/l			354000	439000	95800
SW6010B-D		Thallium (Dissolved)	ug/l			6.6 U	3.1 U	3.1 U
SW6010B-D		Vanadium (Dissolved)	ug/l			1.1 U	19.9	0.7 U
SW6010B-D		Zinc (Dissolved)	ug/l			12.9	20	4.6
SW7470A		Mercury (Total)	ug/l			0.62	0.54	3.3
SW7470A-D		Mercury (Dissolved)	ug/l			0.1 U	0.1 U	0.1 U
Pesticides								
SW8081A		4,4'-DDD	ug/l		0.11 U			
SW8081A		4,4'-DDE	ug/l		0.11 U			
SW8081A		4,4'-DDT	ug/l		0.11 U			
SW8081A		Aldrin	ug/l		0.053 U			
SW8081A		Alpha-BHC	ug/l		0.053 U			
SW8081A		alpha-Chlordane	ug/l		0.053 U			
SW8081A		Beta-BHC	ug/l		0.053 U			
SW8081A		Delta-BHC	ug/l		0.053 U			
SW8081A		Dieldrin	ug/l		0.11 U			
SW8081A		Endosulfan I	ug/l		0.053 U			
SW8081A		Endosulfan II	ug/l		0.11 U			
SW8081A		Endosulfan sulfate	ug/l		0.11 U			
SW8081A		Endrin	ug/l		0.2			
SW8081A		Endrin aldehyde	ug/l		0.11 U			
SW8081A		Endrin ketone	ug/l		0.11 U			
SW8081A		gamma-BHC (Lindane)	ug/l		0.053 U			
SW8081A		gamma-Chlordane	ug/l		0.053 U			
SW8081A		Heptachlor	ug/l		0.053 U			
SW8081A		Heptachlor epoxide	ug/l		0.13 I			
SW8081A		Methoxychlor	ug/l		0.53 U			
SW8081A		Toxaphene	ug/l		5.3 U			
PCBs								
SW8082		Aroclor-1016	ug/l		5.3 U			
SW8082		Aroclor-1221	ug/l		11 U			
SW8082		Aroclor-1232	ug/l		5.3 U			
SW8082		Aroclor-1242	ug/l		5.3 U			
SW8082		Aroclor-1248	ug/l		5.3 U			
SW8082		Aroclor-1254	ug/l		5.3 U			
SW8082		Aroclor-1260	ug/l		5.3 U			
SW8082		Aroclor-1268	ug/l		5.3 U			
Volatiles								

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	2BH008-GW-001-0	2BH010-GW-001-0	2BH016-GW-001-0	2BH042-GW-001-0
				Sample Date	7/25/2002	7/30/2002	7/22/2002	7/19/2002
				Location ID	2BH008	2BH010	2BH016	2BH042
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0
SW8260B		1,1,1-Trichloroethane	ug/l		5 U			
SW8260B		1,1,2,2-Tetrachloroethane	ug/l		5 U			
SW8260B		1,1,2-Trichloroethane	ug/l		5 U			
SW8260B		1,1-Dichloroethane	ug/l		2 J			
SW8260B		1,1-Dichloroethene	ug/l		5 U			
SW8260B		1,2-Dichloroethane	ug/l		5 J			
SW8260B		1,2-Dichloroethene (total)	ug/l		1 J			
SW8260B		1,2-Dichloropropane	ug/l		5 U			
SW8260B		2-Butanone	ug/l		2 J			
SW8260B		2-Hexanone	ug/l		10 U			
SW8260B		4-Methyl-2-pentanone	ug/l		1 J			
SW8260B		Acetone	ug/l		34 JD			
SW8260B		Benzene	ug/l		670 D			
SW8260B		Bromodichloromethane	ug/l		5 U			
SW8260B		Bromoform	ug/l		5 U			
SW8260B		Bromomethane	ug/l		10 U			
SW8260B		Carbon Disulfide	ug/l		5 U			
SW8260B		Carbon Tetrachloride	ug/l		2 J			
SW8260B		Chlorobenzene	ug/l		480 D			
SW8260B		Chloroethane	ug/l		10 U			
SW8260B		Chloroform	ug/l		5 U			
SW8260B		Chloromethane	ug/l		10 U			
SW8260B		cis-1,3-Dichloropropene	ug/l		5 U			
SW8260B		Dibromochloromethane	ug/l		5 U			
SW8260B		Ethylbenzene	ug/l		270 D			
SW8260B		Methylene Chloride	ug/l		5 U			
SW8260B		Styrene	ug/l		180 D			
SW8260B		Tetrachloroethene	ug/l		5 U			
SW8260B		Toluene	ug/l		720 D			
SW8260B		Trans-1,3-Dichloropropene	ug/l		5 U			
SW8260B		Trichloroethene	ug/l		5 U			
SW8260B		Vinyl Chloride	ug/l		2 J			
SW8260B		Xylene (total)	ug/l		1300 D			
Semivolatiles								
SW8270C		1,2,4-Trichlorobenzene	ug/l		200 U			
SW8270C		1,2-Dichlorobenzene	ug/l		200 U			
SW8270C		1,3-Dichlorobenzene	ug/l		200 U			
SW8270C		1,4-Dichlorobenzene	ug/l		200 U			
SW8270C		2,2'-oxybis(1-Chloropropane)	ug/l		200 U			
SW8270C		2,4,5-Trichlorophenol	ug/l		510 U			
SW8270C		2,4,6-Trichlorophenol	ug/l		200 U			
SW8270C		2,4-Dichlorophenol	ug/l		200 U			
SW8270C		2,4-Dimethylphenol	ug/l		200 U			
SW8270C		2,4-Dinitrophenol	ug/l		510 U			
SW8270C		2,4-Dinitrotoluene	ug/l		200 U			
SW8270C		2,6-Dinitrotoluene	ug/l		200 U			

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	2BH008-GW-001-0	2BH010-GW-001-0	2BH016-GW-001-0	2BH042-GW-001-0
				Sample Date	7/25/2002	7/30/2002	7/22/2002	7/19/2002
				Location ID	2BH008	2BH010	2BH016	2BH042
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0
SW8270C		2-Chloronaphthalene	ug/l		200 U			
SW8270C		2-Chlorophenol	ug/l		200 U			
SW8270C		2-Methylphenol	ug/l		12 J			
SW8270C		2-Nitroaniline	ug/l		510 U			
SW8270C		2-Nitrophenol	ug/l		200 U			
SW8270C		3,3'-Dichlorobenzidine	ug/l		410 U			
SW8270C		3-Nitroaniline	ug/l		510 U			
SW8270C		4,6-Dinitro-2-methylphenol	ug/l		510 U			
SW8270C		4-Bromophenyl-phenylether	ug/l		200 U			
SW8270C		4-Chloro-3-methylphenol	ug/l		200 U			
SW8270C		4-Chloroaniline	ug/l		9600 D			
SW8270C		4-Chlorophenyl-phenylether	ug/l		200 U			
SW8270C		4-Methylphenol	ug/l		23 J			
SW8270C		4-Nitroaniline	ug/l		510 U			
SW8270C		4-Nitrophenol	ug/l		510 U			
SW8270C		Acenaphthene	ug/l		42 J			
SW8270C		Acenaphthylene	ug/l		13 J			
SW8270C		Anthracene	ug/l		13 J			
SW8270C		Benzo(a)anthracene	ug/l		200 U			
SW8270C		Benzo(a)pyrene	ug/l		200 U			
SW8270C		Benzo(b)fluoranthene	ug/l		200 U			
SW8270C		Benzo(g,h,i)perylene	ug/l		200 U			
SW8270C		Benzo(k)fluoranthene	ug/l		200 U			
SW8270C		bis(2-Chloroethoxy)methane	ug/l		200 U			
SW8270C		bis(2-Chloroethyl)ether	ug/l		200 U			
SW8270C		bis(2-Ethylhexyl)phthalate	ug/l		200 U			
SW8270C		Butylbenzylphthalate	ug/l		200 U			
SW8270C		Carbazole	ug/l		200 U			
SW8270C		Chrysene	ug/l		200 U			
SW8270C		Dibenz(a,h)anthracene	ug/l		200 U			
SW8270C		Dibenzofuran	ug/l		200 U			
SW8270C		Diethylphthalate	ug/l		200 U			
SW8270C		Dimethylphthalate	ug/l		200 U			
SW8270C		Di-n-butylphthalate	ug/l		200 U			
SW8270C		Di-n-octyl phthalate	ug/l		200 U			
SW8270C		Fluoranthene	ug/l		200 U			
SW8270C		Fluorene	ug/l		17 J			
SW8270C		Hexachlorobenzene	ug/l		200 U			
SW8270C		Hexachlorobutadiene	ug/l		200 U			
SW8270C		Hexachlorocyclopentadiene	ug/l		200 U			
SW8270C		Hexachloroethane	ug/l		200 U			
SW8270C		Indeno(1,2,3-cd)pyrene	ug/l		200 U			
SW8270C		Isophorone	ug/l		200 U			
SW8270C		Naphthalene	ug/l		520			
SW8270C		Nitrobenzene	ug/l		200 U			
SW8270C		N-Nitroso-di-n-propylamine	ug/l		200 U			

Table H-5 Appendix H IDW Characterization Data
July 2002 Groundwater Data

				Field Sample ID	2BH008-GW-001-0	2BH010-GW-001-0	2BH016-GW-001-0	2BH042-GW-001-0
				Sample Date	7/25/2002	7/30/2002	7/22/2002	7/19/2002
				Location ID	2BH008	2BH010	2BH016	2BH042
				Depth	9.75 - 14.75	0 - 0	0 - 0	0 - 0
SW8270C		N-Nitrosodiphenylamine (1)	ug/l		200 U			
SW8270C		Pentachlorophenol	ug/l		510 U			
SW8270C		Phenanthrene	ug/l		31 J			
SW8270C		Phenol	ug/l		200 U			
SW8270C		Pyrene	ug/l		12 J			
TOC								
SW9060		Total Organic Carbon	mg/l					

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH013-GW-001-0	2BH018-GW-001-0	2BH022-GW-001-0	2BH025-GW-001-0	2BH026-GW-001-0
			Sample Date	8/8/2002	8/1/2002	8/7/2002	8/5/2002	8/19/2002
			Location ID	2BH013	2BH018	2BH022	2BH025	2BH026
			Depth	5 - 15	0 - 0	5 - 15	5 - 15	5 - 15
Method	**Parameter**	**Result Units**						
Anions								
E300.0	Chloride	mg/l				97.9	143	220
E300.0	Nitrate	mg/l				0.02 U		0.039
E300.0	Nitrite	mg/l				0.02 U	0.02 U	0.02 U
E300.0	Sulfate	mg/l				46.5	8.5	22.8
E300.0	Sulfide	mg/l				1 U	5.4	2.3
E310.1	Bicarbonate	mg/l				272	427	230
E310.1	Carbonate	mg/l				2 U	0.5 U	4
E353.2	Nitrate+W63	mg/l						
E353.2	Nitrate+W84	mg/l					0.02 U	
Metals (Total)								
SW6010B	Aluminum (Total)	ug/l				238000	40600	40800
SW6010B	Antimony (Total)	ug/l				4.7	3.6	8
SW6010B	Arsenic (Total)	ug/l				55.2	12.7	48.3
SW6010B	Barium (Total)	ug/l				4060	116	102
SW6010B	Beryllium (Total)	ug/l				16.5	3.4	1.5
SW6010B	Cadmium (Total)	ug/l				2.2	0.3 U	0.3 U
SW6010B	Calcium (Total)	ug/l				55300	43100	6350
SW6010B	Chromium (Total)	ug/l				417	88.6	73.8
SW6010B	Cobalt (Total)	ug/l				104	8.2	9.1
SW6010B	Copper (Total)	ug/l				409	33.6	61.3
SW6010B	Iron (Total)	ug/l				361000	36400	60400
SW6010B	Lead (Total)	ug/l				217	19.3	101
SW6010B	Magnesium (Total)	ug/l				30600	12500	2920
SW6010B	Manganese (Total)	ug/l				3390	254	126
SW6010B	Nickel (Total)	ug/l				213	25.7	27.8
SW6010B	Potassium (Total)	ug/l				52800	27500	8170
SW6010B	Selenium (Total)	ug/l				5.2	4.1 U	4.1 U
SW6010B	Silver (Total)	ug/l				1.1 U	1.1 U	1.1
SW6010B	Sodium (Total)	ug/l				110000	214000	228000
SW6010B	Thallium (Total)	ug/l				6.6 U	6.6 U	6.6 U
SW6010B	Vanadium (Total)	ug/l				612	200	101
SW6010B	Zinc (Total)	ug/l				646	110	110
Metals (Dissolved)								
SW6010B-D	Aluminum (Dissolved)	ug/l				72.6	6950	2880
SW6010B-D	Antimony (Dissolved)	ug/l				3.5 U	3.5 U	5.7
SW6010B-D	Arsenic (Dissolved)	ug/l				3.3 U	7.2	40.2
SW6010B-D	Barium (Dissolved)	ug/l				1950	42.2	18.5
SW6010B-D	Beryllium (Dissolved)	ug/l				0.1 U	0.78	0.19
SW6010B-D	Cadmium (Dissolved)	ug/l				0.3 U	0.3 U	0.41
SW6010B-D	Calcium (Dissolved)	ug/l				47800	36100	4500

