



Appendix B

Additional Laboratory Control Limits

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Benning Road Facility RI/FS Project

Analysis Group Description	Method Description	Method Code								
Soil Analysis	Closed System Purge and Trap (Low-Level)	5035A								
Soil Analysis	Volatile Organic Compounds (GC/MS)	8260B								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	1,1,1-Trichloroethane	71-55-6	67	126	31	67	126	31		
	1,1,2,2-Tetrachloroethane	79-34-5	60	139	24	60	139	24		
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	55	130	37	55	130	37		
	1,1,2-Trichloroethane	79-00-5	70	128	22	70	128	22		
	1,1-Dichloroethane	75-34-3	66	124	23	66	124	23		
	1,1-Dichloroethene	75-35-4	59	129	25	59	129	25		
	1,2,3-Trichlorobenzene	87-61-6	37	144	40	37	144	40		
	1,2,4-Trichlorobenzene	120-82-1	51	136	40	51	136	40		
	1,2-Dibromo-3-Chloropropane	96-12-8	35	136	40	35	136	40		
	1,2-Dibromoethane (EDB)	106-93-4	70	131	20	70	131	20		
	1,2-Dichlorobenzene	95-50-1	71	124	22	71	124	22		
	1,2-Dichloroethane	107-06-2	61	127	23	61	127	23		
	1,2-Dichloroethane-d4 (Surr)	17060-07-0							52	124
	1,2-Dichloropropane	78-87-5	72	122	20	72	122	20		
	1,3-Dichlorobenzene	541-73-1	75	118	20	75	118	20		
	1,4-Dichlorobenzene	106-46-7	77	116	20	77	116	20		
	1,4-Dioxane	123-91-1	10	160	40	10	160	40		
	2-Butanone (MEK)	78-93-3	35	149	36	35	149	36		
	2-Hexanone	591-78-6	32	150	32	32	150	32		
	4-Bromofluorobenzene (Surr)	460-00-4							63	120
	4-Methyl-2-pentanone (MIBK)	108-10-1	44	148	30	44	148	30		
	Acetone	67-64-1	20	150	40	20	150	40		
	Benzene	71-43-2	77	120	20	77	120	20		
	Bromochloromethane	74-97-5	67	126	29	67	126	29		
	Bromodichloromethane	75-27-4	70	125	21	70	125	21		

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Soil Analysis	Volatile Organic Compounds (GC/MS)	8260B								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	Bromoform	75-25-2	53	140	23	53	140	23		
	Bromomethane	74-83-9	25	150	40	25	150	40		
	Carbon disulfide	75-15-0	50	127	23	50	127	23		
	Carbon tetrachloride	56-23-5	69	122	22	69	122	22		
	Chlorobenzene	108-90-7	79	120	20	79	120	20		
	Chloroethane	75-00-3	22	150	40	22	150	40		
	Chloroform	67-66-3	72	120	25	72	120	25		
	Chloromethane	74-87-3	44	131	27	44	131	27		
	cis-1,2-Dichloroethene	156-59-2	80	118	20	80	118	20		
	cis-1,3-Dichloropropene	10061-01-5	73	120	20	73	120	20		
	Cyclohexane	110-82-7	64	130	21	64	130	21		
	Dibromochloromethane	124-48-1	70	132	20	70	132	20		
	Dibromofluoromethane (Surr)	1868-53-7							68	121
	Dichlorodifluoromethane	75-71-8	25	150	34	25	150	34		
	Ethylbenzene	100-41-4	78	125	21	78	125	21		
	Isopropylbenzene	98-82-8	70	133	22	70	133	22		
	Isopropyl ether	108-20-3	NA	NA	NA	NA	NA	NA		
	Methyl acetate	79-20-9	27	142	40	27	142	40		
	Methyl tert-butyl ether	1634-04-4	48	132	36	48	132	36		
	Methylcyclohexane	108-87-2	66	135	23	66	135	23		
	Methylene Chloride	75-09-2	58	127	28	58	127	28		
	m-Xylene & p-Xylene	179601-23-1	75	126	21	75	126	21		
	o-Xylene	95-47-6	83	127	20	83	127	20		
	Styrene	100-42-5	83	129	20	83	129	20		
	tert-Butyl alcohol	75-65-0	68	122	36	68	122	36		
	Tert-amyl methyl ether	994-05-8	NA	NA	NA	NA	NA	NA		
	Tert-butyl ethyl ether	637-92-3	NA	NA	NA	NA	NA	NA		
	Tetrachloroethene	127-18-4	78	129	20	78	129	20		
	Toluene	108-88-3	78	124	21	78	124	21		

