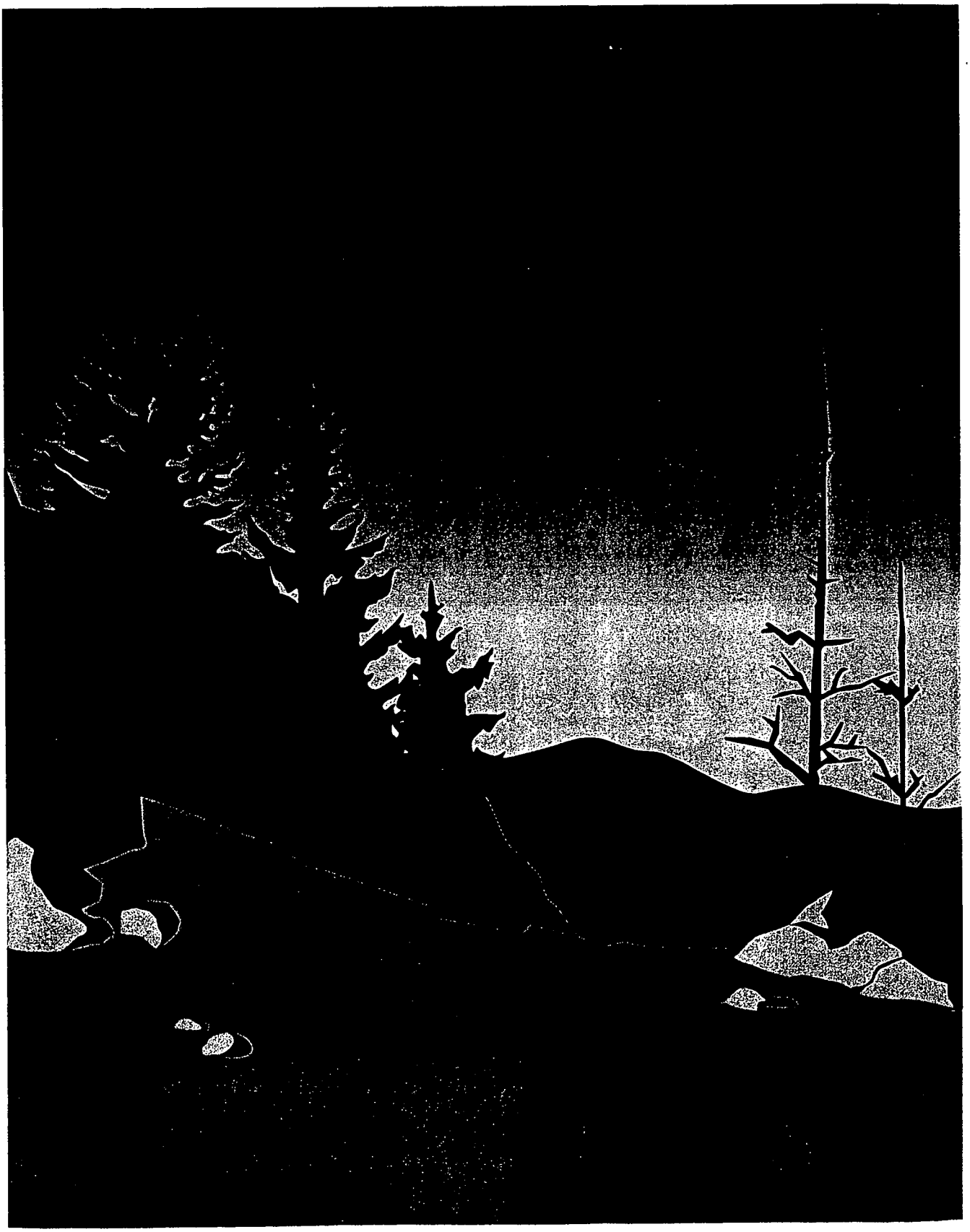
NFA DETERMINATIONS
FY'02



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STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
2001 Annual							
206	IA	300-206	Inactive D-836 Hazardous Waste Tank	HRR[1]	Annual 2001	NFA	2/27/02
189	IA	600-189	Nitric Acid Tank	HRR[1]	Annual 1997[3] Annual 2000[26] Annual 2001	NFA	1/31/02
1999 Annual							
170	BZ	NW-170	PU&D Storage Yard - Waste Spills	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 1999[7]	NFA	2/27/02
1998 Annual							
142.6	BZ	NE-1404	Diesel Spill at Pond B-2 Spillway	Quarterly 2[5]	Quarterly 3[6] Annual 1998[7]	NFA	2/27/02
1997 Annual							
212	IA	300-212	Building 371 Drum Storage Area, Unit 63 (deferred to Part VIII of the RFETS RCRA Mixed Residues Modification; see Annual 1997)	HRR[1]	Annual 1997[3]	NFA	2/27/02
NA	IA	700-1114a	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA	2/27/02
NA	IA	700-1114b	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA	2/27/02
109	BZ	900-109	Trench T-2 - Ryan's Pit	HRR[1]	Annual 1996[2] Annual 1997[3]	NFA	4/03/02

ADMIN RECORD

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
Quarterly 12							
156.1, 186	IA	500-908	Oil Released from Air Compressor	Quarterly 12[17]	-		3/13/02
Quarterly 11							
101	IA	700-1113	Water Released from 207C Solar Evaporation Pond	Quarterly 11[18]	-		3/13/02
NA	IA	900-1315	Tanker Truck Release on East Patrol Road, North of Spruce Ave.	Quarterly 10[11]	Quarterly 11[18]		3/13/02
176	IA	900-1317	Soil Released from Wooden Crate in 964 Laydown Yard	Quarterly 11[18]	-	NFA	4/03/02
Quarterly 10							
NA	IA	300-714	Laundry Waste Water Spill From Tank T-803, North of Building 374	Quarterly 10[11]	-		3/13/02
NA	BZ	900-1316	Elevated Chromium (total) Identified During Geotechnical Drilling	Quarterly 10[11]	-		3/13/02
Quarterly 9							
101	IA	900-1314	Solar Evaporation Pond 207B Sludge Release	Quarterly 9[13]	-		3/13/02
Quarterly 8							
NA	IA	300-713	Caustic Spill North of Building 331	Quarterly 8[15]	-		3/13/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	400-814	Air Conditioner Compressor Release, Bldg. 444 Roof	Quarterly 8[15]	-		3/13/02
Quarterly 7							
NA	BZ	NE-1410	Diesel Fuel Spill at Field Treatability Unit	Quarterly 7[9]	-	NFA	1/31/02
NA	BZ	NE-1411	Diesel Fuel Overflowed from Tanker at OU 2 Field Treatability Unit	Quarterly 7[9]	-	NFA	2/27/02
114	7	NW-1504	Improper Disposal of Thorosilane Contaminated Material at Landfill	Quarterly 7[9]	-	NFA	1/31/02
NA	IA	000-503	Solar Pond Water Spill Along Central Avenue	Quarterly 7[9]	-	NFA	1/31/02
NA	IA	100-613	Asphalt Surface in Lay Down Yard North of Building 130 (identified as 000-501 in Quarterly 4[8]; reassigned as 100-613 in Quarterly 7[9])	Quarterly 4[8]	Quarterly 7[9]	NFA	2/27/02
NA	IA	300-711	Ni-Cad Battery Spill Outside of Building 373	Quarterly 1[24]	Quarterly 7[9]	NFA	1/31/02
NA	IA	300-712	1/2 gal Antifreeze Spilled by Street Sweeper Outside of Building 373	Quarterly 7[9]	-	NFA	1/31/02
Miscellaneous Sites EPA approved in 1992. CDPHE reviewed and verbally concurred. Need written concurrence.							
NA	BZ	SE-1600	Pond 7 – Steam Condensate Releases	HRR[1]	-	NFA	4/03/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	BZ	SE-1601	Pond 8 - Cooling Tower Discharge Releases	HRR[1]	-	NFA.	4/03/02
NA	IA	700-1110	Nickel Carbonyl Burial West of Building 771	HRR[1]	-	NFA.	4/03/02
NA	IA	900-1300	RO Plant Sludge Drying Beds	HRR[1]	-	NFA	4/03/02
NA	NA	NA	PICs 1, 2, 3, 5, 7, 8, 10, 12, 13, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 43, 45, 46, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58, 59, 60, 61			NFA	2002

RED	Pending further Agency Review
	Approved NFA
BLUE	Requires additional characterization
GREEN	Approved NFA but requires additional information or clarification in the FY02 HRR.
GRAY	Decision delayed

1/15/02

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STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
2001 Annual							
133.1	5	SW-133.1	Ash Pit 1	HRR[1]	Annual 2001	Determination delayed pending subsurface action level outcome.	
133.2	5	SW-133.2	Ash Pit 2	HRR[1]	Annual 2001	Determination delayed pending subsurface action level outcome.	
133.3	5	SW-133.3	Ash Pit 3	HRR[1]	Annual 2001	NFA	12/05/01
133.4	5	SW-133.4	Ash Pit 4	HRR[1]	Annual 2001	Determination delayed pending subsurface action level outcome.	
133.5	5	SW-133.5	Incinerator Facility	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.	
133.6	5	SW-133.6	Concrete Wash Pad	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.	
NA	5	SW-1701	Recently Identified Ash Pit (also referred to as TDEM-1)	Quarterly 9[13]	Annual 1997[3] Annual 2001	NFA	12/05/01
NA	5	SW-1702	Recently Identified Ash Pit (also referred to as TDEM-2)	Quarterly 9[13]	Annual 2001	Determination delayed pending subsurface action level outcome.	
NA	IA	100-603	Building 123 Bioassay Waste Spill	HRR[1]	Annual 2001	NFA (Quarterly Letter Clarification)	12/19/01
206	IA	300-206	Inactive D-836 Hazardous Waste Tank	HRR[1]	Annual 2001	NFA	2/27/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	400-812	Tank T-2 Spill in Building 460	Quarterly 6[16]	Quarterly 7[9] Quarterly 8[15] Annual 2001	NFA	12/19/01
189	IA	600-189	Nitric Acid Tank	HRR[1]	Annual 1997[3] Annual 2000[26] Annual 2001	NFA	1/31/02
NA	IA	700-1102	Transformer Leak – 776-4	HRR[1]	Annual 1996[2] Annual 1997[3] Annual 2000[26] Annual 2001	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
179	15	800-179	Building 865 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	NFA	12/19/01
180	15	800-180	Building 883 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	NFA	12/19/01
NA	IA	900-1308	Gasoline Spill Outside of Building 980	Quarterly 6[16]	Quarterly 8[15] Annual 2001	NFA	12/19/01
2000 Annual							
NA	BZ	NE-1409	Modular Tanks and 910 Treatment System Spill (formerly 000-503)	Quarterly 5[10]	Quarterly 7[9] Annual 2000[26]	NFA (Quarterly Letter Clarification)	11/14/01
156.1	IA	300-156.1	Building 371 Parking Lot (2 locations designated on Plate #2)	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA	11/14/01
164.1	IA	600-164.1	Radioactive Slab from Bldg. 776	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA (Quarterly Letter Clarification)	11/14/01

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	600-1001(a)	Waste Oil Identified in PAC-1001	Annual 1997[3]	Annual 1997[3] Annual 2000[26]	NFA (Quarterly Letter Clarification)	11/14/01
123.1	IA	700-123.1	Valve Vault 7	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA	11/14/01
108	BZ	900-108	Trench T-1	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 2000[26]	NFA	11/14/01
NA	IA	900-1311	Septic Tank East of Building 991	Quarterly 7[9]	Annual 1999[23] Annual 2000[26]	NFA	11/14/01
NA	IA	900-1318	Release of F001 Listed Waste Water to Soil (identified as 900-1307 in Annual 1997; reassigned 900-1318 in Annual 1998)	Annual 1997[3]	Annual 1998[7] Annual 2000[26]	NFA	11/14/01
183	BZ	900-183	Gas Detoxification Area	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA	11/14/01
110	BZ	NE-110	Trench T-3	HRR[1]	Annual 1996[2] Annual 1997[3] Annual 2000[26]	NFA	11/14/01
1999 Annual							
170	BZ	NW-170	PU&D Storage Yard - Waste Spills	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 1999[7]	NFA	2/27/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
1998 Annual							
142.6	BZ	NE-1404	Diesel Spill at Pond B-2 Spillway	Quarterly 2[5]	Quarterly 3[6] Annual 1998[7]	NFA	2/27/02
1997 Annual							
216.2	BZ	NE-216.2	East Spray Field	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.	
216.3	BZ	NE-216.3	East Spray Field	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.	
212	IA	300-212	Building 371 Drum Storage Area, Unit 63 (deferred to Part VIII of the RFETS RCRA Mixed Residues Modification; see Annual 1997)	HRR[1]	Annual 1997[3]	NFA	2/27/02
NA	IA	700-1114a	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA	2/27/02
NA	IA	700-1114b	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA	2/27/02
109	BZ	900-109	Trench T-2 - Ryan's Pit	HRR[1]	Annual 1996[2] Annual 1997[3]	NFA	4/03/02
1996 Annual							
166.1	6	NE-166.1	Trench A	HRR[1]	Annual 1996[2]	NFA	11/14/01

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
166.2	6	NE-166.2	Trench B	HRR[1]	Annual 1996[2]	NFA	11/14/01
166.3	6	NE-166.3	Trench C	HRR[1]	Annual 1996[2]	NFA	11/14/01
167.2	7	NE-167.2	Pond Area Spray Field (Center Area)	HRR[1]	Annual 1996[2]	NFA	11/14/01
167.3	7	NE-167.3	South Area Spray Field	HRR[1]	Annual 1996[2]	NFA	11/14/01
216.1	6	NE-216.1	East Spray Fields - North Area	HRR[1]	Annual 1996[2]	NFA	11/14/01
NA	IA	300-708	Transformers North of Building 371	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	300-709	Transformer Leak 334-1	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
204	15	400-204	Original Uranium Chip Roaster	HRR[1]	Annual 1996[2]	NFA	11/14/01
NA	IA	500-900	Transformer Leak – 515/516	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	500-901	Transformer Leak – 555	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	500-902	Transformer Leak – 559	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	500-905	Transformer Leak – 558-1	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
158	IA	500-909	Release of Spent Photographic Fixer Solution	Annual 1996[2]	-	NFA	11/14/01
NA	IA	600-1000	Transformer Storage Building 662	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	600-1002	Transformer Storage - West of Building 666	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	600-1003	Transformers North and South of 661-675 Substation	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	700-1103	Leaking Transformers - Building 707	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	700-1104	Leaking Transformers - Building 708	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	700-1111	Leaking Transformer - Building 750	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	700-1112	Leaking Transformer - 776-5	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	800-1207	Transformer 883-4	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	800-1208	Transformer 881-4	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	800-1209	Leaking Transformers, 800 Area	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	800-1210	Transformer 865-1 and 865-2	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	
NA	IA	900-1306	Transformers 991-1 and 991-2	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.	