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH013-GW-001-0	2BH018-GW-001-0	2BH022-GW-001-0	2BH025-GW-001-0	2BH026-GW-001-0
			Sample Date	8/8/2002	8/1/2002	8/7/2002	8/5/2002	8/19/2002
			Location ID	2BH013	2BH018	2BH022	2BH025	2BH026
			Depth	5 - 15	0 - 0	5 - 15	5 - 15	5 - 15
SW6010B-D	Chromium (Dissolved)	ug/l				1 U	25.5	9.9
SW6010B-D	Cobalt (Dissolved)	ug/l				7.3	1.6	1.4 U
SW6010B-D	Copper (Dissolved)	ug/l				1 U	6.3	5.5
SW6010B-D	Iron (Dissolved)	ug/l				10200	8000	5560
SW6010B-D	Lead (Dissolved)	ug/l				5.8	4.2	21.7
SW6010B-D	Magnesium (Dissolved)	ug/l				9100	8840	664
SW6010B-D	Manganese (Dissolved)	ug/l				1700	151	14.1
SW6010B-D	Nickel (Dissolved)	ug/l				2.6	5.7	3.7
SW6010B-D	Potassium (Dissolved)	ug/l				29000	21700	4850
SW6010B-D	Selenium (Dissolved)	ug/l				4.1 U	4.1 U	4.6
SW6010B-D	Silver (Dissolved)	ug/l				1.1 U	1.1 U	1.1
SW6010B-D	Sodium (Dissolved)	ug/l				105000	207000	222000
SW6010B-D	Thallium (Dissolved)	ug/l				6.6 U	6.6 U	6.6 U
SW6010B-D	Vanadium (Dissolved)	ug/l				1.1 U	85.5	13
SW6010B-D	Zinc (Dissolved)	ug/l				21.6	48.3	12.8
SW7470A	Mercury (Total)	ug/l				0.96	0.1 U	0.1 U
SW7470A-D	Mercury (Dissolved)	ug/l				0.1 U	0.1 U	0.1 U
Pesticides								
SW8081A	4,4'-DDD	ug/l		2.5 U	0.2 U			
SW8081A	4,4'-DDE	ug/l		2.5 U	0.2 U			
SW8081A	4,4'-DDT	ug/l		2.5 U	0.2 U			
SW8081A	Aldrin	ug/l		1.2 U	0.1 U			
SW8081A	Alpha-BHC	ug/l		1.2 U	0.1 U			
SW8081A	alpha-Chlordane	ug/l		1.2 U	0.1 U			
SW8081A	Beta-BHC	ug/l		1.2 U	0.1 U			
SW8081A	Delta-BHC	ug/l		1.2 U	0.1 U			
SW8081A	Dieldrin	ug/l		2.5 U	0.2 U			
SW8081A	Endosulfan I	ug/l		1.2 U	0.1 U			
SW8081A	Endosulfan II	ug/l		2.5 U	0.2 U			
SW8081A	Endosulfan sulfate	ug/l		2.5 U	0.2 U			
SW8081A	Endrin	ug/l		2.5 U	0.2 U			
SW8081A	Endrin aldehyde	ug/l		2.5 U	0.2 U			
SW8081A	Endrin ketone	ug/l		2.5 U	0.2 U			
SW8081A	gamma-BHC (Lindane)	ug/l		1.2 U	0.1 U			
SW8081A	gamma-Chlordane	ug/l		1.2 U	0.1 U			
SW8081A	Heptachlor	ug/l		1.2 U	0.1 U			
SW8081A	Heptachlor epoxide	ug/l		1.2 U	0.1 U			
SW8081A	Methoxychlor	ug/l		12 U	1 U			
SW8081A	Toxaphene	ug/l		120 U	10 U			
PCBs								
SW8082	Aroclor-1016	ug/l		1 U	1 U			
SW8082	Aroclor-1221	ug/l		2.1 U	2 U			
SW8082	Aroclor-1232	ug/l		1 U	1 U			
SW8082	Aroclor-1242	ug/l		1 U	1 U			
SW8082	Aroclor-1248	ug/l		1 U	1 U			
SW8082	Aroclor-1254	ug/l		1 U	1 U			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH013-GW-001-0	2BH018-GW-001-0	2BH022-GW-001-0	2BH025-GW-001-0	2BH026-GW-001-0
			Sample Date	8/8/2002	8/1/2002	8/7/2002	8/5/2002	8/19/2002
			Location ID	2BH013	2BH018	2BH022	2BH025	2BH026
			Depth	5 - 15	0 - 0	5 - 15	5 - 15	5 - 15
SW8082	Aroclor-1260	ug/l		1 U	1 U			
SW8082	Aroclor-1268	ug/l		1 U	1 U			
Volatiles								
SW8260B	1,1,1-Trichloroethane	ug/l		50 U	5 U			
SW8260B	1,1,2,2-Tetrachloroethane	ug/l		50 U	5 U			
SW8260B	1,1,2-Trichloroethane	ug/l		50 U	5 U			
SW8260B	1,1-Dichloroethane	ug/l		50 U	5 U			
SW8260B	1,1-Dichloroethene	ug/l		50 U	5 U			
SW8260B	1,2-Dichloroethane	ug/l		50 U	24			
SW8260B	1,2-Dichloroethene (total)	ug/l		50 U	5 U			
SW8260B	1,2-Dichloropropane	ug/l		50 U	5 U			
SW8260B	2-Butanone	ug/l		100 U	10 U			
SW8260B	2-Hexanone	ug/l		100 U	10 U			
SW8260B	4-Methyl-2-pentanone	ug/l		100 U	10 U			
SW8260B	Acetone	ug/l		100 U	9 J			
SW8260B	Benzene	ug/l		13 J	0 E			
SW8260B	Bromodichloromethane	ug/l		50 U	5 U			
SW8260B	Bromoform	ug/l		50 U	5 U			
SW8260B	Bromomethane	ug/l		100 U	10 U			
SW8260B	Carbon Disulfide	ug/l		1900 D	2 J			
SW8260B	Carbon Tetrachloride	ug/l		50 U	5 U			
SW8260B	Chlorobenzene	ug/l		46 J	0 E			
SW8260B	Chloroethane	ug/l		100 U	10 U			
SW8260B	Chloroform	ug/l		50 U	5 U			
SW8260B	Chloromethane	ug/l		100 U	10 U			
SW8260B	cis-1,3-Dichloropropene	ug/l		50 U	5 U			
SW8260B	Dibromochloromethane	ug/l		50 U	5 U			
SW8260B	Ethylbenzene	ug/l		50 U	0 E			
SW8260B	Methylene Chloride	ug/l		50 U	5 U			
SW8260B	Styrene	ug/l		50 U	5 U			
SW8260B	Tetrachloroethene	ug/l		50 U	5 U			
SW8260B	Toluene	ug/l		50 U	0 E			
SW8260B	Trans-1,3-Dichloropropene	ug/l		50 U	5 U			
SW8260B	Trichloroethene	ug/l		50 U	5 U			
SW8260B	Vinyl Chloride	ug/l		100 U	10 U			
SW8260B	Xylene (total)	ug/l		50 U	0 E			
Semivolatiles								
SW8270C	1,2,4-Trichlorobenzene	ug/l		56 U	1000 U			
SW8270C	1,2-Dichlorobenzene	ug/l		7 J	1000 U			
SW8270C	1,3-Dichlorobenzene	ug/l		56 U	1000 U			
SW8270C	1,4-Dichlorobenzene	ug/l		56 U	1000 U			
SW8270C	2,2'-oxybis(1-Chloropropane)	ug/l		56 U	1000 U			
SW8270C	2,4,5-Trichlorophenol	ug/l		140 U	2600 U			
SW8270C	2,4,6-Trichlorophenol	ug/l		56 U	1000 U			
SW8270C	2,4-Dichlorophenol	ug/l		56 U	1000 U			
SW8270C	2,4-Dimethylphenol	ug/l		56 U	1000 U			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH013-GW-001-0	2BH018-GW-001-0	2BH022-GW-001-0	2BH025-GW-001-0	2BH026-GW-001-0
			Sample Date	8/8/2002	8/1/2002	8/7/2002	8/5/2002	8/19/2002
			Location ID	2BH013	2BH018	2BH022	2BH025	2BH026
			Depth	5 - 15	0 - 0	5 - 15	5 - 15	5 - 15
SW8270C	2,4-Dinitrophenol	ug/l		140 U	2600 U			
SW8270C	2,4-Dinitrotoluene	ug/l		56 U	1000 U			
SW8270C	2,6-Dinitrotoluene	ug/l		56 U	1000 U			
SW8270C	2-Chloronaphthalene	ug/l		56 U	1000 U			
SW8270C	2-Chlorophenol	ug/l		56 U	1000 U			
SW8270C	2-Methylphenol	ug/l		56 U	1000 U			
SW8270C	2-Nitroaniline	ug/l		140 U	2600 U			
SW8270C	2-Nitrophenol	ug/l		56 U	1000 U			
SW8270C	3,3'-Dichlorobenzidine	ug/l		110 U	2100 U			
SW8270C	3-Nitroaniline	ug/l		140 U	2600 U			
SW8270C	4,6-Dinitro-2-methylphenol	ug/l		140 U	2600 U			
SW8270C	4-Bromophenyl-phenylether	ug/l		56 U	1000 U			
SW8270C	4-Chloro-3-methylphenol	ug/l		56 U	1000 U			
SW8270C	4-Chloroaniline	ug/l		56 U	1000 U			
SW8270C	4-Chlorophenyl-phenylether	ug/l		56 U	1000 U			
SW8270C	4-Methylphenol	ug/l		56 U	1000 U			
SW8270C	4-Nitroaniline	ug/l		140 U	2600 U			
SW8270C	4-Nitrophenol	ug/l		140 U	2600 U			
SW8270C	Acenaphthene	ug/l		8 J	1000 U			
SW8270C	Acenaphthylene	ug/l		56 U	1000 U			
SW8270C	Anthracene	ug/l		56 U	1000 U			
SW8270C	Benzo(a)anthracene	ug/l		56 U	1000 U			
SW8270C	Benzo(a)pyrene	ug/l		56 U	1000 U			
SW8270C	Benzo(b)fluoranthene	ug/l		56 U	1000 U			
SW8270C	Benzo(g,h,i)perylene	ug/l		56 U	1000 U			
SW8270C	Benzo(k)fluoranthene	ug/l		56 U	1000 U			
SW8270C	bis(2-Chloroethoxy)methane	ug/l		56 U	1000 U			
SW8270C	bis(2-Chloroethyl)ether	ug/l		56 U	1000 U			
SW8270C	bis(2-Ethylhexyl)phthalate	ug/l		6 JB	1000 U			
SW8270C	Butylbenzylphthalate	ug/l		56 U	1000 U			
SW8270C	Carbazole	ug/l		56 U	1000 U			
SW8270C	Chrysene	ug/l		56 U	1000 U			
SW8270C	Dibenz(a,h)anthracene	ug/l		56 U	1000 U			
SW8270C	Dibenzofuran	ug/l		56 U	1000 U			
SW8270C	Diethylphthalate	ug/l		56 U	1000 U			
SW8270C	Dimethylphthalate	ug/l		56 U	1000 U			
SW8270C	Di-n-butylphthalate	ug/l		56 U	1000 U			
SW8270C	Di-n-octyl phthalate	ug/l		56 U	1000 U			
SW8270C	Fluoranthene	ug/l		56 U	1000 U			
SW8270C	Fluorene	ug/l		56 U	1000 U			
SW8270C	Hexachlorobenzene	ug/l		56 U	1000 U			
SW8270C	Hexachlorobutadiene	ug/l		56 U	1000 U			
SW8270C	Hexachlorocyclopentadiene	ug/l		56 U	1000 U			
SW8270C	Hexachloroethane	ug/l		56 U	1000 U			
SW8270C	Indeno(1,2,3-cd)pyrene	ug/l		56 U	1000 U			
SW8270C	Isophorone	ug/l		56 U	1000 U			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH013-GW-001-0	2BH018-GW-001-0	2BH022-GW-001-0	2BH025-GW-001-0	2BH026-GW-001-0
			Sample Date	8/8/2002	8/1/2002	8/7/2002	8/5/2002	8/19/2002
			Location ID	2BH013	2BH018	2BH022	2BH025	2BH026
			Depth	5 - 15	0 - 0	5 - 15	5 - 15	5 - 15
SW8270C	Naphthalene	ug/l		89	4800			
SW8270C	Nitrobenzene	ug/l		56 U	1000 U			
SW8270C	N-Nitroso-di-n-propylamine	ug/l		56 U	1000 U			
SW8270C	N-Nitrosodiphenylamine (1)	ug/l		56 U	1000 U			
SW8270C	Pentachlorophenol	ug/l		140 U	2600 U			
SW8270C	Phenanthrene	ug/l		56 U	1000 U			
SW8270C	Phenol	ug/l		56 U	1000 U			
SW8270C	Pyrene	ug/l		56 U	1000 U			
TOC								
SW9060	Total Organic Carbon	mg/l		56.9	41.2			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH028-GW-001-0	2BH033-GW-001-0	2BH034-GW-001-0	2BH036-GW-001-0	2BH037-GW-001-0
			Sample Date	8/6/2002	8/19/2002	8/2/2002	8/2/2002	8/6/2002
			Location ID	2BH028	2BH033	2BH034	2BH036	2BH037
			Depth	0 - 0	5 - 15	5 - 15	5 - 15	0 - 0
Method	**Parameter**	**Result Units**						
Anions								
E300.0	Chloride	mg/l		295		155	112	166
E300.0	Nitrate	mg/l		0.02 U		0.02 U	0.02 U	
E300.0	Nitrite	mg/l		0.031		0.02	0.02 U	0.02 U
E300.0	Sulfate	mg/l		274		72.8	36.6	46.6
E300.0	Sulfide	mg/l		1 U		1 U	1 U	1.1
E310.1	Bicarbonate	mg/l		2 U		197	72.4	192
E310.1	Carbonate	mg/l		0.5 U		2 U	2 U	0.5 U
E353.2	Nitrate+W63	mg/l						0.02 U
E353.2	Nitrate+W84	mg/l						
Metals (Total)								
SW6010B	Aluminum (Total)	ug/l		29800		1570	69700	31900
SW6010B	Antimony (Total)	ug/l		3.5 U		3.5 U	3.5 U	3.5 U
SW6010B	Arsenic (Total)	ug/l		13.3		13	17	19.8
SW6010B	Barium (Total)	ug/l		94.9		44.8	170	236
SW6010B	Beryllium (Total)	ug/l		3.4		0.2	3.4	4.2
SW6010B	Cadmium (Total)	ug/l		1		0.3 U	0.55	0.3 U
SW6010B	Calcium (Total)	ug/l		25000		11300	13400	42100
SW6010B	Chromium (Total)	ug/l		49.3		4.4	74.3	56.5
SW6010B	Cobalt (Total)	ug/l		89.9		7.5	18.9	14.1
SW6010B	Copper (Total)	ug/l		39.5		3.1	35.1	40
SW6010B	Iron (Total)	ug/l		114000		20500	54200	99100
SW6010B	Lead (Total)	ug/l		1430		2710	57.7	133
SW6010B	Magnesium (Total)	ug/l		10900		12400	7680	15500
SW6010B	Manganese (Total)	ug/l		2230		4740	1680	943
SW6010B	Nickel (Total)	ug/l		112		5.5	36.8	34.1
SW6010B	Potassium (Total)	ug/l		11500		5450	7150	13800
SW6010B	Selenium (Total)	ug/l		4.1 U		4.1 U	4.1 U	4.1 U
SW6010B	Silver (Total)	ug/l		1.1 U		1.1 U	1.1 U	1.1 U
SW6010B	Sodium (Total)	ug/l		190000		151000	74300	130000
SW6010B	Thallium (Total)	ug/l		6.6 U		6.6 U	6.6 U	6.6 U
SW6010B	Vanadium (Total)	ug/l		57.5		3.6	106	81.9
SW6010B	Zinc (Total)	ug/l		634		29.6	97.8	122
Metals (Dissolved)								
SW6010B-D	Aluminum (Dissolved)	ug/l		2150		43.3	82.2	25
SW6010B-D	Antimony (Dissolved)	ug/l		4.3		3.5 U	3.5 U	3.5 U
SW6010B-D	Arsenic (Dissolved)	ug/l		3.3 U		12.9	3.3	3.3 U
SW6010B-D	Barium (Dissolved)	ug/l		22.8		40	25.4	69.9
SW6010B-D	Beryllium (Dissolved)	ug/l		1.2		0.1 U	0.1 U	0.1 U
SW6010B-D	Cadmium (Dissolved)	ug/l		1.2		0.3 U	0.3 U	0.3 U
SW6010B-D	Calcium (Dissolved)	ug/l		27100		11200	11600	39400

