



Environmental Functional Area
Environmental Support and Programmatic Outreach

LLNL-TR-578472

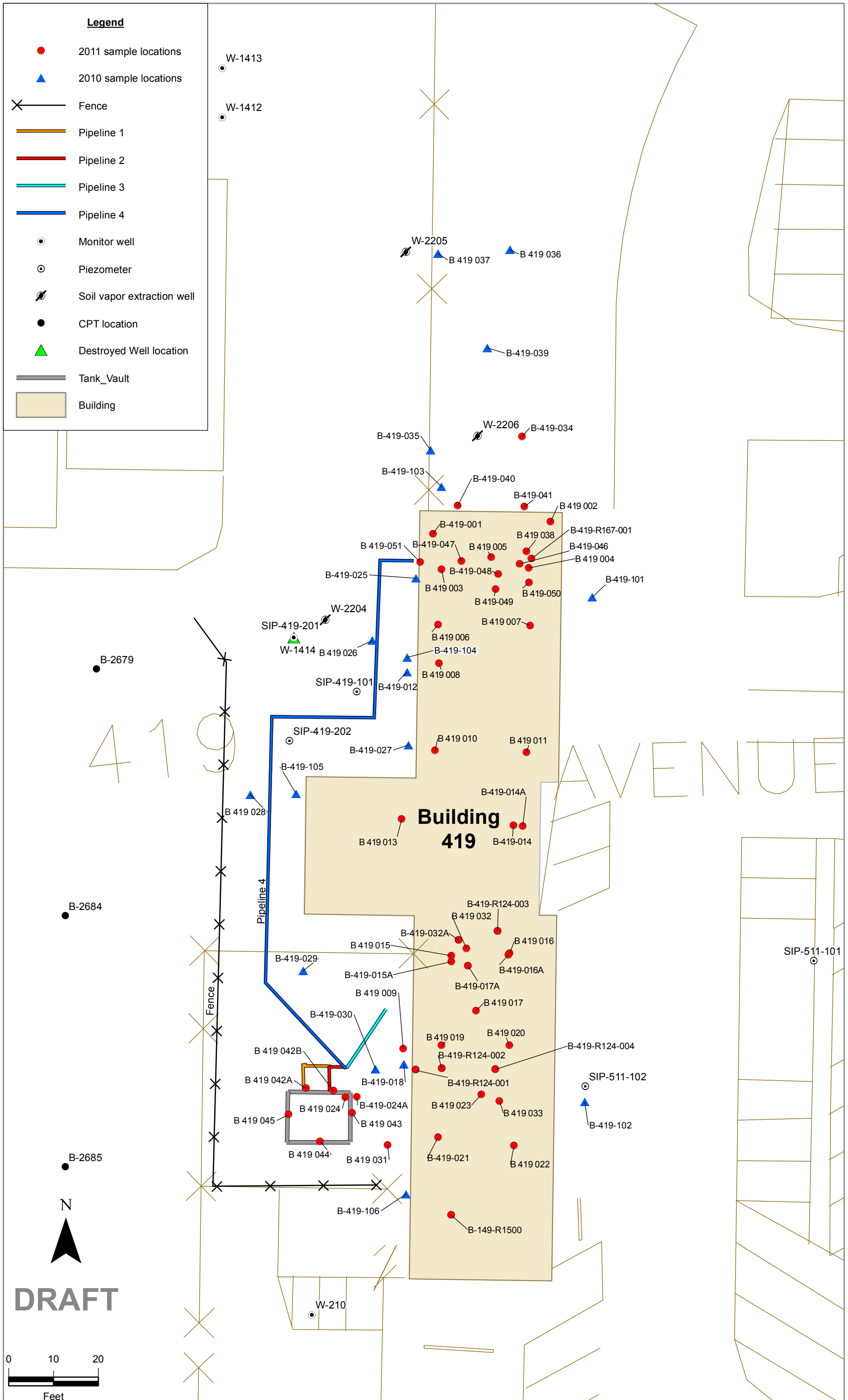
**Requested Documentation Associated with
Soil Sampling at Building 419**

March 12, 2012

V. Salvo

**This work performed under the auspices of the U.S. Department of Energy by
Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.**

Building 419 Map Showing Soil Sample Locations



Logs for Building 419 Borehole Locations 40 and 41

Borehole/Well Construction Log

(1) BOREHOLE LOCATION 	(2) Project: LLNL, B419 RERA Closure Phase II Soil Investigation		(3) Borehole/Well No.: B-419-D40
	(5) Logged By: William McLaughlin		(4) Job No.: 33824-B419.3.3
	(7) Project Manager: Valerie Morrow		(6) Edited By: Mark Buschbeck
	(9) Drilling Contractor: Gregg Drilling, Martinez, CA		(8) Drill Rig: Mobile Drill B-61
	(10) Driller/Helper: Eric Santellan / Rick Ryan		(11) Drilling Method: Hollow-stem auger
	(13) Hammer Weight/Drop: 140 lb / 30-inch		(12) Sample Method: Split-spoon every 5-ft interval
	(15) Borehole Diameter, Pilot: 6-inch		(14) Bentonite Gel Used: N/A
	(16) Borehole Started, Time/Date: 8:37 8/30/2011		(17) Borehole Completed, Time/Date: 9:30 8/31/11
	(19) Well Started, Time/Date: No well installed		(18) Water Source: B419 area hydrant
	(20) Well Completed, Time/Date: N/A		(21) Well Head Completion: N/A

ABBREVIATIONS: ----- = Approx. Contact; / / / / / = Gradational Contact; @ = at; _____ = Definite Contact; 1 K = primary conductivity; 2 K = secondary conductivity due to fracturing, mineralization, etc.; A = angular; bl = blue; blk = black; bm = brown/brownish; c = coarse; calc = calcite; CIF = coring induced fracture; cmt = cemented; DA = Drill Ahead; def'm = deformation; DF = drilling fluid (mud); dk = dark; E = estimated; f = fine; FeOx = iron oxide; gm = green/greenish; gry = gray/grayish; H = high; HF = heated fracture; HIF = handling induced fracture; ind = indurated; K = Hydraulic conductivity; L = low; lt = light; m = medium; min = mineralization; MnO2 = manganese oxide; mod = moderate; NF = natural fracture; NR = No Recovery; P = plasticity; PC = punch core; ppm = parts per million; qtz = quartz; R = rounded; RC = rock core; RQD = rock quality description; rx w/HCl = reaction with hydrochloric acid; S = sub; SA = subangular; soft sed = soft sediment deformation; SR = subrounded; SS = split spoon; v = very; wl = with; x-beds = cross beds; ylw = yellow/yellowish. **SP: Standard Penetrometer**

(30) OVA/PID Field Readings (ppm)	(31) Sampler Type/Depth	(32) Blows 6 inches	(33) Inches Recovered/Inches Driven	(34) Sample Condition/RQD	(35) Sample ID	(36) Analysis	(37) Well Annulus/Borehole Filler	(38) Well Casing	(39) Depth in Feet	(40) Recovery/Sample Loc.	(41) Contact	(23) Total Depth: 106.0 ft	(24) Casing Depth: N/A
	Concrete Coring		0.6 / 0.6		B-419-COMP-001				1	Concrete		(25) Screened Interval: N/A	(26) Sand Pack, #3: N/A #0/30: N/A
	DA to 4.5'								2			(27) Well Development Method: N/A	Time: _____ Date: _____ Flow Rate: _____
									3			(28) Geophysical Logs, Type: N/A	(29) Circulation: N/A
									4			(42) LITHOLOGIC DESCRIPTIONS	
									5	Clayey silt		Soil core had readings of 0mg/cm ³ with Hg sniffer and α, β, and gamma at bkgd levels	
	SP 8	1.5							5.3			(0-0.6) Concrete slab. 0.6'	
	4.5' to 6.0'	18	1.5						5.3			(4.5-5.3) Clayey silt (ML) yellow brown, (10YR 5/4) med, damp, 10-15% v-f m sand, LEH. 5.3'	
	DA to 9.5'	3.0							6			(5.3-6) Gravelly Sand (SW) yellow brown (10YR 5/4) dense, damp, v-f vc grained, 10-15% SA-SR gravels to 1/16" max. 5'	
									7				
									8				
									9				
	SP 17								10			Gravelly Sand (cont'd)	

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(30) OVA/PID Field Readings (ppm)		(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(2) Project:	(3) Borehole/Well No.:		
Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annular/Borehole Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	Notes:			
		9.5 to 11.0	19	18/19	-	10F (9:05)				10			LLNL, B419 RCRA Closure Phase II Soil Investigation	B-419-0400		
		DA 11.0 to 14.5	25							11						
										12						
										13						
										14						
		SP 14.5 to 16	16	10		15F (9:16)				15						
		DA 16 to 17.5	23	18						16						
		SP 17.5 to 19.5	14	18/18						17						
		DA 19.5 to 21	24							18						
										19						
		SP 21 to 24.5	9	18		20F (9:24)				20						
		DA 24.5 to 26	11	18						21						
										22						
										23						
										24						
		SP 26 to 29.5	8	18		25F (9:42)				25						
		DA 29.5 to 30	9	18						26						
										27						
										28						
										29						
		SP 30 to 31	19	18/18						30						

Type 11-V Portland Cement Grout

14
163
195
245
29.5

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(30) OVA/PID Field Readings (ppm)		(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(2) Project: LLNL, B419 RCRA Closure Phase II Soil Investigation	(3) Borehole/Well No.: B-419-04U
Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annular/Borehole Filler	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	Notes:	
		29.5 to 31	24	20		30F (10:00)				30				
		DA to 34.5								31			caliche, LEK.	
										32				
										33				
										34				
		SP	17	8						35	X		@ 34.5 - 36 ft, same as above, stiff, tight cream colored caliche.	
		34.5 to 36	18	18		35F (10:08)				36				
		DA to 39.5								37				
										38				
										39				
		SP	16	12						40	X		39.5'	
		39.5 to 41	15	16		40F (10:18)				41			(39.5 - 41.0) Sandy Silt, (ML) olive yellow, (2.5Y 6/4), snuff, dry, 10-13% v-f sand cream colored caliche, blk MnO2 stains to 0.25-inch LEK.	
		DA to 44.5								42				
										43				
										44				
		SP	18	18						45	X		(44.5 - 46.0) Sandy Silt (ML), yellow brn, (10YR 5/4), med dry, 20-30% v-f sand	
		44.5 to 46	19	18		45F (10:29)				46			10% SA gravels to 0.75 inch, tight, LEK.	
		DA to 49.5								47				
										48				
										49				
		SP	22	18						50	X		(49.5 - 51.0) Sandy Gravel, (GM/GW) yellow-brn (10YR 5/4), dense-hard, damp, SA SR gravels	

Type II-V Portland Cement Grout

Clayey Silt

Sandy Silt

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(38) OVA/PID Field Readings (ppm)		(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(2) Project: LLNL, B419 RCRA	(3) Borehole/Well No.: B-419-040
Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annular/Borehole Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	Notes:	
		49.5 to 51	27	↓		-5DF (10:40)				50		Sandy Gravel	Closure Phase II Soil Investigation	
		DA to 54.5'	31	↓						51			to 2 inches, 20-30% v-f-v-e sand, 10% fines, LMEK.	
										52				
										53				
										54				
		SP 54.5 to 56'	17	18		-55F (10:50)				55	⊗	Sandy Silt	54.5' (54.5 - 56.0) Sandy Silt, (ML) yel-brn (10 YR 5/4), med, dry, 10-15% v-f sand, crumble Mn-O specks, LEK.	
		DA to 59.5'	19	18						56				
			24	↓						57				
		SP 59.5 to 61'	24	18		-60F (11:06)				58		Sandy Silt		
		DA to 64.5'	29	18						59				
			36	↓						60	⊗		(59.5 - 61.0) Sandy Silt (ML), as above.	
										61				
										62				
		SP 64.5 to 66'	18	18		-65F (11:20)				63		Gravelly Sand		
		DA to 69.5'	27	18						64				
			29	↓						65	⊗		(64.5 - 66.0) Gravelly Sand (SM/SW) yellow brown (10 YR 6/6), dense, dry, v-f-v-e gravied, 20-30% SA-SR gravels tot 1/4-inch, 10% fines, MEK	
										66				
										67				
		SP 69.5 to 71.0'	21	18						68		Clayey Silt		
										69				
										70	⊗	(69.5 - 71.0) Clayey Silt, (ML) light yel-		

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Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annular/Borehole Filler	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	LLNL, B419 RCRA Closure Phase II Soil Investigation B-419-040	
		69.5' to 71.0'	31	18		-70F (11:33)				70		Clayey Silt	Notes: Brown (2.5Y 6/4), very stiff, dry, trace vf sand, Fe-O stains, LEK	
		DA to 74.5'	39	↓						71				
										72				
										73				
										74				
										75		Gravelly Sand	74.5'	
		SP 74.5' to 76.0'	27	18		-75F (11:48)				75			(74.5 - 76.0) Gravelly Sand, (SM/SW) yel-brn (10YR 5/4), dense, dry, vf-vc grained, 10-20% SA-SR gravels to 2" inches, 10% fines, LEK.	
		DA to 79.5'	35	18						76				
			41	↓						77				
										78				
										79				
										80		Silty Clay	79.5'	
		SP 79.5' to 81.0'	19	18		-80F (12:02)				80			(79.5 - 81.0) Silty Clay (CL), brn-yellow (10YR 6/6), very stiff, dry, Mn-O specks, trace vf sand, LEK.	
		DA to 84.5'	33	18						81				
			40	↓						82			8/30/2011, stop drilling @ 81'	
										83			8/31/2011, start drilling from 81' to 106'	
										84				
										85		Sandy Silt	@ 84.5 ft, light yellow brown (10YR 6/4)	
		SP 84.5' to 86.0'	14	18		-85F (8:45)				85				
			22	18		-DUP-				86			86.0'	
		SP 86.0' to 87.5'	29	↓		-85F (8:54)				86			(86.0 - 87.5) Sandy Silt (ML) light yel-brn (10YR 6/4) med, damp, 20-30% vf-f sand, LEK.	
			13	18						87				
			20	18						88				
		DA to 89.5'	26	↓						89				
										90			(89.5 - 91.0) Sandy Silt (ML), as above	

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(30) OVA/PID Field Readings (ppm)		(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(2) Project:	(3) Borehole/Well No.:
Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annulus/Borehole Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	Notes:	
		90' to 91'	18	13		90F (9:05)				90			LLNL, B419 RCRA Closure Phase II Soil Investigation	B-419-040
		DA to 94.5'								91			Sandy Silt (ML), cont'd	
										92				
										93				
										94				
		SP 94.5' to 96'	15	16		95F (9:15)				95	X		(94.5-96.0) Clayey Silt (ML), light yellow-brown (10YR 6/4), med, moist, crumbles, Mn-O specks, LEK	94.5'
		DA to 99.5'								96				
										97				
										98				
										99				
		SP 99.5' to 101'	11	13		100F (9:25)				100	X		@99.5ft, same as at 94.5ft. Driller indicates moisture/wet outside of sampler @ 90-100ft	
		DA to 104.5'								101				
										102				
										103				
										104				
		SP 104.5' to 106'	12	13		105F (9:37)				105	X		(104.5-106.0) Gravelly Sand, (SM/SW) yellow brown (10YR 5/6), med, moist, vf-vc grained 15-25% SA SR gravels to 3/4 inches, 10-15% clayey fines, L-MEK.	104.5'
										106				
										107				
										108				
										109				
										110				
										110				

T.D. = 106.0ft

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Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annulus/Borehole Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	LLNL, B419	B-419-041
		DA to 14.0'	30			-10F (8.54)				10			RCRA Closure Phase II Site Investigation	
										11				
										12				
										13				
		SP 14'-15.5'	13	18						14				
			22	19						15				
		DA to 19'	26			-15F (9.05)				16				
										17				
										18				
		SP 19'-20.5'	14	18						19				
			19	19						20				
			20			-20F (9.10)				21				
		SP 20.5'-22'	15	18		-DUP				22				
			21	19		20F (9.18)				23				
		DA to 24'	27							24				
										25				
		SP 24'-25.5'	13	18						26				
			17	19						27				
			19			-25F (9.27)				28				
		DA to 29'								29				
										30				
		SP 29'-30.5'	13	18										
			18	19										

Gravelly Sand

Clayey Silt

Silty Sand

Clayey Silt

Type II - V Portland Cement Grout

Notes: vs -ve grained, 25-35% gravels, to 3/4-inch, 10% fines, LEK-M.

(14-15.5), same as at 9-10.5 ft.

(19-21.5) Clayey Silt (ML), light yellow brown (10YR 6/4), firm, damp, low plasticity, LEK.

(24-25.5) Silty Sand (SM), light yellow brown, (10YR 6/4), loose, dry, vs -f grained, 10-15% silty fines, L-MEK.

(29-30.5) Clayey Silt (ML), yellow/brown (10YR 5/6), firm, dry, low plasticity, tight.