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
Quarterly 12							
156.1, 186	IA	500-908	Oil Released from Air Compressor	Quarterly 12[17]	-		3/13/02
Quarterly 11							
101	IA	700-1113	Water Released from 207C Solar Evaporation Pond	Quarterly 11[18]	-		3/13/02
NA	IA	900-1315	Tanker Truck Release on East Patrol Road, North of Spruce Ave.	Quarterly 10[11]	Quarterly 11[18]		3/13/02
176	IA	900-1317	Soil Released from Wooden Crate in 964 Laydown Yard	Quarterly 11[18]	-	NFA	4/03/02
Quarterly 10							
NA	IA	300-714	Laundry Waste Water Spill From Tank T-803, North of Building 374	Quarterly 10[11]	-		3/13/02
NA	BZ	900-1316	Elevated Chromium (total) Identified During Geotechnical Drilling	Quarterly 10[11]	-		3/13/02
Quarterly 9							
101	IA	900-1314	Solar Evaporation Pond 207B Sludge Release	Quarterly 9[13]	-		3/13/02
Quarterly 8							
NA	IA	300-713	Caustic Spill North of Building 331	Quarterly 8[15]	-		3/13/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	400-814	Air Conditioner Compressor Release, Bldg. 444 Roof	Quarterly 8[15]	-		3/13/02
Quarterly 7							
NA	BZ	NE-1410	Diesel Fuel Spill at Field Treatability Unit	Quarterly 7[9]	-	NFA	1/31/02
NA	BZ	NE-1411	Diesel Fuel Overflowed from Tanker at OU 2 Field Treatability Unit	Quarterly 7[9]	-	NFA	2/27/02
114	7	NW-1502	Improper Disposal of Diesel-Contaminated Material at Landfill (formerly NW-177)	Quarterly 2[5]	Quarterly 3[6] Quarterly 7[9]	NFA	12/19/01
114	7	NW-1503	Improper Disposal of Fuel Contaminated Material at Landfill	Quarterly 1[24]	Quarterly 7[9]	NFA	12/19/01
114	7	NW-1504	Improper Disposal of Thorosilane Contaminated Material at Landfill	Quarterly 7[9]	-	NFA	1/31/02
NA	IA	000-503	Solar Pond Water Spill Along Central Avenue	Quarterly 7[9]	-	NFA	1/31/02
NA	IA	100-613	Asphalt Surface in Lay Down Yard North of Building 130 (identified as 000-501 in Quarterly 4[8]; reassigned as 100-613 in Quarterly 7[9])	Quarterly 4[8]	Quarterly 7[9]	NFA	2/27/02
NA	IA	300-711	Ni-Cad Battery Spill Outside of Building 373	Quarterly 1[24]	Quarterly 7[9]	NFA	1/31/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	300-712	1/2 gal Antifreeze Spilled by Street Sweeper Outside of Building 373	Quarterly 7[9]	-	NFA	1/31/02
Miscellaneous Sites EPA approved in 1992. CDPHE reviewed and verbally concurred. Need written concurrence.							
NA	BZ	NE-1400	Tear Gas Powder Release	HRR[1]	-	NFA	12/19/01
NA	BZ	NE-1401	NE Buffer Zone Gas Line Break	HRR[1]	-	NFA	11/14/01
NA	BZ	NE-1402	East Inner Gate PCB Spill	HRR[1]	-	NFA	11/14/01
NA	BZ	NE-1403	Gasoline Spill - Building 920 Guard Post	HRR[1]	-	NFA	11/14/01
NA	BZ	SE-1600	Pond 7 – Steam Condensate Releases	HRR[1]	-	NFA	4/03/02
NA	BZ	SE-1601	Pond 8 - Cooling Tower Discharge Releases	HRR[1]	-	NFA.	4/03/02
NA	BZ	SW-1700	Fuel Spill into Woman Creek Drainage	HRR[1]	-	NFA	11/14/01
NA	BZ	000-501	Roadway Spraying	HRR[1]	-	NFA	12/19/01
NA	IA	100-600	Mercury Spill – Valve Vault 124-B, Building 124	HRR[1]	-	NFA	12/19/01

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	100-601	Building 123 Phosphoric Acid Spill	HRR[1]	-	NFA	11/14/01
NA	IA	100-604	T130 Complex Sewer Line Leaks	HRR[1]	-	NFA	11/14/01
NA	IA	100-605	Building 115 Hydraulic Oil Spill	HRR[1]	-	NFA	11/14/01
NA	IA	100-606	Building 125 TCE Spill	HRR[1]	-	NFA	11/14/01
NA	IA	100-610	Asbestos Release – Building 123	HRR[1]	-	NFA	11/14/01
NA	IA	100-612	Battery Solution Spill - Building 119	HRR[1]	-	NFA	11/14/01
NA	IA	300-700	Scrap Roofing Disposal	HRR[1]	-	NFA	11/14/01
NA	IA	300-701	Sulfuric Acid Spill – Building 371	HRR[1]	-	NFA	11/14/01
NA	IA	300-703	Building 331 North Area	HRR[1]	-	NFA	11/14/01
NA	IA	300-704	Roof Fire, Building 381	HRR[1]	-	NFA	11/14/01

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	300-705	Potassium Hydroxide Spill North of Building 374	HRR[1]	-	NFA	11/14/01
NA	IA	300-706	Evaporator Tanks North of Building 374	HRR[1]	-	NFA	11/14/01
NA	IA	300-707	Sanitizer Spill	HRR[1]	-	NFA	12/19/01
NA	IA	300-710	Gasoline Spill North of Building 331	HRR[1]	-	NFA	11/14/01
NA	IA	400-805	Building 443 Tank #9 Leak	HRR[1]	-	NFA	12/05/01
NA	IA	400-806	Catalyst Spill, Building 440	HRR[1]	-	NFA	11/14/01
NA	IA	400-808	Vacuum Pump Leak - Building 442	HRR[1]	-	NFA	11/14/01
NA	IA	400-809	Oil Leak - 446 Guard Post	HRR[1]	-	NFA	11/14/01
NA	IA	500-903	RCRA Storage Unit #1	HRR[1]	-	NFA	11/14/01
NA	IA	700-1107	Compressor Waste Oil Spill - Building 776	HRR[1]	-	NFA	11/14/01

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	700-1109	Uranium Incident - Building 778	HRR[1]	-	NFA	11/14/01
NA	IA	700-1110	Nickel Carbonyl Burial West of Building 771	HRR[1]	-	NFA.	4/03/02
NA	IA	800-1202	Sulfuric Acid Spill, Building 883	HRR[1]	-	NFA	11/14/01
NA	IA	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	HRR[1]	-	NFA	11/14/01
NA	IA	800-1206	Fire, Building 883	HRR[1]	-	NFA	11/14/01
NA	IA	800-1211	Capacitor Leak, Building 883	HRR[1]	-	NFA	11/14/01
NA	IA	900-1300	RO Plant Sludge Drying Beds	HRR[1]	-	NFA	4/03/02
NA	IA	900-1302	Gasoline Spill	HRR[1]	-	NFA	11/14/01
NA	IA	900-1303	Natural Gas Leak	HRR[1]	-	NFA	11/14/01
NA	IA	900-1304	c2667 Chromic Acid Spill - Building 991	HRR[1]	-	NFA	11/14/01

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	900-1305	Building 991 Roof	HRR[1]	-	NFA	11/14/01
NA	NA	NA	PICs 1, 2, 3, 5, 7, 8, 10, 12, 13, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 43, 45, 46, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58, 59, 60, 61			NFA	2002
NA	NA	NA	PICs 4, 6, 9, 11, 14, 15, 17, 18, 41, 42, 44, 47, 57			Deferred for further discussion	

RED	Pending further Agency Review
	Approved NFA
BLUE	Requires additional characterization
GREEN	Approved NFA but requires additional information or clarification in the FY02 HRR.
GRAY	Decision delayed

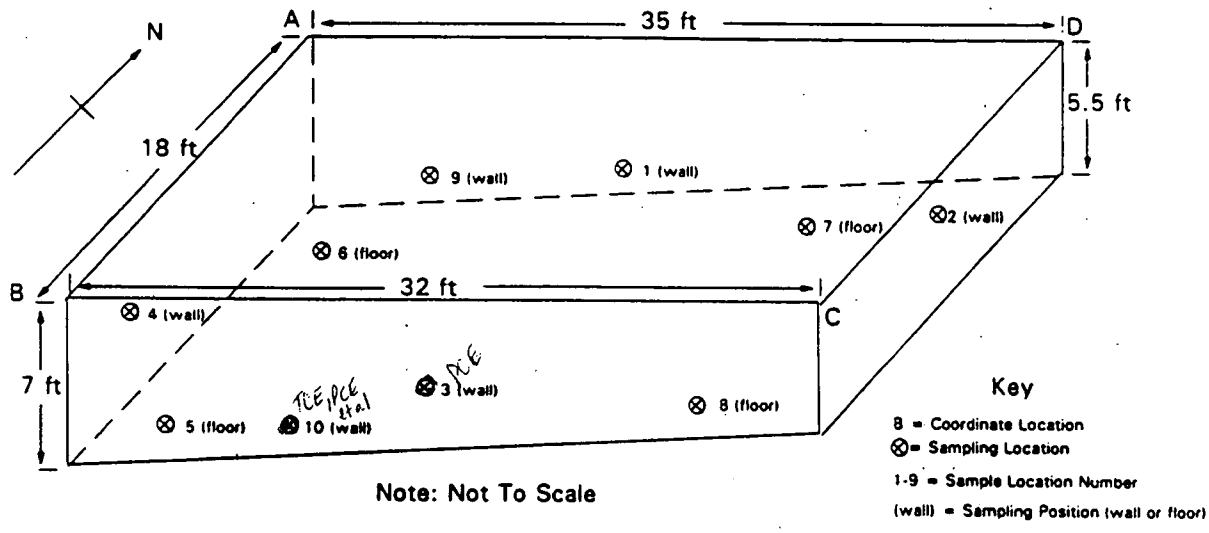
1/15/02

MAS

FIGURE 2 RYAN'S PIT EXCAVATION DIMENSIONS, COORDINATES AND SAMPLE LOCATIONS

State Plane Coordinates

Location	Northing	Easting
A	748630.9238	2085788.7205
B	748611.7765	2085792.4820
C	748619.4533	2085824.7810
D	748639.9318	2085816.1978



Note: Not To Scale

HPC & be done?

TABLE 1 EXCAVATION BOUNDARY VOC CONFIRMATION SAMPLING RESULTS

Sample	Location	Sample #	Analyte	Results (mg/kg)	PPRGs[1] (mg/kg)	Tier II (mg/kg)
1	north wall	A639901	PCE 1,1,2-Trichloroethane	0.019 0.002 (J)	2210 2180	~~.0315~~ ✓ .0123 ✓
2	east wall	A640001	PCE	0.002 (J)	2210	.0315 ✓
3	south wall	A640101	4- Methyl 2-Pentanone PCE	1.7 1.2	142000 2210	*NV* — .0315 ↑
4	west wall	A640201	None detected	NA		—
5	southwest floor	A640301	PCE	0.014	2210	.0315 ✓
6	northwest floor	A640401	1,1-Dichloroethane TCE	0.005 (J) 0.002 (J)	53000 5120	6.89 ✓ .0328 ✓
7	northeast floor	A640501	1,1-Dichloroethane Chloroform	0.018 0.060	53000 568	6.89 ✓ .214 ✓
8	southeast floor	A640601	PCE	0.003 (J)	2210	.0315 ✓
9	north wall (west side)	A640701	PCE	0.013	2210	.0315 ✓
10	south wall (west side)	A640801	TCE 4- Methyl 2-Pentanone PCE Toluene Ethylbenzene Xylene (total)	19 19 250 100 28 140	5120 142000 2210 116000 148000 >100%	.0328 ↑ *NV* — .0315 ↑ 7.07 ↑ 9.32 ↑ 97.4 ↑

[1] ...e soil scenario, Rev 3., August 1995.