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH028-GW-001-0	2BH033-GW-001-0	2BH034-GW-001-0	2BH036-GW-001-0	2BH037-GW-001-0
			Sample Date	8/6/2002	8/19/2002	8/2/2002	8/2/2002	8/6/2002
			Location ID	2BH028	2BH033	2BH034	2BH036	2BH037
			Depth	0 - 0	5 - 15	5 - 15	5 - 15	0 - 0
SW6010B-D	Chromium (Dissolved)	ug/l		2.5		1.6	1.1	1 U
SW6010B-D	Cobalt (Dissolved)	ug/l		75.5		7.1	8.1	1.4 U
SW6010B-D	Copper (Dissolved)	ug/l		4.3		1 U	1 U	1 U
SW6010B-D	Iron (Dissolved)	ug/l		64300		19500	4080	378
SW6010B-D	Lead (Dissolved)	ug/l		1420		2600	4.6	2.4 U
SW6010B-D	Magnesium (Dissolved)	ug/l		6710		12300	4250	10600
SW6010B-D	Manganese (Dissolved)	ug/l		1930		4780	1860	685
SW6010B-D	Nickel (Dissolved)	ug/l		76.7		4.5	2.1	1.6 U
SW6010B-D	Potassium (Dissolved)	ug/l		8800		5120	3570	9360
SW6010B-D	Selenium (Dissolved)	ug/l		4.1 U		4.1 U	4.1 U	4.1 U
SW6010B-D	Silver (Dissolved)	ug/l		1.1 U		1.1 U	1.1 U	1.1 U
SW6010B-D	Sodium (Dissolved)	ug/l		179000		154000	79200	132000
SW6010B-D	Thallium (Dissolved)	ug/l		6.6 U		6.6 U	6.6 U	6.6 U
SW6010B-D	Vanadium (Dissolved)	ug/l		1.1 U		1.1 U	1.6	1.1 U
SW6010B-D	Zinc (Dissolved)	ug/l		545		21.1	55.6	8.2
SW7470A	Mercury (Total)	ug/l		0.37		0.1 U	0.15	1.6
SW7470A-D	Mercury (Dissolved)	ug/l		0.26		0.1 U	0.1 U	0.1 U
Pesticides								
SW8081A	4,4'-DDD	ug/l			1 U			
SW8081A	4,4'-DDE	ug/l			2			
SW8081A	4,4'-DDT	ug/l			1 U			
SW8081A	Aldrin	ug/l			0.52 U			
SW8081A	Alpha-BHC	ug/l			0.52 U			
SW8081A	alpha-Chlordane	ug/l			0.52 U			
SW8081A	Beta-BHC	ug/l			0.52 U			
SW8081A	Delta-BHC	ug/l			0.52 U			
SW8081A	Dieldrin	ug/l			1 U			
SW8081A	Endosulfan I	ug/l			0.52 U			
SW8081A	Endosulfan II	ug/l			1 U			
SW8081A	Endosulfan sulfate	ug/l			1 U			
SW8081A	Endrin	ug/l			1 U			
SW8081A	Endrin aldehyde	ug/l			1 U			
SW8081A	Endrin ketone	ug/l			1 U			
SW8081A	gamma-BHC (Lindane)	ug/l			0.52 U			
SW8081A	gamma-Chlordane	ug/l			0.52 U			
SW8081A	Heptachlor	ug/l			0.52 U			
SW8081A	Heptachlor epoxide	ug/l			0.52 U			
SW8081A	Methoxychlor	ug/l			5.2 U			
SW8081A	Toxaphene	ug/l			52 U			
PCBs								
SW8082	Aroclor-1016	ug/l			1 U			
SW8082	Aroclor-1221	ug/l			2.1 U			
SW8082	Aroclor-1232	ug/l			1 U			
SW8082	Aroclor-1242	ug/l			1 U			
SW8082	Aroclor-1248	ug/l			1 U			
SW8082	Aroclor-1254	ug/l			1 U			