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Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annulus/Borehole Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	LLNL, B419 RORA	B-419-041
		DA to 34'	20			-30F (9.35)				30			Closure Phase II Soil Investigation	
										31				Notes: trace SR gravels to 1/2 inch, LEK.
										32				
										33				
		SP 34L 35S	11 15	18 18						34				
		DA to 39'				-35F (9.50)				35				(34-35.5) Clayey Silt (ML) light yellow-brn (2.5Y 6/4) firm, dry, low plasticity, calcic (cream-gray) deposits, LEK, crumbles.
										36				
										37				
										38				
		SP 39L 40S	18 22	18 18						39				
		DA to 44'				-40F (9.58)				40				(39-40.5) Sandy Silt (ML) light olive-brown (2.5Y 5/6), firm, damp 15-25% sand crumbles, some plasticity, LEK.
										41				
										42				
										43				
		SP 44L 45S	19 27	18 18						44				
		DA to 49'				-45F 10:10				45				(44-45.5) Gravelly Sand, (5M/50) yel-brn (10YR 5/6), dense, damp, vt-vc grained, 20-30% SA-SR gravels to 1.5 inches, 10% fines, 2-MEK.
										46				
										47				
										48				
		SP 49L 50S	19 21	18 18						49				(49.-50.5) Same as at 44-45.5ft, gravel up to 2 inches.
										50				

Type II - V Portland Cement Grout

Clayey Silt.

Sandy Silt

Gravelly Sand

----- = Approx. Contact; // // // // = Gradational Contact; @ = at; _____ = Definite Contact; 1 K = primary conductivity; 2 K = secondary conductivity due to fracturing, mineralization, etc.; A = angular; bl = blue; blk = black; brn = brown/brownish; c = coarse; calc = calcite; CIF = coring induced fracture; cmt = cemented; DA = Drill Ahead; def = deformation; DF = drilling fluid (mud); dk = dark; E = estimated; f = fine; FeOx = iron oxide; grn = green/greenish; gry = gray/grayish; H = high; HF = healed fracture; HIF = handling induced fracture; ind = indurated; K = Hydraulic conductivity; L = low; lt = light; m = medium; mln = mineralization; MnO2 = manganese oxide; mod = moderate; NF = natural fracture; NR = No Recovery; P = plasticity; PC = punch core; ppm = parts per million; qtz = quartz; R = rounded; RC = rock core; RQD = rock quality description; rx w/HCl = reaction with hydrochloric acid; S = sub; SA = subangular; soft sed = soft sediment deformation; SR = subrounded; SS = split spoon; v = very; w = with; x-beds = cross beds; ylw = yellow/yellowish.

(30) OVA/PID Field Readings (ppm)		(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(2) Project:	(3) Borehole/Well No
Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annular/Borehole Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	LLNL, B419 RCRA Closure Phase II Soil Investigation	B-419-041
		↓	32	↓	-50F			↑		50				
		DA to 54'								51				
										52				
										53				
		↓								54				
		SP 54L	17	18						54				
		55S	23	12						55			@54ft, same as above with 35-40% SA-SR gravels to 1.5 inch.	
		↓	27	↓	-55F					56				
		DA to 59'								57				
										58				
		↓								59				
		SP 59L	15	18						59				
		60S	21	18						60			@59ft, Gravelly Sand, as above, 15-25% SA-SR gravels to 3/4-inch.	
		↓	31	↓	-60F					61				
		DA to 64'								62				
										63				
		↓								64				
		SP 64L	15	18						64				
		65S	22	18						65			@64ft, Gravelly Sand, as above	
		↓	23	↓	-65F					66				
		DK 22								66				9/6/2011 Stop @ 70'
		to 69'								67				
										68				
		↓								69				
		SP 69L	17	18						69				
		70S	13	18						70			(69-70.1) same as above with 10-20% SA-SR gravels to 1.5 inch.	

Type II - V Portland Cement Grout

Gravelly Sand

..... = Approx. Contact; // // // // = Gradational Contact; @ = at; _____ = Definite Contact; 1 K = primary conductivity; 2 K = secondary conductivity due to fracturing, mineralization, etc.; A = angular; bl = blue; blk = black; brn = brown/brownish; c = coarse; calc = calcite; CIF = coring induced fracture; cmt = cemented; DA = Drill Ahead; def m = deformation; DF = drilling fluid (mud); dk = dark; E = estimated; f = fine; FeOx = iron oxide; grn = green/greenish; gry = gray/grayish; H = high; HF = healed fracture; HIF = handling induced fracture; ind = indurated; K = Hydraulic conductivity; L = low; lt = light; m = medium; min = mineralization; MnO2 = manganese oxide; mol = molten; NF = natural fracture; NR = No Recovery; P = plasticity; PC = punch core; ppm = parts per million; qtz = quartz; R = rounded; RC = rock core; RQD = rock quality description; rx w/HCl = reaction with hydrochloric acid; S = sub, SA = subangular; soft sed = soft sediment deformation, SR = subrounded; SS = split spoon; v = very; w = with; x-beds = cross beds; ylw = yellow/yellowish.

(30) OVA/PID Field Readings (ppm)		(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(2) Project:	(3) Borehole/Well No.
Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Co	Sample ID	Analysis	Well Annular/Beneath Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	LLNL, B419 RCRA Closure Phase II Soil Investigation	
		↓	19	↓		-70F (9:07)				70			Notes: 70.1'	
		SP 70.5' - 72'	15	18						71			(70.1 - 70.5) Clayey Silt (ML), yellow brown (10YR 6/5), shd, dry, tight, trace sand, Mn-O specks, LEK.	
		↓	18	18						72				
		↓	19	↓						73				
		DA to 74'								74				
		↓								75				
		SP 74' - 75.5'	16	18						75			(74 - 75.5) Clayey Silt (ML), brown-yellow (10YR 6/6), firm, dry, crumbles, Mn-O specks low plasticity, LEK.	
		↓	18	18						76				
		DA to 79'	20	↓		-75F (9:18)				76				
		↓								77				
		↓								78				
		↓								79				
		SP 79' - 80.5'	10	18						80			(79 - 80.5) Clayey Silt (ML) as above.	
		↓	13	18						81				
		SP 80.5' - 82'	13	18		-80F (9:30) -DUR- 80F (9:35)				81				
		↓	16	18						82				
		DA to 84'	20	↓						82				
		↓								83				
		↓								84				
		SP 84' - 85.5'	13	18						85			(84 - 85.5) Clayey Silt (ML) light yellow brown (2.5Y 6/4), firm, damp, low plasticity LEK.	
		↓	15	18						85				
		↓	17	↓		-85F (9:43)				86				
		DA to 89'								87				
		↓								88				
		↓								89				
		SP 89' - 90.5'	9	18						90			(89 - 90.5) Clayey Silt (ML) light yellow brown (2.5Y 6/4), firm, damp, tight, trace SA gravels	
		↓	12	18						90				

Type II - Portland Cement Grout

Clayey Silt

----- = Approx. Contact; // = Gradational Contact; ⊕ = at; _____ = Definite Contact; 1 K = primary conductivity; 2 K = secondary conductivity due to fracturing, mineralization, etc.; A = angular; bl = blue; blk = black; brn = brown/brownish; c = coarse; calc = calcite; CIF = coring induced fracture; cmt = cemented; DA = Drill Ahead; def = deformation; DF = drilling fluid (mud); dk = dark; E = estimated; f = fine; FeOx = iron oxide; gm = green/greenish; gry = gray/grayish; H = high; HF = healed fracture; HIF = handling induced fracture; ind = indurated; K = Hydraulic conductivity; L = low; lt = light; m = medium; mln = mineralization; MnO2 = manganese oxide; mod = moderate; NF = natural fracture; NR = No Recovery; P = plasticity; PC = punch core; ppm = parts per million; qtz = quartz; R = rounded; RC = rock core; RQD = rock quality description; rx w/HCl = reaction with hydrochloric acid; S = sub; SA = subangular; soft sed = soft sediment deformation; SR = subrounded; SS = split spoon; v = very; w = with; x-beds = cross beds; ylw = yellow/yellowish.

(30) OVA/PID Field Readings (ppm)		(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(2) Project:	(3) Borehole/Well No.:
Work Area	Soil/Rock	Sampler Type/Depth	Blows 6 inches	Inches Recovered/Inches Driven	Sample Condition/RQD	Sample ID	Analysis	Well Annulus/Borehole Filter	Well Casing	Depth in Feet	Recovery/Sample Loc.	Contact	LLNL, B419 RCRA Closure Phase II Site Investigation.	B-419-041
		DA to 94'	16			-90F (A:55)		Type II-V Portland Cement Grout		90				
										91			to 1/2 inch, LEK.	
										92				
										93				
		SP 94'-95.5'	11 13	18 18						94	⊗		94'	
		DA to 99'	19			-95F (10:11)				95			(94-95.5) Silt (ML) light brown-yellow (2.5Y 6/4), firm, moist, low plasticity, LEK.	
										96				
										97				
										98				
		SP 99'-100.5'	9 17	18 18						99	⊗		99'	
			20			-100F (10:24)				100			(99-100.5) Clayey Silt (ML) light olive brown (2.5Y 5/4), firm, moist, tight, low plasticity, Mn=O specks, LEK.	
										101				
										102			T.D. = 100.5ft	9/7/11 @ 10:00 AM
										103				
										104				
										105				
										106				
										107				
										108				
										109				
										110				

Building 419 Soil Sample Results

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background	
									Industrial Screening Level (mg/kg)	419 Background Screening Values	established (Y/N)	Above PRG (Y/N)
B-419-001	9-Aug-11	B-419-001-1F	SO	1	Diesel Fuel	5.9	mg/kg		180	NE	N	N
B-419-001	9-Aug-11	B-419-001-1F	SO	1	Mercury	0.26	mg/kg		43	0.0759	Y	N
B-419-001	9-Aug-11	B-419-001-1F	SO	1	Tritium	102	pCi/g		1.27	0.106	Y	Y
B-419-001	9-Aug-11	B-419-001-2F	SO	2	Selenium	0.62	mg/kg		5,100	0.55	Y	N
B-419-001	9-Aug-11	B-419-001-2F	SO	2	Tritium	62.7	pCi/g		1.27	0.106	Y	Y
B-419-001	9-Aug-11	B-419-001-5F	SO	5	Mercury	0.11	mg/kg		43	0.0759	Y	N
B-419-001	9-Aug-11	B-419-001-5F	SO	5	Tritium	18.4	pCi/g		1.27	0.106	Y	Y
B-419-001	9-Aug-11	B-419-001-10F	SO	10	Mercury	0.078	mg/kg		43	0.0759	Y	N
B-419-001	9-Aug-11	B-419-001-10F	SO	10	Tritium	3.93	pCi/g		1.27	0.106	Y	Y
B-419-001	9-Aug-11	B-419-001-15F	SO	15	Tritium	1.49	pCi/g		1.27	0.106	Y	Y
B-419-002	10-Aug-11	B-419-002-1F	SO	1	Mercury	1.1	mg/kg	L	43	0.0759	Y	N
B-419-002	10-Aug-11	B-419-002-1F	SO	1	Tritium	117	pCi/g		1.27	0.106	Y	Y
B-419-002	10-Aug-11	B-419-002-2F	SO	2	Tritium	96	pCi/g		1.27	0.106	Y	Y
B-419-002	10-Aug-11	B-419-002-5F	SO	5	Mercury	0.12	mg/kg	L	43	0.0759	Y	N
B-419-002	10-Aug-11	B-419-002-5F	SO	5	Tritium	14.3	pCi/g		1.27	0.106	Y	Y
B-419-002	10-Aug-11	B-419-002-10F	SO	10	Mercury	0.079	mg/kg	L	43	0.0759	Y	N
B-419-002	10-Aug-11	B-419-002-10F	SO	10	Tritium	59.2	pCi/g		1.27	0.106	Y	Y
B-419-002	10-Aug-11	B-419-002-15F	SO	15	Tritium	141	pCi/g		1.27	0.106	Y	Y
B-419-003	9-Aug-11	B-419-003-1F	SO	1	Mercury	0.1	mg/kg		43	0.0759	Y	N
B-419-003	9-Aug-11	B-419-003-1F	SO	1	Tritium	25.5	pCi/g		1.27	0.106	Y	Y
B-419-003	9-Aug-11	B-419-003-2F	SO	2	Mercury	0.21	mg/kg		43	0.0759	Y	N
B-419-003	9-Aug-11	B-419-003-2F	SO	2	Tritium	21.1	pCi/g		1.27	0.106	Y	Y
B-419-003	9-Aug-11	B-419-003-5F	SO	5	Mercury	0.29	mg/kg		43	0.0759	Y	N
B-419-003	9-Aug-11	B-419-003-5F	SO	5	Tritium	89	pCi/g		1.27	0.106	Y	Y
B-419-003	9-Aug-11	B-419-003-9.5F	SO	9.5	Mercury	0.11	mg/kg		43	0.0759	Y	N
B-419-003	9-Aug-11	B-419-003-9.5F	SO	9.5	Tritium	21.9	pCi/g		1.27	0.106	Y	Y
B-419-003	9-Aug-11	B-419-003-15F	SO	15	Tritium	34.6	pCi/g		1.27	0.106	Y	Y
B-419-004	29-Aug-11	B-419-004-1F	SO	1	Mercury	0.67	mg/kg	O	43	0.0759	Y	N
B-419-004	29-Aug-11	B-419-004-1F	SO	1	Selenium	0.59	mg/kg		5,100	0.55	Y	N
B-419-004	29-Aug-11	B-419-004-1F	SO	1	Gross alpha	3.5	pCi/g		NE	3.38	Y	N
B-419-004	29-Aug-11	B-419-004-1F	SO	1	Tritium	100	pCi/g	J	1.27	0.106	Y	Y
B-419-004	29-Aug-11	B-419-004-1F	SO	1	PCB 1248	350	ug/kg	D	740	NE	N	N
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Beryllium	5	mg/kg		2,000	0.55	Y	N
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Lead	99	mg/kg		800	14.3	Y	N
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Mercury	7.3	mg/kg	O	43	0.0759	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Selenium	0.7	mg/kg		5,100	0.55	Y	N
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Barium	1	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Barium	7.7	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Beryllium	0.15	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Chromium	0.36	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Cobalt	0.17	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Copper	0.31	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Lead	0.063	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Lead	1.4	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Mercury	0.0023	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Mercury	0.01	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Nickel	0.29	mg/L	B	NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Vanadium	0.23	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Zinc	0.97	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Gross alpha	11.5	pCi/g		NE	3.38	Y	N
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Gross beta	6.5	pCi/g		NE	4.47	Y	N
B-419-004	29-Aug-11	B-419-004-2F	SO	2	Tritium	358	pCi/g	J	1.27	0.106	Y	Y
B-419-004	29-Aug-11	B-419-004-2F	SO	2	PCB 1248	310	ug/kg	D	740	NE	N	N
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Beryllium	1.3	mg/kg		2,000	0.55	Y	N
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Lead	22	mg/kg	D	800	14.3	Y	N
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Mercury	3.1	mg/kg	O	43	0.0759	Y	N
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Barium	0.88	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Barium	9.3	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Chromium	0.51	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Cobalt	0.34	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Copper	0.45	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Lead	0.47	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Nickel	0.67	mg/L	B	NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Vanadium	0.43	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Zinc	0.75	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Gross alpha	5.5	pCi/g		NE	3.38	Y	N
B-419-004	29-Aug-11	B-419-004-5F	SO	5	Tritium	646	pCi/g	J	1.27	0.106	Y	Y
B-419-004	29-Aug-11	B-419-004-10F	SO	10	Lead	19	mg/kg	D	800	14.3	Y	N
B-419-004	29-Aug-11	B-419-004-10F	SO	10	Mercury	0.27	mg/kg	O	43	0.0759	Y	N
B-419-004	29-Aug-11	B-419-004-10F	SO	10	Gross alpha	5.7	pCi/g		NE	3.38	Y	N
B-419-004	29-Aug-11	B-419-004-10F	SO	10	Gross beta	4.8	pCi/g		NE	4.47	Y	N
B-419-004	29-Aug-11	B-419-004-10F	SO	10	Tritium	1,920	pCi/g	J	1.27	0.106	Y	Y
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Cadmium	0.66	mg/kg		800	0.55	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg		
									Industrial Screening Level (mg/kg)	419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Chromium	49	mg/kg	O	1,500,000 (1)	48.9	Y	N
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Lead	160	mg/kg		800	14.3	Y	N
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Mercury	0.49	mg/kg	O	43	0.0759	Y	N
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Thallium	1.2	mg/kg		100	1.1	Y	N
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Barium	0.89	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Barium	8.4	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Chromium	0.4	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Cobalt	0.13	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Copper	0.43	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Lead	0.4	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Lead	11	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Nickel	0.21	mg/L	B	NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Vanadium	0.18	mg/L		NA	NA	NA	NA
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Gross alpha	3.9	pCi/g		NE	3.38	Y	N
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Tritium	554	pCi/g	J	1.27	0.106	Y	Y
B-419-004	29-Aug-11	B-419-004-15F	SO	15	Tetrachloroethen	5.1	ug/kg		2,600	NE	N	N
B-419-005	9-Aug-11	B-419-005-1F	SO	1	Tritium	11.5	pCi/g		1.27	0.106	Y	Y
B-419-005	9-Aug-11	B-419-005-1F	SO	1	Methylene	7.4	ug/kg		53.0	NE	N	N
B-419-005	9-Aug-11	B-419-005-2F	SO	2	Mercury	0.12	mg/kg		43	0.0759	Y	N
B-419-005	9-Aug-11	B-419-005-DUP-2F	SO	2	Mercury	0.12	mg/kg		43	0.0759	Y	N
B-419-005	9-Aug-11	B-419-005-DUP-2F	SO	2	Tritium	9.7	pCi/g		1.27	0.106	Y	Y
B-419-005	9-Aug-11	B-419-005-2F	SO	2	Tritium	10.9	pCi/g		1.27	0.106	Y	Y
B-419-005	9-Aug-11	B-419-005-5F	SO	5	Mercury	0.35	mg/kg		43	0.0759	Y	N
B-419-005	9-Aug-11	B-419-005-5F	SO	5	Tritium	313	pCi/g		1.27	0.106	Y	Y
B-419-005	9-Aug-11	B-419-005-5F	SO	5	PCB 1254	56	ug/kg		740	NE	N	N
B-419-005	9-Aug-11	B-419-005-10F	SO	10	Mercury	0.37	mg/kg		43	0.0759	Y	N
B-419-005	9-Aug-11	B-419-005-10F	SO	10	Gross alpha	4.1	pCi/g		NE	3.38	Y	N
B-419-005	9-Aug-11	B-419-005-10F	SO	10	Tritium	218	pCi/g		1.27	0.106	Y	Y
B-419-005	9-Aug-11	B-419-005-10F	SO	10	PCB 1254	100	ug/kg		740	NE	N	N
B-419-005	9-Aug-11	B-419-005-15F	SO	15	Mercury	0.13	mg/kg		43	0.0759	Y	N
B-419-005	9-Aug-11	B-419-005-15F	SO	15	Tritium	258	pCi/g		1.27	0.106	Y	Y
B-419-005	9-Aug-11	B-419-005-15F	SO	15	PCB 1254	62	ug/kg		740	NE	N	N
B-419-006	8-Aug-11	B-419-006-1F	SO	1	Selenium	0.58	mg/kg		5,100	0.55	Y	N
B-419-006	8-Aug-11	B-419-006-1F	SO	1	Tritium	52.1	pCi/g		1.27	0.106	Y	Y
B-419-006	8-Aug-11	B-419-006-2F	SO	2	Selenium	0.58	mg/kg		5,100	0.55	Y	N
B-419-006	8-Aug-11	B-419-006-2F	SO	2	Tritium	110	pCi/g		1.27	0.106	Y	Y