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Soil Analysis	Closed System Purge and Trap (Low-Level)	5035A								
Soil Analysis	Volatile Organic Compounds (GC/MS)	8260B								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	Toluene-d8 (Surr)	2037-26-5							72	127
	trans-1,2-Dichloroethene	156-60-5	77	121	20	77	121	20		
	trans-1,3-Dichloropropene	10061-02-6	74	129	20	74	129	20		
	Trichloroethene	79-01-6	76	119	21	76	119	21		
	Trichlorofluoromethane	75-69-4	20	150	40	20	150	40		
	Vinyl chloride	75-01-4	63	124	27	63	124	27		
	Xylenes, Total	1330-20-7	83	126	20	83	126	20		
Analysis Group Description	Method Description	Method Code								
Aqueous Analysis	Purge and Trap	5030B								
Aqueous Analysis	Volatile Organic Compounds (GC/MS)	8260C								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	1,1,1-Trichloroethane	71-55-6	57	128	19	68	128	35		
	1,1,2,2-Tetrachloroethane	79-34-5	78	135	16	78	135	35		
	1,1,2-Trichloro-1,2,2- trifluoroethane	76-13-1	72	123	20	72	123	35		
	1,1,2-Trichloroethane	79-00-5	77	127	17	77	127	35		
	1,1-Dichloroethane	75-34-3	76	126	22	76	126	35		
	1,1-Dichloroethene	75-35-4	71	122	18	71	122	35		
	1,1-Dichloropropene	563-58-6	74	123	35	74	123	35		
	1,2,3-Trichlorobenzene	87-61-6	39	143	35	39	143	35		
	1,2,3-Trichloropropane	96-18-4	66	125	35	66	125	35		
	1,2,4-Trichlorobenzene	120-82-1	51	138	35	51	138	35		
	1,2,4-Trimethylbenzene	95-63-6	71	122	30	71	122	30		
	1,2-Dibromo-3-Chloropropane	96-12-8	55	139	23	55	139	35		
	1,2-Dibromoethane (EDB)	106-93-4	79	126	16	79	126	35		
	1,2-Dichlorobenzene	95-50-1	80	120	15	80	120	24		
	1,2-Dichloroethane	107-06-2	72	126	15	72	126	32		
	1,2-Dichloroethane-d4 (Surr)	17060-07-0							72	134
	1,2-Dichloroethene, Total	540-59-0	71	124	35	71	124	35		
	1,2-Dichloropropane	78-87-5	78	123	15	78	123	34		
	1,3,5-Trichlorobenzene	108-70-3	58	132	35	58	132	35		
	1,3,5-Trimethylbenzene	108-67-8	70	126	33	70	126	33		
	1,3-Dichlorobenzene	541-73-1	80	120	15	80	120	24		
	1,3-Dichloropropane	142-28-9	76	124	36	76	124	36		
	1,4-Dichlorobenzene	106-46-7	80	120	15	80	120	24		

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Analysis Group Description	Method Description	Method Code								
Aqueous Analysis	Purge and Trap	5030B								
Aqueous Analysis	Volatile Organic Compounds (GC/MS)	8260B								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	1,4-Dioxane	123-91-1	NA	NA	NA	NA	NA	NA		
	2-Butanone (MEK)	78-93-3	41	150	35	41	150	35		
	2-Hexanone	591-78-6	40	150	35	40	150	35		
	4-Bromofluorobenzene (Surr)	460-00-4							72	120
	4-Methyl-2-pentanone (MIBK)	108-10-1	49	147	21	49	147	35		
	Acetone	67-64-1	10	150	35	10	150	35		
Aqueous Analysis	Purge and Trap	5030B								
Aqueous Analysis	Volatile Organic Compounds (GC/MS)	8260B								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	Benzene	71-43-2	80	121	15	80	121	32		
	Bromoform	75-25-2	62	138	16	62	138	35		
	Bromomethane	74-83-9	39	150	35	39	150	35		
	Carbon disulfide	75-15-0	57	137	16	57	137	35		
	Carbon tetrachloride	56-23-5	59	145	19	59	145	35		
	Chlorobenzene	108-90-7	80	120	15	80	120	29		
	Chloroethane	75-00-3	53	148	24	53	148	35		
	Chloroform	67-66-3	78	122	15	78	122	35		
	Chloromethane	74-87-3	51	150	22	51	150	35		
	cis-1,2-Dichloroethene	156-59-2	80	120	17	80	120	35		
	cis-1,3-Dichloropropene	10061-01-5	67	127	18	67	127	35		
	Cyclohexane	110-82-7	65	132	17	65	132	35		
	Dibromofluoromethane (Surr)	1868-53-7							77	127
	Dichlorodifluoromethane	75-71-8	43	142	19	43	142	35		
	Ethylbenzene	100-41-4	80	123	15	80	123	33		