Table H-6 Appendix H IDW Characterization Data
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			Field Sample ID	2BH028-GW-001-0	2BH033-GW-001-0	2BH034-GW-001-0	2BH036-GW-001-0	2BH037-GW-001-0
			Sample Date	8/6/2002	8/19/2002	8/2/2002	8/2/2002	8/6/2002
			Location ID	2BH028	2BH033	2BH034	2BH036	2BH037
			Depth	0 - 0	5 - 15	5 - 15	5 - 15	0 - 0
SW8082	Aroclor-1260	ug/l			1 U			
SW8082	Aroclor-1268	ug/l			1 U			
Volatiles								
SW8260B	1,1,1-Trichloroethane	ug/l			50 U			
SW8260B	1,1,2,2-Tetrachloroethane	ug/l			50 U			
SW8260B	1,1,2-Trichloroethane	ug/l			50 U			
SW8260B	1,1-Dichloroethane	ug/l			13 J			
SW8260B	1,1-Dichloroethene	ug/l			50 U			
SW8260B	1,2-Dichloroethane	ug/l			390 JD			
SW8260B	1,2-Dichloroethene (total)	ug/l			250			
SW8260B	1,2-Dichloropropane	ug/l			28 J			
SW8260B	2-Butanone	ug/l			100 U			
SW8260B	2-Hexanone	ug/l			100 U			
SW8260B	4-Methyl-2-pentanone	ug/l			100 U			
SW8260B	Acetone	ug/l			480 JD			
SW8260B	Benzene	ug/l			5600 D			
SW8260B	Bromodichloromethane	ug/l			50 U			
SW8260B	Bromoform	ug/l			50 U			
SW8260B	Bromomethane	ug/l			100 U			
SW8260B	Carbon Disulfide	ug/l			50 U			
SW8260B	Carbon Tetrachloride	ug/l			50 U			
SW8260B	Chlorobenzene	ug/l			9700 D			
SW8260B	Chloroethane	ug/l			100 U			
SW8260B	Chloroform	ug/l			50 U			
SW8260B	Chloromethane	ug/l			100 U			
SW8260B	cis-1,3-Dichloropropene	ug/l			50 U			
SW8260B	Dibromochloromethane	ug/l			50 U			
SW8260B	Ethylbenzene	ug/l			2200 D			
SW8260B	Methylene Chloride	ug/l			50 U			
SW8260B	Styrene	ug/l			50 U			
SW8260B	Tetrachloroethene	ug/l			74			
SW8260B	Toluene	ug/l			1600 D			
SW8260B	Trans-1,3-Dichloropropene	ug/l			50 U			
SW8260B	Trichloroethene	ug/l			470			
SW8260B	Vinyl Chloride	ug/l			140			
SW8260B	Xylene (total)	ug/l			7300 D			
Semivolatiles								
SW8270C	1,2,4-Trichlorobenzene	ug/l			2000 U			
SW8270C	1,2-Dichlorobenzene	ug/l			2000 U			
SW8270C	1,3-Dichlorobenzene	ug/l			2000 U			
SW8270C	1,4-Dichlorobenzene	ug/l			120 J			
SW8270C	2,2'-oxybis(1-Chloropropane)	ug/l			2000 U			
SW8270C	2,4,5-Trichlorophenol	ug/l			5000 U			
SW8270C	2,4,6-Trichlorophenol	ug/l			2000 U			
SW8270C	2,4-Dichlorophenol	ug/l			2000 U			
SW8270C	2,4-Dimethylphenol	ug/l			410 J			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH028-GW-001-0	2BH033-GW-001-0	2BH034-GW-001-0	2BH036-GW-001-0	2BH037-GW-001-0
			Sample Date	8/6/2002	8/19/2002	8/2/2002	8/2/2002	8/6/2002
			Location ID	2BH028	2BH033	2BH034	2BH036	2BH037
			Depth	0 - 0	5 - 15	5 - 15	5 - 15	0 - 0
SW8270C	2,4-Dinitrophenol	ug/l			5000 U			
SW8270C	2,4-Dinitrotoluene	ug/l			2000 U			
SW8270C	2,6-Dinitrotoluene	ug/l			2000 U			
SW8270C	2-Chloronaphthalene	ug/l			2000 U			
SW8270C	2-Chlorophenol	ug/l			2000 U			
SW8270C	2-Methylphenol	ug/l			2000 U			
SW8270C	2-Nitroaniline	ug/l			5000 U			
SW8270C	2-Nitrophenol	ug/l			2000 U			
SW8270C	3,3'-Dichlorobenzidine	ug/l			4000 U			
SW8270C	3-Nitroaniline	ug/l			5000 U			
SW8270C	4,6-Dinitro-2-methylphenol	ug/l			5000 U			
SW8270C	4-Bromophenyl-phenylether	ug/l			2000 U			
SW8270C	4-Chloro-3-methylphenol	ug/l			2000 U			
SW8270C	4-Chloroaniline	ug/l			2000			
SW8270C	4-Chlorophenyl-phenylether	ug/l			2000 U			
SW8270C	4-Methylphenol	ug/l			140 J			
SW8270C	4-Nitroaniline	ug/l			5000 U			
SW8270C	4-Nitrophenol	ug/l			5000 U			
SW8270C	Acenaphthene	ug/l			2000 U			
SW8270C	Acenaphthylene	ug/l			2000 U			
SW8270C	Anthracene	ug/l			2000 U			
SW8270C	Benzo(a)anthracene	ug/l			2000 U			
SW8270C	Benzo(a)pyrene	ug/l			2000 U			
SW8270C	Benzo(b)fluoranthene	ug/l			2000 U			
SW8270C	Benzo(g,h,i)perylene	ug/l			2000 U			
SW8270C	Benzo(k)fluoranthene	ug/l			2000 U			
SW8270C	bis(2-Chloroethoxy)methane	ug/l			2000 U			
SW8270C	bis(2-Chloroethyl)ether	ug/l			2000 U			
SW8270C	bis(2-Ethylhexyl)phthalate	ug/l			2000 U			
SW8270C	Butylbenzylphthalate	ug/l			2000 U			
SW8270C	Carbazole	ug/l			2000 U			
SW8270C	Chrysene	ug/l			2000 U			
SW8270C	Dibenz(a,h)anthracene	ug/l			2000 U			
SW8270C	Dibenzofuran	ug/l			2000 U			
SW8270C	Diethylphthalate	ug/l			2000 U			
SW8270C	Dimethylphthalate	ug/l			2000 U			
SW8270C	Di-n-butylphthalate	ug/l			2000 U			
SW8270C	Di-n-octyl phthalate	ug/l			2000 U			
SW8270C	Fluoranthene	ug/l			2000 U			
SW8270C	Fluorene	ug/l			2000 U			
SW8270C	Hexachlorobenzene	ug/l			2000 U			
SW8270C	Hexachlorobutadiene	ug/l			2000 U			
SW8270C	Hexachlorocyclopentadiene	ug/l			2000 U			
SW8270C	Hexachloroethane	ug/l			2000 U			
SW8270C	Indeno(1,2,3-cd)pyrene	ug/l			2000 U			
SW8270C	Isophorone	ug/l			2000 U			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH028-GW-001-0	2BH033-GW-001-0	2BH034-GW-001-0	2BH036-GW-001-0	2BH037-GW-001-0
			Sample Date	8/6/2002	8/19/2002	8/2/2002	8/2/2002	8/6/2002
			Location ID	2BH028	2BH033	2BH034	2BH036	2BH037
			Depth	0 - 0	5 - 15	5 - 15	5 - 15	0 - 0
SW8270C	Naphthalene	ug/l			6800			
SW8270C	Nitrobenzene	ug/l			2000 U			
SW8270C	N-Nitroso-di-n-propylamine	ug/l			2000 U			
SW8270C	N-Nitrosodiphenylamine (1)	ug/l			2000 U			
SW8270C	Pentachlorophenol	ug/l			5000 U			
SW8270C	Phenanthrene	ug/l			2000 U			
SW8270C	Phenol	ug/l			2000 U			
SW8270C	Pyrene	ug/l			2000 U			
TOC								
SW9060	Total Organic Carbon	mg/l			216			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH039-GW-001-0	2BH041-GW-001-0
			Sample Date	8/7/2002	8/7/2002
			Location ID	2BH039	2BH041
			Depth	5 - 15	5 - 15
Method	**Parameter**	**Result Units**			
Anions					
E300.0	Chloride	mg/l		85.1	58.7
E300.0	Nitrate	mg/l		0.02 U	0.02 U
E300.0	Nitrite	mg/l		0.02 U	0.02 U
E300.0	Sulfate	mg/l		126	95.4
E300.0	Sulfide	mg/l		1 U	1 U
E310.1	Bicarbonate	mg/l		6.2	25
E310.1	Carbonate	mg/l		0.5 U	2 U
E353.2	Nitrate+W63	mg/l			
E353.2	Nitrate+W84	mg/l			
Metals (Total)					
SW6010B	Aluminum (Total)	ug/l		538	54400
SW6010B	Antimony (Total)	ug/l		3.5 U	6.4
SW6010B	Arsenic (Total)	ug/l		3.3 U	14
SW6010B	Barium (Total)	ug/l		20.8	358
SW6010B	Beryllium (Total)	ug/l		0.28	5.4
SW6010B	Cadmium (Total)	ug/l		0.3 U	0.3 U
SW6010B	Calcium (Total)	ug/l		6010	70200
SW6010B	Chromium (Total)	ug/l		3.2	124
SW6010B	Cobalt (Total)	ug/l		7.1	30.9
SW6010B	Copper (Total)	ug/l		1.9	132
SW6010B	Iron (Total)	ug/l		6760	94000
SW6010B	Lead (Total)	ug/l		142	2320
SW6010B	Magnesium (Total)	ug/l		3560	44100
SW6010B	Manganese (Total)	ug/l		1220	4050
SW6010B	Nickel (Total)	ug/l		5.4	110
SW6010B	Potassium (Total)	ug/l		2620	14100
SW6010B	Selenium (Total)	ug/l		4.1 U	4.1 U
SW6010B	Silver (Total)	ug/l		1.1 U	1.1 U
SW6010B	Sodium (Total)	ug/l		83700	49800
SW6010B	Thallium (Total)	ug/l		6.6 U	6.6 U
SW6010B	Vanadium (Total)	ug/l		1.3	157
SW6010B	Zinc (Total)	ug/l		48.6	296
Metals (Dissolved)					
SW6010B-D	Aluminum (Dissolved)	ug/l		82.2	12.1 U
SW6010B-D	Antimony (Dissolved)	ug/l		3.5 U	3.5 U
SW6010B-D	Arsenic (Dissolved)	ug/l		3.3 U	3.3 U
SW6010B-D	Barium (Dissolved)	ug/l		19.9	31.4
SW6010B-D	Beryllium (Dissolved)	ug/l		0.26	0.1 U
SW6010B-D	Cadmium (Dissolved)	ug/l		0.3 U	0.3 U
SW6010B-D	Calcium (Dissolved)	ug/l		5690	12800

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH039-GW-001-0	2BH041-GW-001-0
			Sample Date	8/7/2002	8/7/2002
			Location ID	2BH039	2BH041
			Depth	5 - 15	5 - 15
SW6010B-D	Chromium (Dissolved)	ug/l		2	1 U
SW6010B-D	Cobalt (Dissolved)	ug/l		7.2	5.7
SW6010B-D	Copper (Dissolved)	ug/l		1 U	1 U
SW6010B-D	Iron (Dissolved)	ug/l		5270	4780
SW6010B-D	Lead (Dissolved)	ug/l		149	29.5
SW6010B-D	Magnesium (Dissolved)	ug/l		3560	6790
SW6010B-D	Manganese (Dissolved)	ug/l		1260	3250
SW6010B-D	Nickel (Dissolved)	ug/l		4.6	2.3
SW6010B-D	Potassium (Dissolved)	ug/l		2570	3500
SW6010B-D	Selenium (Dissolved)	ug/l		4.1 U	4.1 U
SW6010B-D	Silver (Dissolved)	ug/l		1.1 U	1.1 U
SW6010B-D	Sodium (Dissolved)	ug/l		85600	47000
SW6010B-D	Thallium (Dissolved)	ug/l		6.6 U	6.6 U
SW6010B-D	Vanadium (Dissolved)	ug/l		1.1 U	1.1 U
SW6010B-D	Zinc (Dissolved)	ug/l		45.9	14.9
SW7470A	Mercury (Total)	ug/l		0.1 U	0.81
SW7470A-D	Mercury (Dissolved)	ug/l		0.1 U	0.1 U
Pesticides					
SW8081A	4,4'-DDD	ug/l			
SW8081A	4,4'-DDE	ug/l			
SW8081A	4,4'-DDT	ug/l			
SW8081A	Aldrin	ug/l			
SW8081A	Alpha-BHC	ug/l			
SW8081A	alpha-Chlordane	ug/l			
SW8081A	Beta-BHC	ug/l			
SW8081A	Delta-BHC	ug/l			
SW8081A	Dieldrin	ug/l			
SW8081A	Endosulfan I	ug/l			
SW8081A	Endosulfan II	ug/l			
SW8081A	Endosulfan sulfate	ug/l			
SW8081A	Endrin	ug/l			
SW8081A	Endrin aldehyde	ug/l			
SW8081A	Endrin ketone	ug/l			
SW8081A	gamma-BHC (Lindane)	ug/l			
SW8081A	gamma-Chlordane	ug/l			
SW8081A	Heptachlor	ug/l			
SW8081A	Heptachlor epoxide	ug/l			
SW8081A	Methoxychlor	ug/l			
SW8081A	Toxaphene	ug/l			
PCBs					
SW8082	Aroclor-1016	ug/l			
SW8082	Aroclor-1221	ug/l			
SW8082	Aroclor-1232	ug/l			
SW8082	Aroclor-1242	ug/l			
SW8082	Aroclor-1248	ug/l			
SW8082	Aroclor-1254	ug/l			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH039-GW-001-0	2BH041-GW-001-0
			Sample Date	8/7/2002	8/7/2002
			Location ID	2BH039	2BH041
			Depth	5 - 15	5 - 15
SW8082	Aroclor-1260	ug/l			
SW8082	Aroclor-1268	ug/l			
Volatiles					
SW8260B	1,1,1-Trichloroethane	ug/l			
SW8260B	1,1,2,2-Tetrachloroethane	ug/l			
SW8260B	1,1,2-Trichloroethane	ug/l			
SW8260B	1,1-Dichloroethane	ug/l			
SW8260B	1,1-Dichloroethene	ug/l			
SW8260B	1,2-Dichloroethane	ug/l			
SW8260B	1,2-Dichloroethene (total)	ug/l			
SW8260B	1,2-Dichloropropane	ug/l			
SW8260B	2-Butanone	ug/l			
SW8260B	2-Hexanone	ug/l			
SW8260B	4-Methyl-2-pentanone	ug/l			
SW8260B	Acetone	ug/l			
SW8260B	Benzene	ug/l			
SW8260B	Bromodichloromethane	ug/l			
SW8260B	Bromoform	ug/l			
SW8260B	Bromomethane	ug/l			
SW8260B	Carbon Disulfide	ug/l			
SW8260B	Carbon Tetrachloride	ug/l			
SW8260B	Chlorobenzene	ug/l			
SW8260B	Chloroethane	ug/l			
SW8260B	Chloroform	ug/l			
SW8260B	Chloromethane	ug/l			
SW8260B	cis-1,3-Dichloropropene	ug/l			
SW8260B	Dibromochloromethane	ug/l			
SW8260B	Ethylbenzene	ug/l			
SW8260B	Methylene Chloride	ug/l			
SW8260B	Styrene	ug/l			
SW8260B	Tetrachloroethene	ug/l			
SW8260B	Toluene	ug/l			
SW8260B	Trans-1,3-Dichloropropene	ug/l			
SW8260B	Trichloroethene	ug/l			
SW8260B	Vinyl Chloride	ug/l			
SW8260B	Xylene (total)	ug/l			
Semivolatiles					
SW8270C	1,2,4-Trichlorobenzene	ug/l			
SW8270C	1,2-Dichlorobenzene	ug/l			
SW8270C	1,3-Dichlorobenzene	ug/l			
SW8270C	1,4-Dichlorobenzene	ug/l			
SW8270C	2,2'-oxybis(1-Chloropropane)	ug/l			
SW8270C	2,4,5-Trichlorophenol	ug/l			
SW8270C	2,4,6-Trichlorophenol	ug/l			
SW8270C	2,4-Dichlorophenol	ug/l			
SW8270C	2,4-Dimethylphenol	ug/l			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH039-GW-001-0	2BH041-GW-001-0
			Sample Date	8/7/2002	8/7/2002
			Location ID	2BH039	2BH041
			Depth	5 - 15	5 - 15
SW8270C	2,4-Dinitrophenol	ug/l			
SW8270C	2,4-Dinitrotoluene	ug/l			
SW8270C	2,6-Dinitrotoluene	ug/l			
SW8270C	2-Chloronaphthalene	ug/l			
SW8270C	2-Chlorophenol	ug/l			
SW8270C	2-Methylphenol	ug/l			
SW8270C	2-Nitroaniline	ug/l			
SW8270C	2-Nitrophenol	ug/l			
SW8270C	3,3'-Dichlorobenzidine	ug/l			
SW8270C	3-Nitroaniline	ug/l			
SW8270C	4,6-Dinitro-2-methylphenol	ug/l			
SW8270C	4-Bromophenyl-phenylether	ug/l			
SW8270C	4-Chloro-3-methylphenol	ug/l			
SW8270C	4-Chloroaniline	ug/l			
SW8270C	4-Chlorophenyl-phenylether	ug/l			
SW8270C	4-Methylphenol	ug/l			
SW8270C	4-Nitroaniline	ug/l			
SW8270C	4-Nitrophenol	ug/l			
SW8270C	Acenaphthene	ug/l			
SW8270C	Acenaphthylene	ug/l			
SW8270C	Anthracene	ug/l			
SW8270C	Benzo(a)anthracene	ug/l			
SW8270C	Benzo(a)pyrene	ug/l			
SW8270C	Benzo(b)fluoranthene	ug/l			
SW8270C	Benzo(g,h,i)perylene	ug/l			
SW8270C	Benzo(k)fluoranthene	ug/l			
SW8270C	bis(2-Chloroethoxy)methane	ug/l			
SW8270C	bis(2-Chloroethyl)ether	ug/l			
SW8270C	bis(2-Ethylhexyl)phthalate	ug/l			
SW8270C	Butylbenzylphthalate	ug/l			
SW8270C	Carbazole	ug/l			
SW8270C	Chrysene	ug/l			
SW8270C	Dibenz(a,h)anthracene	ug/l			
SW8270C	Dibenzofuran	ug/l			
SW8270C	Diethylphthalate	ug/l			
SW8270C	Dimethylphthalate	ug/l			
SW8270C	Di-n-butylphthalate	ug/l			
SW8270C	Di-n-octyl phthalate	ug/l			
SW8270C	Fluoranthene	ug/l			
SW8270C	Fluorene	ug/l			
SW8270C	Hexachlorobenzene	ug/l			
SW8270C	Hexachlorobutadiene	ug/l			
SW8270C	Hexachlorocyclopentadiene	ug/l			
SW8270C	Hexachloroethane	ug/l			
SW8270C	Indeno(1,2,3-cd)pyrene	ug/l			
SW8270C	Isophorone	ug/l			