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-006	8-Aug-11	B-419-006-5F	SO	5	Thallium	1.2	mg/kg		100	1.1	Y	N
B-419-006	8-Aug-11	B-419-006-5F	SO	5	Tritium	234	pCi/g		1.27	0.106	Y	Y
B-419-006	8-Aug-11	B-419-006-10F	SO	10	Mercury	0.076	mg/kg		43	0.0759	Y	N
B-419-006	8-Aug-11	B-419-006-10F	SO	10	Tritium	153	pCi/g		1.27	0.106	Y	Y
B-419-006	8-Aug-11	B-419-006-15F	SO	15	Mercury	0.09	mg/kg		43	0.0759	Y	N
B-419-006	8-Aug-11	B-419-006-15F	SO	15	Tritium	55.2	pCi/g		1.27	0.106	Y	Y
B-419-007	8-Aug-11	B-419-007-1F	SO	1	Tritium	163	pCi/g		1.27	0.106	Y	Y
B-419-007	8-Aug-11	B-419-007-2F	SO	2	Tritium	307	pCi/g		1.27	0.106	Y	Y
B-419-007	8-Aug-11	B-419-007-5F	SO	5	Mercury	0.1	mg/kg		43	0.0759	Y	N
B-419-007	8-Aug-11	B-419-007-5F	SO	5	Tritium	226	pCi/g		1.27	0.106	Y	Y
B-419-007	8-Aug-11	B-419-007-10F	SO	10	Mercury	0.089	mg/kg		43	0.0759	Y	N
B-419-007	8-Aug-11	B-419-007-10F	SO	10	Tritium	343	pCi/g		1.27	0.106	Y	Y
B-419-007	8-Aug-11	B-419-007-15F	SO	15	Tritium	660	pCi/g		1.27	0.106	Y	Y
B-419-008	8-Aug-11	B-419-008-1F	SO	1	Tritium	4.05	pCi/g		1.27	0.106	Y	Y
B-419-008	8-Aug-11	B-419-008-1F	SO	1	Bis(2-	360	ug/kg		120,000	NE	N	N
B-419-008	8-Aug-11	B-419-008-2F	SO	2	Tritium	4.49	pCi/g		1.27	0.106	Y	Y
B-419-008	8-Aug-11	B-419-008-5F	SO	5	Mercury	0.11	mg/kg		43	0.0759	Y	N
B-419-008	8-Aug-11	B-419-008-5F	SO	5	Tritium	4.32	pCi/g		1.27	0.106	Y	Y
B-419-008	8-Aug-11	B-419-008-10F	SO	10	Mercury	0.092	mg/kg		43	0.0759	Y	N
B-419-008	8-Aug-11	B-419-008-10F	SO	10	Tritium	1.65	pCi/g		1.27	0.106	Y	Y
B-419-008	8-Aug-11	B-419-008-15F	SO	15	Tritium	1.15	pCi/g		1.27	0.106	Y	N
B-419-010	3-Aug-11	B-419-010-1F	SO	1	Nickel	160	mg/kg	L	20,000	70.1	Y	N
B-419-010	3-Aug-11	B-419-010-2F	SO	2	Tritium	0.47	pCi/g		1.27	0.106	Y	N
B-419-010	3-Aug-11	B-419-010-5F	SO	5	Mercury	0.1	mg/kg		43	0.0759	Y	N
B-419-010	3-Aug-11	B-419-010-5F	SO	5	Tritium	0.372	pCi/g		1.27	0.106	Y	N
B-419-010	3-Aug-11	B-419-010-10F	SO	10	Barium	940	mg/kg	L	190,000	332	Y	N
B-419-010	3-Aug-11	B-419-010-10F	SO	10	Cadmium	1.1	mg/kg		800	0.55	Y	N
B-419-010	3-Aug-11	B-419-010-10F	SO	10	Molybdenum	1.7	mg/kg		5,100	1.1	Y	N
B-419-010	3-Aug-11	B-419-010-10F	SO	10	Nickel	140	mg/kg	L	20,000	70.1	Y	N
B-419-011	3-Aug-11	B-419-011-1F	SO	1	Tritium	1.33	pCi/g		1.27	0.106	Y	Y
B-419-011	3-Aug-11	B-419-011-2F	SO	2	Tritium	1.7	pCi/g		1.27	0.106	Y	Y
B-419-011	3-Aug-11	B-419-011-5F	SO	5	Mercury	0.076	mg/kg		43	0.0759	Y	N
B-419-011	3-Aug-11	B-419-011-5F	SO	5	Tritium	1.07	pCi/g		1.27	0.106	Y	N
B-419-011	3-Aug-11	B-419-011-10F	SO	10	Mercury	0.089	mg/kg		43	0.0759	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-011	3-Aug-11	B-419-011-DUP-10F	SO	10	Mercury	0.097	mg/kg		43	0.0759	Y	N
B-419-011	3-Aug-11	B-419-011-10F	SO	10	Tritium	0.332	pCi/g		1.27	0.106	Y	N
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Chromium	230	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Nickel	170	mg/kg	L	20,000	70.1	Y	N
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Barium	0.97	mg/L		NA	NA	NA	NA
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Barium	10	mg/L		NA	NA	NA	NA
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Cobalt	0.28	mg/L		NA	NA	NA	NA
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Copper	0.16	mg/L		NA	NA	NA	NA
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Lead	0.088	mg/L		NA	NA	NA	NA
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Nickel	0.45	mg/L	B	NA	NA	NA	NA
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Vanadium	0.18	mg/L		NA	NA	NA	NA
B-419-011	3-Aug-11	B-419-011-15F	SO	15	Zinc	2.3	mg/L		NA	NA	NA	NA
B-419-012	28-Sep-10	B-419-012-1F	SO	1	Chromium	54	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-012	28-Sep-10	B-419-012-1F	SO	1	Diesel Fuel	360	mg/kg	D	180	NE	N	Y
B-419-012	28-Sep-10	B-419-012-1F	SO	1	Molybdenum	4.2	mg/kg		5,100	1.1	Y	N
B-419-012	28-Sep-10	B-419-012-1F	SO	1	Methylene	67	ug/L	DB	NA	NA	NA	NA
B-419-012	28-Sep-10	B-419-012-11F	SO	11	Barium	640	mg/kg		190,000	332	Y	N
B-419-012	28-Sep-10	B-419-012-11F	SO	11	Mercury	0.077	mg/kg		43	0.0759	Y	N
B-419-013	2-Aug-11	B-419-013-1F	SO	1	Tritium	0.314	pCi/g		1.27	0.106	Y	N
B-419-013	2-Aug-11	B-419-013-2F	SO	2	Tritium	0.257	pCi/g		1.27	0.106	Y	N
B-419-013	2-Aug-11	B-419-013-5F	SO	5	Mercury	0.14	mg/kg		43	0.0759	Y	N
B-419-013	2-Aug-11	B-419-013-10F	SO	10	Mercury	0.076	mg/kg		43	0.0759	Y	N
B-419-013	2-Aug-11	B-419-013-15F	SO	15	Tritium	0.84	pCi/g		1.27	0.106	Y	N
B-419-014	3-Aug-11	B-419-014-1F	SO	1	Hexavalent	3.5	mg/kg	D	5.6	2.2	Y	N
B-419-014	3-Aug-11	B-419-014-1F	SO	1	Tritium	1.3	pCi/g		1.27	0.106	Y	Y
B-419-014	3-Aug-11	B-419-014-2F	SO	2	Lead	20	mg/kg	D	800	14.3	Y	N
B-419-014	3-Aug-11	B-419-014-2F	SO	2	Tritium	1.05	pCi/g		1.27	0.106	Y	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Arsenic	8.6	mg/kg		1.6	7.59	Y	Y
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Chromium	760	mg/kg		1,500,000 (3)	48.9	Y	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Copper	180	mg/kg		41,000	35.8	Y	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Diesel Fuel	23	mg/kg		180	NA	N	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Gasoline fingerpri	3	mg/kg		180	NA	N	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Lead	15	mg/kg	BD	800	14.3	Y	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Molybdenum	85	mg/kg		5,100	1.1	Y	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Nickel	440	mg/kg		20,000	70.1	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Selenium	12	mg/kg	D	5,100	0.55	Y	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Barium	0.59	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Barium	2.9	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Chromium	0.42	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Cobalt	0.11	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Copper	1.4	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Lead	0.065	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Molybdenum	0.34	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Nickel	0.69	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Vanadium	0.16	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Zinc	0.58	mg/L		NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Tritium	0.382	pCi/g		1.27	0.106	Y	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	1,2,4-Trimethylbe	440	ug/kg		260,000	NA	N	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	1,3,5-Trimethylbe	130	ug/kg		10,000,000	NA	N	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Naphthalene	140	ug/kg		18,000	NA	N	N
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	1,2,4-	17	ug/L	D	NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Methylene chlorid	210	ug/L	BD	NA	NA	NA	NA
B-419-014	21-Sep-11	B-419-014-4.5F	OT	4.5	Naphthalene	12	ug/L	D	NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-1F	SO	1	Chromium	55	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-014A	10-Aug-11	B-419-014A-1F	SO	1	Copper	36	mg/kg		41,000	35.8	Y	N
B-419-014A	10-Aug-11	B-419-014A-1F	SO	1	Nickel	160	mg/kg		20,000	70.1	Y	N
B-419-014A	10-Aug-11	B-419-014A-1F	SO	1	Tritium	0.68	pCi/g		1.27	0.106	Y	N
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Chromium	64	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-014A	10-Aug-11	B-419-014A-DUP-2F	SO	2	Chromium	72	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Cobalt	18	mg/kg		300	16.7	Y	N
B-419-014A	10-Aug-11	B-419-014A-DUP-2F	SO	2	Cobalt	19	mg/kg		300	16.7	Y	N
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Nickel	200	mg/kg		20,000	70.1	Y	N
B-419-014A	10-Aug-11	B-419-014A-DUP-2F	SO	2	Nickel	200	mg/kg		20,000	70.1	Y	N
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Barium	0.68	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Barium	6.9	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Chromium	0.36	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Cobalt	0.47	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Copper	0.64	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Lead	0.058	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Nickel	2.2	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Vanadium	0.14	mg/L		NA	NA	NA	NA
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Zinc	0.21	mg/L		NA	NA	NA	NA

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-014A	10-Aug-11	B-419-014A-DUP-2F	SO	2	Tritium	0.85	pCi/g		1.27	0.106	Y	N
B-419-014A	10-Aug-11	B-419-014A-2F	SO	2	Tritium	1.01	pCi/g		1.27	0.106	Y	N
B-419-014A	10-Aug-11	B-419-014A-DUP-2F	SO	2	Bis(2-	5900	ug/kg		120,000	NE	N	N
B-419-014A	10-Aug-11	B-416-014A-5F	SO	5	Tritium	0.365	pCi/g		1.27	0.106	Y	N
B-419-015A	15-Aug-11	B-419-015A-1F	SO	1	Barium	360	mg/kg	L	190,000	332	Y	N
B-419-015A	15-Aug-11	B-419-015A-1F	SO	1	Zinc	150	mg/kg	L	310,000	69.8	Y	N
B-419-015A	15-Aug-11	B-419-015A-2F	SO	2	Barium	380	mg/kg	L	190,000	332	Y	N
B-419-015A	15-Aug-11	B-419-015A-2F	SO	2	Zinc	140	mg/kg	L	310,000	69.8	Y	N
B-419-015A	15-Aug-11	B-419-015A-2F	SO	2	Tritium	1.19	pCi/g	L	1.27	0.106	Y	N
B-419-015A	15-Aug-11	B-419-015A-5F	SO	5	Mercury	0.077	mg/kg		43	0.0759	Y	N
B-419-015A	15-Aug-11	B-419-015A-5F	SO	5	Tritium	0.88	pCi/g	L	1.27	0.106	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Arsenic	37	mg/kg		1.6	7.59	Y	Y
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Barium	1000	mg/kg	L	190,000	332	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Chromium	230	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Cobalt	60	mg/kg		300	16.7	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Copper	120	mg/kg		41,000	35.8	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Lead	44	mg/kg		800	14.3	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Nickel	280	mg/kg		20,000	70.1	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Vanadium	180	mg/kg		5,200	43.7	Y	N
B-419-015A	15-Aug-11	B-419-015A-10F	SO	10	Zinc	280	mg/kg	L	310,000	69.8	Y	N
B-419-015A	15-Aug-11	B-419-015A-15F	SO	15	Tritium	0.426	pCi/g	L	1.27	0.106	Y	N
B-419-016A	10-Aug-11	B-419-016A-1F	SO	1	Lead	23	mg/kg		800	14.3	Y	N
B-419-016A	10-Aug-11	B-419-016A-1F	SO	1	Tritium	0.444	pCi/g		1.27	0.106	Y	N
B-419-016A	10-Aug-11	B-419-016A-2F	SO	2	Tritium	2.39	pCi/g		1.27	0.106	Y	Y
B-419-016A	10-Aug-11	B-419-016A-5F	SO	5	Tritium	2.2	pCi/g		1.27	0.106	Y	Y
B-419-016A	10-Aug-11	B-419-016A-10F	SO	10	Arsenic	11	mg/kg		1.6	7.59	Y	Y
B-419-016A	10-Aug-11	B-419-016A-10F	SO	10	Mercury	0.085	mg/kg	L	43	0.0759	Y	N
B-419-016A	10-Aug-11	B-419-016A-10F	SO	10	Tritium	0.336	pCi/g		1.27	0.106	Y	N
B-419-017	1-Aug-11	B-419-017-0.8F	SO	0.8	Tritium	0.55	pCi/g		1.27	0.106	Y	N
B-419-017	1-Aug-11	B-419-017-4.5F	SO	4.5	Tritium	0.64	pCi/g		1.27	0.106	Y	N
B-419-017	1-Aug-11	B-419-017-10F	SO	10	Tritium	0.419	pCi/g		1.27	0.106	Y	N
B-419-017	1-Aug-11	B-419-017-15F	SO	15	Mercury	0.79	mg/kg		43	0.0759	Y	N
B-419-017	1-Aug-11	B-419-017-15F	SO	15	Tritium	1.82	pCi/g		1.27	0.106	Y	Y
B-419-017A	19-Sep-11	B-419-017A-2F	SO	2	Molybdenum	5.6	mg/kg		5,100	1.1	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-017A	19-Sep-11	B-419-017A-2F	SO	2	Tritium	1.25	pCi/g		1.27	0.106	Y	N
B-419-018	30-Sep-10	B-419-018-DUP-0F	SO	0	Chromium	70	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-018	30-Sep-10	B-419-018-DUP-0F	SO	0	Diesel Fuel	290	mg/kg	DB	180	NE	N	Y
B-419-018	30-Sep-10	B-419-018-DUP-1F	SO	1	Chromium	70	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-018	30-Sep-10	B-419-018-1F	SO	1	Chromium	93	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-018	30-Sep-10	B-419-018-DUP-1F	SO	1	Diesel Fuel	200	mg/kg	DB	180	NE	N	Y
B-419-018	30-Sep-10	B-419-018-1F	SO	1	Diesel Fuel	270	mg/kg	DB	180	NE	N	Y
B-419-018	30-Sep-10	B-419-018-DUP-1F	SO	1	Chloroform	5.5	ug/L	D	NA	NA	NA	NA
B-419-018	30-Sep-10	B-419-018-1F	SO	1	Methylene	69	ug/L	DB	NA	NA	NA	NA
B-419-018	30-Sep-10	B-419-018-DUP-1F	SO	1	Methylene	71	ug/L	DB	NA	NA	NA	NA
B-419-018	30-Sep-10	B-419-018-DUP-3F	SO	3	Chromium	51	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	Chromium	85	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-018	30-Sep-10	B-419-018-DUP-3F	SO	3	Diesel Fuel	9.2	mg/kg	B	180	NE	N	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	Diesel Fuel	26	mg/kg	B	180	NE	N	N
B-419-018	30-Sep-10	B-419-018-DUP-3F	SO	3	Mercury	0.078	mg/kg		43	0.0759	Y	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	Mercury	0.11	mg/kg		43	0.0759	Y	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	Acetone	30	ug/kg		630,000,000	NE	N	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	Benzene	24	ug/kg		5,400	NE	N	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	m- and p-Xylene	8.9	ug/kg	L	2,500,000	NE	N	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	Naphthalene	7	ug/kg		18,000	NE	N	N
B-419-018	30-Sep-10	B-419-018-3F	SO	3	Toluene	23	ug/kg		45,000,000	NE	N	N
B-419-018	30-Sep-10	B-419-018-6F	SO	6	Mercury	0.076	mg/kg		43	0.0759	Y	N
B-419-018	30-Sep-10	B-419-018-11F	SO	11	Chromium	53	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-019	27-Jul-11	B-419-019-.8F	SO	0.8	Tritium	0.215	pCi/g		1.27	0.106	Y	N
B-419-019	27-Jul-11	B-419-019-4F	SO	4	Tritium	0.75	pCi/g		1.27	0.106	Y	N
B-419-020	1-Aug-11	B-419-020-0.8F	SO	0.8	Tritium	0.61	pCi/g		1.27	0.106	Y	N
B-419-020	1-Aug-11	B-419-020-4F	SO	4	Tritium	0.472	pCi/g		1.27	0.106	Y	N
B-419-020	1-Aug-11	B-419-020-6F	SO	6	Tritium	0.87	pCi/g		1.27	0.106	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Bismuth 214	0.52	pCi/g		11,600	0.912	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Gross alpha	14.1	pCi/g	L	NE	3.38	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Gross beta	8.9	pCi/g		NE	4.47	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Lead 212	0.38	pCi/g		5,330	0.938	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Lead 214	0.42	pCi/g		65,300	0.844	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Potassium 40	7.9	pCi/g		0.265	18.4	Y	Y

