



Waste Profile Form

For rapid processing, complete all sections in black or blue ink and mail to: Waste Acceptance Group at MS J496.

For assistance with completing this form, contact your WMC. Click [here](#) for instruction in completing the form.

Contact (if other than given below)
Matthew Whitaker 662-7600

Reference Number
(for Waste Acceptance Group Use Only)

Generator's Z Number 115625	Waste Generator's Name (print) John McCann	WMC's Z Number 135015	WMC's Name (print) Michael C. Le Scouarnec	Generator's Phone 665-1091
Generator's Mail Stop M992	Waste Generating Group CAP	Waste Stream Technical Area 16	Building Outside	Room NA
Waste Accumulation (check only one) <input type="checkbox"/> Satellite Accumulation Area Site No: _____ <input checked="" type="checkbox"/> Less-than-90-days Storage Area Site No: <u>5267</u> <input type="checkbox"/> TSDF Site No: _____ <input type="checkbox"/> Universal Waste Storage Area Site No: _____ <input type="checkbox"/> Used Oil for Recycle Site No: _____ ER Use Only <input checked="" type="checkbox"/> ER Site SWMU/AOC No. <u>16-026(z)</u>			<input type="checkbox"/> PCBs Storage Area Site No: _____ <input type="checkbox"/> NM Special Waste Site No: _____ <input type="checkbox"/> Rad Staging Area Site No: _____ <input type="checkbox"/> Rad Storage Area Site No: _____ <input type="checkbox"/> None of the Above	
Method of Characterization (check as many as apply) <input checked="" type="checkbox"/> Chemical Physical Analysis <input checked="" type="checkbox"/> Attached Sample No: _____ <input type="checkbox"/> Radiological Analysis <input type="checkbox"/> Attached Sample No: _____ <input type="checkbox"/> PCB Analysis <input type="checkbox"/> Attached Sample No: _____ <input checked="" type="checkbox"/> Acceptable Knowledge Documentation <input checked="" type="checkbox"/> Attached Documentation No: <u>See Section 5</u> <input type="checkbox"/> MSDS <input type="checkbox"/> Attached				

Section 1 – Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?	<input type="checkbox"/> Yes (provide comments)	<input checked="" type="checkbox"/> No
Can any of the materials in the waste stream be recycled or reused?	<input type="checkbox"/> Yes (provide comments)	<input checked="" type="checkbox"/> No
Has waste minimization been incorporated into procedures or other process controls?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No (provide comments)
Can this waste be generated outside a RCA?	<input type="checkbox"/> Yes (provide comments)	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Comments:		

Section 2 – Chemical and Physical Information

Waste Type (check only one) <input type="checkbox"/> Unused/Unspent Chemical (complete all sections as appropriate) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/Other (complete all sections)	Waste Category (check all that apply) <input checked="" type="checkbox"/> Inorganic <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Solvent* <input type="checkbox"/> Degreaser* <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous Waste or Residue <input type="checkbox"/> No-Longer Contained-In <input type="checkbox"/> Explosive Process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (see instructions) <input type="checkbox"/> Battery (see instructions) Asbestos <input type="checkbox"/> Friable <input type="checkbox"/> non-friable PCB Source Concentration <input checked="" type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Hazardous Waste Contaminated Soil <input type="checkbox"/> Untreated Hazardous Debris <input type="checkbox"/> Commercial Solid Waste <input type="checkbox"/> Other (describe below) * See instructions	Waste Source (check only one) Waste Source A <input type="checkbox"/> Decon <input type="checkbox"/> Materials Processing Production <input type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling – Routine Monitoring <input type="checkbox"/> Other (describe below) Waste Source B <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input checked="" type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping (non-routine) <input type="checkbox"/> Spill Cleanup (non-routine) <input type="checkbox"/> Non-Petroleum Tanks <input type="checkbox"/> Petroleum Tanks <input type="checkbox"/> Other (describe below)	Waste Matrix (check only one) Gas <input type="checkbox"/> ≤1.5 Atmospheres Pressure <input type="checkbox"/> >1.5 Atmospheres Pressure <input type="checkbox"/> Liquefied Compressed Gas Liquid <input type="checkbox"/> Aqueous <input type="checkbox"/> Non-Aqueous <input type="checkbox"/> Suspended Solids/Aqueous <input type="checkbox"/> Suspended Solids/Non-Aqueous Solid <input type="checkbox"/> Powder/Ash/Dust <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed/Solidified Liquid <input type="checkbox"/> Debris Matrix Type (check only one) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (describe below) Estimated Annual Volume (m³): 0.208
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Section 3 – Process and Waste Description

Process Description:
TA-16, SWMU 16-026(z). Cuttings were generated while performing borehole drilling.