4 METH 2 PENT. NO ACTION Level

PCE @ 1.2 = 1200 PPb < T1 > TIER II 31.50 31.50

TCE @ 19 = 19000 > T1 32.80 32.8

PCE @ 250 = 250,000 > T1

TOL @ 100 = 100,000 > T II < T1

xylene @ 140 = 140,000 > Tier II < T1

TABLE 1

SUMMARY OF PROPOSED OPERABLE UNITS FOR
NEWLY IDENTIFIED POTENTIAL AREAS OF CONCERN (PACs) REQUIRING FURTHER INVESTIGATION

OU	OU 1	OU 2	OU 3	OU 4	OU 5	OU 6	OU 7	OU 8	OU 9	OU 10	OU 11
PAC	900-1307	700-1100 700-1101 700-1108 900-1301 PIC #44	000-500	400-803 400-804 400-807 400-810 600-1001 800-1201 800-1204 800-1205	100-602 100-603 100-609 100-611 300-702 400-802 PIC #9			100-607 100-608 300-708 300-709 400-800 400-801 500-900 500-901 500-902 500-904 500-905 600-1000 600-1002 600-1003 700-1102 700-1103 700-1104 700-1105 700-1111 700-1112 800-1207 800-1208 800-1209 800-1210 900-1306 PIC #41		UBC-371 UBC-374 UBC-528 UBC-559 UBC-701 UBC-707 UBC-731 UBC-770 UBC-771 UBC-774 UBC-776 UBC-777 UBC-778 UBC-779 UBC-991	UBC-122 UBC-123 UBC-125 UBC-331 UBC-439 UBC-440 UBC-441 UBC-442 UBC-444 UBC-447 UBC-865 UBC-881 UBC-883 UBC-886 UBC-887 UBC-889
TOTALS	1	5	1	8	7			26		15	16

NEWLY IDENTIFIED POTENTIAL AREAS OF CONCERN

PAC Number	Located Near OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
NE-1400	N/A	Spill of tear gas powder onto roadway (1987)	5 pounds CS tear gas powder	The area was hosed down.	No	Hosing down the area is considered a sufficient remedial action.
NE-1401	6	Rupture in Coors Company natural gas line	5 million cubic feet of natural gas were released	The line was repaired and returned to service.	No	The natural gas was dissipated to the atmosphere, so no remediation is necessary.
NE-1402	2	Contaminated transformer oil leaked onto asphalt in 1983	PCB-contaminated fuel	One square foot of contaminated asphalt was removed.	No	Appropriate remedial actions were already conducted.
NE-1403	6	Gas from portable generator spilled onto parking lot in 1991	1 quart gasoline	Spill contained with Oil-Dri and removed, packaged material transferred to Building 531 Storage Area.	No	Appropriate remedial actions were already conducted.
SE-1600	1	Former pond received steam condensate from Building 881 in 1955	5,400 gallons of steam condensate	None	No	The subsurface soil in the vicinity of this former pond has been sampled in the soil sampling program for OU1. Surface soils have been completely disturbed by construction of the French Drain.
SE-1601.1 & SE-1601.2	1	Pond 8-north (SE-1601.1) and Pond 8-South (SE-1601.2) received overflow/blowdown from Building 881 Cooling Towers	Chromium-based biocides	None	No	The subsurface soil in the vicinity of these former ponds has been sampled in soil sampling program for OU1. Surface soils adjacent to 1601.2 were also sampled in the OU1 investigation.
SW-1700	5	Fuel spill into Woman Creek drainage in 1975	Either diesel or gasoline	There is no evidence that remedial actions were conducted.	No	Because 18 years have passed since the fuel was spilled into the creek, the fuel has degraded and is no longer a concern.
000-500	Site wide	Releases from the sanitary sewer system	Plutonium contaminated laundry waste, laboratory waste, photographic waste (included tritium, uranium, plutonium) tritium, chromic acid	Remedial actions were conducted in the areas of four known releases (PAC 800-145, 900-141, 700-144, and 100-604). The actions consisted of repairing the broken line and removing soil at PAC 700-144.	Yes	The sanitary sewer system has probably leaked at locations in addition to the four already identified. To determine if there are other areas of contamination, it is suggested that the sludge from several sewer junctions be sampled for plutonium, americium, and uranium. Results for this sampling could guide the selection of additional soil sampling along the sewer pipelines.
000-501	Site wide	Spraying waste oil on unpaved roads to suppress dust	Waste oils/diesel fuel number 2	None	No	The last instance of roadway spraying with waste oil is cited as having been in Sept. 1983. It is improbable that contaminants from the waste oil and/or brines would still be present on the dirt roads or nearby sediments after nine years of exposure.
100-600	13	Spill onto concrete and soil, 1990	2.75 pounds of mercury	The mercury was vacuumed from the valve floor and contaminated soil was excavated.	No	Appropriate remedial actions were already conducted.

Site Number	Location Within OU Number	Type of Release	Contaminants	Remedial Actions	Should Be Investigated in OU13 RI Process?	Justification
100-601	13	Spill onto ground, 1989	8 ounces 1,2-ethylhexyl phosphoric acid	None	No	The small size of the spill (8 ounces) and the caustic nature of 1,2-ethylhexyl phosphoric acid indicates that this spill does not require remediation.
100-602	13	Break in Building 123 process waste line in 1989	25 gallons urine, 12.5 gallons nitric acid, 20 gallons hydrochloric acid, 1.5 pounds ammonium thiocyanate, 1.0 pound ammonium iodide, 2.5 gallons ammonium hydroxide	The spill was near two IHSSs scheduled for remediation investigation, so no action was taken.	Yes (Could be easily incorporated in OU13 RI process)	The soil was contaminated as a result of the break in the process waste line. This area is not being studied as part of OU9. (OU9 deals exclusively with abandoned process waste lines.) Therefore all breaks or releases from currently operating process waste lines will require a separate remedial investigation.
100-603	13	Overflow of process waste from Building 123 in 1989	Hydrochloric and nitric acids, urine, ammonium thiocyanate, ammonium iodide, and ammonium hydroxide	The spill was neutralized and soil samples were collected to confirm that contamination was restricted to the area.	Yes (Could be easily incorporated in OU13 RI process)	The soil was contaminated as a result of the break in the process waste line. This area is not being studied as part of OU9. (OU9 deals exclusively with abandoned process waste lines.) Therefore all breaks or releases from currently operating process waste lines will require a separate remedial investigation.
100-604	13	Leaking sanitary sewer pipes, 1990	Unknown	The pipes were repaired.	No	Sanitary sewer lines from trailers are not likely to contain any impacting contaminants, therefore investigation is not warranted.
100-605	13	Spill onto asphalt or soil, 1989	2 gallons hydraulic oil	No documentation was found which detailed a response.	No	Because of the small size of this spill and the type of material involved, (hydraulic oil does not contain PCBs), no remedial actions are warranted.
100-606	13	Spill onto asphalt, 1989	8 ounces of TCE	None	No	TCE is very volatile, so an 8-ounce spill in 1989 would no longer be of concern.
100-607	13	Transformer leak onto gravel basement floor, 1984-1986	PCB bearing cooling oil	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
100-608	13	Transformer leak onto ground, 1989	0.25 gallons of PCB containing oil	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
100-609	13	Incinerator releases to the air, 1980-1985	Dioxins and furans	None	Yes	Dioxins and furans are toxic and their presence should be examined. If the incinerator is still in place, building smear samples should be collected. In addition, soil samples should be collected from downwind of the incinerator (southern edge of the 600 Area) and analyzed for dioxins.
100-610	13	Asbestos insulation disturbed in 1987	12 linear feet of asbestos	Related asbestos was wetted down and pipes were repaired.	No	The disturbed asbestos was released to the atmosphere, so no remedial actions are necessary.

JAN- 7-93 THU 16:18 DOE CHY RECONSTRUCTION DAY

Site Number	Location Number OU Number	Type of Release	Contents	Remedial Actions	Further Investigation Warranted	Rationale
100-611	13	Liquid spill into containment area and 3 pits under Building 123 in 1989	Several hundred gallons of acidic scrubbing solutions	All spilled materials were contained and transferred to process waste lines.	Yes	Berms and pits into which the spilled solution overflowed may not have completely contained the release.
100-612	13	Nickel-cadmium battery fell onto pavement in 1991	3 quarts potassium hydroxide	Spill contained and cleanup using Oil-Dri. Residue placed in drum for disposal	No	Appropriate remedial actions were already taken.
300-700	14	Unknown, scrap building material was buried in trench from 1955-1981	Buried material consisted of roofing material, styrofoam, asphalt, and plastic sheeting	The material was removed and taken to the sanitary landfill. No radioactivity was discovered in the trench.	No	There is no evidence that burying scrap building material had any impact on the environment.
300-701	13	Liquid spill onto loading dock in 1989	20 gallons diluted sulfuric acid	Solution removed with vacuum and floor washed, waste sent to process waste system	No	Appropriate remedial actions were already taken.
300-702	13	Spills and leaks of pesticides and herbicides stored in Building 367 between 1952 and 1988. Contaminants released onto soil and possibly nearby drainage ditch.	Pesticides and herbicides in unknown quantities	Soil sampling was scheduled in 1988, but there is no record verifying that the sampling was conducted.	Yes	Soil around Building 367 and along drainage pathways are probably contaminated with residual pesticides and herbicides. Further investigations could include select soil and ditch sampling with analysis for organophosphorus and chlorinated herbicides.
300-703	13	Road oil vapors were ignited in 1970	Oil vapors and burned road oil residual	Fire was extinguished by fire department with water and dry chemical.	No	Residuals and releases from fire 22 years ago would not be present.
300-704	10 and 8	Fire on roof of Building 381 in 1982	Smoke and fluorine vapors	None	No	Fluorine vapors have already been dispersed to the atmosphere.
300-705	10 and 8	Spill into containment berm from storage tank north of Building 374 in 1989	Potassium hydroxide	The liquid was pumped back into the process waste line.	No	Appropriate remedial actions were already conducted.
300-706	10 and 8	Spill from Tank 805 north of Building 374 in 1989. Liquid spilled onto plywood deck, dripped onto concrete slab, migrated toward sump embedded in sand	2 gallons of process waste stream included a variety of chemicals	The plywood and concrete were washed with soap, the liquid was pumped to the waste system, and saturated sand and cleaning materials were removed and treated as low-level mixed waste.	No	Appropriate remedial actions were already conducted.
300-707	13 and 10	Liquid spill from tank onto asphalt in 1985	3 gallons of water and sanitizer (water and formaldehyde)	None	No	The 3 gallons of sanitizer have already evaporated.
300-708	10	Transformers leaking onto pad of unknown composition until 1987	PCB containing oil	The transformers were retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
300-709	13	Transformer leak	772 ppm PCB oil	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey should evaluate the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
300-710	13	Gasoline spill from supply truck in 1991	2 gallons unleaded gasoline	Waste was cleaned up and packaged.	No	Appropriate remedial actions were already conducted.

AC Number	Year of OE Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
400-800	13	Small leak from a transformer (1987?)	Dielectric fluid; smear samples contained 10,964 ppm PCBs	The transformer was removed.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
400-801	12	Transformer leak on roof of Building 447 (1987?)	PCB contaminated transformer oil; smear samples contained 120-94 mg of PCBs	The roofing material was removed.	Yes	Need to confirm that all material contaminated with PCBs has been removed.
400-802	14	Drums leaking on a concrete slab from 1955-1969. Equipment stored on slab was also contaminated by the leaking drums	Depleted uranium chips immersed in oil stored in 125 30-gallon drums	The drums were removed in 1956 and the concrete was decontaminated with perchloroethene. The equipment was moved to another area. After cleanup, parts of the slab registered 108 disintegrations/minute (d/m).	Yes	Soil around the concrete storage area and possibly under the area may be contaminated with uranium. Collection of soil samples around this storage area is suggested.
400-803	12	Miscellaneous materials were dumped into storm drain near Building 446 in 1972. Mixture found along open ditch south of Cottonwood Ave. northeastward to Seventh Ave.	Silver paint, oil, and aluminum paint	There is no evidence to suggest that remedial actions were conducted.	Yes	Dumping silver and aluminum paint would release heavy metals to the soil. It is suggested that soil samples be collected from the area around the storm drain and along the ditch and analyzed for lead, cadmium, chromium, and arsenic.
400-804	14	Four ingots of unknown composition fell from a truck onto asphalt in 1957.	Radioactivity	The ignots removed, the area was dry vacuumed, and hot spots were covered with asphalt.	Yes	Field sampling activities (rad survey and asphalt sampling) in OU12 work plan will sufficiently investigate this location.
400-805	13	Leak from a filler pipe near tank #9 in 1990	Fuel	The filler pipe was repaired.	No	Appropriate remedial actions were already conducted.
400-806	10(?)	Leak from production tank north of Building 440 onto pavement in 1989	5 gallons polymethylene polyphylisocyanate	The liquid was cleaned up using Oil-Dri and residue was placed in hazardous material waste drums.	No	Appropriate remedial actions were already conducted.
400-807	12	Sandblasting of railroad cars released contaminants to the air. Sandblasting may still be in operation.	Unknown	None	Yes	Field sampling activities (rad survey, surficial soils and sediment sampling) in OU12 work plan will sufficiently investigate this location.
400-808	12	Oil leaked from vacuum pump	1 quart vacuum pump oil	Contaminated soils were removed	No	Appropriate remedial actions were already taken.
400-809	12	Oil leak was found in motorcycle parking lot in 1991	1 quart motor oil	Spill cleaned up with absorbant material and packaged for disposal.	No	Appropriate remedial actions were already taken.
400-810	12	Fire in the inlet-duct of the beryllium air plenum for Building 444 in 1978	14.5 grams beryllium	None	Yes	Field sampling activities (surficial soils and sediment sampling) in OU12 work plan will sufficiently investigate this location.
500-900	8	Transformer oil	50-500 mg/L PCBs	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.