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Thorium 228	0.52	pCi/g		109	0.991	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Thorium 230	0.403	pCi/g		18	0.957	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Thorium 232	0.382	pCi/g	B	17	0.983	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Tritium	9.8	pCi/g		1.27	0.106	Y	Y
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Uranium 234 and	0.42	pCi/g		25.5	0.76	Y	N
B-419-021	27-Jul-11	B-419-021-1.3F	SO	1.3	Uranium 238	0.33	pCi/g		33	0.717	Y	N
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Lead	96	mg/kg	B	800	14.3	Y	N
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Mercury	0.078	mg/kg		43	0.0759	Y	N
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Barium	0.67	mg/L		NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Barium	6.5	mg/L		NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Chromium	0.15	mg/L		NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Cobalt	0.29	mg/L		NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Copper	0.12	mg/L		NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Lead	0.069	mg/L	B	NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Nickel	0.59	mg/L		NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Selenium	0.055	mg/L	B	NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Vanadium	0.21	mg/L		NA	NA	NA	NA
B-419-021	27-Jul-11	B-419-021-4F	SO	4	Tritium	2.31	pCi/g		1.27	0.106	Y	Y
B-419-021	27-Jul-11	B-419-021-7F	SO	7	Mercury	0.085	mg/kg		43	0.0759	Y	N
B-419-021	27-Jul-11	B-419-021-7F	SO	7	Tritium	1.47	pCi/g		1.27	0.106	Y	Y
B-419-021	27-Jul-11	B-419-021-9F	SO	9	Tritium	0.55	pCi/g		1.27	0.106	Y	N
B-419-021	27-Jul-11	B-419-021-15F	SO	15	Diesel Fuel	11	mg/kg		180	NE	N	N
B-419-021	27-Jul-11	B-419-021-15F	SO	15	Tritium	0.28	pCi/g		1.27	0.106	Y	N
B-419-022	26-Jul-11	B-419-022-2F	SO	2	Selenium	0.73	mg/kg		5,100	0.55	Y	N
B-419-022	26-Jul-11	B-419-022-2F	SO	2	Tritium	0.6	pCi/g		1.27	0.106	Y	N
B-419-022	26-Jul-11	B-419-022-5F	SO	5	Selenium	0.74	mg/kg		5,100	0.55	Y	N
B-419-022	26-Jul-11	B-419-022-5F	SO	5	Tritium	0.392	pCi/g		1.27	0.106	Y	N
B-419-022	26-Jul-11	B-419-022-10F	SO	10	Selenium	0.6	mg/kg		5,100	0.55	Y	N
B-419-023	15-Aug-11	B-419-023-2F	SO	2	Selenium	0.57	mg/kg		5,100	0.55	Y	N
B-419-023	15-Aug-11	B-419-023-2F	SO	2	Tritium	0.57	pCi/g	L	1.27	0.106	Y	N
B-419-023	15-Aug-11	B-419-023-5F	SO	5	Tritium	1.33	pCi/g	L	1.27	0.106	Y	Y
B-419-023	15-Aug-11	B-419-023-15F	SO	15	Mercury	0.12	mg/kg		43	0.0759	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Beryllium	0.74	mg/kg		2,000	0.55	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Diesel Fuel	64	mg/kg		180	NE	N	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Lead	16	mg/kg	D	800	14.3	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Mercury	0.28	mg/kg		43	0.0759	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Americium 241	0.68	pCi/g	B	4.82	0.062	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Americium 241	0.77	pCi/g		4.82	0.062	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Gross alpha	9.8	pCi/g	L	NE	3.38	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Lead 212	0.49	pCi/g		5,330	0.938	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Lead 214	0.58	pCi/g		65,300	0.844	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Plutonium 238	0.268	pCi/g		14.4	0.0355	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Plutonium 239+24	2.52	pCi/g		12.5	0.046	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Potassium 40	10.3	pCi/g		0.265	18.4	Y	Y
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Thallium 208	0.33	pCi/g		33,600	0.371	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Thorium 228	0.61	pCi/g		109	0.991	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Thorium 230	0.37	pCi/g		18	0.957	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Thorium 232	0.385	pCi/g	B	17	0.983	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Tritium	14.2	pCi/g		1.27	0.106	Y	Y
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Uranium 234 and	1.26	pCi/g		25.5	0.76	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	Uranium 238	0.89	pCi/g		33	0.717	Y	N
B-419-024	16-Aug-11	B-419-024-1F	SO	1	PCB 1254	3100	ug/kg	DIJ	740	NE	N	Y
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	Beryllium	0.56	mg/kg		2,000	0.55	Y	N
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	Diesel Fuel	86	mg/kg		180	NE	N	N
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	Lead	61	mg/kg	D	800	14.3	Y	N
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	Mercury	0.6	mg/kg		43	0.0759	Y	N
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	Gross alpha	8.6	pCi/g	L	NE	3.38	Y	N
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	Tritium	11.6	pCi/g		1.27	0.106	Y	Y
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	Bis(2-	1200	ug/kg		120,000	NE	N	N
B-419-024	16-Aug-11	B-419-024-2.5F	SO	2.5	PCB 1254	6900	ug/kg	DIJ	740	NE	N	Y
B-419-024	16-Aug-11	B-419-024-5F	SO	5	Diesel Fuel	7.5	mg/kg		180	NE	N	N
B-419-024	16-Aug-11	B-419-024-5F	SO	5	Mercury	0.12	mg/kg		43	0.0759	Y	N
B-419-024	16-Aug-11	B-419-024-5F	SO	5	Tritium	5.99	pCi/g		1.27	0.106	Y	Y
B-419-024	16-Aug-11	B-419-024-5F	SO	5	Bis(2-	460	ug/kg		120,000	NE	N	N
B-419-024	16-Aug-11	B-419-024-5F	SO	5	PCB 1254	1000	ug/kg	DIJ	740	NE	N	Y
B-419-024	16-Aug-11	B-419-024-10F	SO	10	Tritium	0.7	pCi/g		1.27	0.106	Y	N
B-419-024	16-Aug-11	B-419-024-15F	SO	15	Tritium	0.391	pCi/g		1.27	0.106	Y	N
B-419-024A	22-Aug-11	B-419-024A-2F	SO	2	Tritium	4.01	pCi/g		1.27	0.106	Y	Y
B-419-024A	22-Aug-11	B-419-024A-2F	SO	2	PCB 1254	42	ug/kg		740	NE	N	N
B-419-025	28-Sep-10	B-419-025-1F	SO	1	Diesel Fuel	130	mg/kg	DBLO	180	NE	N	N
B-419-025	28-Sep-10	B-419-025-DUP-1F	SO	1	Diesel Fuel	150	mg/kg	DBLO	180	NE	N	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg		Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values	background established (Y/N)	
B-419-025	28-Sep-10	B-419-025-1F	SO	1	Methylene	67	ug/L	DB	NA	NA	NA	NA
B-419-025	28-Sep-10	B-419-025-DUP-1F	SO	1	Methylene	68	ug/L	DB	NA	NA	NA	NA
B-419-025	28-Sep-10	B-419-025-3F	SO	3	Mercury	0.1	mg/kg		43	0.0759	Y	N
B-419-025	28-Sep-10	B-419-025-DUP-3F	SO	3	Tritium	1.06	pCi/g	L	1.27	0.106	Y	N
B-419-025	28-Sep-10	B-419-025-3F	SO	3	Tritium	1.24	pCi/g	L	1.27	0.106	Y	N
B-419-025	28-Sep-10	B-419-025-6F	SO	6	Tritium	0.97	pCi/g	L	1.27	0.106	Y	N
B-419-025	28-Sep-10	B-419-025-11F	SO	11	Mercury	0.1	mg/kg		43	0.0759	Y	N
B-419-025	28-Sep-10	B-419-025-11F	SO	11	Bis(2-	800	ug/kg		120,000	NE	N	N
B-419-025	28-Sep-10	B-419-025-16F	SO	16	Diesel Fuel	21	mg/kg		180	NE	N	N
B-419-026	28-Sep-10	B-419-026-1F	SO	1	Diesel Fuel	440	mg/kg	D	180	NE	N	Y
B-419-026	28-Sep-10	B-419-026-1F	SO	1	Methylene	58	ug/L	DB	NA	NA	NA	NA
B-419-026	28-Sep-10	B-419-026-3F	SO	3	Diesel Fuel	32	mg/kg		180	NE	N	N
B-419-026	28-Sep-10	B-419-026-6F	SO	6	Arsenic	10	mg/kg		1.6	7.59	Y	Y
B-419-026	28-Sep-10	B-419-026-11F	SO	11	Mercury	0.091	mg/kg		43	0.0759	Y	N
B-419-027	29-Sep-10	B-419-027-1F	SO	1	Diesel Fuel	250	mg/kg	DB	180	NE	N	Y
B-419-027	29-Sep-10	B-419-027-1F	SO	1	Lead	27	mg/kg	D	800	14.3	Y	N
B-419-027	29-Sep-10	B-419-027-1F	SO	1	Mercury	0.093	mg/kg		43	0.0759	Y	N
B-419-027	29-Sep-10	B-419-027-1F	SO	1	Barium	5.7	mg/L	D	NA	NA	NA	NA
B-419-027	29-Sep-10	B-419-027-1F	SO	1	Lead	2.3	mg/L	D	NA	NA	NA	NA
B-419-027	29-Sep-10	B-419-027-1F	SO	1	Zinc	3.5	mg/L	D	NA	NA	NA	NA
B-419-027	29-Sep-10	B-419-027-1F	SO	1	Methylene	62	ug/L	DB	NA	NA	NA	NA
B-419-027	29-Sep-10	B-419-027-3F	SO	3	Diesel Fuel	5.8	mg/kg	B	180	NE	N	N
B-419-027	29-Sep-10	B-419-027-6F	SO	6	Mercury	0.1	mg/kg		43	0.0759	Y	N
B-419-027	29-Sep-10	B-419-027-11F	SO	11	Mercury	0.088	mg/kg		43	0.0759	Y	N
B-419-028	29-Sep-10	B-419-028-1F	SO	0	Methylene	60	ug/L	DB	NA	NA	NA	NA
B-419-028	29-Sep-10	B-419-028-1F	SO	1	Chromium	52	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-028	29-Sep-10	B-419-028-1F	SO	1	Chromium	69	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-028	29-Sep-10	B-419-028-1F	SO	1	Diesel Fuel	85	mg/kg	DBLO	180	NE	N	N
B-419-028	29-Sep-10	B-419-028-1F	SO	1	Diesel Fuel	110	mg/kg	DBLO	180	NE	N	N
B-419-028	29-Sep-10	B-419-028-1F	SO	1	Nickel	140	mg/kg	D	20,000	70.1	Y	N
B-419-028	29-Sep-10	B-419-028-1F	SO	1	Barium	4.6	mg/L	D	NA	NA	NA	NA
B-419-028	29-Sep-10	B-419-028-1F	SO	1	PCB 1254	250	ug/kg	DIJ	740	NE	N	N
B-419-028	29-Sep-10	B-419-028-1F	SO	1	Methylene	67	ug/L	DB	NA	NA	NA	NA
B-419-028	29-Sep-10	B-419-028-3F	SO	3	Chromium	70	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-028	29-Sep-10	B-419-028-3F	SO	3	Nickel	120	mg/kg	D	20,000	70.1	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg		
									Industrial Screening Level (mg/kg)	419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-028	29-Sep-10	B-419-028-DUP-3F	SO	3	Tritium	0.283	pCi/g	L	1.27	0.106	Y	N
B-419-028	29-Sep-10	B-419-028-3F	SO	3	Tritium	0.37	pCi/g	L	1.27	0.106	Y	N
B-419-028	29-Sep-10	B-419-028-6F	SO	6	Tritium	4.78	pCi/g	L	1.27	0.106	Y	Y
B-419-028	29-Sep-10	B-419-028-11F	SO	11	Mercury	0.097	mg/kg		43	0.0759	Y	N
B-419-028	29-Sep-10	B-419-028-11F	SO	11	Tritium	2.56	pCi/g	L	1.27	0.106	Y	Y
B-419-029	29-Sep-10	B-419-029-1F	SO	1	Chromium	100	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-029	29-Sep-10	B-419-029-1F	SO	1	Diesel Fuel	210	mg/kg	DBLO	180	NE	N	Y
B-419-029	29-Sep-10	B-419-029-1F	SO	1	Barium	9.3	mg/L	D	NA	NA	NA	NA
B-419-029	29-Sep-10	B-419-029-1F	SO	1	Lead	0.54	mg/L	D	NA	NA	NA	NA
B-419-029	29-Sep-10	B-419-029-1F	SO	1	Methylene	69	ug/L	DB	NA	NA	NA	NA
B-419-029	29-Sep-10	B-419-029-6F	SO	6	Diesel Fuel	360	mg/kg	DBLO	180	NE	N	Y
B-419-029	29-Sep-10	B-419-029-11F	SO	11	Mercury	0.082	mg/kg		43	0.0759	Y	N
B-419-030	30-Sep-10	B-419-030-1F	SO	1	Chromium	110	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-030	30-Sep-10	B-419-030-1F	SO	1	Diesel Fuel	140	mg/kg	DB	180	NE	N	N
B-419-030	30-Sep-10	B-419-030-1F	SO	1	Barium	8.7	mg/L	D	NA	NA	NA	NA
B-419-030	30-Sep-10	B-419-030-1F	SO	1	Methylene	58	ug/L	DB	NA	NA	NA	NA
B-419-030	30-Sep-10	B-419-030-3F	SO	3	Chromium	71	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-030	30-Sep-10	B-419-030-3F	SO	3	Diesel Fuel	20	mg/kg	B	180	NE	N	N
B-419-030	30-Sep-10	B-419-030-3F	SO	3	Mercury	0.21	mg/kg		43	0.0759	Y	N
B-419-030	30-Sep-10	B-419-030-6F	SO	6	Arsenic	9.2	mg/kg	D	1.6	7.59	Y	Y
B-419-030	30-Sep-10	B-419-030-6F	SO	6	Chromium	59	mg/kg	D	1,500,000 (1)	48.9	Y	N
B-419-030	30-Sep-10	B-419-030-6F	SO	6	Mercury	0.089	mg/kg		43	0.0759	Y	N
B-419-030	30-Sep-10	B-419-030-11F	SO	11	Mercury	0.086	mg/kg		43	0.0759	Y	N
B-419-030	30-Sep-10	B-419-030-11F	SO	11	Tritium	0.77	pCi/g		1.27	0.106	Y	N
B-419-031	17-Aug-11	B-419-031-1F	SO	1	Zinc	76	mg/kg	L	310,000	69.8	Y	N
B-419-031	17-Aug-11	B-419-031-2F	SO	2	Diesel Fuel	5.8	mg/kg		180	NE	N	N
B-419-031	17-Aug-11	B-419-031-5F	SO	5	Mercury	0.099	mg/kg		43	0.0759	Y	N
B-419-031	17-Aug-11	B-419-031-15F	SO	15	Mercury	0.11	mg/kg		43	0.0759	Y	N
B-419-032	1-Aug-11	B-419-032-0.8F	SO	0.8	Diesel Fuel	15	mg/kg		180	NE	N	N
B-419-032	1-Aug-11	B-419-032-0.8F	SO	0.8	Mercury	0.083	mg/kg		43	0.0759	Y	N
B-419-032	1-Aug-11	B-419-032-0.8F	SO	0.8	Tritium	0.5	pCi/g		1.27	0.106	Y	N
B-419-032	1-Aug-11	B-419-032-0.8F	SO	0.8	Methylene	6.3	ug/kg		53.0	NE	N	N
B-419-032	1-Aug-11	B-419-032-5F	SO	5	Tritium	0.92	pCi/g		1.27	0.106	Y	N
B-419-032	1-Aug-11	B-419-032-10F	SO	10	Nickel	100	mg/kg		20,000	70.1	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-032	1-Aug-11	B-419-032-15F	SO	15	Tritium	0.225	pCi/g		1.27	0.106	Y	N
B-419-032A	19-Sep-11	B-419-032A-2F	SO	2	Tritium	0.37	pCi/g		1.27	0.106	Y	N
B-419-033	16-Aug-11	B-419-033-1.6F	SO	1.6	Cobalt	19	mg/kg	LO	300	16.7	Y	N
B-419-033	16-Aug-11	B-419-033-1.6F	SO	1.6	Tritium	0.338	pCi/g		1.27	0.106	Y	N
B-419-033	16-Aug-11	B-419-033-2F	SO	2	Cobalt	21	mg/kg	LO	300	16.7	Y	N
B-419-033	16-Aug-11	B-419-033-2F	SO	2	Tritium	0.313	pCi/g		1.27	0.106	Y	N
B-419-034	17-Aug-11	B-419-034-1F	SO	1	Diesel Fuel	23	mg/kg		180	NE	N	N
B-419-034	17-Aug-11	B-419-034-1F	SO	1	Tetrachloroethen	5.6	ug/kg		2,600	NE	N	N
B-419-034	17-Aug-11	B-419-034-2F	SO	2	Chromium	54	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-034	17-Aug-11	B-419-034-2F	SO	2	Diesel Fuel	54	mg/kg		180	NE	N	N
B-419-034	17-Aug-11	B-419-034-2F	SO	2	Nickel	110	mg/kg		20,000	70.1	Y	N
B-419-034	17-Aug-11	B-419-034-2F	SO	2	Tritium	0.278	pCi/g		1.27	0.106	Y	N
B-419-034	17-Aug-11	B-419-034-2F	SO	2	Tetrachloroethen	5.4	ug/kg		2,600	NE	N	N
B-419-034	17-Aug-11	B-419-034-DUP-2.8F	SO	2.8	Diesel Fuel	32	mg/kg		180	NE	N	N
B-419-034	17-Aug-11	B-419-034-DUP-2.8F	SO	2.8	Tritium	0.41	pCi/g		1.27	0.106	Y	N
B-419-034	17-Aug-11	B-419-034-5F	SO	5	Mercury	0.099	mg/kg		43	0.0759	Y	N
B-419-034	17-Aug-11	B-419-034-5F	SO	5	Tritium	1.44	pCi/g		1.27	0.106	Y	Y
B-419-034	17-Aug-11	B-419-034-10F	SO	10	Tritium	1.8	pCi/g		1.27	0.106	Y	Y
B-419-034	17-Aug-11	B-419-034-15F	SO	15	Tritium	1.87	pCi/g		1.27	0.106	Y	Y
B-419-035	27-Sep-10	B-419-035-1F	SO	1	Cadmium	0.73	mg/kg		800	0.55	Y	N
B-419-035	27-Sep-10	B-419-035-1F	SO	1	Chromium	54	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-035	27-Sep-10	B-419-035-1F	SO	1	Diesel Fuel	480	mg/kg	D	180	NE	N	Y
B-419-035	27-Sep-10	B-419-035-1F	SO	1	Mercury	0.19	mg/kg	B	43	0.0759	Y	N
B-419-035	27-Sep-10	B-419-035-1F	SO	1	Nickel	140	mg/kg	LO	20,000	70.1	Y	N
B-419-035	27-Sep-10	B-419-039-3F	SO	1	Barium	11	mg/L	D	NA	NA	NA	NA
B-419-035	27-Sep-10	B-419-035-1F	SO	1	Tritium	0.213	pCi/g	L	1.27	0.106	Y	N
B-419-035	27-Sep-10	B-419-035-1F	SO	1	Methylene	50	ug/L	D	NA	NA	NA	NA
B-419-035	27-Sep-10	B-419-035-3F	SO	3	Chromium	52	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-035	27-Sep-10	B-419-035-3F	SO	3	Diesel Fuel	370	mg/kg	D	180	NE	N	Y
B-419-035	27-Sep-10	B-419-035-3F	SO	3	Nickel	110	mg/kg	LO	20,000	70.1	Y	N
B-419-035	27-Sep-10	B-419-035-3F	SO	3	Tetrachloroethen	4.4	ug/kg		2,600	NE	N	N
B-419-035	27-Sep-10	B-419-035-6F	SO	6	Mercury	0.085	mg/kg	B	43	0.0759	Y	N
B-419-035	27-Sep-10	B-419-035-11F	SO	11	Mercury	0.11	mg/kg	B	43	0.0759	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg		
									Industrial Screening Level (mg/kg)	419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-036	14-Sep-10	B-419-036-1F	SO	1	Mercury	0.43	mg/kg	B	43	0.0759	Y	N
B-419-036	14-Sep-10	B-419-036-1F	SO	1	Nickel	87	mg/kg		20,000	70.1	Y	N
B-419-036	14-Sep-10	B-419-036-1F	SO	1	PCB 1254	120	ug/kg	D	740	NE	N	N
B-419-036	14-Sep-10	B-419-036-3F	SO	3	Tritium	0.305	pCi/g		1.27	0.106	Y	N
B-419-036	14-Sep-10	B-419-036-11F	SO	11	Mercury	0.1	mg/kg	B	43	0.0759	Y	N
B-419-036	14-Sep-10	B-419-036-11F	SO	11	Selenium	0.57	mg/kg		5,100	0.55	Y	N
B-419-036	14-Sep-10	B-419-036-16F	SO	16	Tritium	0.89	pCi/g		1.27	0.106	Y	N
B-419-036A	27-Sep-10	B-419-036A-1F	SO	1	Diesel Fuel	360	mg/kg	DBLO	180	NE	N	Y
B-419-036A	27-Sep-10	B-419-036A-1F	SO	1	Methylene	51	ug/L	DB	NA	NA	NA	NA
B-419-036A	27-Sep-10	B-419-036A-3F	SO	3	Diesel Fuel	200	mg/kg	DBLO	180	NE	N	Y
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Antimony	2.9	mg/kg	EUL	410	2.2	Y	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Cadmium	0.61	mg/kg		800	0.55	Y	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Copper	170	mg/kg		41,000	35.8	Y	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Diesel Fuel	250	mg/kg	DL	180	NE	N	Y
B-419-037	23-Sep-10	B-419-037-1F	SO	1	Diesel Fuel	360	mg/kg	DL	180	NE	N	Y
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Lead	19	mg/kg	D	800	14.3	Y	N
B-419-037	23-Sep-10	B-419-037-1F	SO	1	Mercury	12	mg/kg	D	43	0.0759	Y	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Mercury	17	mg/kg	D	43	0.0759	Y	N
B-419-037	23-Sep-10	B-419-037-1F	SO	1	Molybdenum	1.5	mg/kg		5,100	1.1	Y	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Molybdenum	5	mg/kg		5,100	1.1	Y	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Nickel	110	mg/kg		20,000	70.1	Y	N
B-419-037	23-Sep-10	B-419-037-1F	SO	1	Mercury	0.034	mg/L	D	NA	NA	NA	NA
B-419-037	23-Sep-10	B-419-037-1F	SO	1	Tritium	0.216	pCi/g	J	1.27	0.106	Y	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	PCB 1254	110	ug/kg	D	740	NE	N	N
B-419-037	23-Sep-10	B-419-037-1F	SO	1	PCB 1254	110	ug/kg	D	740	NE	N	N
B-419-037	23-Sep-10	B-419-037-DUP-1F	SO	1	Methylene	42	ug/L	D	NA	NA	NA	NA
B-419-037	23-Sep-10	B-419-037-1F	SO	1	Methylene	43	ug/L	D	NA	NA	NA	NA
B-419-037	23-Sep-10	B-419-037-DUP-3F	SO	3	Diesel Fuel	6.4	mg/kg	L	180	NE	N	N
B-419-037	23-Sep-10	B-419-037-DUP-3F	SO	3	Mercury	0.2	mg/kg		43	0.0759	Y	N
B-419-037	23-Sep-10	B-419-037-3F	SO	3	Mercury	0.21	mg/kg		43	0.0759	Y	N
B-419-037	23-Sep-10	B-419-037-3F	SO	3	Tritium	3.53	pCi/g	J	1.27	0.106	Y	Y
B-419-037	23-Sep-10	B-419-037-DUP-3F	SO	3	Tritium	4.16	pCi/g	J	1.27	0.106	Y	Y
B-419-037	23-Sep-10	B-419-037-6F	SO	6	Mercury	0.13	mg/kg		43	0.0759	Y	N
B-419-037	23-Sep-10	B-419-037-6F	SO	6	Tritium	7.8	pCi/g	J	1.27	0.106	Y	Y
B-419-037	23-Sep-10	B-419-037-11F	SO	11	Mercury	0.084	mg/kg		43	0.0759	Y	N
B-419-037	23-Sep-10	B-419-037-11F	SO	11	Tritium	7.4	pCi/g	J	1.27	0.106	Y	Y