Waste Description:
Qbt4 Drill Cuttings

Section 4 – Characteristics

Ignitability (check only one) (°F) (°C) <input type="checkbox"/> < 73 < 22.8 <input type="checkbox"/> 73 – 99 22.8 - 37.2 <input type="checkbox"/> 100 – 139 37.8 - 59.4 <input type="checkbox"/> 140 – 200 60.0 - 93.3 <input type="checkbox"/> > 200 > 93.3 <input type="checkbox"/> EPA Ignitable – Non-liquid <input type="checkbox"/> DOT Flammable Gas <input type="checkbox"/> DOT Oxidizer <input checked="" type="checkbox"/> Not Ignitable	Corrosivity (check only one) (pH) <input type="checkbox"/> ≤ 2.0 <input type="checkbox"/> 2.1 – 4.0 <input type="checkbox"/> 4.1 – 6.0 <input type="checkbox"/> 6.1 – 9.0 <input type="checkbox"/> 9.1 - 12.4 <input type="checkbox"/> ≥ 12.5 <input type="checkbox"/> Liquid corrosive to steel <input checked="" type="checkbox"/> Non-aqueous	Reactivity (check as many as apply) <input type="checkbox"/> RCRA Unstable <input type="checkbox"/> Water Reactive <input type="checkbox"/> Cyanide Bearing <input type="checkbox"/> Sulfide Bearing <input type="checkbox"/> Pyrophoric <input type="checkbox"/> Shock Sensitive <input type="checkbox"/> Explosive - DOT Div.: _____ <input checked="" type="checkbox"/> Non-reactive	Boiling Point (check only one) (°F) (°C) <input type="checkbox"/> ≤ 95 ≤ 35 <input type="checkbox"/> > 95 > 35 <input checked="" type="checkbox"/> Not applicable
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Identify for all contaminants listed.	Characterization Method				Concentration of Contaminants			Regulatory Limit
	AK	TCLP	Total	None or Non-detect	Contaminant present at			
Toxicity Characteristic Metals					Minimum	Maximum		
					(10,000 ppm = 1%)			
Arsenic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	5.0 ppm
Barium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	to	0.676 ppm	100.0 ppm
Cadmium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	1.0 ppm
Chromium (Total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	5.0 ppm
Lead	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	5.0 ppm
Mercury	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.2 ppm
Selenium	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	1.0 ppm
Silver	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	5.0 ppm
Toxicity Characteristic Organics								
Benzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.5 ppm
Carbon Tetrachloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.5 ppm
Chlorobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	100.0 ppm
Chloroform	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	6.0 ppm
o - cresol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	200.0 ppm
m - cresol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	200.0 ppm
p - cresol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	200.0 ppm
Cresol - mixed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	200.0 ppm
1,4-Dichlorobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	7.5 ppm
1,2-Dichloroethane	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.5 ppm
1,1-Dichloroethylene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.7 ppm
2,4-Dinitrotoluene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.13 ppm
Hexachlorobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.13 ppm
Hexachlorobutadiene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.5 ppm
Hexachloroethane	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	3.0 ppm
Methyl ethyl ketone	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	200.0 ppm
Nitrobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	2.0 ppm
Pentachlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	100.0 ppm
Pyridine	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	5.0 ppm
Tetrachloroethylene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.7 ppm
Trichloroethylene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.5 ppm
2,4,5-Trichlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	400.0 ppm
2,4,6-Trichlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	2.0 ppm
Vinyl chloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.2 ppm
Herbicides and Pesticides								
Chlordane	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.03 ppm
2,4-D	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	10.0 ppm
Endrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.02 ppm
Heptachlor (& its epoxide)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.008 ppm
Lindane	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.4 ppm
Methoxychlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	10.0 ppm
Toxaphene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	0.5 ppm
2,4,5-TP (Silvex)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to	ppm	1.0 ppm