Number	Located Near OU Number	Type of Release	Contaminants	Remedial Actions	Investigation Warranted	Rationale
500-901	8	Transformer oil	55 ppm PCBs	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
500-902	8	Transformer leak	>500 ppm PCBs	The transformer was retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
500-903	8	1988 - Drum leaked in RCRA storage unit #1 1991 - Release in storage unit	1988: <4 ounces of S9-63 ppm PCBs 1991: 40 gallons of "Trim-sol" lubricant mixed with waste oil	1988: Leaking drum and cleanup debris placed in overpack drum. 1991: Leak was completely contained within secondary containment pan. Leaking drum placed into overpack drum. Spill pumped into new drum.	No	The 1991 incident had no impact on the environment. The 1988 event consisted of a release of less than 4 fluid ox. into a cargo container. It is unclear whether any release was made to the environment, but due to the small amount of release and the ambiguity involved, further investigation seems to be unnecessary.
500-904	8	Transformer leaks	Transformer 223-1 contained >500 ppm PCBs Transformer 223-2 contained <50 ppm PCBs	The transformers were retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
500-905	8	Transformer leak	PCBs	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
600-1000	14	Transformer oil	>500 mg/L PCBs	Action was proposed, but completion was not documented.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
600-1001	14	Nov. 1954 - Drums leaked still bottoms and oils from Building 444 onto slab Sept. 1958 - Punctured drum leaked highly contaminated waste coolant from Building 776 Mar. 1960 - Drums with loose lids contaminated 2 square feet of slab with solid material from Building 883. Drum leaked waste from Building 881 onto slab.	Still bottoms and oils Contaminated waste coolant 3,000 counts/min. Up to 300 counts/min.	The drums were repacked and the south end of the slab decontaminated. The area was cleaned "to an extent" and leaking drum contents transferred to a second drum. (Smear count in 1959 found 100,000 counts/min, not related to specific release.) The contamination (up to 3,000 d/m) was removed. Leaking drums were returned to Building 881.	Yes	Soil around this concrete slab and possibly under the pad may be contaminated with uranium. Collection of soil samples around this slab are suggested.

Number	Ported Remedium OU Number	Type of Release	Contaminant	Remedial Actions	Further Action Warranted	Rationale
		May 1960 - Corroded drums leaked acidic waste material from Building 881 onto loading facility	No contamination detected	None		
		June 1960 - Drum leaked waste from Building 881 onto slab	Waste from Building 881	None		
600-1001 (cont.)	14	Aug. 1961 - Drums leaked waste from Buildings 444 and 776 in Building 663	Waste from Buildings 444 and 776	Equipment was decontaminated or replaced.	Above	Above
		Mar. 1968 - Three drums leaked waste and contaminated trailers, forklifts, work area, and personnel clothing and shoes.	Not specified	None		
		Sept. 1963 - Drum contaminated a fork truck, panel truck, and semitrailer in Building 663.	Not specified			
600-1002	14	Transformer Storage Area Leak	PCBs	None	Yes	A PC[illegible]urvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil contaminated with PCBs from transformer leaks should[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.
600-1003	14	Transformer leak	PCBs	None	Yes	A PC[illegible]urvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil contaminated with PCBs from transformer leaks should[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.
700-1100	14	1964 and 1969-Plutonium contamination from incidents potentially transported along french drain.	Possible plutonium	None	Yes	The p[illegible]tial for radioactive contamination in the area w[illegible]nts further investigation along the frenchd[illegible]in
700-1101	14	Laundry wastewater tank overflowed west of Building 778 into tank pit.	Laundry wastewater (probably low-level)	None	Yes	Laund[illegible] waste water may contain low level radioa[illegible]e contamination. The extent of this radioa[illegible]dity warrants further investigation
700-1102	8	Transformer oil	14,900 mg/L PCBs	The transformer was removed for retro-filling and relocation several feet to the north. The pad was partially removed to 4 inches deep and appears to have had fill recently placed around it.	Yes	A PC[illegible]urvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil contaminated with PCBs from transformer leaks should[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.
700-1103	8	Transformer oil	135-7,200 µg PCBs	PCBs were to be cleaned up with Building 707 under the Toxic Substances Control Act.	Yes	A PC[illegible]urvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil contaminated with PCBs from transformer leaks should[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.

PAC Number	Located Near or in Wt Number	Type of Release	Contaminants	Remedial Actions	Further Vestigation Warranted	Rationale
700-1104	8	Transformer oil	1,035-3,350 µg PCBs	Transformers were moved and retrofilled. Rock and gravel fill was placed around the transformer pad west of Building 708.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
700-1105	8	Transformer oil	PCBs	Transformers were retrofilled and moved several feet east and north.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
700-1106	8	Process wastewater from valve vault 12 leak spilled onto street from tank truck at entrance to portal 1	10 gallons radioactive process wastewater (no radioactivity found on street at the time)	None	Yes	The magnitude of the rad contamination from samples of the process wastewater warrants further investigation.
700-1107	8	June 10, 1986 - Open oil drum filled with water from compressor house roof overflowed and soil flowed onto road past Building 776 June 12, 1986 - Compressor waste oil spilled from overfilled drum outside door 15T north of Building 776	1 to 2 gallons oil 2 to 3 gallons oil	"Oil-Dri" was poured over the area to absorb the spilled oil. "Oil-Dri" was to be swept up, placed in a drum, and disposed in Present Landfill (PAC NW-114). Two bags of oil absorbent were used to absorb the spill.	No	Appropriate remedial actions were already conducted.
700-1108	8	Process waste storage tanks leaked chemical and radioactive contamination to the soil around Building 774, and minor leakage seeped to building footing drain tiles. July 21, 1980 - Process waste line leaked June 22, 1987 - Caustic overflowed in bermed area beneath 8,000-gallon above-ground condensate tank. Drained into western condensate receiving tank.	Mar. 1971 - 500 disintegrations per minute per liter (d/m/L) gross alpha Apr. 1971 - 400 d/m/L plutonium and 800 ppm nitrate 1,000 gallons - 2,500 pCi/L total alpha; 4000 pCi/L gross beta; 10,000 mg/L NO_3; pH 12.	1975 - Wet-well with a submersible pump installed at Building 771/774 footing drain outfall pond. 1981 - Interceptor trench pump house installed. The initial response - stop flow through waste line to stop leak. FIDLER survey to determine extent of contamination. Broken waste line excavated and loose flange identified. Contents of western condensate tank sampled, and solution pumped to sanitary sewer or Building 774 for processing.	Yes	Levels of radioactivity warrant conducting further scans of radioactive contamination.
700-1109	8	Piece of uranium found on ground between Buildings 778 and 729	Depleted uranium disk 1" diameter by 1/2-inch thick	The uranium was transported to Building 776 then to Building 779 Nuclear Material Control custodian; stored in 55-gallon drum. Site where U found surveyed (counts within background).	No	Depleted uranium is not a serious hazard.
700-1110	8	Fire in Building 771. Nickel carbonyl cylinders drummed and buried.	Nickel carbonyl	Four 55-gallon drums; 1 GI can with two cylinders and 6 loose cylinders of nickel carbonyl removed from burial pit west of Building 771 to pit east of Solar Evaporation Ponds. Explosive charges used to destructively vent the cylinders and ignite any residual gas.	No	Appropriate remedial actions were already conducted.

[illegible] Number	Located Near or in OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
700-1111	8	Transformer leak	PCBs	The transformer unit was retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
700-1112	8	Transformer leak	807 ppm PCBs	Cleanup scheduled during 1989, but not confirmed.	Yes	The previous remedial action should be confirmed. A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1200	12	South process transfer line leaked Mar. 15, 1989 Mar. 16, 1989 Apr. 13, 1989 June 1989 - Secondary chase pipe leak detected	Partially neutralized HNO_3 or rinsate water contaminated with depleted uranium (pH = 1.2) 5 gallons 7 gallons (>1 lb radionuclides) 15 gallons (>100 lbs corrosives)	Discharge valves were closed and locked out; plumbing was changed and hydrostatically tested. The inner line was removed.	Yes	Since both the inner and the outer chase pipe were found to be leaking, further investigation is warranted.
800-1201	14	1957 - Plutonium fire contamination	Building 881 (NW corner) total activity = 4.5×10^6 d/m/kg 20 feet west, total activity = 1.5×10^6 d/m/kg; with some plutonium; uranium-235 in soil (1978)	April 1981 - Contaminated soil removed in two small areas near Building 883. May not be same areas.	Yes	The radioactive contamination in soil in 1978 warrants further investigation in the area around Building 881.
800-1202	12	Battery fell from truck and battery acid spilled on road	1 qt.-1/2 gallon H_2SO_4	$NaHCO_3$ applied to spill and area washed down. Battery disposed in present landfill.	No	Appropriate remedial actions were already conducted.
800-1203	12	Broken sanitary sewer line between Building 865 and 886	Sanitary sewage waste	None	No	No specific contaminants are associated with this break in the sanitary sewer line, however the site-wide sanitary sewer system (PAC 000-500) is listed as needing further investigation.
800-1204	12	Building 886 spills Jan. 1978 - vent pipe overflow onto ground 1984 - Tank overflow onto roof and ground 1986 - Tank overflow onto roof through downspouts and onto ground	2 gallons on about 16 sq. ft. 410,000 d/m/L alpha Decontamination water radioactivity 20 gallons process waste	None	Yes	Levels of radioactivity warrant conducting further scans of radioactive contamination.
800-1205	12	Uranium and plutonium and condensate contaminated east dock of Building 881	Uranium, plutonium, and condensate	None	Yes	The presence of uranium and plutonium contamination warrants further investigation specifically, the collection of wipe samples of the dock outside Building 881.

[illegible] Number	Located Near [illegible] Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
800-1206	12	Trash container fire in Building 883	Contaminated trash	The shift superintendent was responsible for improper cleanup activities, and Health Physics was to follow up on the incident with the proper department.	No	The drum is probably not at the same location.
800-1207	12	Transformer leak	>500 ppm PCBs	The transformer was required to be removed or replaced by fiscal year 1987 or 1988.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1208	12	Transformer leak	435 gallons 110 ppm PCBs	The transformer was retrofilled in 1987	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1209	12	Transformer leaks	PCBs	The transformers were retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1210	12	Transformer leaks	Possibly PCBs	The transformers were removed from the old pad, retrofilled, and placed on a new pad.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1211	12	Capacitor leak	1 pint oil (no PCBs)	A smear sample was taken from the concrete where the leak occurred. A glass bottle was placed under the leak, absorbent pads were put on the spill, and the area was barricaded.	No	Appropriate remedial actions were already conducted.
900-1300	8	Sludge from sanitary sewage treatment reverse osmosis plant	Low-level radioactive waste sludge from sanitary treatment plant	Monitoring ground water and the vadose zone are planned.	No	Monitoring is sufficient to evaluate the potential contamination from sewage sludge.
900-1301	8	79 drums containing concreted wastes from Building 991	Drummed concreted wastes contaminated with enriched and depleted uranium	None	Yes	Further investigation of this area is recommended, because concrete stabilization has not always been successful at RFP. In addition, drums were stored outside, above the headwaters of Walnut Creek. Water could have leached radioactivity from waste drums into Walnut Creek where it may be transported to ponds downstream.
900-1302	10	Gasoline spill sprayed into the air or leaked onto the ground from 55-gallon drum	Approximately 2 gallons gasoline	The Hazardous Materials Team sealed the leak, and a concrete containment berm was to be installed around the contractor's fuel storage facility.	No	Contamination was not severe and has probably degraded.
900-1303	6	Natural gas leak	Natural gas	The pipe was repaired and 400 feet of gas line near Building 991 were slated to be replaced in 1971.	No	The natural gas was dissipated to the atmosphere, so no remediation is necessary.