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Beryllium	0.69	mg/kg		2,000	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Lead	220	mg/kg	O	800	14.3	Y	N
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Mercury	0.65	mg/kg	O	43	0.0759	Y	N
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Barium	0.81	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Barium	11	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Chromium	0.38	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Cobalt	0.4	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Copper	0.23	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Lead	0.28	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Lead	1.5	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Nickel	0.41	mg/L	B	NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Vanadium	0.47	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Zinc	1.7	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Gross alpha	5.6	pCi/g		NE	3.38	Y	N
B-419-038	24-Aug-11	B-419-038-1F	SO	1	Tritium	390	pCi/g	J	1.27	0.106	Y	Y
B-419-038	24-Aug-11	B-419-038-1F	SO	1	PCB 1248	130	ug/kg		740	NE	N	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Beryllium	29	mg/kg		2,000	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Cadmium	2.1	mg/kg		800	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Chromium	280	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Copper	110	mg/kg		41,000	35.8	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Diesel Fuel	80	mg/kg		180	NE	N	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Hexavalent	8.3	mg/kg	D	5.6	2.2	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Lead	230	mg/kg	O	800	14.3	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Mercury	66	mg/kg	DO	43	0.0759	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Silver	1.8	mg/kg		5,100	1.1	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Zinc	130	mg/kg		310,000	69.8	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Barium	0.91	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Barium	9.4	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Beryllium	0.06	mg/L	B	NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Beryllium	1.1	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Cadmium	0.093	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Chromium	0.15	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Chromium	7.5	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Cobalt	0.26	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Copper	3.9	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Lead	0.16	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Lead	8.3	mg/L		NA	NA	NA	NA

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg		
									Industrial Screening Level (mg/kg)	419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Mercury	0.073	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Mercury	0.56	mg/L	D	NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Nickel	1.9	mg/L	B	NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Vanadium	0.57	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Zinc	0.25	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Zinc	6.1	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Actinium 228	0.97	pCi/g		988	1.5	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Americium 241	132	pCi/g	B	4.82	0.062	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Americium 241	150	pCi/g		4.82	0.062	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Cesium 137	1.08	pCi/g		5.82	0.16	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Cobalt 56	1.12	pCi/g		0.95	0.0547	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Curium 242	0.24	pCi/g		3.41	0.0143	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Gross alpha	262	pCi/g		NE	3.38	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Gross beta	9.8	pCi/g		NE	4.47	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Lead 212	0.88	pCi/g		5,330	0.938	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Plutonium 238	1.07	pCi/g		14.4	0.0355	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Plutonium 239+24	32.2	pCi/g	B	12.5	0.046	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Potassium 40	13.4	pCi/g		0.265	18.4	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Strontium 90	1.15	pCi/g		38	0.264	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Thallium 208	0.31	pCi/g		33,600	0.371	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Thorium 228	0.83	pCi/g		109	0.991	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Tritium	192	pCi/g	J	1.27	0.106	Y	Y
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Uranium 234 and	2.7	pCi/g		25.5	0.76	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Uranium 235 and	0.129	pCi/g		31.3	0.0904	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	Uranium 238	1.45	pCi/g		33	0.717	Y	N
B-419-038	24-Aug-11	B-419-038-2F	SO	2	PCB 1254	2000	ug/kg	D	740	NE	N	Y
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Beryllium	40	mg/kg		2,000	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Cadmium	4	mg/kg		800	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Chromium	300	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Copper	200	mg/kg		41,000	35.8	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Diesel Fuel	29	mg/kg		180	NE	N	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Hexavalent	12	mg/kg	D	5.6	2.2	Y	Y
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Lead	230	mg/kg	DO	800	14.3	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Mercury	15	mg/kg	DO	43	0.0759	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Nickel	91	mg/kg		20,000	70.1	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Silver	1.2	mg/kg		5,100	1.1	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Zinc	170	mg/kg		310,000	69.8	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Barium	0.7	mg/L		NA	NA	NA	NA

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Barium	10	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Beryllium	1.1	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Cadmium	0.15	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Chromium	0.11	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Chromium	11	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Cobalt	0.22	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Copper	0.15	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Copper	6.3	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Lead	0.086	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Lead	11	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Mercury	0.024	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Mercury	0.084	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Nickel	1.7	mg/L	B	NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Vanadium	0.32	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Zinc	0.25	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Zinc	4.9	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Gross alpha	156	pCi/g		NE	3.38	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Gross beta	6.6	pCi/g		NE	4.47	Y	N
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	Tritium	243	pCi/g	J	1.27	0.106	Y	Y
B-419-038	24-Aug-11	B-419-038-DUP-2.5F	SO	2.5	PCB 1254	990	ug/kg	D	740	NE	N	Y
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Beryllium	4.8	mg/kg		2,000	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Cadmium	0.82	mg/kg		800	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Chromium	52	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Copper	36	mg/kg		41,000	35.8	Y	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Diesel Fuel	15	mg/kg		180	NE	N	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Lead	60	mg/kg	DO	800	14.3	Y	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Mercury	8.8	mg/kg	DO	43	0.0759	Y	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Barium	1	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Barium	14	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Beryllium	0.2	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Chromium	1.2	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Cobalt	0.2	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Copper	1.3	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Lead	0.044	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Lead	2.9	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Mercury	0.027	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Nickel	0.53	mg/L	B	NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Vanadium	0.3	mg/L		NA	NA	NA	NA