Additional Constituents - Chemicals

Sampling event ID 2549
 SWMU ev2549
 Stockpile Number ev2549

associated Excel file: 9907 AWD 6-29.xlsm
 evaluation date: 6/29/2010

Analyte	CAS/ Symbol	concentration	Unit	Results (ppm)	MIN (ppm)	MAX (ppm)	MIN. %	MAX. %	comments
Aluminum	Al	3010000	ug/kg	3010.000	0	3010.000	0	0.301	
Anthracene	120-12-7	14.2	ug/kg	0.014	0	0.014	0	1.4E-06	
Aroclor-1260	11096-82-5	1280	ug/kg	1.280	0	1.280	0	1.3E-04	
Benzo(a)pyrene	50-32-8	34.9	ug/kg	0.035	0	0.035	0	3.5E-06	
Benzo(b)fluoranthene	205-99-2	30.1	ug/kg	0.030	0	0.030	0	3.0E-06	
Benzo(g,h,i)perylene	191-24-2	16	ug/kg	0.016	0	0.016	0	1.6E-06	
Beryllium	Be	0.385	mg/kg	0.385	0	0.385	0	3.9E-05	
Calcium	Ca	808000	ug/kg	808.000	0	808.000	0	0.081	
Chrysene	218-01-9	32.7	ug/kg	0.033	0	0.033	0	3.3E-06	
Cobalt	Co	992	ug/kg	0.992	0	0.992	0	9.9E-05	
Copper	Cu	6110	ug/kg	6.110	0	6.110	0	6.1E-04	
Fluoranthene	206-44-0	81.6	ug/kg	0.082	0	0.082	0	8.2E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	124	ug/kg	0.124	0	0.124	0	1.2E-05	
Iron	Fe	1000000	ug/kg	10000.000	0	10000.000	0	1.000	
Magnesium	Mg	415000	ug/kg	415.000	0	415.000	0	0.042	
Manganese	Mn	237000	ug/kg	237.000	0	237.000	0	0.024	
Nickel	Ni	1.9	mg/kg	1.900	0	1.900	0	1.9E-04	
Phenanthrene	85-01-8	60.3	ug/kg	0.060	0	0.060	0	6.0E-06	
Potassium	K	635000	ug/kg	635.000	0	635.000	0	0.064	
Pyrene	129-00-0	69.9	ug/kg	0.070	0	0.070	0	7.0E-06	
Sodium	Na	280000	ug/kg	280.000	0	280.000	0	0.028	
Toluene	108-88-3	0.523	ug/kg	5.2E-04	0	5.2E-04	0	5.2E-08	
Trichloroethane[1,1,1-]	71-55-6	1.23	ug/kg	1.2E-03	0	1.2E-03	0	1.2E-07	
Uranium	U	0.357	mg/kg	0.357	0	0.357	0	3.6E-05	
Vanadium	V	5520	ug/kg	5.520	0	5.520	0	5.5E-04	
Zinc	Zn	29800	ug/kg	29.800	0	29.800	0	3.0E-03	
TOTAL							0	1.543	% (all analytes from all pages were added for this total)

NOTE 1: This table contains all detected, non D-coded analytes

NOTE 2: Highlighted analytes are potentially F-coded

Solid Waste Evaluation Summary

RCRA

41 analytes pass
 40 analytes pass as undetected
 0 analytes fail

Defects

PCBs: between 0 and 50 ppm 1.28
 9 analytes with potential F-code
 11 analytes with potential K-code
 7 analytes with potential U-code
 0 analytes with potential P-code

Non-wastewater LDR: 20 pass 0 FAIL
 Hazardous soil LDR: 20 pass 0 FAIL

Industrial/ Occupational Soil (mg/kg) : 26 pass
 Construction Worker Soil (mg/kg) : 27 pass
 Recreational Soil (mg/kg) : 23 pass
 soil background: 27 pass
 Canyon Sediment background: 18 pass
 Qbt 2,3,4 background: 19 pass
 Qbt 1v background: 17 pass
 Qbt 1g, Qct,Qbo background: 14 pass
 12 pass