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Analysis Group Description	Method Description	Method Code								
Aqueous Analysis	Purge and Trap	5030B								
Aqueous Analysis	Volatile Organic Compounds (GC/MS)	8260B								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	Isopropylbenzene	98-82-8	80	124	15	80	124	35		
	Methyl tert-butyl ether	1634-04-4	68	124	25	68	124	35		
	Methylcyclohexane	108-87-2	74	120	20	74	120	35		
	Methylene Chloride	75-09-2	71	129	19	71	129	35		
	m-Xylene & p-Xylene	179601-23-1	80	124	17	80	124	32		
	o-Xylene	95-47-6	80	123	15	80	123	33		
	Styrene	100-42-5	80	125	15	80	125	34		
	tert-Butyl alcohol	75-65-0	72	126	35	72	126	30		
	Tert-amyl methyl ether	994-05-8	NA	NA	NA	NA	NA	NA		
	Tert-butyl ethyl ether	637-92-3	NA	NA	NA	NA	NA	NA		
	Tetrachloroethene	127-18-4	80	122	15	80	122	35		
	Toluene	108-88-3	80	125	15	80	125	35		
	Toluene-d8 (Surr)	2037-26-5							80	120
	trans-1,2-Dichloroethene	156-60-5	80	121	18	80	121	35		
Analysis Group Description	Method Description	Method Code								
Aqueous Analysis	Purge and Trap	5030B								
Aqueous Analysis	Volatile Organic Compounds (GC/MS)	8260B								
	Analyte Description	CAS Number	LCSREC Recovery Low %	LCSREC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC Recovery Low %	SUREC Recovery High %
	trans-1,3-Dichloropropene	10061-02-6	63	144	17	63	144	35		
	Trichloroethene	79-01-6	79	120	15	79	120	35		
	Trichlorofluoromethane	75-69-4	39	150	28	39	150	35		
	Vinyl chloride	75-01-4	61	138	16	61	138	35		

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Analysis Group Description	Method Description	Method Code								
Aqueous/Soil Analysis	PCDD/PCDFs by HRGC/HRMS	8290A								
	Analyte Description	CAS Number	BCS ₃ REC Recovery Low %	BCS ₃ REC Recovery High %	LCSRPD Precision %	MSREC Recovery Low %	MSREC Recovery High %	MSRPD Precision %	SUREC *Recovery Low %	SUREC *Recovery High %
	1,2,3,4,6,7,8-HPCDD	35822-46-9	80	120	NA	NA	NA	NA	23	140
	1,2,3,4,6,7,8-HPCDF	67562-39-4	80	120	NA	NA	NA	NA	28	143
	1,2,3,4,7,8-HxCDD	39227-28-6	80	120	NA	NA	NA	NA	32	141
	1,2,3,4,7,8-HxCDF	70648-26-9	80	120	NA	NA	NA	NA	26	152
	1,2,3,4,7,8,9-HPCDF	55673-89-7	80	120	NA	NA	NA	NA	26	138
	1,2,3,6,7,8-HxCDD	57653-85-7	80	120	NA	NA	NA	NA	28	130
	1,2,3,6,7,8-HxCDF	57117-44-9	80	120	NA	NA	NA	NA	26	123
	1,2,3,7,8,9-HxCDD	19408-74-3	80	120	NA	NA	NA	NA	29	147
	1,2,3,7,8,9-HxCDF	72918-21-9	80	120	NA	NA	NA	NA	29	147
	1,2,3,7,8-PeCDD	40321-76-4	80	120	NA	NA	NA	NA	25	181
	1,2,3,7,8-PECDF	57117-41-6	80	120	NA	NA	NA	NA	24	184
	2,3,4,6,7,8-HxCDF	60851-34-5	80	120	NA	NA	NA	NA	28	136
	2,3,4,7,8-PECDF	57117-31-4	80	120	NA	NA	NA	NA	21	178
	2,3,7,8-TCDD	1746-01-6	80	120	NA	NA	NA	NA	25	164
	2,3,7,8-TCDF	51207-31-9	80	120	NA	NA	NA	NA	24	169
	OCDD	3268-87-9	80	120	NA	NA	NA	NA	17	157
	OCDF	39001-02-0	80	120	NA	NA	NA	NA	17	157