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background	
									Industrial Screening Level (mg/kg)	419 Background Screening Values	established (Y/N)	Above PRG (Y/N)
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Zinc	6.1	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Gross alpha	75	pCi/g		NE	3.38	Y	N
B-419-038	24-Aug-11	B-419-038-5F	SO	5	Tritium	323	pCi/g	J	1.27	0.106	Y	Y
B-419-038	24-Aug-11	B-419-038-5F	SO	5	PCB 1254	230	ug/kg	D	740	NE	N	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Beryllium	8.2	mg/kg		2,000	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Cadmium	1	mg/kg		800	0.55	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Chromium	95	mg/kg	L	NE	48.9	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Copper	64	mg/kg		41,000	35.8	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Diesel Fuel	30	mg/kg		180	NE	N	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Hexavalent	4.5	mg/kg	D	5.6	2.2	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Lead	130	mg/kg	DO	800	14.3	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Mercury	25	mg/kg	DO	43	0.0759	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Zinc	71	mg/kg		310,000	69.8	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Barium	0.91	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Lead	0.095	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Mercury	0.0095	mg/L		NA	NA	NA	NA
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Gross alpha	68	pCi/g		NE	3.38	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Gross beta	5.3	pCi/g		NE	4.47	Y	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Tritium	240	pCi/g	J	1.27	0.106	Y	Y
B-419-038	24-Aug-11	B-419-038-9F	SO	9	PCB 1254	510	ug/kg	D	740	NE	N	N
B-419-038	24-Aug-11	B-419-038-9F	SO	9	Tetrachloroethen	4	ug/kg		2,600	NE	N	N
B-419-038	24-Aug-11	B-419-038-15F	SO	15	Mercury	0.19	mg/kg	O	43	0.0759	Y	N
B-419-038	24-Aug-11	B-419-038-15F	SO	15	Gross alpha	6.4	pCi/g		NE	3.38	Y	N
B-419-038	24-Aug-11	B-419-038-15F	SO	15	Tritium	1360	pCi/g	J	1.27	0.106	Y	Y
B-419-039	27-Sep-10	B-419-039-1F	SO	1	Chromium	53	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-039	27-Sep-10	B-419-039-1F	SO	1	Diesel Fuel	610	mg/kg	DBLO	180	NE	N	Y
B-419-039	27-Sep-10	B-419-039-1F	SO	1	Mercury	2.8	mg/kg	DBO	43	0.0759	Y	N
B-419-039	27-Sep-10	B-419-039-1F	SO	1	Nickel	160	mg/kg	LO	20,000	70.1	Y	N
B-419-039	27-Sep-10	B-419-039-1F	SO	1	Barium	0.82	mg/L		NA	NA	NA	NA
B-419-039	27-Sep-10	B-419-039-1F	SO	1	Barium	5.5	mg/L	D	NA	NA	NA	NA
B-419-039	27-Sep-10	B-419-039-1F	SO	1	PCB 1254	220	ug/kg	D	740	NE	N	N
B-419-039	27-Sep-10	B-419-039-1F	SO	1	Methylene	53	ug/L	DB	NA	NA	NA	NA
B-419-039	27-Sep-10	B-419-039-3F	SO	3	Chromium	150	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-039	27-Sep-10	B-419-039-3F	SO	3	Cobalt	30	mg/kg	L	300	16.7	Y	N
B-419-039	27-Sep-10	B-419-039-3F	SO	3	Diesel Fuel	25	mg/kg		180	NE	N	N
B-419-039	27-Sep-10	B-419-039-3F	SO	3	Mercury	0.21	mg/kg	B	43	0.0759	Y	N
B-419-039	27-Sep-10	B-419-039-3F	SO	3	Nickel	430	mg/kg	LO	20,000	70.1	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-039	27-Sep-10	B-419-039-11F	SO	11	Tritium	0.422	pCi/g	L	1.27	0.106	Y	N
B-419-040	30-Aug-11	B-419-040-5F	SO	5	Mercury	0.092	mg/kg		43	0.0759	Y	N
B-419-040	30-Aug-11	B-419-040-5F	SO	5	Tritium	18.2	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-10F	SO	10	Mercury	0.092	mg/kg		43	0.0759	Y	N
B-419-040	30-Aug-11	B-419-040-10F	SO	10	Tritium	4.47	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-15F	SO	15	Mercury	0.1	mg/kg		43	0.0759	Y	N
B-419-040	30-Aug-11	B-419-040-15F	SO	15	Selenium	0.61	mg/kg		5,100	0.55	Y	N
B-419-040	30-Aug-11	B-419-040-15F	SO	15	Tritium	23.8	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-15F	SO	15	Methylene	15	ug/kg	F	53.0	NE	N	N
B-419-040	30-Aug-11	B-419-040-20F	SO	20	Tritium	67.3	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-25F	SO	25	Tritium	14	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-30F	SO	30	Barium	350	mg/kg		190,000	332	Y	N
B-419-040	30-Aug-11	B-419-040-30F	SO	30	Mercury	0.085	mg/kg		43	0.0759	Y	N
B-419-040	30-Aug-11	B-419-040-30F	SO	30	Tritium	12.7	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-35F	SO	35	Tritium	79	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-40F	SO	40	Beryllium	0.56	mg/kg		2,000	0.55	Y	N
B-419-040	30-Aug-11	B-419-040-40F	SO	40	Tritium	62.6	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-45F	SO	45	Tritium	50.8	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-50F	SO	50	Mercury	0.084	mg/kg		43	0.0759	Y	N
B-419-040	30-Aug-11	B-419-040-50F	SO	50	Tritium	41.7	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-50F	SO	50	Trichloroethene	4.9	ug/kg		6,400	NE	N	N
B-419-040	30-Aug-11	B-419-040-55F	SO	55	Tritium	60.1	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-60F	SO	60	Tritium	53.5	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-65F	SO	65	Tritium	41.1	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-70F	SO	70	Beryllium	0.6	mg/kg		2,000	0.55	Y	N
B-419-040	30-Aug-11	B-419-040-70F	SO	70	Tritium	54	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-70F	SO	70	1,2-	15	ug/kg		2,200	NE	N	N
B-419-040	30-Aug-11	B-419-040-70F	SO	70	Trichloroethene	5.8	ug/kg		6,400	NE	N	N
B-419-040	30-Aug-11	B-419-040-75F	SO	75	Chromium	51	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-040	30-Aug-11	B-419-040-75F	SO	75	Tritium	13.4	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-75F	SO	75	1,2-	8.6	ug/kg		2,200	NE	N	N
B-419-040	30-Aug-11	B-419-040-80F	SO	80	Tritium	27.1	pCi/g		1.27	0.106	Y	Y
B-419-040	30-Aug-11	B-419-040-80F	SO	80	1,2-	31	ug/kg		2,200	NE	N	N
B-419-040	30-Aug-11	B-419-040-80F	SO	80	Trichloroethene	17	ug/kg		6,400	NE	N	N
B-419-040	31-Aug-11	B-419-040-85F	SO	85	Beryllium	0.61	mg/kg		2,000	0.55	Y	N
B-419-040	31-Aug-11	B-419-040-DUP-85F	SO	85	Beryllium	0.62	mg/kg		2,000	0.55	Y	N
B-419-040	31-Aug-11	B-419-040-DUP-85F	SO	85	Tritium	5.82	pCi/g		1.27	0.106	Y	Y

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-040	31-Aug-11	B-419-040-85F	SO	85	Tritium	13.5	pCi/g		1.27	0.106	Y	Y
B-419-040	31-Aug-11	B-419-040-DUP-85F	SO	85	1,2-	62	ug/kg		2,200	NE	N	N
B-419-040	31-Aug-11	B-419-040-85F	SO	85	1,2-	67	ug/kg		2,200	NE	N	N
B-419-040	31-Aug-11	B-419-040-DUP-85F	SO	85	Tetrachloroethen	5.1	ug/kg	F	2,600	NE	N	N
B-419-040	31-Aug-11	B-419-040-85F	SO	85	Trichloroethene	63	ug/kg		6,400	NE	N	N
B-419-040	31-Aug-11	B-419-040-DUP-85F	SO	85	Trichloroethene	97	ug/kg		6,400	NE	N	N
B-419-040	31-Aug-11	B-419-040-90F	SO	90	Tritium	28	pCi/g		1.27	0.106	Y	Y
B-419-040	31-Aug-11	B-419-040-90F	SO	90	1,2-	61	ug/kg		2,200	NE	N	N
B-419-040	31-Aug-11	B-419-040-90F	SO	90	Trichloroethene	67	ug/kg		6,400	NE	N	N
B-419-040	31-Aug-11	B-419-040-95F	SO	95	Tritium	8.9	pCi/g		1.27	0.106	Y	Y
B-419-040	31-Aug-11	B-419-040-95F	SO	95	1,2-	23	ug/kg		2,200	NE	N	N
B-419-040	31-Aug-11	B-419-040-95F	SO	95	Carbon	5.2	ug/kg		3,000	NE	N	N
B-419-040	31-Aug-11	B-419-040-95F	SO	95	Tetrachloroethen	9.3	ug/kg	F	2,600	NE	N	N
B-419-040	31-Aug-11	B-419-040-95F	SO	95	Trichloroethene	280	ug/kg		6,400	NE	N	N
B-419-040	31-Aug-11	B-419-040-100F	SO	100	Tritium	0.53	pCi/g		1.27	0.106	Y	N
B-419-040	31-Aug-11	B-419-040-100F	SO	100	Trichloroethene	190	ug/kg		6,400	NE	N	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	Chromium	73	mg/kg	O	1,500,000 (1)	48.9	Y	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	Cobalt	29	mg/kg		300	16.7	Y	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	Nickel	170	mg/kg		20,000	70.1	Y	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	Vanadium	46	mg/kg	D	5,200	43.7	Y	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	1,1-	12	ug/kg		1,100,000	NE	N	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	Carbon	4.3	ug/kg		3,000	NE	N	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	Tetrachloroethen	4.9	ug/kg	F	2,600	NE	N	N
B-419-040	31-Aug-11	B-419-040-105F	SO	105	Trichloroethene	160	ug/kg		6,400	NE	N	N
B-419-040	31-Aug-11	B-410-040-GW	AQ		Arsenic	0.045	mg/L		0.01	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Barium	2.5	mg/L		2	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Beryllium	0.0069	mg/L	B	0.004	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Chromium	0.3	mg/L		0.1	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Cobalt	0.094	mg/L		0.003	NE	ESL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Copper	0.22	mg/L		1.3	NE	Action level	N
B-419-040	31-Aug-11	B-419-040-GW	AQ		Hexavalent	0.0089	mg/L		0.011	NE	ESL	N
B-419-040	31-Aug-11	B-410-040-GW	AQ		Lead	0.066	mg/L	D	0.015	NE	Action level	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Mercury	0.00034	mg/L		0.002	NE	MCL	N
B-419-040	31-Aug-11	B-410-040-GW	AQ		Nickel	0.49	mg/L		0.1000	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Gasoline fingerpr	0.35	mg/L		0.21	NE	ESL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Gross alpha	128	pCi/L		NE	NE	NE	N
B-419-040	31-Aug-11	B-410-040-GW	AQ		Gross beta	219	pCi/L		NE	NE	NE	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-040	31-Aug-11	B-410-040-GW	AQ		Tritium	59700	pCi/L		20,000	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		1,1-Dichloroethane	65	ug/L	D	6	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		1,2-Dichloroethane	110	ug/L	D	5	NE	MCL	Y
B-419-040	31-Aug-11	B-410-040-GW	AQ		Trichloroethene	1200	ug/L	D	5	NE	MCL	Y
B-419-041	6-Sep-11	B-419-041-5F	SO	5	Tritium	19.8	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-10F	SO	10	Mercury	0.11	mg/kg		43	0.0759	Y	N
B-419-041	6-Sep-11	B-419-041-10F	SO	10	Tritium	19.9	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-15F	SO	15	Chromium	72	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-041	6-Sep-11	B-419-041-15F	SO	15	Tritium	116	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-DUP-20F	SO	20	Mercury	0.077	mg/kg		43	0.0759	Y	N
B-419-041	6-Sep-11	B-419-041-20F	SO	20	Mercury	0.082	mg/kg		43	0.0759	Y	N
B-419-041	6-Sep-11	B-419-041-20F	SO	20	Tritium	990	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-DUP-20F	SO	20	Tritium	1910	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-25F	SO	25	Tritium	359	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-30F	SO	30	Tritium	890	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-35F	SO	35	Beryllium	0.61	mg/kg		2,000	0.55	Y	N
B-419-041	6-Sep-11	B-419-041-35F	SO	35	Tritium	990	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-40F	SO	40	Tritium	468	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-45F	SO	45	Mercury	0.13	mg/kg		43	0.0759	Y	N
B-419-041	6-Sep-11	B-419-041-45F	SO	45	Tritium	277	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-50F	SO	50	Tritium	311	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-55F	SO	55	Tritium	220	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-60F	SO	60	Tritium	117	pCi/g	L	1.27	0.106	Y	Y
B-419-041	6-Sep-11	B-419-041-65F	SO	65	Tritium	57.2	pCi/g	L	1.27	0.106	Y	Y
B-419-041	7-Sep-11	B-419-041-70F	SO	70	Tritium	102	pCi/g	LO	1.27	0.106	Y	Y
B-419-041	7-Sep-11	B-419-041-75F	SO	75	Tritium	40.5	pCi/g	L	1.27	0.106	Y	Y
B-419-041	7-Sep-11	B-419-041-75F	SO	75	1,2-	10	ug/kg		2,200	NE	N	N
B-419-041	7-Sep-11	B-419-041-75F	SO	75	Acetone	18	ug/kg		630,000,000	NE	N	N
B-419-041	7-Sep-11	B-419-041-75F	SO	75	Trichloroethene	6.3	ug/kg		6,400	NE	N	N
B-419-041	7-Sep-11	B-419-041-80F	SO	80	Tritium	40.4	pCi/g	L	1.27	0.106	Y	Y
B-419-041	7-Sep-11	B-419-041-DUP-80F	SO	80	Tritium	62.8	pCi/g	L	1.27	0.106	Y	Y
B-419-041	7-Sep-11	B-419-041-80F	SO	80	1,2-	17	ug/kg		2,200	NE	N	N
B-419-041	7-Sep-11	B-419-041-DUP-80F	SO	80	1,2-	26	ug/kg		2,200	NE	N	N
B-419-041	7-Sep-11	B-419-041-80F	SO	80	Trichloroethene	12	ug/kg		6,400	NE	N	N
B-419-041	7-Sep-11	B-419-041-DUP-80F	SO	80	Trichloroethene	19	ug/kg		6,400	NE	N	N
B-419-041	7-Sep-11	B-419-041-85F	SO	85	Beryllium	0.58	mg/kg		2,000	0.55	Y	N
B-419-041	7-Sep-11	B-419-041-85F	SO	85	Tritium	19.6	pCi/g	L	1.27	0.106	Y	Y

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values	established (Y/N)	
B-419-041	7-Sep-11	B-419-041-85F	SO	85	1,2-	21	ug/kg		2,200	NE	N	N
B-419-041	7-Sep-11	B-419-041-85F	SO	85	Trichloroethene	23	ug/kg		6,400	NE	N	N
B-419-041	7-Sep-11	B-419-041-90F	SO	90	Tritium	34.2	pCi/g	L	1.27	0.106	Y	Y
B-419-041	7-Sep-11	B-419-041-90F	SO	90	1,2-	16	ug/kg		2,200	NE	N	N
B-419-041	7-Sep-11	B-419-041-90F	SO	90	Trichloroethene	22	ug/kg		6,400	NE	N	N
B-419-041	7-Sep-11	B-419-041-95F	SO	95	Tritium	4.53	pCi/g	L	1.27	0.106	Y	Y
B-419-041	7-Sep-11	B-419-041-95F	SO	95	1,2-	7	ug/kg		2,200	NE	N	N
B-419-041	7-Sep-11	B-419-041-95F	SO	95	Trichloroethene	76	ug/kg		6,400	NE	N	N
B-419-041	7-Sep-11	B-419-041-100F	SO	100	Tritium	1.02	pCi/g	L	1.27	0.106	Y	N
B-419-041	7-Sep-11	B-419-041-100F	SO	100	1,1-	18	ug/kg		1,100,000	NE	N	N
B-419-041	7-Sep-11	B-419-041-100F	SO	100	Carbon	9	ug/kg		3,000	NE	N	N
B-419-041	7-Sep-11	B-419-041-100F	SO	100	Tetrachloroethen	9.5	ug/kg		2,600	NE	N	N
B-419-041	7-Sep-11	B-419-041-100F	SO	100	Trichloroethene	430	ug/kg		6,400	NE	N	N
B-419-041	7-Sep-11	B-419-041-GW	AQ		Arsenic	0.023	mg/L		0.010	NE	MCL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Barium	2.7	mg/L		2	NE	MCL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Chromium	0.18	mg/L		0.1	NE	MCL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Cobalt	0.058	mg/L		0.003	NE	ESL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Copper	0.12	mg/L		1.3	NE	Action Level	N
B-419-041	7-Sep-11	B-419-041-GW	AQ		Hexavalent	0.0089	mg/L		0.011	NE	ESL	N
B-419-041	7-Sep-11	B-419-041-GW	AQ		Lead	0.038	mg/L		0.015	NE	Action Level	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Nickel	0.26	mg/L		0.1	NE	MCL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Gasoline	0.36	mg/L		0.21	NE	ESL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Gross alpha	46	pCi/L		NE	NE	NE	N
B-419-041	7-Sep-11	B-419-041-GW	AQ		Gross beta	83	pCi/L	B	NE	NE	NE	N
B-419-041	7-Sep-11	B-419-041-GW	AQ		Tritium	59800	pCi/L		20,000	NE	MCL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Tetrachloroethen	53	ug/L	D	5	NE	MCL	Y
B-419-041	7-Sep-11	B-419-041-GW	AQ		Trichloroethene	1700	ug/L	D	5	NE	MCL	Y
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Barium	460	mg/kg	L	190,000	332	Y	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Beryllium	2.8	mg/kg		2,000	0.55	Y	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Cadmium	2.6	mg/kg		800	0.55	Y	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Cobalt	130	mg/kg		300	16.7	Y	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Diesel Fuel	170	mg/kg	D	180	NE	N	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Gasoline	1.2	mg/kg		180	NE	N	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Lead	80	mg/kg		800	14.3	Y	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Mercury	6.8	mg/kg	D	43	0.0759	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Silver	9	mg/kg		5,100	1.1	Y	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Zinc	180	mg/kg	L	310,000	69.8	Y	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Barium	2.2	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Barium	12	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Beryllium	0.17	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Cadmium	0.073	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Chromium	1	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Cobalt	6.8	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Cobalt	12	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Copper	1.2	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Lead	0.064	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Lead	2.9	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Nickel	0.61	mg/L	B	NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Vanadium	0.31	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Zinc	0.22	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Zinc	1.3	mg/L		NA	NA	NA	NA
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Tritium	4.16	pCi/g	L	1.27	0.106	Y	Y
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	Acetone	23	ug/kg		630,000,000	NE	N	N
B-419-042A	15-Aug-11	B-419-042A-1F	SO	1	PCB 1254	3200	ug/kg	DIJ	740	NE	N	Y
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Beryllium	3.9	mg/kg		2,000	0.55	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Cadmium	0.68	mg/kg		800	0.55	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Cobalt	170	mg/kg	LO	300	16.7	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Diesel Fuel	18	mg/kg		180	NE	N	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Lead	140	mg/kg	D	800	14.3	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Mercury	0.74	mg/kg		43	0.0759	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Silver	2.7	mg/kg		5,100	1.1	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Zinc	120	mg/kg		310,000	69.8	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Barium	1.1	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Barium	7.6	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Beryllium	0.082	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Chromium	0.72	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Cobalt	3.1	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Cobalt	14	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Copper	0.74	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Lead	0.22	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Lead	29	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Nickel	0.92	mg/L	B	NA	NA	NA	NA