1 FAIL
 0 FAIL
 1 FAIL
 0 FAIL
 1 FAIL
 0 FAIL
 2 FAIL
 5 FAIL
 7 FAIL

RAD

Not TRU

total dose: 0.3899 mRem/year

analysed for H-3
 analysed for Pu-239
 36 isotopes,

12 were detected
 23 undetected

Residen-tial SAL: 2 pass
 Indust-rial SAL: 2 pass
 Constr. Worker SAL: 4 pass
 Recrea-tional SAL: 4 pass
 Soil: 9 pass
 Canyon Sedi-ment: 9 pass
 QBT2,3,4: 9 pass
 QBt 1v: 9 pass
 QBt 1g, Qct, Qbo: 9 pass

0 FAIL
 0 FAIL

Remark: The Evaluator may overwrite any result of automatic evaluation, but a short written explanation must be added

Sample ID	associated blanks	associated duplicate
WST16-10-9907	WST16-10-9891	

Imported data files
ev2549.txt

RCRA Characteristics Form

Analyte	CAS/ Symbol	Potential Haz Code	Reg. limit	concentration	unit of measure	Qualifier	Pass/Fail	comments
Arsenic	As		5000	50	ug/L	U	pass	
Barium	Ba	D005	100000	676	ug/L	NQ	pass	
Cadmium	Cd		1000	1.85	ug/L	U	pass	
Chromium	Cr		5000	26.6	ug/L	U	pass	
Lead	Pb		5000	20	ug/L	U	pass	
Mercury	Hg		200	2	ug/L	U	pass	
Selenium	Se		1000	16.1	ug/L	U	pass	
Silver	Ag		5000	10	ug/L	U	pass	
Endrin	72-20-8		20	0.4	ug/L	U	pass	
BHC[gamma-]	58-89-9		400	0.2	ug/L	U	pass	
Methoxychlor[4,4'-]	72-43-5		10000	2	ug/L	U	pass	
Toxaphene (Technical Grade)	8001-35-2		500	5	ug/L	U	pass	
D[2,4-]	94-75-7		10000	50	ug/L	U	pass	
TP[2,4,5-]	93-72-1		1000	50	ug/L	U	pass	
Benzene	71-43-2		500	10	ug/L	U	pass	
Carbon Tetrachloride	56-23-5		500	10	ug/L	U	pass	
Chlordane(alpha/gamma)	57-74-9		30	2.5	ug/L	U	pass	
Chlordane[gamma-]	5103-74-2	D020		NA	ug/L		NA	
Chlordane[alpha-]	5103-71-9	D020		NA	ug/L		NA	
Chlorobenzene	108-90-7		100000	10	ug/L	U	pass	
Chloroform	67-66-3		6000	10	ug/L	U	pass	
Methylphenol[2-]	95-48-7		200000	50	ug/L	U	pass	
Methylphenol[3-]	108-39-4		200000	50	ug/L	U	pass	
Methylphenol[4-]	106-44-5		200000	50	ug/L	U	pass	
Methylphenol[3-, 4-]	65794-96-9		200000	50	ug/L	U	pass	
Methylphenol(total)	8027-16-5		200000	100	ug/L	UU	pass	
Dichlorobenzene[1,4-]	106-46-7		7500	50	ug/L	U	pass	
Dichloroethane[1,2-]	107-06-2		500	10	ug/L	U	pass	
Dichloroethene[1,1-]	75-35-4		700	10	ug/L	U	pass	
Dinitrotoluene[2,4-]	121-14-2		130	50	ug/L	U	pass	
Heptachlor	76-44-8		8	0.2	ug/L	U	pass	
Hexachlorobenzene	118-74-1		130	50	ug/L	U	pass	
Hexachlorobutadiene	87-68-3		500	50	ug/L	U	pass	
Hexachloroethane	67-72-1		3000	50	ug/L	U	pass	
Butanone[2-]	78-93-3		200000	50	ug/L	U	pass	
Nitrobenzene	98-95-3		2000	50	ug/L	U	pass	
Pentachlorophenol	87-86-5		100000	50	ug/L	U	pass	
Pyridine	110-86-1		5000	50	ug/L	U	pass	
Tetrachloroethene	127-18-4		700	10	ug/L	U	pass	
Trichloroethene	79-01-6		500	10	ug/L	U	pass	
Trichlorophenol[2,4,5-]	95-95-4		400000	50	ug/L	U	pass	
Trichlorophenol[2,4,6-]	88-06-2		2000	50	ug/L	U	pass	
Vinyl Chloride	75-01-4		200	10	ug/L	U	pass	

NOTE 1: If multiple results exist for given analyte, first, the highest detected result is chosen. If there are no detected results, the lowest undetected result is chosen.