PAC Number	Location of Release	Type of Release	Contaminant	Remedial Action	Further Work Required	Rationale
900-1304	8	Chromic acid spilled in cement pit	Several gallons chromic acid laboratory waste	Steps were taken to prevent recurrence.	No	Cement pit and berm functioned properly in containing the spill; therefore no release to the environment.
900-1305	8	Prime coating spilled on roof of Building 991 under intake affected climate inside building.	Approximately 5 gallons primer Tremco Trempdmo containing mineral spirits as a solvent	Primer was spread around and dried.	No	Contamination was not severe and has probably degraded.
900-1306	8	Transformer leaks	114 and 60 ppm PCBs in transformers 991-1 and 991-2, respectively	PCBs were cleaned up and the transformers repaired by an outside contractor.	Yes	Need to confirm that all contaminated material was removed from this site.
900-1307	8	Explosive bonding experiment hurled a piece of aluminum 525 feet	Uranium alloy and stainless steel	Measures were to be evaluated to prevent malfunctions during future experiments.	Yes	Explosive bonding experiments used uranium. The pit area should be investigated to determine the extent of radioactivity in the soil.
Under Building Contamination (UBC)	Site wide	Building operations released contaminants into soil or ground water under the buildings.	Radionuclides, nitrate solvents, acids, and bases	Some releases have been remediated, but a majority have never been researched.	Yes	Under building soil and ground-water contamination resulting from building operations has not be previously addressed. Virtually every current or former building used for operation, production, or maintenance could have contaminated the environment beneath the buildings. It is suggested that soil sampling be conducted in hot areas of building basements and that ground water be monitored for all the appropriate contaminants of interest. Some of the identified PACs (100-611 and 400-157.2) pertain to contamination under buildings; these PACs may be investigated concurrently with the UBCs.
PIC #9	13	Leaking drums outside Building 551.	Aqueous ammonia and carbon tetrachloride.	No cleanup mentioned.	Yes	Field sampling activities for HSS 158 in the OU 13 work plan will sufficiently investigate this location with minor revisions.
PIC #41	8	Transformer leaks	PCBs.	Transformer 777-1 was scheduled for cleanup to occur on August 14, 1989.	Yes	PCBs do not degrade and are not readily transported.
PIC #44	8	Liquid contaminated to 6,700 d/m/s	Unknown distillate.	Soil samples taken for analysis. No cleanup mentioned.	Yes	Contaminated liquid was pumped to the ground south of building 374; no cleanup known.

REFERENCES

EG&G Rocky Flats, 1991, "Assessment of Known, Suspect, and Potential Environmental Releases of Polychlorinated Biphenyls (PCBs)," October 1991

d/m/L = disintegrations per minute per liter
pCi/L = pico-curie per liter

WORK PERFORMED BY:
EG&G [ ]
Other Golder Assoc.

NON-ROUTINE WASTE ORIGINATION LOG

WORK CONTROL # _____
BUILDING 964 ROOM Laydown Yard

WORK PACKAGE TITLE: 964 repack of Orphan Crates

PAGE 1 OF 1

	DESCRIPTION	IDC/ WFC	* PROCESS #	HAZARDOUS CONSTITUENT	RCRA CCC	NON-RCRA CCC	COMP CODE	EPA CODE(S)	LDR? (Y/N/ TBD)	Waste Destination	RCRA CUSTODIAN EST./PAGER	Waste Contact Signature Date 6/6/95
1.	Dirt and Sand	374	044-6-4	None	00	00	N/A	None	No	LL	N/A	E. A. Keil 8642/D4405
2.												
3.												
4.												
5.												
6.												
7.												
8.												

* No Non-Routine Waste Origination Log is required if the process is identified with a Process Number in the applicable Building WSRIC book.

CHARACTERIZATION RATIONALE:
(#X) Sample Analysis (See attached
(#)
(#)
(#)

EC/EPM Review: E. A. Keil (Typed or Printed) Date: 6/6/95 Ext. 8642 Pager: 4405

RF-47637 (Rev 04/94)

REPORT DATE: 2-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.

95X003009

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

SDG No.: FEB018158

Lab Sample ID: 95X003009

Date Taken: 24-JAN-1995

Date Received: 24-JAN-1995

Concentration Units: ug/L TPB

TCLP results Crute 2

Cas No.	Analyte	Concentration	C	Q	M
7429-90-5	ALUMINUM	281			P
7440-36-0	ANTIMONY	26.0	U		P
7440-38-2	ARSENIC	88.0	U		P
7440-39-3	BARIUM	273		N	P
7440-41-7	BERYLLIUM	1.0	U		P
7440-43-9	CADMIUM	34.6			P
7440-70-2	CALCIUM	95500			P
7440-47-3	CHROMIUM	4.6	B		P
7440-48-4	COBALT	4.0	U		P
7440-50-8	COPPER	52.7			P
7439-89-6	IRON	167		E	P
7439-92-1	LEAD	41.0	U	N	P
7439-95-4	MAGNESIUM	12000			P
7439-96-5	MANGANESE	897			P
7440-02-0	NICKEL	130			P
7440-09-7	POTASSIUM	6270			P
7782-49-2	SELENIUM	44.0	U		P
7440-22-4	SILVER	3.0	U		P
7440-23-5	SODIUM	1160000		E	P
7440-28-0	THALLIUM	133	U		P
7440-62-2	VANADIUM	2.0	U		P
7440-66-6	ZINC	2700			P

Color Before: COLORLESS
Color After: COLORLESS

Clarity Before: CLEAR
Clarity After: CLEAR

Texture:
Artifacts:

Comment: Reported above are TCLP leachate results. The reported sodium result is above the instrument linear range.

REPORT DATE: 2-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.

| BLK-STCLPBLANK-1.21 |

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

Date Taken:

SDG No.: FEB01B158

Lab Sample ID:

Date Received:

Concentration Units: ug/L

Cas No.	Analyte	Concentration	C	Q	M
7429-90-5	ALUMINUM	58.0	B		P
7440-36-0	ANTIMONY	26.0	U		P
7440-38-2	ARSENIC	88.0	U		P
7440-39-3	BARIUM	106	B		P
7440-41-7	BERYLLIUM	1.0	U		P
7440-43-9	CADMIUM	2.0	U		P
7440-70-2	CALCIUM	687	U		P
7440-47-3	CHROMIUM	4.1	B		P
7440-48-4	COBALT	4.0	U		P
7440-50-8	COPPER	3.8	B		P
7439-89-6	IRON	20.2	B		P
7439-92-1	LEAD	41.0	U		P
7439-95-4	MAGNESIUM	40.0	U		P
7439-96-5	MANGANESE	1.1	B		P
7440-02-0	NICKEL	13.0	U		P
7440-09-7	POTASSIUM	1330	U		P
7782-49-2	SELENIUM	44.0	U		P
7440-22-4	SILVER	3.0	U		P
7440-23-5	SODIUM	1220000		E	P
7440-28-0	THALLIUM	133	U		P
7440-62-2	VANADIUM	2.0	U		P
7440-66-6	ZINC	87.8			P

Color Before: COLORLESS
Color After: COLORLESS

Clarity Before: CLEAR
Clarity After: CLEAR

Texture:
Artifacts:

Comment: Results reported above are for the TCLP extraction blank for samples 95X003009, 95X002909, 95X002908, and 95X002910.
The reported sodium result is above the instrument linear range.

REPORT DATE: 2-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.

95X002909D

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

SDG No.: FEB01B158

Lab Sample ID: 95X002909

Date Taken: 24-JAN-1995

Date Received: 24-JAN-1995

TCLP results Crate 1 Duplicate

Concentration Units: ug/L

Cas No.	Analyte	Concentration	C	Q	M
7429-90-5	ALUMINUM	3490			P
7440-36-0	ANTIMONY	26.0	U		P
7440-38-2	ARSENIC	88.0	U		P
7440-39-3	BARIUM	761			P
7440-41-7	BERYLLIUM	19.0			P
7440-43-9	CADMIUM	227			P
7440-70-2	CALCIUM	140000			P
7440-47-3	CHROMIUM	11.0			P
7440-48-4	COBALT	4.0	U		P
7440-50-8	COPPER	13.3	B		P
7439-89-6	IRON	20.2	B		P
7439-92-1	LEAD	95.2	B		P
7439-95-4	MAGNESIUM	12000			P
7439-96-5	MANGANESE	562			P
7440-02-0	NICKEL	26.0	B		P
7440-09-7	POTASSIUM	45700			P
7782-49-2	SELENIUM	44.0	U		P
7440-22-4	SILVER	3.0	U	N	P
7440-23-5	SODIUM	1300000		E	P
7440-28-0	THALLIUM	133	U		P
7440-62-2	VANADIUM	4.2	B		P
7440-66-6	ZINC	233		E	P

Color Before: COLORLESS
Color After: COLORLESS

Clarity Before: CLEAR
Clarity After: CLEAR

Texture:
Artifacts:

Comment: Reported above are TCLP leachate results. The reported sodium result is above the instrument linear range.

FORM I - IN

ILM02.0

REPORT DATE: 2-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.
95X002908

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

Date Taken: 24-JAN-1995

EDG No.: FEB01B15B

Lab Sample ID: 95X002908

Date Received: 24-JAN-1995

TCLP results
Cross!

Concentration Units: ug/L

Cas No.	Analyte	Concentration	C	Q	M
7429-90-5	ALUMINUM	3710			P
7440-36-0	ANTIMONY	26.0	U		P
7440-38-2	ARSENIC	88.0	U		P
7440-39-3	BARIUM	709			P
7440-41-7	BERYLLIUM	17.3			P
7440-43-9	CADMIUM	199			P
7440-70-2	CALCIUM	129000			P
7440-47-3	CHROMIUM	13.5			P
7440-48-4	COBALT	4.0	U		P
7440-50-8	COPPER	11.6	B		P
7439-89-6	IRON	18.9	B		P
7439-92-1	LEAD	41.0	U		P
7439-95-4	MAGNESIUM	12000			P
7439-96-5	MANGANESE	494			P
7440-02-0	NICKEL	28.8	B		P
7440-09-7	POTASSIUM	47000			P
7782-49-2	SELENIUM	44.0	U		P
7440-22-4	SILVER	3.0	U	N	P
7440-23-5	SODIUM	1260000		E	P
7440-28-0	THALLIUM	133	U		P
7440-62-2	VANADIUM	2.8	B		P
7440-66-6	ZINC	165		E	P

Color Before: COLORLESS
Color After: COLORLESS

Clarity Before: CLEAR
Clarity After: CLEAR

Texture:
Artifacts:

Comment: Reported above are TCLP leachate results. The reported sodium result is above the instrument linear range.

REPORT DATE: 2-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.
95X002910FB

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

SDG No.: FEB01B158

Lab Sample ID: 95X002910

Date Taken: 24-JAN-1995

Date Received: 24-JAN-1995

Field Blank

Concentration Units: ug/L

Cas No.	Analyte	Concentration	C	Q	M
7429-90-5	ALUMINUM	33.8	B		P
7440-36-0	ANTIMONY	26.0	U		P
7440-38-2	ARSENIC	88.0	U		P
7440-39-3	BARIUM	33.7	B		P
7440-41-7	BERYLLIUM	1.0	U		P
7440-43-9	CADMIUM	2.0	U		P
7440-70-2	CALCIUM	687	U		P
7440-47-3	CHROMIUM	4.0	U		P
7440-48-4	COBALT	4.0	U		P
7440-50-8	COPPER	3.0	U		P
7439-89-6	IRON	6.8	B		P
7439-92-1	LEAD	41.0	U		P
7439-95-4	MAGNESIUM	40.0	U		P
7439-96-5	MANGANESE	1.0	U		P
7440-02-0	NICKEL	13.0	U		P
7440-09-7	POTASSIUM	1350	U		P
7782-49-2	SELENIUM	44.0	U		P
7440-22-4	SILVER	3.0	U		P
7440-23-5	SODIUM	34600			P
7440-28-0	THALLIUM	133	U		P
7440-62-2	VANADIUM	2.0	U		P
7440-66-6	ZINC	28.1			P

Color Before: COLORLESS
Color After: COLORLESS

Clarity Before: CLEAR
Clarity After: CLEAR

Texture:
Artifacts:

Comment: FIELD BLANK

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
4

Lab Name: Building 559 RA Inorganic Laboratories

Lab Sample ID: 95X0030-03 , Bldg 964 Soil from Crate # 2

Section: ICPAES

% Solids (0 = N/A): 100.00

Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

Date Sampled: 01/24/95

SDG No. : JAN18

Lab Receipt Date: 01/24/95

QC Report No.: SD011895.RPT

Matrix: Water ____ Soil X Sludge ____ Other ____

Elements Identified and Measured

Concentration Units: (mg/Kg)

-30 Crate 2 Soil

Analyte	Concentration	C	Q	M
Aluminum	14721.4289	B	N,V	P
Antimony	29.9775	U	S	P
Arsenic	19.9850	U		P
Barium	127.3645	B		P
Beryllium	1.9985	U		P
Cadmium	3.6972	B		P
Calcium	3804.2568	B		P
Chromium	35.3235	B		P
Cobalt	4.9962	U		P
Copper	171.3315	B		P
Iron	3498.7359	B		P
Lead	27.2496	B		P
Magnesium	474.0345	B		P
Manganese	38.3812	B		P
Molybdenum	9.9926	U		P
Nickel	11.9210	B		P
Phosphorus	12014.0395	B		P
Selenium	49.9625	U		P
Silver	77.7517	B		P
Strontium	40.9793	B		P
Thallium	29.9775	U		P
Titanium	18.1664	B		P
Vanadium	4.9962	U		P
Zinc	284.6065	B	S	P

Color Before: Brown
Color After : Brown

Clarity Before: Opaque
Clarity After : Opaque

Texture:

Artifacts : Fine mesh brown soil left over in Total Metals Digestion.