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Vanadium	0.42	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Zinc	0.3	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Zinc	3.8	mg/L		NA	NA	NA	NA
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Tritium	0.63	pCi/g		1.27	0.106	Y	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	Acetone	40	ug/kg		630,000,000	NE	N	N
B-419-042B	15-Aug-11	B-419-042B-1F	SO	1	PCB 1254	5000	ug/kg	DIJ	740	NE	N	Y
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Antimony	2.9	mg/kg		410	2.2	Y	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Cobalt	50	mg/kg	LO	300	16.7	Y	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Copper	67	mg/kg		41,000	35.8	Y	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Lead	34	mg/kg	D	800	14.3	Y	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Molybdenum	7	mg/kg		5,100	1.1	Y	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Zinc	97	mg/kg		310,000	69.8	Y	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Benzo(a)anthrace	370	ug/kg		2,100	NE	N	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Benzo(b)fluorant	420	ug/kg		2,100	NE	N	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Chrysene	410	ug/kg		210,000	NE	N	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Fluoranthene	840	ug/kg		22,000,000	NE	N	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Phenanthrene	770	ug/kg		NE	NE	N	N
B-419-043	15-Aug-11	B-419-043-1F	SO	1	Pyrene	740	ug/kg		17,000,000	NE	N	N
B-419-044	15-Aug-11	B-419-044-1F	SO	1	Cobalt	94	mg/kg	LO	300	16.7	Y	N
B-419-044	15-Aug-11	B-419-044-1F	SO	1	Lead	25	mg/kg	D	800	14.3	Y	N
B-419-044	15-Aug-11	B-419-044-1F	SO	1	Mercury	1.7	mg/kg		43	0.0759	Y	N
B-419-044	15-Aug-11	B-419-044-1F	SO	1	Silver	1.2	mg/kg		5,100	1.1	Y	N
B-419-045	15-Aug-11	B-419-045-1F	SO	1	Cadmium	1.1	mg/kg		800	0.55	Y	N
B-419-045	15-Aug-11	B-419-045-1F	SO	1	Cobalt	150	mg/kg	LO	300	16.7	Y	N
B-419-045	15-Aug-11	B-419-045-1F	SO	1	Silver	4.7	mg/kg		5,100	1.1	Y	N
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Beryllium	2.3	mg/kg		2,000	0.55	Y	N
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Lead	210	mg/kg	O	800	14.3	Y	N
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Mercury	1.2	mg/kg	O	43	0.0759	Y	N
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Barium	0.12	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Barium	5.3	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Beryllium	0.33	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Chromium	0.2	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Cobalt	0.1	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Copper	0.21	mg/L		NA	NA	NA	NA

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background	
									Industrial Screening Level (mg/kg)	419 Background Screening Values	established (Y/N)	Above PRG (Y/N)
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Lead	0.56	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Lead	13	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Zinc	1.7	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Gross alpha	18.7	pCi/g		NE	3.38	Y	N
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Gross beta	6.6	pCi/g		NE	4.47	Y	N
B-419-046	24-Aug-11	B-419-046-1F	SO	1	Tritium	232	pCi/g	J	1.27	0.106	Y	Y
B-419-046	24-Aug-11	B-419-046-1F	SO	1	PCB 1254	97	ug/kg		740	NE	N	N
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Lead	50	mg/kg	DO	800	14.3	Y	N
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Mercury	0.99	mg/kg	O	43	0.0759	Y	N
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Barium	0.89	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Barium	8.8	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Chromium	0.17	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Cobalt	0.14	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Copper	0.31	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Lead	0.097	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Lead	2.5	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Nickel	0.23	mg/L	B	NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Vanadium	0.17	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Zinc	1.4	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Gross alpha	5.5	pCi/g		NE	3.38	Y	N
B-419-046	24-Aug-11	B-419-046-5F	SO	5	Tritium	367	pCi/g	J	1.27	0.106	Y	Y
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Beryllium	2.1	mg/kg		2,000	0.55	Y	N
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Cadmium	1.2	mg/kg		800	0.55	Y	N
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Copper	41	mg/kg		41,000	35.8	Y	N
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Lead	330	mg/kg	DO	800	14.3	Y	N
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Mercury	3.6	mg/kg	DO	43	0.0759	Y	N
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Barium	0.73	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Barium	9.6	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Beryllium	0.05	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Cadmium	0.054	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Chromium	0.57	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Cobalt	0.16	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Copper	0.76	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Lead	0.27	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Lead	14	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Nickel	0.27	mg/L	B	NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Vanadium	0.2	mg/L		NA	NA	NA	NA
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Zinc	0.89	mg/L		NA	NA	NA	NA

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg		
									Industrial Screening Level (mg/kg)	419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Gross alpha	17.4	pCi/g		NE	3.38	Y	N
B-419-046	24-Aug-11	B-419-046-10F	SO	10	Tritium	740	pCi/g	J	1.27	0.106	Y	Y
B-419-046	24-Aug-11	B-419-046-10F	SO	10	PCB 1254	60	ug/kg		740	NE	N	N
B-419-046	24-Aug-11	B-419-046-15F	SO	15	Mercury	0.32	mg/kg	O	43	0.0759	Y	N
B-419-046	24-Aug-11	B-419-046-15F	SO	15	Tritium	291	pCi/g	J	1.27	0.106	Y	Y
B-419-046	24-Aug-11	B-419-046-15F	SO	15	PCB 1254	46	ug/kg		740	NE	N	N
B-419-047	23-Aug-11	B-419-047-1F	SO	1	Mercury	0.3	mg/kg		43	0.0759	Y	N
B-419-047	23-Aug-11	B-419-047-1F	SO	1	Tritium	97	pCi/g		1.27	0.106	Y	Y
B-419-047	23-Aug-11	B-419-047-1F	SO	1	Acetone	29	ug/kg	O	630,000,000	NE	N	N
B-419-047	23-Aug-11	B-419-047-1F	SO	1	PCB 1254	38	ug/kg		740	NE	N	N
B-419-047	23-Aug-11	B-419-047-5F	SO	5	Mercury	0.21	mg/kg		43	0.0759	Y	N
B-419-047	23-Aug-11	B-419-047-5F	SO	5	Selenium	0.56	mg/kg		5,100	0.55	Y	N
B-419-047	23-Aug-11	B-419-047-5F	SO	5	Tritium	98	pCi/g		1.27	0.106	Y	Y
B-419-047	23-Aug-11	B-419-047-10F	SO	10	Tritium	14.7	pCi/g		1.27	0.106	Y	Y
B-419-047	23-Aug-11	B-419-047-15F	SO	15	Tritium	17.7	pCi/g		1.27	0.106	Y	Y
B-419-048	23-Aug-11	B-419-048-1F	SO	1	Mercury	0.095	mg/kg		43	0.0759	Y	N
B-419-048	23-Aug-11	B-419-048-1F	SO	1	Tritium	242	pCi/g		1.27	0.106	Y	Y
B-419-048	23-Aug-11	B-419-048-1F	SO	1	Acetone	430	ug/kg	O	630,000,000	NE	N	N
B-419-048	23-Aug-11	B-419-048-5F	SO	5	Beryllium	0.57	mg/kg		2,000	0.55	Y	N
B-419-048	23-Aug-11	B-419-048-5F	SO	5	Lead	16	mg/kg	D	800	14.3	Y	N
B-419-048	23-Aug-11	B-419-048-5F	SO	5	Mercury	0.41	mg/kg		43	0.0759	Y	N
B-419-048	23-Aug-11	B-419-048-5F	SO	5	Gross alpha	3.5	pCi/g	L	NE	3.38	Y	N
B-419-048	23-Aug-11	B-419-048-5F	SO	5	Tritium	1420	pCi/g		1.27	0.106	Y	Y
B-419-048	23-Aug-11	B-419-048-5F	SO	5	PCB 1254	96	ug/kg		740	NE	N	N
B-419-048	23-Aug-11	B-419-048-5F	SO	5	Tetrachloroethen	7.2	ug/kg		2,600	NE	N	N
B-419-048	23-Aug-11	B-419-048-10F	SO	10	Beryllium	0.62	mg/kg		2,000	0.55	Y	N
B-419-048	23-Aug-11	B-419-048-10F	SO	10	Chromium	52	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-048	23-Aug-11	B-419-048-10F	SO	10	Mercury	0.8	mg/kg		43	0.0759	Y	N
B-419-048	23-Aug-11	B-419-048-10F	SO	10	Gross alpha	3.6	pCi/g	L	NE	3.38	Y	N
B-419-048	23-Aug-11	B-419-048-10F	SO	10	Tritium	1380	pCi/g		1.27	0.106	Y	Y
B-419-048	23-Aug-11	B-419-048-10F	SO	10	PCB 1254	100	ug/kg		740	NE	N	N
B-419-048	23-Aug-11	B-419-048-15F	SO	15	Chromium	55	mg/kg		1,500,000 (1)	48.9	Y	N
B-419-048	23-Aug-11	B-419-048-15F	SO	15	Mercury	0.29	mg/kg		43	0.0759	Y	N
B-419-048	23-Aug-11	B-419-048-15F	SO	15	Tritium	427	pCi/g		1.27	0.106	Y	Y
B-419-048	23-Aug-11	B-419-048-15F	SO	15	PCB 1254	190	ug/kg		740	NE	N	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background established (Y/N)	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-049	22-Aug-11	B-419-049-1F	SO	1	Diesel Fuel	11	mg/kg		180	NE	N	N
B-419-049	22-Aug-11	B-419-049-1F	SO	1	Hexavalent	3.2	mg/kg	D	5.6	2.2	Y	N
B-419-049	22-Aug-11	B-419-049-1F	SO	1	Mercury	0.27	mg/kg		43	0.0759	Y	N
B-419-049	22-Aug-11	B-419-049-1F	SO	1	Gross alpha	3.5	pCi/g	L	NE	3.38	Y	N
B-419-049	22-Aug-11	B-419-049-1F	SO	1	Tritium	1180	pCi/g		1.27	0.106	Y	Y
B-419-049	22-Aug-11	B-419-049-5F	SO	5	Mercury	0.25	mg/kg		43	0.0759	Y	N
B-419-049	22-Aug-11	B-419-049-5F	SO	5	Tritium	1680	pCi/g		1.27	0.106	Y	Y
B-419-049	22-Aug-11	B-419-049-5F	SO	5	PCB 1254	81	ug/kg		740	NE	N	N
B-419-049	22-Aug-11	B-419-049-10F	SO	10	Mercury	0.27	mg/kg		43	0.0759	Y	N
B-419-049	22-Aug-11	B-419-049-10F	SO	10	Tritium	1740	pCi/g		1.27	0.106	Y	Y
B-419-049	22-Aug-11	B-419-049-10F	SO	10	PCB 1254	74	ug/kg		740	NE	N	N
B-419-049	22-Aug-11	B-419-049-15F	SO	15	Tritium	1440	pCi/g		1.27	0.106	Y	Y
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Beryllium	1.3	mg/kg		2,000	0.55	Y	N
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Lead	150	mg/kg	O	800	14.3	Y	N
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Mercury	13	mg/kg	D	43	0.0759	Y	N
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Barium	1.2	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Barium	9.9	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Chromium	0.14	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Cobalt	0.22	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Copper	0.13	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Lead	0.15	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Lead	0.67	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Mercury	0.06	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Nickel	0.27	mg/L	B	NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Vanadium	0.17	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Zinc	2.7	mg/L		NA	NA	NA	NA
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Gross alpha	3.6	pCi/g		NE	3.38	Y	N
B-419-050	22-Aug-11	B-419-050-1F	SO	1	Tritium	1330	pCi/g		1.27	0.106	Y	Y
B-419-050	22-Aug-11	B-419-050-1F	SO	1	PCB 1248	280	ug/kg	D	740	NE	N	N
B-419-050	22-Aug-11	B-419-050-DUP-1.5F	SO	1.5	Beryllium	1.7	mg/kg		2,000	0.55	Y	N
B-419-050	22-Aug-11	B-419-050-DUP-1.5F	SO	1.5	Lead	300	mg/kg	O	800	14.3	Y	N
B-419-050	22-Aug-11	B-419-050-DUP-1.5F	SO	1.5	Mercury	22	mg/kg	D	43	0.0759	Y	N
B-419-050	22-Aug-11	B-419-050-DUP-1.5F	SO	1.5	Tritium	451	pCi/g		1.27	0.106	Y	Y
B-419-050	22-Aug-11	B-419-050-DUP-1.5F	SO	1.5	PCB 1248	260	ug/kg	DIJ	740	NE	N	N
B-419-050	22-Aug-11	B-419-050-5F	SO	5	Mercury	0.17	mg/kg		43	0.0759	Y	N
B-419-050	22-Aug-11	B-419-050-5F	SO	5	Gross alpha	4	pCi/g		NE	3.38	Y	N
B-419-050	22-Aug-11	B-419-050-5F	SO	5	Tritium	1130	pCi/g		1.27	0.106	Y	Y

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-050	22-Aug-11	B-419-050-10F	SO	10	Mercury	0.2	mg/kg		43	0.0759	Y	N
B-419-050	22-Aug-11	B-419-050-10F	SO	10	Tritium	1430	pCi/g		1.27	0.106	Y	Y
B-419-050	22-Aug-11	B-419-050-14.5F	SO	14.5	Mercury	0.09	mg/kg		43	0.0759	Y	N
B-419-050	22-Aug-11	B-419-050-14.5F	SO	14.5	Tritium	1350	pCi/g		1.27	0.106	Y	Y
B-419-051	23-Aug-11	B-419-051-1F	SO	1	Tritium	9.4	pCi/g		1.27	0.106	Y	Y
B-419-051	23-Aug-11	B-419-051-1F	SO	1	Tetrachloroethen	4.4	ug/kg		2,600	NE	N	N
B-419-051	23-Aug-11	B-419-051-5F	SO	5	Mercury	0.17	mg/kg		43	0.0759	Y	N
B-419-051	23-Aug-11	B-419-051-5F	SO	5	Tritium	99	pCi/g		1.27	0.106	Y	Y
B-419-051	23-Aug-11	B-419-051-10F	SO	10	Mercury	0.11	mg/kg		43	0.0759	Y	N
B-419-051	23-Aug-11	B-419-051-10F	SO	10	Tritium	17.7	pCi/g		1.27	0.106	Y	Y
B-419-051	23-Aug-11	B-419-051-15F	SO	15	Mercury	0.087	mg/kg		43	0.0759	Y	N
B-419-051	23-Aug-11	B-419-051-15F	SO	15	Tritium	5.33	pCi/g		1.27	0.106	Y	Y
B-419-101	19-Sep-10	B-419-101-7F	SO	7	Mercury	0.093	mg/kg	B	43	0.0759	Y	N
B-419-101	19-Sep-10	B-419-101-7F	SO	7	Tritium	228	pCi/g		1.27	0.106	Y	Y
B-419-101	19-Sep-10	B-419-101-10F	SO	10	Mercury	0.39	mg/kg	B	43	0.0759	Y	N
B-419-101	19-Sep-10	B-419-101-10F	SO	10	Tritium	1130	pCi/g		1.27	0.106	Y	Y
B-419-102	19-Sep-10	B-419-102-DUP-1F	SO	1	Diesel Fuel	44	mg/kg		180	NE	N	N
B-419-102	19-Sep-10	B-419-102-1F	SO	1	Diesel Fuel	120	mg/kg	D	180	NE	N	Y
B-419-102	19-Sep-10	B-419-102-DUP-1F	SO	1	Methylene chlorid	430	ug/L	DB	NA	NA	NA	NA
B-419-102	19-Sep-10	B-419-102-1F	SO	1	Methylene chlorid	440	ug/L	DB	NA	NA	NA	NA
B-419-102	19-Sep-10	B-419-102-3F	SO	3	Diesel Fuel	9.1	mg/kg		180	NE	N	N
B-419-103	21-Sep-10	B-419-103-7F	SO	7	Tritium	0.207	pCi/g	J	1.27	0.106	Y	N
B-419-103	21-Sep-10	B-419-103-10F	SO	10	Mercury	0.19	mg/kg	B	43	0.0759	Y	N
B-419-103	21-Sep-10	B-419-103-10F	SO	10	Tritium	1.8	pCi/g	J	1.27	0.106	Y	Y
B-419-103	21-Sep-10	B-419-103-25F	SO	25	Trichloroethene	11	ug/kg		6,400	NE	N	N
B-419-103	21-Sep-10	B-419-103-30F	SO	30	Diesel Fuel	12	mg/kg	B	180	NE	N	N
B-419-104	21-Sep-10	B-419-104-DUP-7F	SO	7	Mercury	0.1	mg/kg	B	43	0.0759	Y	N
B-419-104	21-Sep-10	B-419-104-7F	SO	7	Tritium	0.74	pCi/g	J	1.27	0.106	Y	N
B-419-104	21-Sep-10	B-419-104-10F	SO	10	Mercury	0.086	mg/kg	B	43	0.0759	Y	N
B-419-104	21-Sep-10	B-419-104-10F	SO	10	Tritium	0.89	pCi/g	J	1.27	0.106	Y	N
B-419-104	21-Sep-10	B-419-104-25F	SO	25	Diesel Fuel	16	mg/kg	B	180	NE	N	N
B-419-104	21-Sep-10	B-419-104-30F	SO	30	Diesel Fuel	9.9	mg/kg	B	180	NE	N	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-105	22-Sep-10	B-419-105-25F	SO	25	Bis(2-	420	ug/kg		120,000	NE	N	N
B-419-106	22-Sep-10	B-419-106-7F	SO	7	Mercury	0.084	mg/kg		43	0.0759	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Beryllium	0.76	mg/kg		2,000	0.55	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Diesel Fuel	5.7	mg/kg		180	NE	N	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Mercury	4.3	mg/kg	D	43	0.0759	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Molybdenum	2.1	mg/kg		5,100	1.1	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Barium	1	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Barium	8.2	mg/L	B	NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Chromium	0.11	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Cobalt	0.34	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Copper	0.34	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Lead	0.094	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Mercury	0.015	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Nickel	0.44	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Vanadium	0.21	mg/L		NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Zinc	0.56	mg/L	B	NA	NA	NA	NA
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Americium 241	0.159	pCi/g	B	4.82	0.062	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Gross alpha	21.2	pCi/g		NE	3.38	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Gross beta	28.1	pCi/g		NE	4.47	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Lead 212	0.4	pCi/g		5,330	0.938	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Plutonium 239+24	0.64	pCi/g	O	12.5	0.046	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Potassium 40	10.8	pCi/g		0.265	18.4	Y	Y
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Thorium 228	0.6	pCi/g		109	0.991	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Thorium 230	0.56	pCi/g		18	0.957	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Thorium 232	0.56	pCi/g		17	0.983	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Thorium 234	30	pCi/g		2,750	2.44	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Tritium	2.2	pCi/g		1.27	0.106	Y	Y
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Uranium 234 and	18.4	pCi/g		25.5	0.76	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Uranium 235 and	1.39	pCi/g		31.3	0.0904	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Uranium 238	46	pCi/g		33	0.717	Y	Y
B-419-R124-001	19-Sep-11	B-419-R124-001-3F	SO	3	Acetone	100	ug/kg		630,000,000	NE	N	N
B-419-R124-001	19-Sep-11	B-419-R124-001-5F	SO	5	Mercury	0.14	mg/kg		43	0.0759	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-5F	SO	5	Tritium	0.482	pCi/g		1.27	0.106	Y	N
B-419-R124-001	19-Sep-11	B-419-R124-001-5F	SO	5	Acetone	20	ug/kg		630,000,000	NE	N	N
B-419-R124-001	19-Sep-11	B-419-R124-001-10F	SO	10	Tritium	0.69	pCi/g		1.27	0.106	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA	Preliminary Bldg	background	Above PRG (Y/N)
									Industrial Screening Level (mg/kg)	419 Background Screening Values		
B-419-R124-002	19-Sep-11	B-419-R124-002-3.5F	SO	3.5	Lead	29	mg/kg		800	14.3	Y	N
B-419-R124-002	19-Sep-11	B-419-R124-002-3.5F	SO	3.5	Tritium	0.57	pCi/g		1.27	0.106	Y	N
B-419-R124-002	19-Sep-11	B-419-R124-002-3.5F	SO	3.5	Acetone	53	ug/kg		630,000,000	NE	N	N
B-419-R124-002	19-Sep-11	B-419-R124-002-5F	SO	5	Tritium	0.208	pCi/g		1.27	0.106	Y	N
B-419-R124-002	19-Sep-11	B-419-R124-002-5F	SO	5	Acetone	41	ug/kg		630,000,000	NE	N	N
B-419-R124-002	19-Sep-11	B-419-R124-002-10F	SO	10	Tritium	0.65	pCi/g		1.27	0.106	Y	N
B-419-R124-002	19-Sep-11	B-419-R124-002-15F	SO	15	Tritium	0.229	pCi/g		1.27	0.106	Y	N
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Chromium	110	mg/kg	L	1,500,000 (1)	48.9	Y	N
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Nickel	160	mg/kg		20,000	70.1	Y	N
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Barium	0.75	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Barium	6.3	mg/L	B	NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Chromium	0.46	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Cobalt	0.38	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Copper	0.31	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Lead	1.2	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Nickel	1.6	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Selenium	0.058	mg/L	B	NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Vanadium	0.24	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Zinc	0.2	mg/L		NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-3F	SO	3	Zinc	2.1	mg/L	B	NA	NA	NA	NA
B-419-R124-003	19-Sep-11	B-419-R124-003-5F	SO	5	Copper	52	mg/kg	L	41,000	35.8	Y	N
B-419-R124-003	19-Sep-11	B-419-R124-003-15F	SO	15	Tritium	0.259	pCi/g		1.27	0.106	Y	N
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Lead	120	mg/kg		800	14.3	Y	N
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Mercury	0.14	mg/kg		43	0.0759	Y	N
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Barium	1.3	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Barium	12	mg/L	B	NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Chromium	0.35	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Cobalt	0.37	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Copper	0.38	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Lead	0.59	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Lead	11	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Nickel	0.88	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Selenium	0.053	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Vanadium	0.4	mg/L		NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-3F	SO	3	Zinc	5.6	mg/L	B	NA	NA	NA	NA
B-419-R124-004	19-Sep-11	B-419-R124-004-5F	SO	5	Tritium	1.69	pCi/g		1.27	0.106	Y	Y