NOTE 2: Often chlordane is analyzed as alpha and gamma isomers. If no total chlordane result exist, total concentration will be calculated from individual isomer results.

NOTE 3: Most frequently 2-Methylphenol is analyzed separately and 3- and 4-methylphenols are reported together.

Often, raw data contain only two results - for 2- methylphenol and 4-methylphenol. In such case 4-methyl is in fact a result

for two isomers together: 3-methyl + 4-methylphenol. The macro evaluates present data and calculates concentrations for 3-, 4-, and total

methylphenols. Results reported separately for 3- and 4- methylphenols with calc. remark are, in fact, partial total, 3- + 4-methylphenol together.

NOTE 4: Undetected results pass automatically, without comparing to standard. Detected results pass only if reported concentration is lower than legal standard.

NOTE 5: CAS number is highlighted in pink if there is a large discrepancy between sample and duplicate.

Detected Chemicals Form

Analyte	CAS/ Symbol	concentration	unit of measure	Non- wastewater LDR	Hazardous Soil LDR	Potential Haz F-codes	Potential Haz K-codes	Potential Haz U-codes	Potential Haz P-codes	comments
Aluminum	Al	3010	mg/kg	pass						
Anthracene	120-12-7	0.0142	mg/kg	pass						
Aroclor-1260	11096-82-5	1.28	mg/kg							
Arsenic	As	0.96	mg/kg	pass		F032,F034,F035	K031,K060,K161,K171,K172,K176,K084,K101,K102			
Barium	Ba	67.8	mg/kg	pass						
Benzo(a)pyrene	50-32-8	0.0349	mg/kg	pass		F032,F034,F037,F038	K001,K035,K141,K142,K144,K145,K147,K148,K170	U022		
Benzo(b)fluoranthene	205-99-2	0.0301	mg/kg	pass						
Benzo(g,h,i)perylene	191-24-2	0.016	mg/kg	pass						
Beryllium	Be	0.385	mg/kg	pass						
Calcium	Ca	808	mg/kg	pass						
Chromium	Cr	2.61	mg/kg	pass		F032,F034,F035,F037,F038	K090			
Chrysene	218-01-9	0.0327	mg/kg	pass		F037,F038	K001,K035	U050		
Cobalt	Co	0.992	mg/kg	pass						
Copper	Cu	6.11	mg/kg	pass						
Fluoranthene	206-44-0	0.0816	mg/kg	pass						
Indeno(1,2,3-cd)pyrene	193-39-5	0.124	mg/kg	pass		F032,F034	K001,K035	U120, U137		
Iron	Fe	10000	mg/kg							
Lead	Pb	10.8	mg/kg	pass		F035,F037,F038	K002,K003,K005,K048,K049,K051,K062,K064,K086,K100,K176,K046,K052,K061,K069			
Magnesium	Mg	415	mg/kg	pass						
Manganese	Mn	237	mg/kg	pass						
Mercury	Hg	0.097	mg/kg	pass						
Nickel	Ni	1.9	mg/kg	pass		F006	K175,K071,K106	U151		
Phenanthrene	85-01-8	0.0603	mg/kg	pass						
Potassium	K	635	mg/kg	pass						
Pyrene	129-00-0	0.0699	mg/kg	pass						
Sodium	Na	280	mg/kg	pass						
Toluene	108-88-3	0.00052	mg/kg	pass		F005,F024,F025	K015,K036,K037,K149,K151	U220		
Trichloroethane[1,1,1-]	71-55-6	0.00123	mg/kg	pass		F001,F002,F024,F025	K019,K020,K028,K029,K073,K096	U226		
Uranium	U	0.357	mg/kg	pass						
Vanadium	V	5.52	mg/kg	pass						
Zinc	Zn	29.8	mg/kg	pass						