Table H-6 Appendix H IDW Characterization Data
August 2002 Groundwater Data

			Field Sample ID	2BH039-GW-001-0	2BH041-GW-001-0
			Sample Date	8/7/2002	8/7/2002
			Location ID	2BH039	2BH041
			Depth	5 - 15	5 - 15
SW8270C	Naphthalene	ug/l			
SW8270C	Nitrobenzene	ug/l			
SW8270C	N-Nitroso-di-n-propylamine	ug/l			
SW8270C	N-Nitrosodiphenylamine (1)	ug/l			
SW8270C	Pentachlorophenol	ug/l			
SW8270C	Phenanthrene	ug/l			
SW8270C	Phenol	ug/l			
SW8270C	Pyrene	ug/l			
TOC					
SW9060	Total Organic Carbon	mg/l			

TECHNICAL MEMORANDUM REPORTS ON NONINTRUSIVE AIR SAMPLING

Technical Memorandum

Date: April 22, 2002

To: Debra Ford (Design Team Leader, CENAB), George Bock (Project Manager, CENAP)

From: David Pohl (Project Manager, WESTON) & Robert Massengill, RRPT, (Site Radiation Safety Manager & Health and Safety Officer, WESTON)

RE: Personal and Area air sampling results for Tetraethyl Lead (TEL) during Field Surveys (Non-Intrusive) at Dupont Chambers Works FUSRAP Site, Deepwater, NJ

Summary/Action:

During the week of March 18th 2002, personal and area air sampling for TEL was performed at Operational Unit (OU) 1, Area of Concern (AOC) 1, which is the former Building 845 location at the Dupont Deepwater facility.

It should be noted that during the gamma walkover survey and the geophysical survey of the area, no invasive work was being performed and odors were detected in the vicinity of the central drainage ditch.

The samples were sent to PSC Analytical Services in Reading Pennsylvania, for analysis. PSC Analytical Services is accredited by the American Industrial Hygiene Association (AIHA).

One area air sample (sample #03200201) was placed at the west boundary of former Building 845 location, next to the area known as the central drainage ditch. Additionally, one personal air sample (sample #03200202) was placed on Mr. Theron Grim of WESTON who was performing a geophysical survey of the site.

The results of the sampling are as follows:

SAMPLE #	LOCATION	CONCENTRATION		LIMITS	
		Micro-gram (ug)	**Milli-grams Per cubic Meter (mg/m3)**	**OSHA PEL**	**SSHP ACTION LEVEL**
03200201	AREA (near ditch)	10	0.083 mg/m^3	0.075 mg/ m^3	0.0375 mg/ m^3
03200202	PERSONAL (Mr. Grim)	6.4	0.040 mg/m^3	0.075 mg/ m^3	0.0375 mg/ m^3
03200203	BLANK	<0.30 ug (limit of detection)	-	-	-

Based on the results of the air sampling, and the action level identified in the Site Health and Safety plan, the following is recommended:

- Area air sampling in the vicinity of the site trailers to ensure that the TEL levels are less than the action level.
- Review of the work plans to ensure that the generation of airborne TEL is minimized during invasive work activities. The use of containment tents and HEPA ventilation systems should be discussed.
- Area air sampling at the perimeter of the exclusion zones should be performed prior to and during invasive work.
- Re-evaluate the action levels identified in the site health and safety plan to ensure that the exclusion zone (0.0375 mg/m^3) and perimeter (0.01875 mg/m^3) action levels are feasible.

Technical Memorandum

Date: May 3, 2002

To: Debra Ford (Design Team Leader, CENAB), George Bock (Project Manager, CENAP)

From: David Pohl (Project Manager, WESTON) & Robert Massengill, RRPT, (Site Radiation Safety Manager & Health and Safety Officer, WESTON)

RE: **Sampling Strategy for Tetraethyl Lead (TEL) and Selected Volatile Organic Compounds (VOCs) Sampling - Dupont Chambers Works FUSRAP Site, Deepwater, NJ**

Purpose: To determine the ambient concentrations of TEL and selected VOCs present at Operational Unit (OU) #1, Areas of Concern (AOC) 1 & 2 at the Dupont Deepwater facility.

Background: The Central Drainage Ditch (CDD) bisects the former Building 845 area and the F Corral area, which in the past was the conveyance for process waste that originated from the Anti-knock area. TEL was produced in the Anti-knock area and over time, was deposited in the ditch. The part of the ditch between AOCs 1 & 2 extending south was remediated a few years ago. However, only the immediate ditch area was remediated and the ditch was not remediated north of OU No. 1.

Personal and area air sampling for TEL was conducted during the week of 19 March, and indicated that the air sample collected to the east of the ditch showed concentrations of 0.080 mg/m^3 present in the sample. This level is above the OSHA Permissible Exposure Limit (PEL) for TEL, which is 0.075 mg/m^3. The personal air sample taken during a geophysical survey conducted at AOC 1 (former Building 845 location) indicated the concentration of TEL present in the air was 0.040 mg/m^3, which is above the action level of 0.0375 mg/m3 that is stated in the Draft SSHP for OU No. 1.

Contaminants that are also reported to be present at this site are benzene, chlorobenzene, dichlorobenzene, TCE, TCA and carbon tetrachloride.

Procedure: It is proposed that WESTON personnel mobilize to the Dupont Deepwater facility during the week of May 6th 2002 to perform TEL air sampling at OU No. 1. Benzene and other volatile organic compounds (VOCs) may be present in ambient air based on discussions with NJDEP. Dnd due to the low PEL for Benzene (1 ppm), air sampling for VOCs will also be completed and samples analyzed using methods that obtain detection limits below the health and safety action limits.

The sampling for TEL will be conducted in accordance with NIOSH method 2533. All samples will be sent to the analytical laboratory that is accredited by the American Industrial Hygiene Association (AIHA) for analysis. Samples will be analyzed for 24-hour turn-around-time.

The sampling will be performed over a two-day period to account for normal variations in daily conditions with regard to temperature, humidity, barometric pressure; wind speed and direction are taken into consideration. Meteorological data will be collected during each day of sampling at the Dupont Deepwater facility. Sampling shall be terminated in the event of a continuous rain and shall not be performed for at least 24 hours after a significant rainfall (1 inch or more). Samples shall be collected in the morning and afternoon to account for variations in the concentrations as the day progresses.

WESTON personnel will calibrate the pumps prior to arrival at the site. On-site, WESTON personnel will set up the pumps while wearing modified level D PPE. Once the sampling pumps are set up, WESTON will move to a remote location that is upwind of the site. For example, if the wind direction is west to east, WESTON will move to an area west of the ditch by the river. Once the samples are collected, WESTON will leave the site to perform a post calibration of the air sampling pumps and send the samples to the laboratory for analysis. The time sampling personnel will be at OU No. 1 will be limited to less than two hours.

Proposed sampling locations are as follows:

- Three locations east of the ditch on the boundary of AOC 1, the former Building 845 location. Two samples will be located along the portion of the ditch that has been replaced by underground culvert, and one sample will be placed where the ditch is an open channel.
- Three locations west of the ditch on the boundary of AOC 2, the F corrals location. Two samples will be located along the portion of the

ditch that has been replaced by underground culvert, and one sample will be placed where the ditch is an open channel.

- One location outside by the USACE trailers.
- One location inside of the USACE office trailer with the air conditioning running.
- One location 100 feet west of the ditch (in the F corral area).
- One location 300 feet west of the ditch (in the F corral area).
- One location 500 feet west of the ditch (in the F corral area).
- One location on the far west side of the F corral area.

Samples will be collected at the breathing zone height, which is approximately five feet above the surface of the ground.

Volatile organics will be monitored, during the sampling event, through the use of a flame or photo ionization detector (FID or PID). If sustained levels are detected with the FID/PID, then Draeger tubes will be used to try to identify the contaminant. Draeger tube sampling will be performed for contaminants that are reported to be present at this site, including benzene. Specifically, if FID/PID direct measurements indicate that sustained VOC levels are present, then Draeger tube sampling will be conducted for benzene, chlorobenzene, dichlorobenzene, TCE, TCA and carbon tetrachloride. In addition to the Draeger tubes, VOC specific air sampling using a combination of Summa canisters and standard air sampling in accordance with OSHA Method 7 will be conducted. The VOC sampling using Summa canisters and standard air sampling with SKC pumps will be conducted to obtain lower detection limits particularly for benzene which has an action level of 0.5 ppm.

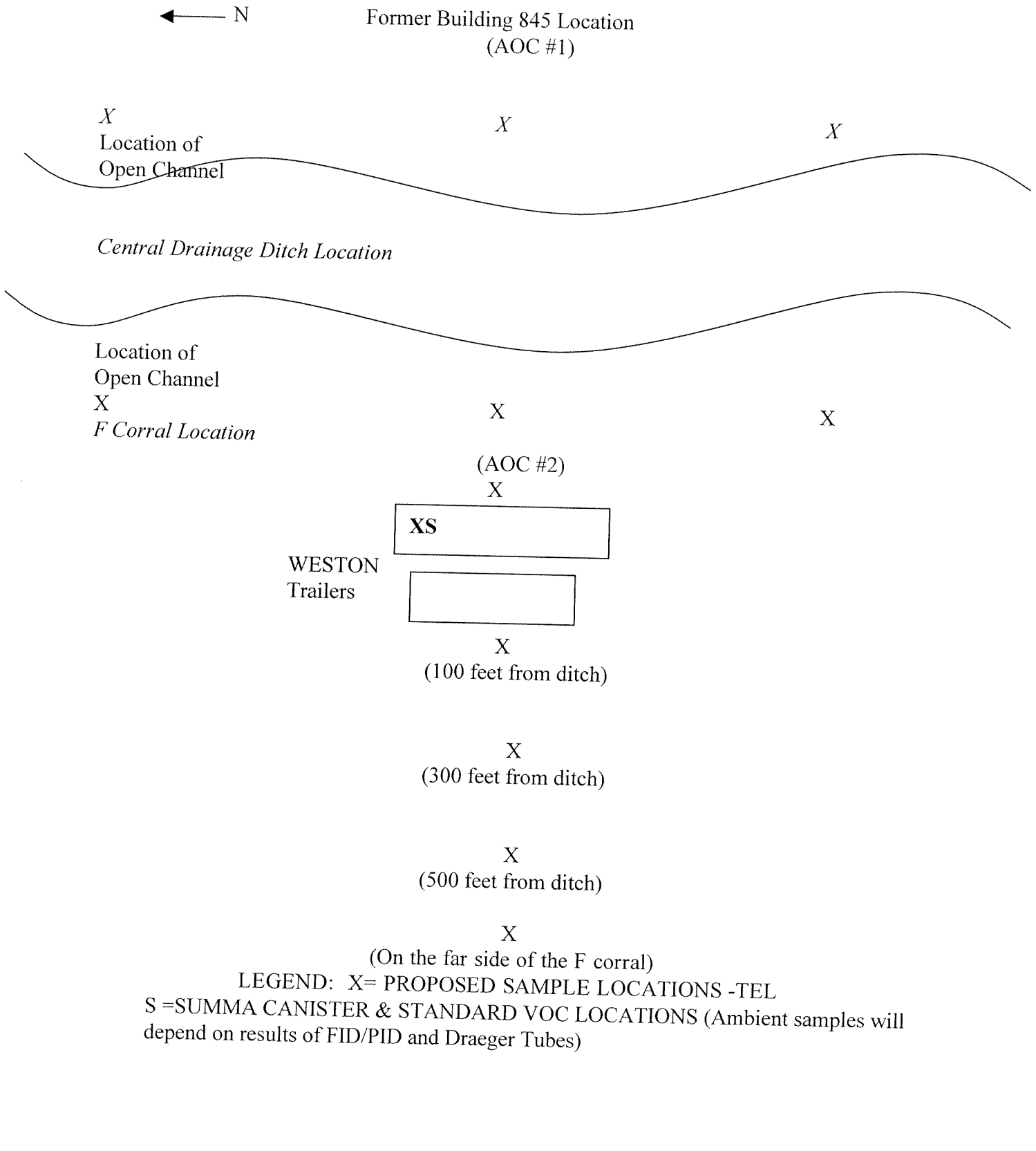
A total of three Summa canisters will be collected during each sampling event, and then sent to the analytical laboratory for VOC analysis using Method TO 14. A Summa canister is a stainless steel canister that typically has a 6 Liter volume that is used to take ambient air samples over a specific time. The Summa canister is place in the area to be sampled, and the valve is opened to allow air into the canister. The sampler will have a critical flow orifice to allow the canister to fill over a specific time period (4 to 8 hours). The detection limit for VOCs would be approximately 0.1-1.0 ppbv or approximately 1.0 to 10.0 ug/m^3. However, the specific detection limit would depend on the chemical being analyzed.