Comments: Sample = 100.00 % Solids. Total Metals Digestion only!

INFORMATION ONLY

2nd crate

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
95X0030-07

Lab Name: RFETS - PAOL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOAC03

Sample wt/vol: 1.0 (g/mL) G Lab File ID: VOAC03.D

Level: (low/med) LOW Date Received: 1/24/95

% Moisture: not dec. Date Analyzed: 1/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

VOA Second crate soil sample

Crate 2 Soil

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	51	U
75-01-4	Vinyl chloride	51	U
74-83-9	Bromomethane	51	U
75-00-3	Chloroethane	51	U
75-35-4	1,1-Dichloroethene	26	U
67-64-1	Acetone	304	B
75-15-0	Carbon disulfide	26	U
75-09-2	Methylene chloride	26	U
156-60-5	trans-1,2-Dichloroethene	26	U
75-34-3	1,1-Dichloroethane	26	U
156-59-2	cis-1,2-Dichloroethene	26	U
78-93-3	2-Butanone	14	JB
67-66-3	Chloroform	26	U
71-55-6	1,1,1-Trichloroethane	26	U
56-23-5	Carbon tetrachloride	26	U
71-43-2	Benzene	26	U
107-06-2	1,2-Dichloroethane	26	U
79-01-6	Trichloroethene	26	U
78-87-5	1,2-Dichloropropane	26	U
75-27-4	Bromodichloromethane	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
108-10-1	4-Methyl-2-pentanone	6	JB
108-88-3	Toluene	26	U
10061-02-6	trans-1,3-Dichloropropene	26	U
79-00-5	1,1,2-Trichloroethane	26	U
127-18-4	Tetrachloroethene	26	U
591-78-6	2-Hexanone	8.7	JB
124-48-1	Chlorodibromomethane	26	U
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	26	U
	m,p-Xylene	51	U
95-47-6	o-Xylene	26	U
100-42-5	Styrene	26	U

INFORMATION ONLY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
95X0030-07

Lab Name: RFETS - PAOL
Contract: NA
Project No.: NA
Site: RFETS
Location: B559
Group: PAOL
Matrix: (soil/water) SOIL
Lab Sample ID: VOAC03
Sample wt/vol: 1.0 (g/mL) G
Lab File ID: VOAC03.D
Level: (low/med) LOW
Date Received: 1/24/95
% Moisture: not dec.
Date Analyzed: 1/25/95
GC Column: DB-624
ID: 0.53 (mm)
Dilution Factor: 5.1
Soil Extract Volume: (uL)
Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
75-25-2	Bromoform	26	U
79-34-5	1,1,2,2-Tetrachloroethane	26	U
541-73-1	1,3-Dichlorobenzene	26	U
106-46-7	1,4-Dichlorobenzene	26	U
95-50-1	1,2-Dichlorobenzene	26	U

INFORMATION ONLY

JAN 26 '95 18:40 PRODUCTION SUPPORT LABS

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
95X0030-07

Lab Name: RFETS - PAOL Contract: NA

Project No. NA Site: RFETS Location: B559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOAC03

Sample wt/vol: 1.0 (g/mL) G Lab File ID: VOAC03.D

Level: (low/med) LOW Date Received: 1/24/95

% Moisture: not dec. Date Analyzed: 1/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 10

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	12.62	49	J
2. 107-39-1	1-Pentene, 2,4,4-trimethyl-	18.48	43	J
3. 637-92-3	Propane, 2-ethoxy-2-methyl-	23.07	120	J
4. 628-44-4	2-Octanol, 2-methyl-	24.88	30	J
5. 541-35-5	Butanamide	25.68	44	J
6. 2517-43-3	1-Butanol, 3-methoxy-	25.85	120	J
7. 19549-74-7	3-Heptanol, 6,5-dimethyl-	26.13	160	J
8. 629-50-5	Tridecane	26.32	31	J
9. 17301-25-6	Undecane, 2,6-dimethyl-	27.07	40	J
10. 594-38-7	Butane, 2-iodo-2-methyl-	28.61	43	J
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INFORMATION ONLY

JAN 26 '95 10:41 PRODUCTION SUPPORT LABS P.10

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
95X0030-05D

Lab Name: RFETS - PAOL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOAC05

Sample wt/vol: 1.0 (g/mL) G Lab File ID: VOAC05.D

Level: (low/med) LOW Date Received: 1/24/95

% Moisture: not dec. Date Analyzed: 1/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Duplicate Soil Sample

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	51	U
75-01-4	Vinyl chloride	51	U
74-83-9	Bromomethane	51	U
75-00-3	Chloroethane	51	U
75-35-4	1,1-Dichloroethene	26	U
67-64-1	Acetone	145	B
75-15-0	Carbon disulfide	26	U
75-09-2	Methylene chloride	26	U
156-60-5	trans-1,2-Dichloroethene	26	U
75-34-3	1,1-Dichloroethane	26	U
156-59-2	cis-1,2-Dichloroethene	26	U
78-93-3	2-Butanone	15	JB
67-66-3	Chloroform	26	U
71-55-6	1,1,1-Trichloroethane	26	U
56-23-5	Carbon tetrachloride	26	U
71-43-2	Benzene	26	U
107-06-2	1,2-Dichloroethane	26	U
79-01-6	Trichloroethene	26	U
78-87-5	1,2-Dichloropropane	26	U
75-27-4	Bromodichloromethane	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
108-10-1	4-Methyl-2-pentanone	51	U
108-88-3	Toluene	26	U
10061-02-6	trans-1,3-Dichloropropene	26	U
79-00-5	1,1,2-Trichloroethane	26	U
127-18-4	Tetrachloroethene	26	U
591-78-6	2-Hexanone	7.2	JB
124-48-1	Chlorodibromomethane	26	U
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	26	U
	m,p-Xylene	51	U
95-47-6	o-Xylene	26	U
100-42-5	Styrene	26	U

Duplicate Cite 2

FORM I VOA

INFORMATION ONLY

JAN 25 '95 10:43 PRODUCTION SUPPORT LABS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
95X0030-05D

Lab Name: RFETS - PAOL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOAC05

Sample wt/vol: 1.0 (g/mL) G Lab File ID: VOAC05.D

Level: (low/med) LOW Date Received: 1/24/95

% Moisture: not dec. Date Analyzed: 1/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
75-25-2	Bromoform	26	U
79-34-5	1,1,2,2-Tetrachloroethane	26	U
541-73-1	1,3-Dichlorobenzene	26	U
106-46-7	1,4-Dichlorobenzene	26	U
95-50-1	1,2-Dichlorobenzene	26	U

INFORMATION ONLY

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
95X0030-05D

Lab Name: RFETS - PAOL Contract: NA

Project No. NA Site: RFETS Location: B559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOAC05

Sample wt/vol: 1.0 (g/mL) G Lab File ID: VOAC05.D

Level: (low/med) LOW Date Received: 1/24/95

% Moisture: not dec. Date Analyzed: 1/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 12

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 110-54-3	Hexane	14.62	27	JB
2. 107-39-1	1-Pentene, 2,4,4-trimethyl-	16.34	110	J
3. 637-92-3	Propane, 2-ethoxy-2-methyl-	23.02	210	J
4.	Linalyl propanoate	24.39	27	J
5. 54725-73-4	1,8-Nonanediol, 8-methyl-	24.85	39	J
6. 3730-60-7	2-Hexanol, 2,5-dimethyl-, (S	25.65	67	J
7. 628-44-4	2-Octanol, 2-methyl-	25.83	150	J
8. 5340-36-3	3-Octanol, 3-methyl-	26.11	170	J
9. 630-07-9	Pentatriacontane	26.29	63	J
10. 5989-27-5	D-Limonene	26.47	70	J
11. 25429-11-8	Heptadecane, 4-methyl-	27.06	67	J
12. 74645-98-0	Dodecane, 2,7,10-trimethyl-	28.60	49	J
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INFORMATION ONLY

FORM I VOA-TIC 3/90

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
1

Lab Name: Building 559 PA Inorganic Laboratories

Lab Sample ID: 95X0029-03 , Bldg 964 Soil from Crate # 1

Section: ICPAES

% Solids (0 = N/A): 100.00

Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

Date Sampled: 01/24/95

SDG No. : JAN18

Lab Receipt Date: 01/24/95

QC Report No.: SD011895.RPT

Matrix: Water ____ Soil X Sludge ____ Other ____

Elements Identified and Measured

Concentration Units: (mg/Kg)

Analyte	Concentration	C	Q	M
Aluminum	7236.4708	B		P
Antimony	29.8954	U		P
Arsenic	19.9302	U		P
Barium	72.0877	B		P
Beryllium	1.9930	U		P
Cadmium	9.0782	B		P
Calcium	5770.4522	B	*	P
Chromium	13.0842	B		P
Cobalt	5.7499	B		P
Copper	19.7409	B		P
Iron	10591.1189	B		P
Lead	19.9302	U		P
Magnesium	1878.9134	B		P
Manganese	175.7548	B		P
Molybdenum	9.9651	U		P
Nickel	12.1973	B		P
Phosphorus	222.6407	B		P
Selenium	49.8256	U		P
Silver	6.9357	B		P
Strontium	24.1056	B	*	P
Thallium	29.8954	U		P
Titanium	208.4205	B		P
Vanadium	26.4574	B		P
Zinc	32.8262	B		P

mg/kg ppm

Crate 1 Soil

Color Before: Tan
Color After : Tan

Clarity Before: Opaque
Clarity After : Opaque

Texture:

Artifacts : Fine mesh brown soil left over in Total Metals Digestion.

Comments: Sample = 100.00 % Solids, Total Metals Digestion only!

INFORMATION ONLY

1st crate

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
95X0029-07

Lab Name: RFETS - PAOL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: PAOL

Matrix (soil/water) SOIL Lab Sample ID: VOAC04 swd from crate 1

Sample wt/vol: 1.0 (g/mL) G Lab File ID: VOAC04.D

Level: (low/med) LOW Date Received: 1/24/95

% Moisture: not dec. Date Analyzed: 1/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	51	U
75-01-4	Vinyl chloride	51	U
74-83-9	Bromomethane	51	U
75-00-3	Chloroethane	51	U
75-35-4	1,1-Dichloroethene	26	U
67-64-1	Acetone	215	B
75-15-0	Carbon disulfide	26	U
75-09-2	Methylene chloride	26	U
156-60-5	trans-1,2-Dichloroethene	26	U
75-34-3	1,1-Dichloroethane	26	U
156-59-2	cis-1,2-Dichloroethene	26	U
78-93-3	2-Butanone	23	EJB ...210 ppm
67-66-3	Chloroform	26	U
71-55-6	1,1,1-Trichloroethane	26	U
56-23-5	Carbon tetrachloride	26	U
71-43-2	Benzene	26	U
107-06-2	1,2-Dichloroethane	26	U
79-01-6	Trichloroethene	26	U
78-87-5	1,2-Dichloropropane	26	U
75-27-4	Bromodichloromethane	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
108-10-1	4-Methyl-2-pentanone	51	U
108-88-3	Toluene	26	U
10061-02-6	trans-1,3-Dichloropropene	26	U
79-00-5	1,1,2-Trichloroethane	26	U
127-18-4	Tetrachloroethene	26	U
591-78-6	2-Hexanone	51	U
124-48-1	Chlorodibromomethane	26	U
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	26	U
	m,p-Xylene	51	U
95-47-6	o-Xylene	26	U
100-42-5	Styrene	26	U

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FORM I VOA

INFORMATION ONLY

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
95X0029-07

Lab Name: RFETS - PAOL Contract: NA

Project No. NA Site: RFETS Location: B559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOAC04

Sample wt/vol: 1.0 (g/mL) G Lab File ID: VOAC04.D

Level: (low/med) LOW Date Received: 1/24/95

% Moisture: not dec. _____ Date Analyzed: 1/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.1

Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
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INFORMATION ONLY

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

95X0027-09F

Lab Name: RFP PAOL Contract: NA

Project No.: NA Site: RFP Location: BLDG. 659 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VOA01.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U

FORM I VOA 3/90

Information Only

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.: 95X0027-09F

Lab Name: RFP PAOL Contract: NA

Project No. NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VOA01.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1 Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Carbon Dioxide	7.06	34	JB
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Information Only

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.: 95X0027-05

Lab Name: RFP PAOL Contract: NA

Project No.: NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA03

Sample wt/vol: 0.9996 (g/mL) G Lab File ID: VOA03.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (UL)

VOA-1 Soil sample taken of ground in our release

Surrounding Area Soil Sample

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-35-4	1,1-Dichloroethene	25	U
67-64-1	Acetone	33	J
75-15-0	Carbon disulfide	25	U
75-09-2	Methylene chloride	25	U
156-60-5	trans-1,2-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
156-59-2	cis-1,2-Dichloroethene	25	U
78-93-3	2-Butanone	14	J
67-66-3	Chloroform	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon tetrachloride	10	JB
71-43-2	Benzene	25	U
107-06-2	1,2-Dichloroethane	25	U
79-01-6	Trichloroethene	25	U
78-87-5	1,2-Dichloropropane	25	U
75-27-4	Bromodichloromethane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	25	U
10061-02-6	trans-1,3-Dichloropropene	25	U
79-00-5	1,1,2-Trichloroethane	25	U
127-18-4	Tetrachloroethene	25	U
591-78-6	2-Hexanone	50	U
124-48-1	Chlorodibromomethane	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
	m,p-Xylene	25	U
95-47-6	o-Xylene	25	U
100-42-5	Styrene	25	U

FORM I VOA 3/90

Information Only

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

95X0027-05

Lab Name: RFP PAOL Contract: NA

Project No.: NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA03

Sample wt/vol: 0.9996 (g/mL) G Lab File ID: VOA03.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
75-25-2	Bromoform	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

FORM I VOA 3/90

Information Only

1E

SAMPLE NO.