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
B-419-R124-004	19-Sep-11	B-419-R124-004-5F	SO	5	Acetone	86	ug/kg		630,000,000	NE	N	N
B-419-R124-004	19-Sep-11	B-419-R124-004-10F	SO	10	Tritium	1.11	pCi/g		1.27	0.106	Y	N
B-419-R124-004	19-Sep-11	B-419-R124-004-15F	SO	15	Tritium	0.208	pCi/g		1.27	0.106	Y	N

Building 419 Soil Sample Results from 2010 and 2011.

Field Location	Sample Date	Sample Identification	Matrix	Depth	Analyte	Result	Units	Flag	US EPA Industrial Screening Level (mg/kg)	Preliminary Bldg 419 Background Screening Values	background established (Y/N)	Above PRG (Y/N)
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Notes:

Data presented are detects in soil above background. If a background number has not been established for an analyte that analyte is listed.

Industrial screening levels are United States Environmental Protection Regional screening levels for all analytes except for radionuclides and diesel.

Radionuclides were screened against USEPA Composite Worker Soil Preliminary Remediation Goals.

Diesel and gasoling range analytes were compared to the RWQCB Environmental Screening Levels for shallow soil and non drinking water conditions were used.

(1) Chromium is assumed to be Chromium III because Hexavalent Chromium was not detected in the sample.

 = Analyte analyzed by STLC

 = Analyte analyzed by TCLP

AQ= Aqueous matrix

OT = concrete matrix

SO= soil matrix

ESL=Regional Water Quality Control Board Environmental Sreening Value

MCL = United States Environmental Protection Agency maximum contaminant level

NE = not established

action level = United States Environmental Protection Agency action level

QC Flag = Quality Control (QC) flags:

B= analyte found in method blank

The Development of
Project-Specific Background
Levels for Soil

B419 Background Screening Values (Background Threshold Values)

March 2012

For use in the B419 Project LLNL has developed a set of background threshold values (EPA 2007a, 2007b) for total metals and radiological isotopes in soil. The background screening values are displayed in the attached table. There were three steps to this process: (1) identify locations considered to be represent background for the Livermore Site; (2) collect and analyze samples; and (3) calculate background threshold values (BTVs; also referred to as screening values) from the analytical results.

To determine how many samples to collect, LLNL followed the MARSSIM guidance for a Wilcoxon Rank Sum Test or Sign Test, with $\Delta/\sigma = 1$ and 5% for both the Type I and Type II errors. This means that if the B419 site is more than one standard deviation above or below the site background those statistical tests would have a high probability (95%) of making the correct decision. These choices indicate that the number of measurements is $n = 32$, in both the site and the background (MARSSIM Table I.2b). Therefore, at least 32 background samples are required. To account for the possibility of lost samples, an additional three sample locations were identified (i.e., to allow for up to 10% lost samples). Therefore, a minimum of 35 randomly selected locations was required. The final sample locations were identified as follows:

1. Two hundred locations within the LLNL perimeter were generated using a random number generator.
2. Using a basemap showing locations of buildings, roads, etc., the two hundred random points were screened, and those that were inside buildings were removed.
3. The remaining 166 locations were reviewed by staff from the Environmental Restoration Division CERCLA remediation effort, and those considered to be inappropriate for use as background were flagged. Thirty-three of the 166 were eliminated this review, leaving 133 potential sampling locations.

The remaining 133 locations were then available for background sampling. Due to potential inaccuracies in the basemap it was expected that some of the 133 locations could be in paved areas or otherwise inaccessible. If there was accessible soil within 25 feet of such a location, the location was adjusted. Otherwise the location was discarded and the next location in the list was used. Since the number of discarded locations was unknown in advance of the sampling effort, the first 50 of the 133 locations, shown in Figure 1, were given to the sampling team. The remaining 83 locations were held in reserve, and it turned out to be unnecessary to use any of them. The sampling team was directed to go through the list sequentially, in order to preserve the randomness of the locations.

One composite sample was collected using a hand auger from each location at a depth between 6 inches to 2 feet below grade. Each sample was analyzed for TTLC metals and

radioactivity, including gross alpha, gross beta, tritium, alpha spectroscopy, gamma spectroscopy, Carbon 14, Strontium 90, and Technetium 99).

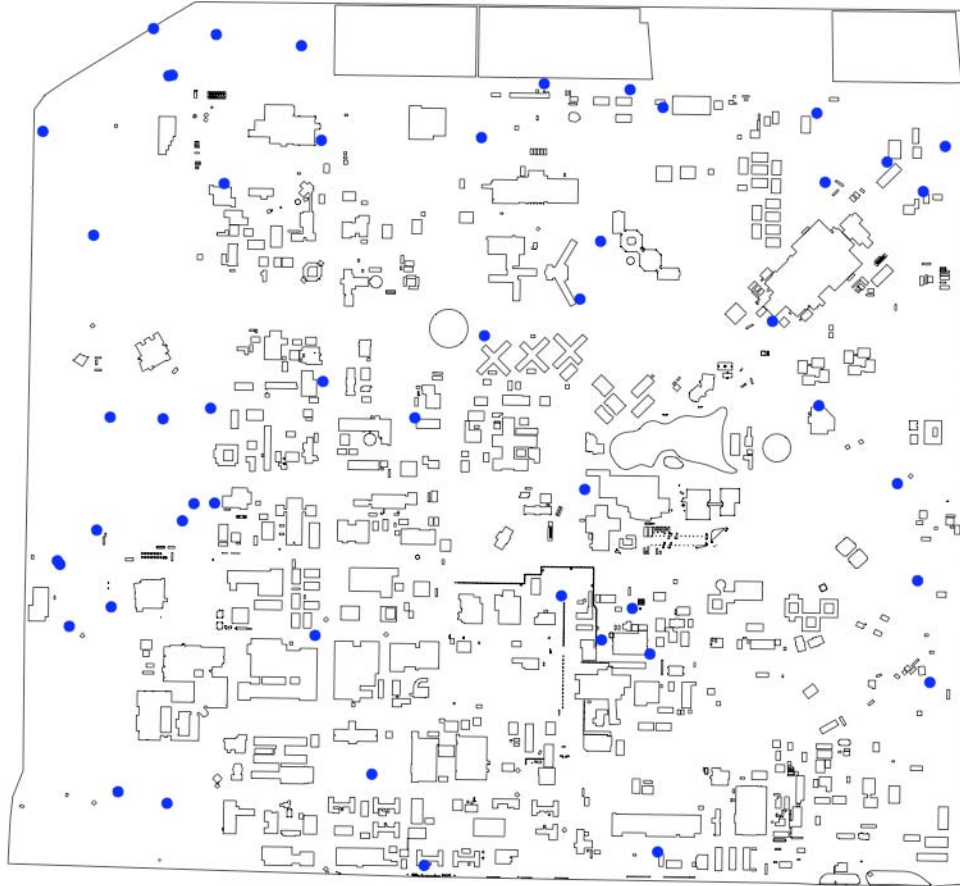


Figure 1. Fifty randomly selected sample locations on the Livermore Site.

Subsequently, LLNL chose to compare each B419 Site sample individually with background. As stated in EPA 2007b (page v), "... upper limits based upon background (or reference) data are used as estimates of BTVs, compliance limits (*CL*), or not-to-exceed values. These upper limits are often used in site (point-by-point) versus background comparison evaluations." BTVs are designed to represent a value that should rarely be exceeded by samples from background.

Specifically, LLNL chose to use the upper prediction limit (UPL) method for the normal distribution from EPA 2007b (Eq. 3-10 in Section 3.6.1 with $\alpha = 0.005$) to calculate BTVs. Samples from background should exceed such a BTV at a rate of approximately 1 in 200. The key to successful use of the UPL for a BTV is to determine whether the

statistical model that underlies the UPL method fits the data. If it does not, then the exceedance rate in actual use could be substantially different from the intended rate.

LLNL first reviewed results for outliers and the number of results reported by the analytical laboratory as above the contract reporting limit (referred to as “>CRL”). One or two high outliers were excluded from four analytes. With one exception, the metals were either all >CRL, or did not have enough results >CRL for statistical calculations. The exception, mercury, had 21 out of 33 results >CRL (after excluding two outliers), and this was considered sufficient for statistical calculations. For radiological isotopes LLNL required the laboratory to report estimated concentrations based on the underlying count data, even when the result was <CRL. These estimated concentrations were used.

After these reviews the statistical distribution of the results was examined. All of the analytes’ probability plots indicated that the normal distribution was a good fit, so the UPL was calculated as described above.

References

EPA 2007a. *ProUCL Version 4.0 User Guide*, EPA/600/R-07/038, 2007.

EPA 2007b. *ProUCL Version 4.0 Technical Guide*, EPA/600/R-07/041, 2007.

For reference, here is a quote of the first three paragraphs of the executive summary of EPA 2007b (page v).

Executive Summary

Statistical inference, including both estimation and hypotheses testing approaches, is routinely used to:

1. Estimate environmental parameters of interest, such as exposure point concentration (EPC) terms, not-to-exceed values, and background level threshold values (BTVs) for contaminants of potential concern (COPC),
2. Identify areas of concern (AOC) at a contaminated site,
3. Compare contaminant concentrations found at two or more AOCs of a contaminated site,
4. Compare contaminant concentrations found at an AOC with background or reference area contaminant concentrations, and
5. Compare site concentrations with a cleanup standard to verify the attainment of cleanup standards.

Several exposure and risk management and cleanup decisions in support of United States Environmental Protection Agency (EPA) projects are often made based upon the mean concentrations of the COPCs. A 95% upper confidence limit (UCL_{95}) of the unknown population (e.g., an AOC) arithmetic mean (AM), μ_1 , can be used to:

- Estimate the EPC term of the AOC under investigation,
- Determine the attainment of cleanup standards,
- Compare site mean concentrations with reference area mean concentrations, and
- Estimate background level mean contaminant concentrations. The background mean contaminant concentration level may be used to compare the mean of an area of concern. It should be noted that it is not appropriate to compare individual point-by-point site observations with the background mean concentration level.

It is important to compute a reliable and stable UCL_{95} of the population mean using the available data. The UCL_{95} should approximately provide the 95% coverage for the unknown population mean, μ_1 . Based upon the available background data, it is equally important to compute reliable and stable upper percentiles, upper prediction limits ($UPLs$), or upper tolerance limits ($UTLs$). These upper limits based upon background (or reference) data are used as estimates of BTVs, compliance limits (CL), or not-to-exceed values. These upper limits are often used in site (point-by-point) versus background comparison evaluations.

Description	ParType	Screening value
Antimony	Metal	2.2
Arsenic	Metal	7.59
Barium	Metal	332
Beryllium	Metal	0.55
Cadmium	Metal	0.55
Chromium	Metal	48.9
Cobalt	Metal	16.7
Copper	Metal	35.8
Hexavalent Chromium	Metal	2.2
Lead	Metal	14.3
Mercury	Metal	0.0759
Molybdenum	Metal	1.1
Nickel	Metal	70.1
Selenium	Metal	0.55
Silver	Metal	1.1
Thallium	Metal	1.1
Vanadium	Metal	43.7
Zinc	Metal	69.8
Actinium 228	Radiological	1.5
Aluminum 26	Radiological	0.133
Am 241 GS	Radiological	0.539
Americium 241	Radiological	0.062
Antimony 124	Radiological	0.145
Antimony 125	Radiological	0.35
Beryllium 7	Radiological	1.15
Bismuth 212	Radiological	2.52
Bismuth 214	Radiological	0.912
Carbon 14	Radiological	10.2
Cerium 139	Radiological	0.0777
Cerium 144	Radiological	0.626
Cesium 134	Radiological	0.189
Cesium 137	Radiological	0.16
Chromium 51	Radiological	0.957
Cobalt 56	Radiological	0.428
Cobalt 57	Radiological	0.0547
Cobalt 58	Radiological	0.181
Cobalt 60	Radiological	0.154
Curium 242	Radiological	0.0143
Curium 244	Radiological	0.0269
Europium 152	Radiological	0.88
Europium 154	Radiological	0.852
Europium 155	Radiological	0.34
Gross alpha	Radiological	3.38
Gross beta	Radiological	4.47
Iodine 131	Radiological	0.395
Iron 59	Radiological	0.399

Lead 212	Radiological	0.938
Lead 214	Radiological	0.844
Manganese 54	Radiological	0.159
Niobium 94	Radiological	0.137
Niobium 95	Radiological	0.169
Plutonium 238	Radiological	0.0355
Plutonium 239+240	Radiological	0.046
Potassium 40	Radiological	18.4
Protactinium 234m	Radiological	29.6
Ruthenium 106	Radiological	1.25
Scandium 46	Radiological	0.134
Silver 110m	Radiological	0.161
Sodium 22	Radiological	0.188
Strontium 90	Radiological	0.264
Technetium 99	Radiological	0.647
Thallium 208	Radiological	0.371
Thorium 227	Radiological	1.05
Thorium 228	Radiological	0.991
Thorium 230	Radiological	0.957
Thorium 232	Radiological	0.983
Thorium 234	Radiological	2.44
Tritium	Radiological	0.106
Uranium 234 and Uranium 23	Radiological	0.76
Uranium 235	Radiological	0.645
Uranium 235 and Uranium 23	Radiological	0.0904
Uranium 238	Radiological	0.717
Zinc 65	Radiological	0.261