A total of six air samples and two blanks will be collected using air sampling methods and analysis in accordance with OHSA Method 7. These air samples will require separate air sample canisters and specific analysis from the

laboratory than the TEL in accordance with the appropriate methods. These air samples are in addition to the Summa canister samples. These air samples will be taken in a similar manner to the TEL samples using an SKC pump for a specified time period and flow rate. The location of the VOC samples will include one within the trailer and 2 of the site ambient air. The 2 ambient air samples will be based on the FIDIPID and Draeger tube readings.

Attachment 1 provides specific sample locations.

ATTACHMENT #1



LEGEND: X= PROPOSED SAMPLE LOCATIONS -TEL
S =SUMMA CANISTER & STANDARD VOC LOCATIONS (Ambient samples will depend on results of FID/PID and Draeger Tubes)

Technical Memorandum

Date: May 14, 2002

To: Debra Ford (Design Team Leader, CENAB), George Bock (Project Manager, CENAP)

From: David Pohl (Project Manager, WESTON) & Robert Massengill, RRPT, (Site Radiation Safety Manager & Health and Safety Officer, WESTON)

RE: Confirmatory Air Sampling Results for Tetraethyl Lead (TEL) – Pre-Mobilization for Intrusive Remedial Investigation Sampling at OU No. 1, Dupont Chambers Works FUSRAP Site, Deepwater, NJ

Summary/Action:

Confirmatory air sampling was performed on 6 and 7 May 2002 in accordance with the sampling strategy and methods outlined in the Technical Memorandum dated 3 May 2002. The air sampling program included collection and analysis of air samples for TEL and Volatile Organic Compounds (VOC) at designated locations within Operational Unit (OU) 1, Areas of Concern (AOC) 1 & 2, the former Building 845 and the F Parking Corral, at the Dupont Deepwater facility. The purpose of the air sampling was to confirm results obtained during the non-intrusive field surveys in the Building 845 area, which indicated levels of TEL above the action level stated in the Site Safety and Health Plan. The objective was also to evaluate if the Central Drainage Ditch was the source of the TEL, and confirm TEL levels in the office trailers and proposed support zone are below the action level.

On both 6 and 7 May 2002, twelve (12)TEL air samples were collected in the morning and in the afternoon. The TEL air samples were placed along both sides of the central drainage ditch (CDD); outside the USACE office trailer; inside the USACE office trailer; 100, 300 and 500 feet west of the CDD; and, on the far west side of the F Corral. Also, three (3) Summa canisters were collected each day, and included two (2) by the CDD and one (1) outside the trailer. The Summa canisters were configured with an 8-hour critical flow orifice to allow the sample to be collected over an 8-hour period. Additionally, three (3) VOC air samples were collected both days using low-flow pump sampling methods. These samples included two (2) by the CDD and one (1) outside the trailer. The attached Figures 1 and 2 presents the locations of the samples for 6 May and 7 May 2002, respectively.

The weather for the sampling event was as follows:

- May 6th was sunny to partly cloudy with the temperature between 60-70 °F and the winds from the south at an estimated speed of 15-20 MPH.
- May 7th was partly cloudy to cloudy with the temperature between 65-75 °F and the winds from the southwest at an estimated speed of 10-15 MPH.

The samples were sent to PSC Analytical Services in Reading Pennsylvania, for analysis. PSC Analytical Services is accredited by the American Industrial Hygiene Association (AIHA).

The TEL sample results for Monday, 6 May 2002 are as follows:

SAMPLE #	**LOCATION**	**CONCENTRATION**		**LIMITS**	
		Micro -gram (ug)	**Milli-grams Per cubic Meter (mg/m3)**	**OSHA PEL**	**SSHP ACTION LEVEL**
050602-01	BLANK	<1.0	Not Applicable	0.075 mg/ m^3	0.0375 mg/ m^3
050602-02A	2 (morning)	<1.0	<0.0063 mg/m^3	0.075 mg/ m^3	0.0375 mg/ m^3
050602-03A	3 (morning)	<1.0	<0.0050 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-05A	5 (morning)	<1.0	<0.0047 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-06A	6 (morning)	<1.0	<0.0052 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-07A	7 (morning)	<1.0	<0.0045 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-08A	8 (morning)	<1.0	<0.0046 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-09A	9 (morning)	<1.0	<0.0048 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-11A	11 (morning)	<1.0	<0.0046 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-12A	12 (morning)	<1.0	<0.0056 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-13A	13 (morning)	<1.0	<0.0047 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-14A	**14 (morning)**	**10.0**	**0.091 mg/m^3**	**0.075 mg/ m^3**	**0.0375 mg/ m^3**
050602-02B	2 (afternoon)	<1.0	<0.0041 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-03B	3 (afternoon)	<1.0	<0.0074 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-05B	5 (afternoon)	<1.0	<0.0054 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-06B	6 (afternoon)	<1.0	<0.0051 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-07B	7 (afternoon)	<1.0	<0.0050 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-08B	8 (afternoon)	<1.0	<0.0047 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-09B	9 (afternoon)	<1.0	<0.0095 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-11B	11 (afternoon)	<1.0	<0.0069 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-12B	12 (afternoon)	<1.0	<0.0069 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-13B	13 (afternoon)	<1.0	<0.0045 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-14B	14 (afternoon)	<1.0	<0.0054 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3

The TEL sample results for Tuesday, 7 May 2002 are as follows:

SAMPLE #	DATE	CONCENTRATION		LIMITS	
		Micro -gram (ug)	Milli-grams Per cubic Meter (mg/m3)	OSHA PEL	SSHP ACTION LEVEL
050702-01	BLANK	<1.0	Not Applicable	0.075 mg/ m^3	0.0375 mg/ m^3
050702-02A	2 (morning)	<1.0	<0.0053 mg/m^3	0.075 mg/ m^3	0.0375 mg/ m^3
050702-03A	3 (morning)	<1.0	<0.0061 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-04A	4 (morning)	<1.0	<0.0065 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-05A	5 (morning)	<1.0	<0.0066 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-06A	6 (morning)	<1.0	<0.0066 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-07A	7 (morning)	<1.0	<0.0068 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-08A	8 (morning)	<1.0	<0.0060 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-09A	9 (morning)	<1.0	<0.0058 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-12A	12 (morning)	<1.0	<0.0063 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-13A	12 (morning)	<1.0	<0.0061 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-14A	13 (morning)	<1.0	<0.0052 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050602-15A	14 (morning)	<1.0	<0.0064 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-02B	2 (afternoon)	<1.0	<0.0043 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-03B	3 (afternoon)	<1.0	<0.0051 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-05B	5 (afternoon)	<1.0	<0.0054 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-06B	6 (afternoon)	<1.0	<0.0050 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-07B	7 (afternoon)	<1.0	<0.0052 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-08B	8 (afternoon)	<1.0	<0.0049 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-09B	9 (afternoon)	<1.0	<0.0047 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-13B	13 (afternoon)	<1.0	<0.0050 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-14B	14 (afternoon)	<1.0	<0.0047 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3
050702-15B	15 (afternoon)	<1.0	<0.0053 mg/m^3-	0.075 mg/ m^3	0.0375 mg/ m^3

The Summa canister and the VOC air samples were analyzed with a 7-day turn-around-time frame. Therefore, the results for the Summa canisters and the VOC air samples have not been received from the laboratory. Those sample results will be presented when received in a supplemental technical memorandum.

Findings and Recommendations

Given the TEL air sampling results, the following observations were made:

- One (1) sample (#050602-14A) indicated that TEL levels, inside the USACE trailer were above the OSHA Permissible Exposure Limit (PEL) for TEL.
- All other TEL air samples collected were below the laboratory detection limit for TEL.

The results indicate that for both of the days sampled, the ambient levels of TEL were below the laboratory detection limits. The previous sampling results reported in the Technical Memorandum dated April 22, 2002, were not confirmed. Weather conditions that differed from the previously reported results included steady winds of 10-20 mph. The results did not identify whether the CDD was the source of the concentrations of TEL measured in the previous sampling, or identify other potential sources such as the Anti-Knock Area to the south-southwest and the open ditch along the eastern and northeastern perimeter of the F Corral area.

The source of the TEL within the office trailer is therefore not known at this time. The trailer had not been accessed since the non-intrusive work, and therefore the air had not been well circulated or vented between sampling events. The air conditioning units were pulling air from the outside during the period between sampling events since the heating and air conditioning unit is on a thermostat control. However, the door or windows of the trailer were not opened frequently between the period of the non-intrusive field surveys and the 6 and 7 May air sampling. The air conditioning unit was kept running during the 6 and 7 May sampling events.

Based on the TEL samples results, stated above, and the results of previous TEL air sampling presented in the, WESTON offers the following options for USACE consideration:

Option 1 – Trailers Remain at Current Locations with Engineering Controls and Additional Air Sampling

- Office and Storage Trailer will not be relocated until further air sampling results indicate consecutive exceedances of the action level
- Institute engineering controls that include:
  - Placing the air conditioning unit on re-circulation to minimize the possibility of capturing TEL gas in the trailer.
  - Removal of some of the trailer skirting to minimize the trapping of contaminants that could infiltrate into the trailer.
- Conduct follow-up sampling within the trailer with the doors and windows closed, and with the windows open and the skirts removed to determine if engineering controls are effective.
- Conduct air sampling during field-work inside of trailers to confirm levels are below the action level.

Advantages: This option will cause the least delay in mobilization of the intrusive work. The implementation costs are low ($1-2,000).

Disadvantages: Added cost for follow-up air sampling and sampling during the field program. Approximate costs for additional air sampling is $7,500. It is possible that even with the engineering controls, consecutive levels above the action level may be measured during the field program, potentially resulting in a shutdown of the field-work to address the health and safety issue.

Option 2 – Move Trailers West of CDD with Engineering Controls and Air Sampling During Field Work

- Office and Storage Trailer will be relocated to west of CDD and use existing electrical and telephone lines used by current DuPont contractor trailers.
- Institute engineering controls that include removal of skirts around trailer, improve circulation of air within the trailer.
- Conduct air sampling during field-work inside of trailers to confirm levels are below the action level.

Advantages: This option may be easier to implement than Option 3 since electricity and telephone exist in the western part of the F Corral area. If the CDD is the primary source of TEL that was detected in air samples during the field survey work, the trailers will be farther from this source.

Disadvantages: More costly to implement than Option 1. Relocation and engineering control costs for each trailer estimate at $4,500 each. There is also an added cost for sampling during the field program. Approximate costs for additional air sampling is $4,725. It is possible that even with the relocation of the trailer and engineering controls, consecutive levels above the action level may be measured during the field program, potentially resulting in a shut-down of the field work to address the health and safety issue. The results to date do not confirm that the CDD is the primary source of TEL.

Option 3 – Move Trailers Up or Cross Wind of Potential TEL Sources

- Office and Storage Trailer will be relocated to an area that is up- or crosswind of potential TEL sources, which include the Anti-Knock Area, the CDD and the open ditch along the perimeter of the F Corral.