95X0027-05

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: RFP PAOL Contract: NA

Project No. NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA03

Sample wt/vol: 0.9996 (g/mL) G Lab File ID: VOA03.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Carbon Dioxide	7.07	230	JB
2. 128-39-2	Phenol, 2,6-bis(1,1-dimethyl	25.35	55	J
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FORM I VOA-TIC 3/90

Information Only

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.: 95X0027-07D

Lab Name: RFP PAOL Contract: NA

Project No.: NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA04

Sample wt/vol: 1.0003 (g/mL) G Lab File ID: VOA04.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

VOA-1 Duplicate Soil sample taken of Groundin area of release

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-35-4	1,1-Dichloroethene	25	U
67-64-1	Acetone	33	J
75-15-0	Carbon disulfide	25	U
75-09-2	Methylene chloride	25	U
156-60-5	trans-1,2-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
156-59-2	cis-1,2-Dichloroethene	25	U
78-93-3	2-Butanone	14	J
67-66-3	Chloroform	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon tetrachloride	15	JB
71-43-2	Benzene	25	U
107-06-2	1,2-Dichloroethane	25	U
79-01-6	Trichloroethene	25	U
78-87-5	1,2-Dichloropropane	25	U
75-27-4	Bromodichloromethane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	25	U
10061-02-6	trans-1,3-Dichloropropene	25	U
79-00-5	1,1,2-Trichloroethane	25	U
127-18-4	Tetrachloroethene	25	U
591-78-6	2-Hexanone	50	U
124-48-1	Chlorodibromomethane	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
	m,p-Xylene	25	U
95-47-6	o-Xylene	25	U
100-42-5	Styrene	25	U

Surrounding area soil sample

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Information Only

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.: 95X0027-07D

Lab Name: RFP PAOL Contract: NA

Project No.: NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix (soil/water): SOIL Lab Sample ID: VOA04

Sample wt/vol: 1.0003 (g/mL) G Lab File ID: VOA04.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
75-25-2	Bromoform	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

FORM I VOA 3/90

Information Only

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
95X0027-07D

Lab Name: RFP PAOL Contract: NA

Project No. NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA04

Sample wt/vol: 1.0003 (g/mL) G Lab File ID: VOA04.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1 Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Carbon Dioxide	7.07	270	JB
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Information Only

REPORT DATE: 8-FEB-1995

EG&G ROCKY FLATS, INC.
&
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.
95X003009

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

SDG No.: SD020195HQ

Lab Sample ID: 95X003009

Date Taken: 24-JAN-1995

Date Received: 24-JAN-1995

Concentration Units: UG/L

Cas No.	Analyte	Concentration	C	Q	M
7439-97-6	MERCURY	0.11	B		CV

Crate 2

Color Before:
Color After:

Clarity Before:
Clarity After:

Texture:
Artifacts:

Comments:

FORM I - IN

ILM02.0

REPORT DATE: 8-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.
95X002908

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% solids (0.0 = N/A): 0.0

SDG No.: SD0201958G

Lab Sample ID: 95X002908

Date Taken: 24-JAN-1995

Date Received: 24-JAN-1995

Concentration Units: UG/L

Cas No.	Analyte	Concentration	C	Q	M
7439-97-6	MERCURY	0.10	B		CV

Crate 1

Color Before:
Color After:

Clarity Before:
Clarity After:

Texture:
Artifacts:

Comment:

FORM I - IN

ILM02.0

REPORT DATE: 8-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.

95X0029090

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

SDG No.: 80020195H0

Lab Sample ID: 95X002909

Date Taken: 24-JAN-1995

Date Received: 24-JAN-1995

Concentration Units: UG/L

Cas No.	Analyte	Concentration	C	Q	M
7439-97-6	MERCURY	0.10	U		CV

Crate 1

Color Before:
Color After:

Clarity Before:
Clarity After:

Texture:
Artifacts:

Comments:

FORM I - IN

ILM02.0

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

95X0027-09F

Lab Name: RFP PAOL Contract: NA

Project No.: NA Site: RFP Location: BLDG. 559 Group: PAOL

Matrix: (soil/water) SOIL Lab Sample ID: VOA01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VOA01.D

Level: (low/med) LOW Date Received: 1/19/95

% Moisture: not dec. Not Det. Date Analyzed: 1/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

field blank for sampled soil taken from ground

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	3.5	JB
71-43-2	Benzene	0.1	J
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U

FORM I VOA 3/90

Information Only

REPORT DATE: 8-FEB-1995

EG&G ROCKY FLATS, INC.
1
INORGANIC ANALYSIS DATA SHEET

ANALYTICAL LABORATORIES
SAMPLE NO.
95X002910FB

Lab Name: BLDG. 881 GENERAL LABORATORIES

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids (0.0 = N/A): 0.0

SDG No.: SD020195HG

Lab Sample ID: 95X002910

Date Taken: 24-JAN-1995

Date Received: 24-JAN-1995

Concentration Units: UG/L

Cas No.	Analyte	Concentration	C	Q	M
7439-97-6	MERCURY	0.11	B		CV

Crate 1

Color Before:
Color After:

Clarity Before:
Clarity After:

Texture:
Artifacts:

Comments:

MCB

Agenda

NFA Status Meeting
February 27, 2002 @ RFETS
10:00 a.m. – 12:00 p.m.

I ER Update [redacted] nicely [redacted] starting this week (weather delay) [redacted] notification handout today, DOE to send notification of 14-day rvw asap. IA-02-03 [illegible] 02-03

II Correction of prior meetings' minutes and sign-off approved as written

III Interactive discussion of NFA justification

- Four sites carried over from the **1992 IHSS List** (State only) (PACs 700-1110, 900-1300, SE-1600 and SE-1601)
- ~~Two sites carried over from 2001 HRR Update (KH to provide new information)~~ (PACs 300-206 and 700-1102) Carl needs to consult w/ State groups prior to saying ye/ney! OK (1) OWOWP (3pgs) → provide new write-up
- ~~PAC 700-613 and NE-1411 from the 7th HRR Quarterly Update~~ (KH to provide new information) [illegible] Q4, provide! → Provide logbook pages (4) ~~& commit to revised write-up in '02 HRR Upd~~ OK, NFA.
- The following new locations:
  - ~~PAC NW-170 from the 1999 Annual Update~~ pg 42 Rec: VOC concentrations > T1 not identified etc not true statement, T11 could impact gw/sw & require evaluation to show not
  - ~~PAC NE-1404 from the 1998 Annual Update~~
  - ~~PACs 300-212, 700-1114a, 700-1114b~~ and ~~900-109~~ from the **1997 Annual Update**
  - PAC 500-908 from the **12th Quarterly Update**
  - ~~PACs 700-113, 900-1315 and 900-1317 from the 11th Quarterly Update~~
  - ~~PACs 300-714 and 900-1316 from the 10th Quarterly Update~~
  - ~~PAC 900-1314 from the 9th Quarterly Update~~
  - ~~PACs 300-713 and 400-814 from the 8th Quarterly Update~~
  - ~~B125 UBC * Provide write up & discuss~~

eliminate sentence

next $ ... not considered part (reword?!)

Revise write-up in '02 HRR

Say: For soil all ↓-AL's [illegible] & remove sentence referencing Tier 1

IV Summary of sites discussed and consensus reached for each location (K-H)

V List of actions for next meeting (K-H)

~~VI~~ Next meeting location and time (DOE) (See next page)

(1) Laura & Susan to discuss RCRA-Unit list @ 3:00
(2)

Adjourn

B889 Tank requested on new figure but not on [illegible] map (Carl [illegible] comment)

Agenda

Gundersen verbal approval of LI/FS WP

NFA Status Meeting
March 13, 2002 @ EPA
2:00 p.m. – 4:00 p.m.

Tim's letters tomorrow for ER-RSOP; BZSAP & BZSAP Addenda (oil burn & – Site only)

I ER Update
- 886 UBC pre-ev today for 6 samples; Comments outstanding for any additional work (approval of doc's).
- B123 soil stockpiled is clean
- 5yr-review report → revised rpt out next week

II Correction of prior meetings' minutes and sign-off

approved as written!

III Interactive discussion of NFA justification

KH Search!

- Four sites carried over from the **1992 IHSS List** (State only)
  (PACs 700-1110, 900-1300, SE-1600 and SE-1601)
  Carl ask chemist too! — Will CK again & send e-mail → [exact location is what? were there samples from the area? was it disturbed w/ OU1]
- One site carried over from **2001 HRR Update** (State only)
  (PAC 700-1102)
  Lana & Carla prepare write-up — Ckng to see what Arsenal did w/ their PCB's — Ckng to see what Anthaily have
- The following new locations:
  - Include Table of values with Nuno — **PAC 900-109 from the 1997 Annual Update** — Elizabeth re-review rpt from this area. KH provide additional support? → to help clarify Air authority & "heavy" PCB's left so dioxin-like elements not realy of concern. "Good-faith effort to look @ isomers associat might be good way"
  - **PAC 500-908 from the 12th Quarterly Update** NFA
  - **PACs 700-1113, 900-1315 and 900-1317 from the 11th Quarterly Update** — NFA! NFA — Data not provided as stated in PSB. KH provide for review!
  - **PACs 300-714 and 900-1316 from the 10th Quarterly Update** — NFA NFA
  - **PAC 900-1314 from the 9th Quarterly Update** — NFA
  - **PACs 300-713 and 400-814 from the 8th Quarterly Update** — NFA NFA

Need to reconstruct the time frame; if really buried for 10-15 yrs need to [illegible] file. If leached – degradation make non-top?

B125 UBC (Separate write-up provided prior to meeting)
NFA concurred; print letter to follow; KH to send revised last page asap.

Include "retardation & lack of pathway to SW."

IV Summary of sites discussed and consensus reached for each location

V Review and discussion of the Site IHSS/RCRA Table provided 1/31/02

VI List of actions for next meeting

VII Next meeting location and time

Adjourn

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
			2001 Annual			
133.1	5	SW-133.1	Ash Pit 1	HRR[1]	Annual 2001	Determination delayed pending subsurface action level outcome.
133.2	5	SW-133.2	Ash Pit 2	HRR[1]	Annual 2001	Determination delayed pending subsurface action level outcome.
133.3	5	SW-133.3	Ash Pit 3	HRR[1]	Annual 2001	NFA
133.4	5	SW-133.4	Ash Pit 4	HRR[1]	Annual 2001	Determination delayed pending subsurface action level outcome.
133.5	5	SW-133.5	Incinerator Facility	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.
133.6	5	SW-133.6	Concrete Wash Pad	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.
NA	5	SW-1701	Recently Identified Ash Pit (also referred to as TDEM-1)	Quarterly 9[13]	Annual 1997[3] Annual 2001	NFA
NA	5	SW-1702	Recently Identified Ash Pit (also referred to as TDEM-2)	Quarterly 9[13]	Annual 2001	Determination delayed pending subsurface action level outcome.
NA	IA	100-603	Building 123 Bioassay Waste Spill	HRR[1]	Annual 2001	NFA (Quarterly Letter Clarification)
206	IA	300-206	Inactive D-836 Hazardous Waste Tank	HRR[1]	Annual 2001	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	400-812	Tank T-2 Spill in Building 460	Quarterly 6[16]	Quarterly 7[9] Quarterly 8[15] Annual 2001	NFA
189	IA	600-189	Nitric Acid Tank	HRR[1]	Annual 1997[3] Annual 2000[26] Annual 2001	NFA
NA	IA	700-1102	Transformer Leak – 776-4	HRR[1]	Annual 1996[2] Annual 1997[3] Annual 2000[26] Annual 2001	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
179	15	800-179	Building 865 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	NFA
180	15	800-180	Building 883 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	NFA
NA	IA	900-1308	Gasoline Spill Outside of Building 980	Quarterly 6[16]	Quarterly 8[15] Annual 2001	NFA
			2000 Annual			
NA	BZ	NE-1409	Modular Tanks and 910 Treatment System Spill (formerly 000-503)	Quarterly 5[10]	Quarterly 7[9] Annual 2000[26]	NFA (Quarterly Letter Clarification)
156.1	IA	300-156.1	Building 371 Parking Lot (2 locations designated on Plate #2)	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA
164.1	IA	600-164.1	Radioactive Slab from Bldg. 776	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA (Quarterly Letter Clarification)