SWMU ev2549

Radioisotopes Form associated Excel file: 16-026(z) AWD.xlsm

Stockpile Number ev2549

evaluation date: 6/22/2010

Analyte	CAS/ Symbol	concentration	unit of measure	Qualifier	comments
Bismuth-214	Bi-214	0.925	pCi/g	NQ	
Gross alpha	GROSSA	9.88	pCi/g	NQ	
Gross beta	GROSSB	19	pCi/g	NQ	
Lead-212	Pb-212	1.32	pCi/g	NQ	
Lead-214	Pb-214	1.25	pCi/g	NQ	
Potassium-40	K-40	30.2	pCi/g	NQ	
Radium 226/228	calc.	2.255	pCi/g		
Radium-226	Ra-226	0.925	pCi/g	NQ	
Radium-228	Ra-228	1.33	pCi/g	NQ	
Thallium-208	Tl-208	0.356	pCi/g	NQ	
Uranium-234	U-234	0.727	pCi/g	NQ	
Uranium-238	U-238	0.684	pCi/g	NQ	
Americium-241	Am-241	0.000859	pCi/g	U	
Cerium-139	Ce-139	-0.0172	pCi/g	U	
Cesium-134	Cs-134	0.0762	pCi/g	U	
Cesium-137	Cs-137	0.03	pCi/g	U	
Cobalt-60	Co-60	-0.0233	pCi/g	U	
Europium-152	Eu-152	0.0359	pCi/g	U	
Lanthanum-140	La-140	0.0589	pCi/g	U	
Mercury-203	Hg-203	0.0191	pCi/g	U	
Plutonium-238	Pu-238	0.0013	pCi/g	U	
Plutonium-239/240	Pu-239/240	0.00686	pCi/g	U	
Radium-223	Ra-223	-0.495	pCi/g	U	
Ruthenium-106	Ru-106	0.18	pCi/g	U	
Sodium-22	Na-22	0.0162	pCi/g	U	
Strontium-85	Sr-85	0.0445	pCi/g	U	
Strontium-90	Sr-90	0.0941	pCi/g	U	
Thorium-227	Th-227	0.0852	pCi/g	U	
Thorium-231	Th-231	-0.495	pCi/g	U	
Thorium-234	Th-234	1.93	pCi/g	U	
Tin-113	Sn-113	0.00584	pCi/g	U	
Tritium	H-3	0.0030797	pCi/g	U	
Uranium-235	U-235	-0.192	pCi/g	U	
Uranium-235/236	U-235/236	0.0469	pCi/g	U	
Yttrium-88	Y-88	0.019	pCi/g	U	
calculated Gross AB	GrossABc	28.880001			

Due Diligence Review for Wastes from Consolidated Unit 16-026(z)
April 2010

Drill cuttings and associated contact waste generated during the investigation of Solid Waste Management Unit (SWMU) 16-026(z) will be characterized using analytical data from the drill cuttings samples (see the automated waste determination for 2549.9907). SWMU 16-026(z) is soil associated with a roof-drain downspout near the southeast side of Building 16-306. The outfall discharges only stormwater. The outfall leads into a paved drainage ditch that carries rainwater to a culvert and eventually into Water Canyon. The maximum concentrations of potentially listed contaminants detected in the drill cuttings are shown in Table 1. The drill cuttings consisted primarily of Qbt 2,3,4 tuff. Other potentially listed inorganics (arsenic, chromium, and lead) were detected at levels below Qbt 2,3,4 background values and are not included in this due diligence.

A due diligence document review to identify the sources of contamination was conducted based on the guidance provided by the Environmental Protection Agency's (EPA's) Management of Remediation Waste under RCRA (EPA 530-F-98-026), Determination of When Contamination is caused by Listed Hazardous Waste, which states:

Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste and, therefore, provided the material in question does not exhibit a characteristic of hazardous waste, RCRA requirements do not apply.

Following is a summary of the good faith effort LANL undertook to determine whether the detected organic compounds were from listed sources.