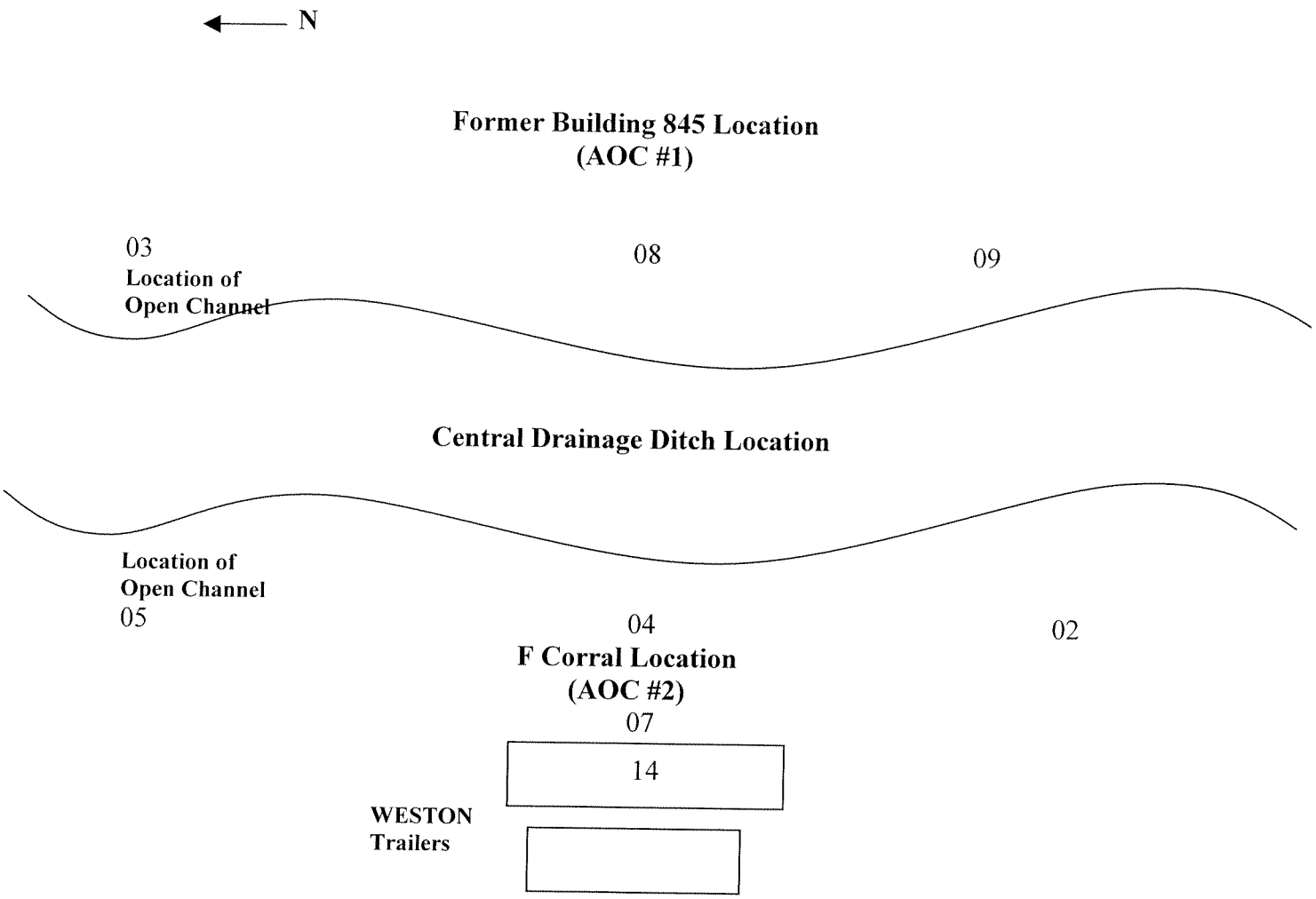
Advantages: This option addressed possible TEL levels within the trailer that may exceed the action levels that could result in temporary shutdown of the field-work. The recommended area should be away from DuPont operations and contractor/union activity and trailers. The area should also be as much west and south of the potential sources as possible since the prevailing winds are southwest. No follow-up air sampling would be required during field-work. Initial

sampling may be needed to confirm area has no issues depending on area approved by DuPont for relocation.

Disadvantages: This option will likely delay the mobilization for the intrusive work by approximately 2 weeks. This option is more costly to implement than Options 1 and 2. Relocation costs for each trailer estimate at $4,000 each. There is also an added cost for electrical and telephone hook-up, which is estimated at $1,600.

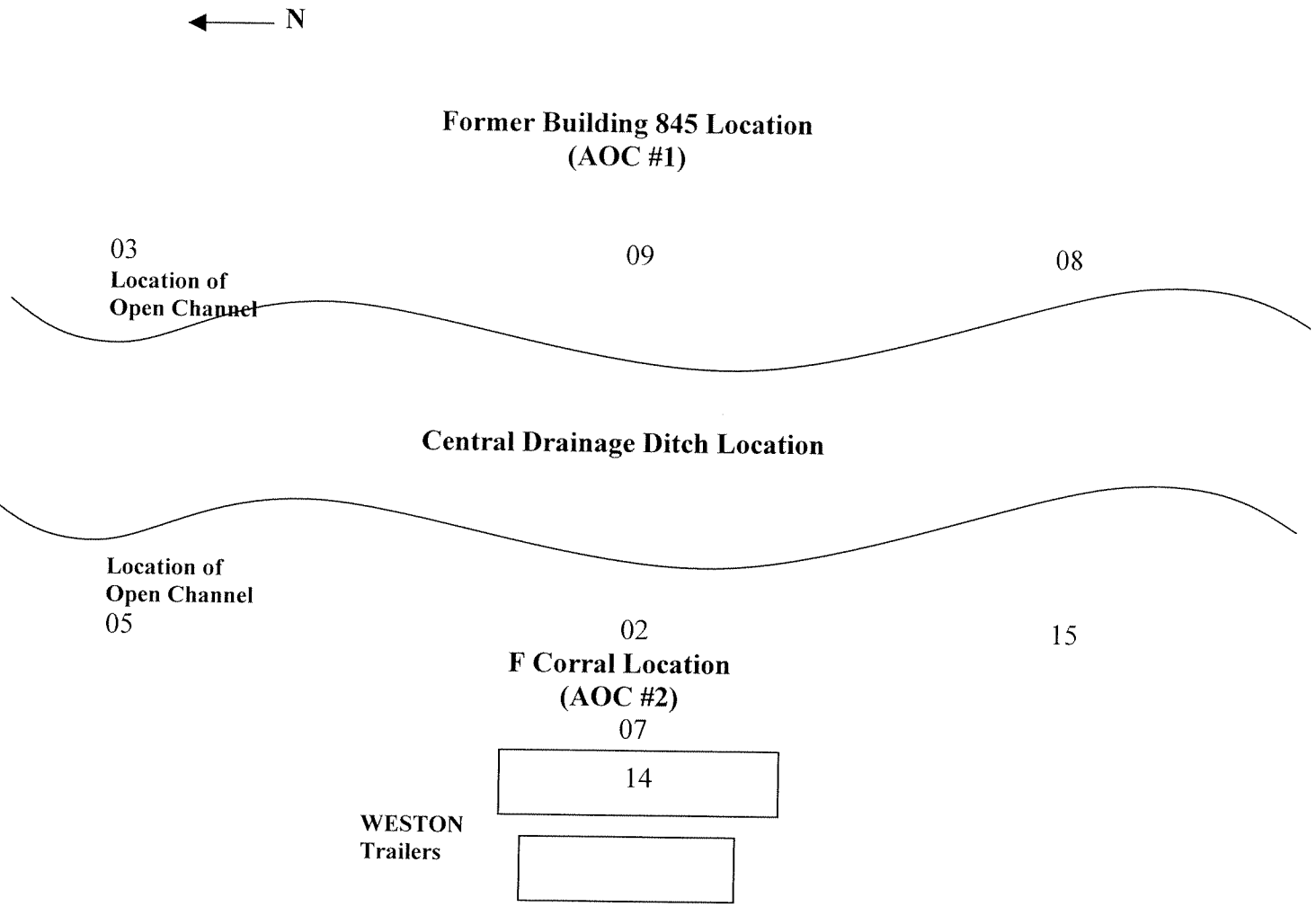
It is recommended that these findings and recommendations be discussed by tele-conference at USACE earliest convenience.

FIGURE #1
(TEL sample locations for 05-06-02)



LEGEND: ## denote sample locations.

FIGURE #2
(TEL sample locations for 05-07-02)



LEGEND: ## denote sample locations.

Technical Memorandum

Date: May 28, 2002

To: Debra Ford (Design Team Leader, CENAB), George Bock (Project Manager, CENAP)

From: David Pohl (Project Manager, WESTON) & Brian Murphy (Site Chemical Health and Safety Officer, WESTON)

RE: Air sampling results for Volatile Organic Compounds (VOC), Building 845 and F Parking Corral Areas of Concern, Dupont Chambers Works FUSRAP Site, Deepwater, NJ

Summary/Action:

During the week of 6 May 2002, air sampling for Volatile Organic Compounds (VOC) was performed at Operational Unit (OU) 1, Area of Concern (AOC) 1 & 2 (the former Building 845 and the F Parking Corral) at the Dupont Deepwater facility.

On 6 and 7 May 2002, 3-4 air samples were collected using low flow pump methods from both sides of the central drainage ditch (CDD) and outside the USACE office trailer. These low flow air samples were then sent to the analytical laboratory for VOC analysis using OSHA Method 7. Attachment #1 provides the sample locations for each sample collected of May 6 and May 7, 2002.

In addition, 3 air samples were collected on 6 and 7 May 2002 using Summa canisters. These air samples were placed along both sides of the central drainage ditch (CDD) and outside the USACE office trailer. The Summa canisters were configured with an 8-hour critical flow orifice to allow the sample to be collected over an 8-hour period. These samples were sent to the analytical laboratory for organic compound analysis using Method TO-14.

The weather for the sampling event was as follows:

- May 6th was sunny to partly cloudy with the temperature between 60-70 °F and the winds from the south at an estimated speed of 15-20 MPH.
- May 7th was partly cloudy to cloudy with the temperature between 65-75 °F and the winds from the southwest at an estimated speed of 10-15 MPH.

The samples were sent to PSC Analytical Services in Reading Pennsylvania, for analysis. PSC Analytical Services is accredited by the American Industrial Hygiene Association (AIHA).

The results for the low flow air samples collected on 6 and 7 May 2002, and analyzed using OSHA Method 7 indicated samples were below the method detection limits. These method detection limits are below the proposed Site-specific Health and Safety Plan (SSHSP) Action Levels.

The results of the analysis of Summa Canisters using Method TO-14 for Monday 6 May 2002 indicated the samples were all below the method detection limits with the following exceptions:

Sample #12424

Chemical	Concentration Present (mg/m3)	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Methylene Chloride	0.022	87	174
MTBE	0.071	NA	144
Toluene	0.017	752	188
Tetrachloroethene	0.012	680	170

Sample #92075

Chemical	Concentration Present (mg/m3)	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Methylene Chloride	0.009	87	174
MTBE	0.035	NA	144
Toluene	0.025	752	188

Sample #12604

Chemical	Concentration Present (mg/m3)	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Dichlorodifluoromethane	0.005	4,950	NA
Methylene Chloride	0.016	87	174
MTBE	0.096	NA	144
Benzene	0.003	3	1.6
Trichloroethene	0.015	538	269
Toluene	0.092	752	188

The results of the analysis of Summa Canisters using Method TO-14 for Tuesday 7 May 2002 indicated the samples were all below the method detection limits with the following exceptions:

Sample # 93242

Chemical	Concentration Present (mg/m3)	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Methylene Chloride	0.016	87	174
MTBE	0.099	NA	144
Toluene	0.067	752	188

Sample #93130

Chemical	Concentration Present (mg/m3)	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Methylene Chloride	0.049	87	174
MTBE	0.161	NA	144
Chloroform	0.014	245 (STEL)	49
Toluene	0.101	752	188
Trans 1,3-dichloropropene	0.012	NA	4.5

Sample #12893

Chemical	Concentration Present (mg/m3)	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Dichlorodifluoromethane	0.005	4,950	NA
Methylene Chloride	0.018	87	174
MTBE	0.081	NA	144
Toluene	0.014	752	188

Given these air sampling results, the following observation is made:

- No VOC ambient exposure concerns are noted among the compounds detected for the Building 845 and F Corral AOCs.

Given the VOC air sampling results, the following observation was made:

- Ambient concentrations of VOC's are not an over-exposure consideration in B. 845 footprint or F Corral areas.

Technical Memorandum

Date: May 29, 2002

To: Debra Ford (Design Team Leader, CENAB), George Bock (Project Manager, CENAP)

From: David Pohl (Project Manager, WESTON) & Brian Murphy, (Site Chemical Health and Safety Officer, WESTON)

RE: Air Sampling Results for E Corral, at Dupont Chambers Works FUSRAP Site, Deepwater, NJ

Summary/Action:

During the week of May 20th 2002, air sampling for Tetraethyl Lead (TEL), Volatile Organic Compounds (VOC) and Organic Compounds was performed at the E-corral location at the Dupont Deepwater facility.