Documents identified in the PRS Database for SWMU 16-026(z) with relevant process information or data (see Table 2) were reviewed to determine whether the contaminants originated from listed sources. Existing data for the consolidated unit summarized in Figures 2.3-1 through 2.3-3 of the 2007 S-Site Aggregate Area Investigation Work Plan and the data in the RACER database for TA-16 were reviewed to determine whether there was an upgradient source of these contaminants. The semi-volatile organic compounds (SVOCs) were ubiquitous throughout the area at concentrations typical of asphalt runoff from the roads; no other upgradient source was apparent. Toluene and 1,1,1-trichloroethane (TCA) were only sporadically detected and there is no apparent upgradient plume. Therefore, only operations in the locale of SWMU 16-026(z) were evaluated.

Based on the documentation review, the conclusions regarding the sources of the contamination are:

- The waste would U-listed only if the source of the contamination was land application (e.g., spills or disposal) of unused/unspent commercial chemical products listed in 40 CFR §261.33. No documentation identified the land application of unused/unspent

commercial chemical products; therefore, U-listings would not be applied to the drill cuttings and associated contact waste.

- The waste would be F-listed for toluene and 1,1,1-trichloroethane if the source of the contamination was spent solvents. According to the RFI Work Plan, the solvents used at the 300s line and potentially discharged included acetone, 1,1,1-trichloroethane (TCA), chloroethene, methylene chloride, methyl ethyl ketone, and trichlorotrifluoroethane (Freon PCA). Of the identified solvents, only TCA was detected. The TCA was detected in only one of the four samples collected at SWMU 16-026(z). There is no record that TCA or toluene were spilled or discharged to this SWMU. The only source identified as discharging to this SWMU was stormwater from the roof drains. Toluene is a constituent of roofing tars, which is not a listed source. Based on the available documentation, a solvent source for the toluene and TCA cannot be identified and the drill cuttings and associated contact waste are not F-listed.
- The waste would also be F-listed if the source of the contamination was wood preserving, petroleum refining, and/or manufacturing of chlorinated aliphatic hydrocarbons. The documentation did not identify these processes, nor would they be typical of weapons-related operations occurring at S-Site. Therefore, the drill cuttings and associated contact waste are not F-listed.
- The waste would be K-listed only if the sources of the contamination were specific processes in wood preserving, pesticide production, coking, pesticide production, organic chemical production, and/or petroleum refining. The documentation did not identify these processes, nor would they be typical of weapons-related operations occurring at S-Site. Therefore, the drill cuttings and associated contact waste are not K-listed.

Based on this good faith effort, listed sources of the contaminants detected at SWMU 16-026(z) were not identified. Therefore, the drill cuttings and associated contact waste need not be managed as listed waste.

References

Ryti, R.T., P.A. Longmire, D.E. Broxton, S.L. Reneau, and E.V. McDonald. "Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory." September 22, 1988

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Table 1. Potentially Listed Contaminants

Analyte	Maximum Concentration (mg/kg)	Potential F-listings	Potential K-listings	Potential U-listings
Benzo(a)pyrene	0.0349	F032,F034,F037, F038	K001,K035,K141, K142,K144,K145, K147,K148,K170	U022
Benzo(b)fluoranthene	0.0301		K001,K035,K141, K142,K143,K144, K147,K148,K170	
Chrysene	0.0327	F037,F038	K001,K035	U050
Fluoranthene	0.0816		K001,K035	U120
Indeno(1,2,3-cd)pyrene	0.124	F032,F034	K001,K035,K141, K142,K147,K148	U137
Toluene	0.000523	F005,F024,F025	K015,K036,K037, K149,K151,	U220
Trichloroethane[1,1,1-]	0.00123	F001,F002,F024, F025	K019,K020,K028, K029,K073,K096	U226

*Inorganics are included only if they exceed Qbt 2,3,4 background values (Ryti, et.al., 1998)

Table 2. Documents Reviewed

Date	Title	DocType	ERId No.
April 20, 1990 – December 31, 1990	Liquid Release Notifications	Spill Log	NA
9/30/2007	Historical Investigation Report (HIR) for S-Site Aggregate Area	HIR	097685
9/30/2007	Investigation Work Plan for S-Site Aggregate Area	Investigation Work Plan	097687
7/1/1993	RFI Work Plan for Operable Unit 1082	RFI Work Plan	020948
November 1990	LANL SWMU Report, Volume II, TA-10-TA-25	SWMU Report	007513