Six (6) TEL air samples were collected using low flow air pump in the morning and in the afternoon on 23 May 2002. The TEL air samples were placed around the perimeter of the proposed trailer location on the far-east side of the E Parking Corral. Additionally, six (6) VOC air samples were collected over an 8-hour period, and placed directly beside the TEL sampling locations. Also, three (3) Summa canisters were set out, two (2) on the southern corners and one (1) at the northeast corner of the proposed trailer location. The Summa canisters were configured with an 8-hour critical flow orifice to allow the sample to be collected over an 8-hour period.

The weather for the sampling event was as follows:

- May 23rd was sunny with the temperature between 64-74 °F with winds from the southeast at an estimated speed of 5-10 MPH.

The samples were sent to Galson Laboratories in Syracuse, New York for analysis. Galson is accredited by the American Industrial Hygiene Association (AIHA).

The TEL sample results for the 23rd of May 2002 are as follows:

- All samples were non-detect at detection limits well below the Site-Specific Health and Safety Plan (SSHSP) Action Levels.

The VOC sample results for the 23rd of May 2002 are as follows:

- All low flow VOC sample results were non-detect at levels well below the SSHSP Action Levels.

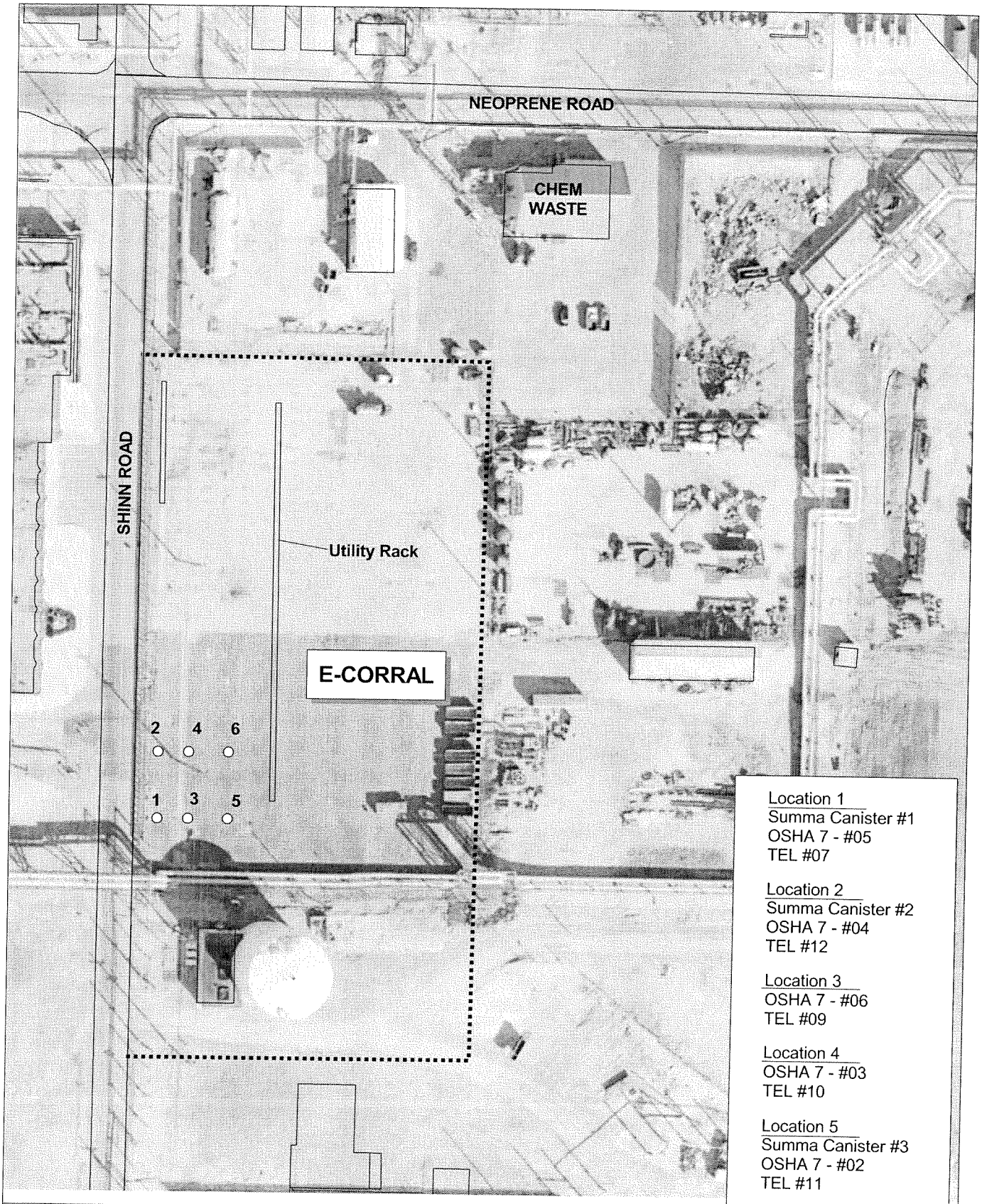
The Summa canister sample results for the 23rd of May 2002 are as follows:

All results were non-detect with the following exceptions:

- Acetone results ranged from 24-56 parts per billion (ppb) detected at all three locations.
- Carbon Disulfide results ranged from 7-9 ppb detected at all three locations.
- Cyclohexane was detected at 26 ppb in one sample.
- Heptane was detected at 5 ppb in one sample and 6 ppb in one sample.
- Toluene was detected at 5 ppb in one sample

Given the air sampling results, the following observation is made:

- No ambient air exposure concerns were noted during the sampling event and it appears that E corral would be a preferable location for the administrative trailers.



Location 1
Summa Canister #1
OSHA 7 - #05
TEL #07

Location 2
Summa Canister #2
OSHA 7 - #04
TEL #12

Location 3
OSHA 7 - #06
TEL #09

Location 4
OSHA 7 - #03
TEL #10

Location 5
Summa Canister #3
OSHA 7 - #02
TEL #11

N

100 0 100 Feet

DuPont Chambers Works
Deepwater, New Jersey

WESTON

E- Corral Air Sampling
05-23-02
DuPont Chambers Works
Deepwater, New Jersey

| G:\GIS\aprs\e_corral.apr | Layout - E-Corral | g:\gis\plots\e_corral_air.eps | 9:49 AM, 6/3/2002 |

INFORMATION REGARDING MED ACTIVITIES

November 25, 2002

Ms. Kelly Spittler
Weston Solutions, Inc.
1400 Weston Way
West Chester, Pennsylvania 19380

Certificate of Analysis
MCLinc Project #: WES001009
X-Ray Diffraction and Scanning Electron Microscopy Characterization

The soil samples were received at Materials and Chemistry Laboratory, Inc. (MCLinc) in good condition on November 15, 2002 and were given MCLinc identification codes as presented in Table 1.

Table 1. Sample Identification Cross-Reference

Weston Sample Number	MCLinc Sample Number
2BH038-BS-020-R	02-0866
2BH018-BS-025-0	02-0867
2BH018-BS-050-R	02-0868
2BH018-BS-018-0	02-0869

MCLinc prepared the samples for examination by X-Ray Diffraction (XRD) and Scanning Electron Microscopy with Energy-Dispersive Spectroscopy (SEM-EDS). Imaging techniques used for SEM-EDS facilitate locating deposits of heavy metals, such as uranium, and identifying elements associated (co-located) with the heavy metals. XRD is used to identify the crystalline phases present in the sample. The samples consist primarily of quartz (SiO_2) with minor mica and some feldspar and calcite.

Samples 02-0866 and 02-0869 had the greatest gross radioactivity (as monitored with a Ludlum beta/gamma survey meter). These as-received samples evidenced weak XRD lines suggestive of uranium oxide, probably U_3O_8. In order to facilitate more definitive identification, the heavy mineral components in these samples were concentrated with use of a density gradient. The XRD of the concentrated samples displayed an improvement in the intensities for several confirmatory peaks not previously well defined. A review of the data (summarized in Table 2) indicates that both U_3O_8 (sometimes referred to as "pitchblende") and UO_2 (uraninite) are present in these samples. The data in Table 2 agree within experimental uncertainty with the reference values compiled by the JCPDS International Center for Diffraction Data for major diffraction lines, d(Å), in the cited compounds. The experimental diffractogram is complex, and additional minor uranium oxide phases and complexes with iron oxyhydroxide may also be present. However, there is no indication in these samples for uranophane ($Ca(UO_2)_2(SiO_3OH)_2 \cdot 5H_2O$).

The identified phases are low solubility (and low mobility) reduced forms of uranium, commonly present in uranium ore. Uraninite is the main ore mineral in many U deposits; it is very sparingly soluble at normal pH values, especially in reducing groundwaters. In nature, pitchblende is found only in veins of hydrothermal origin and usually contains no thorium and only traces of rare earths. (Katz, J.J.; Rabinowitch, E. (1951). *The Chemistry of Uranium. Part I.* McGraw-Hill.) Synthetic forms of UO_2 and U_3O_8 are important intermediate products in nuclear fuel production [Wymer, R.G.; Vondra, B.L. (1981). Light *Water Reactor Nuclear Fuel Cycle*, CRC press].

Table 2. Comparison of Literature (JCPDS) and Experimental d(Å) XRD Values for Select Phases in Soil Samples

UO_2		$B\text{-}U_3O_8$	
JCPDS 5-0550	Sample Value	JCPDS 23-1460	Sample Value
3.157 *	3.14	8.67	8.72
2.73	2.70	4.15 *	4.15
1.93	1.93	3.53	3.53
1.65	1.65	3.35	3.33
1.58	1.57	2.69	2.69
1.255	1.255	2.60	2.62
1.223	1.225	2.072	2.071
		2.004	1.97

* Most intense line (I/Io = 100%) for pure compound.

SEM-EDS was used to verify the chemical association and morphology of the uranium-bearing components in the samples. The samples are dominated by quartz with minor feldspar, consistent with the XRD results. Samples 02-0866 and 02-0869 contained a relatively high proportion of uranium-bearing grains. Sample 02-0867 contained relatively few uranium-bearing grains, but a significantly greater number of lead-containing grains (about 15 times the number of U grains). Sample 02-0868 contained relatively few uranium-bearing grains. All of the uranium-bearing grains examined evidenced uranium and oxygen, with minor contribution by calcium and silicon components.

Thank you for choosing MCLinc. If you have any questions or need additional information, please contact us at (865) 576-4138.

_____ _____

W.D Bostick, Ph.D. Date
Materials and Chemistry Laboratory, Inc.

Materials and Chemistry Laboratory, Inc.
East Tennessee Technology Park, Building K-1006
2010 Highway 58, Suite 1000
Oak Ridge, Tennessee 37830-1702
Telephone: (865) 576-4138 Fax: (865) 576-8558
www.MCL-inc.com

October 15, 2002

Mr. David Pohl
Weston Solutions, Inc.

Addendum
MCLinc Project # WES000873
X-Ray Diffraction and Scanning Electron Microscopy Characterization

This memorandum provides some additional detail requested by you on the subject project. As reported by Dr. Bob Stevenson in his Certificate of Analysis, dated 12 August 2002, the uranium-bearing mineral phases identified in the submitted soil sample[1] were uranophane ($Ca(UO_2)_2(SiO_3OH)_2 \cdot 5H_2O$) and metastudite ($UO_4 \cdot 2H_2O$). Uranium in the soil sample was relatively abundant, and the predominant quartz phase served as an internal standard for the XRD peak positions. The two uranium-bearing crystalline phases were comparable in abundance, with somewhat more intense lines observed for the uranophane phase.

Uranophane forms as an oxidative alteration or weathering product of uraninite (UO_2). It is the most abundant uranyl mineral found in nature and possibly the most common U mineral after uraninite. Uranophane precipitates from near neutral to alkaline groundwaters that contain dissolved Si and Ca. It is moderately insoluble in most groundwaters, and thus it displays relatively low mobility in the geosphere.[2]

Metastudite has been found in nature as a pale yellow, nonfluorescent mineral phase. Synthetic metastudite is prepared by the addition of hydrogen peroxide to mildly acidic solutions containing uranyl ion; this reaction is sometimes used within the nuclear fuel cycle to precipitate and recover uranium from leach or waste solutions.[3] Metastudite has a minimal solubility at pH values near 4; however, at near-neutral or alkaline pH values it is considered a relatively soluble compound of uranium.

We hope that this additional information is useful to your groundwater modeling and mobility calculations. We look forward to receiving additional samples for characterization.

W.D. Bostick, Ph.D.
Materials and Chemistry Laboratory, Inc.
www.MCL-inc.com

[1] Weston COC ID: 29; WO #03886-518-013-0270
[2] The calculated solubility limit for uranophane as a function of pH is illustrated in Figure 2 of the reference URL www.wmsym.org/wm97proceedings/sess27/27-04.htm

[3] See URL www.radsafe.com/solubility/intro.htm