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	600-1001(a)	Waste Oil Identified in PAC-1001	Annual 1997[3]	Annual 1997[3] Annual 2000[26]	NFA (Quarterly Letter Clarification)
123.1	IA	700-123.1	Valve Vault 7	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA
108	BZ	900-108	Trench T-1	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 2000[26]	NFA
NA	IA	900-1311	Septic Tank East of Building 991	Quarterly 7[9]	Annual 1999[23] Annual 2000[26]	NFA
NA	IA	900-1318	Release of F001 Listed Waste Water to Soil (identified as 900-1307 in Annual 1997; reassigned 900-1318 in Annual 1998)	Annual 1997[3]	Annual 1998[7] Annual 2000[26]	NFA
183	BZ	900-183	Gas Detoxification Area	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA
110	BZ	NE-110	Trench T-3	HRR[1]	Annual 1996[2] Annual 1997[3] Annual 2000[26]	NFA
1999 Annual						
170	BZ	NW-170	PU&D Storage Yard - Waste Spills	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 1999[7]	NFA
1998 Annual						
142.6	BZ	NE-1404	Diesel Spill at Pond B-2 Spillway	Quarterly 2[5]	Quarterly 3[6] Annual 1998[7]	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
1997 Annual						
216.2	BZ	NE-216.2	East Spray Field	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.
216.3	BZ	NE-216.3	East Spray Field	HRR[1]	Annual 1997[3] Annual 2001	Additional Characterization Required.
212	IA	300-212	Building 371 Drum Storage Area, Unit 63 (deferred to Part VIII of the RFETS RCRA Mixed Residues Modification; see Annual 1997)	HRR[1]	Annual 1997[3]	NFA
NA	IA	700-1114a	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA
NA	IA	700-1114b	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA
109	BZ	900-109	Trench T-2 - Ryan's Pit	HRR[1] Rq 5 2002 update wrt GW still to be addressed.	Annual 1996[2] Annual 1997[3]	NFA
1996 Annual						
166.1	6	NE-166.1	Trench A	HRR[1]	Annual 1996[2]	NFA
166.2	6	NE-166.2	Trench B	HRR[1]	Annual 1996[2]	NFA
166.3	6	NE-166.3	Trench C	HRR[1]	Annual 1996[2]	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
167.2	7	NE-167.2	Pond Area Spray Field (Center Area)	HRR[1]	Annual 1996[2]	NFA
167.3	7	NE-167.3	South Area Spray Field	HRR[1]	Annual 1996[2]	NFA
216.1	6	NE-216.1	East Spray Fields - North Area	HRR[1]	Annual 1996[2]	NFA
NA	IA	300-708	Transformers North of Building 371	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	300-709	Transformer Leak 334-1	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
204	15	400-204	Original Uranium Chip Roaster	HRR[1]	Annual 1996[2]	NFA
NA	IA	500-900	Transformer Leak – 515/516	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	500-901	Transformer Leak – 555	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	500-902	Transformer Leak – 559	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	500-905	Transformer Leak – 558-1	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
158	IA	500-909	Release of Spent Photographic Fixer Solution	Annual 1996[2]	-	NFA
NA	IA	600-1000	Transformer Storage Building 662	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	600-1002	Transformer Storage - West of Building 666	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	600-1003	Transformers North and South of 661-675 Substation	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	700-1103	Leaking Transformers - Building 707	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	700-1104	Leaking Transformers - Building 708	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	700-1111	Leaking Transformer - Building 750	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	700-1112	Leaking Transformer - 776-5	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	800-1207	Transformer 883-4	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	800-1208	Transformer 881-4	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	800-1209	Leaking Transformers, 800 Area	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	800-1210	Transformer 865-1 and 865-2	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
NA	IA	900-1306	Transformers 991-1 and 991-2	HRR[1]	Annual 1996[2]	Determination delayed for State to review impact of dioxin-like-PCBs to closure actions.
Quarterly 12						
156.1, 186	IA	500-908	Oil Released from Air Compressor	Quarterly 12[17]	-	NFA
Quarterly 11						
101	IA	700-1113	Water Released from 207C Solar Evaporation Pond	Quarterly 11[18]	-	NFA
NA	IA	900-1315	Tanker Truck Release on East Patrol Road, North of Spruce Ave.	Quarterly 10[11]	Quarterly 11[18]	NFA
176	IA	900-1317	Soil Released from Wooden Crate in 964 Laydown Yard	Quarterly 11[18]	-	
Quarterly 10						
NA	IA	300-714	Laundry Waste Water Spill From Tank T-803, North of Building 374	Quarterly 10[11]	-	NFA
NA	BZ	900-1316	Elevated Chromium (total) Identified During Geotechnical Drilling	Quarterly 10[11]	-	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
Quarterly 9						
101	IA	900-1314	Solar Evaporation Pond 207B Sludge Release	Quarterly 9[13]	-	NFA
Quarterly 8						
NA	IA	300-713	Caustic Spill North of Building 331	Quarterly 8[15]	-	NFA
NA	IA	400-814	Air Conditioner Compressor Release, Bldg. 444 Roof	Quarterly 8[15]	-	NFA
Quarterly 7						
NA	BZ	NE-1410	Diesel Fuel Spill at Field Treatability Unit	Quarterly 7[9]	-	NFA
NA	BZ	NE-1411	Diesel Fuel Overflowed from Tanker at OU 2 Field Treatability Unit	Quarterly 7[9]	-	NFA
114	7	NW-1502	Improper Disposal of Diesel-Contaminated Material at Landfill (formerly NW-177)	Quarterly 2[5]	Quarterly 3[6] Quarterly 7[9]	NFA
114	7	NW-1503	Improper Disposal of Fuel Contaminated Material at Landfill	Quarterly 1[24]	Quarterly 7[9]	NFA
114	7	NW-1504	Improper Disposal of Thorosilane Contaminated Material at Landfill	Quarterly 7[9]	-	NFA
NA	IA	000-503	Solar Pond Water Spill Along Central Avenue	Quarterly 7[9]	-	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	100-613	Asphalt Surface in Lay Down Yard North of Building 130 (identified as 000-501 in Quarterly 4[8]; reassigned as 100-613 in Quarterly 7[9])	Quarterly 4[8]	Quarterly 7[9]	NFA
NA	IA	300-711	Ni-Cad Battery Spill Outside of Building 373	Quarterly 1[24]	Quarterly 7[9]	NFA
NA	IA	300-712	1/2 gal Antifreeze Spilled by Street Sweeper Outside of Building 373	Quarterly 7[9]	-	NFA
Miscellaneous Sites EPA approved in 1992. CDPHE reviewed and verbally concurred. Need written concurrence.						
NA	BZ	NE-1400	Tear Gas Powder Release	HRR[1]	-	NFA
NA	BZ	NE-1401	NE Buffer Zone Gas Line Break	HRR[1]	-	NFA
NA	BZ	NE-1402	East Inner Gate PCB Spill	HRR[1]	-	NFA
NA	BZ	NE-1403	Gasoline Spill - Building 920 Guard Post	HRR[1]	-	NFA
NA	BZ	SE-1600	Pond 7 – Steam Condensate Releases	HRR[1]	RQS 2002 HRR update	Pending ~~State internal review.~~ ~~KH Search~~ NFA
NA	BZ	SE-1601	Pond 8 - Cooling Tower Discharge Releases	HRR[1]	RQS 2002 HRR update	Pending ~~State internal review~~. ~~KH Search~~ NFA
NA	BZ	SW-1700	Fuel Spill into Woman Creek Drainage	HRR[1]	-	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	BZ	000-501	Roadway Spraying	HRR[1]	-	NFA
NA	IA	100-600	Mercury Spill – Valve Vault 124-B, Building 124	HRR[1]	-	NFA
NA	IA	100-601	Building 123 Phosphoric Acid Spill	HRR[1]	-	NFA
NA	IA	100-604	T130 Complex Sewer Line Leaks	HRR[1]	-	NFA
NA	IA	100-605	Building 115 Hydraulic Oil Spill	HRR[1]	-	NFA
NA	IA	100-606	Building 125 TCE Spill	HRR[1]	-	NFA
NA	IA	100-610	Asbestos Release – Building 123	HRR[1]	-	NFA
NA	IA	100-612	Battery Solution Spill - Building 119	HRR[1]	-	NFA
NA	IA	300-700	Scrap Roofing Disposal	HRR[1]	-	NFA
NA	IA	300-701	Sulfuric Acid Spill – Building 371	HRR[1]	-	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	300-703	Building 331 North Area	HRR[1]	-	NFA
NA	IA	300-704	Roof Fire, Building 381	HRR[1]	-	NFA
NA	IA	300-705	Potassium Hydroxide Spill North of Building 374	HRR[1]	-	NFA
NA	IA	300-706	Evaporator Tanks North of Building 374	HRR[1]	-	NFA
NA	IA	300-707	Sanitizer Spill	HRR[1]	-	NFA
NA	IA	300-710	Gasoline Spill North of Building 331	HRR[1]	-	NFA
NA	IA	400-805	Building 443 Tank #9 Leak	HRR[1]	-	NFA
NA	IA	400-806	Catalyst Spill, Building 440	HRR[1]	-	NFA
NA	IA	400-808	Vacuum Pump Leak - Building 442	HRR[1]	-	NFA
NA	IA	400-809	Oil Leak - 446 Guard Post	HRR[1]	-	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	500-903	RCRA Storage Unit #1	HRR[1]	-	NFA
NA	IA	700-1107	Compressor Waste Oil Spill - Building 776	HRR[1]	-	NFA
NA	IA	700-1109	Uranium Incident - Building 778	HRR[1]	-	NFA
NA	IA	700-1110	Nickel Carbonyl Burial West of Building 771	HRR[1]	-	~~Pending State internal review~~ NFA
NA	IA	800-1202	Sulfuric Acid Spill, Building 883	HRR[1]	-	NFA
NA	IA	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	HRR[1]	-	NFA
NA	IA	800-1206	Fire, Building 883	HRR[1]	-	NFA
NA	IA	800-1211	Capacitor Leak, Building 883	HRR[1]	-	NFA
NA	IA	900-1300	RO Plant Sludge Drying Beds	HRR[1]	-	~~Pending State internal review~~ NFA
NA	IA	900-1302	Gasoline Spill	HRR[1]	-	NFA

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	900-1303	Natural Gas Leak	HRR[1]	-	NFA
NA	IA	900-1304	c2667 Chromic Acid Spill - Building 991	HRR[1]	-	NFA
NA	IA	900-1305	Building 991 Roof	HRR[1]	-	NFA

RED	Pending further Agency Review
	Approved NFA
BLUE	Requires additional characterization
GREEN	Approved NFA but requires additional information or clarification in the FY02 HRR.
GRAY	Decision delayed

1/15/02

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
2001 Annual						
133.1	5	SW-133.1	Ash Pit 1	HRR[1]	Annual 2001	P Note: Hand out revised Table w/ Corrected Tier II levels when schedule Ash Pit Review. No Δ in status due to correct.
133.2	5	SW-133.2	Ash Pit 2	HRR[1]	Annual 2001	P
133.3	5	SW-133.3	Ash Pit 3	HRR[1]	Annual 2001	NFA
133.4	5	SW-133.4	Ash Pit 4	HRR[1]	Annual 2001	P
C 133.5	5	SW-133.5	Incinerator Facility	HRR[1]	Annual 1997[3] Annual 2001	–
C 133.6	5	SW-133.6	Concrete Wash Pad	HRR[1]	Annual 1997[3] Annual 2001	–
NA	5	SW-1701	Recently Identified Ash Pit (also referred to as TDEM-1)	Quarterly 9[13]	Annual 1997[3] Annual 2001	NFA
NA	5	SW-1702	Recently Identified Ash Pit (also referred to as TDEM-2)	Quarterly 9[13]	Annual 2001	P
NA	IA	100-603	Building 123 Bioassay Waste Spill	HRR[1]	Annual 2001	NFA
206	IA	300-206	Inactive D-836 Hazardous Waste Tank	HRR[1]	Annual 2001 Feb	NFA Agencies want more info

C = requires addition characterization

[redacted] with-in present LF

[redacted] need to plan RA if no [illegible]

Mtng #2
Mtng #3
Mtng #4
Mtng #5

[redacted] mtng #7

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	400-812	Tank T-2 Spill in Building 460	Quarterly 6[16]	Quarterly 7[9] Quarterly 8[15] Annual 2001	NFA
189	IA	600-189	Nitric Acid Tank	HRR[1]	Annual 1997[3] Annual 2000[26] Annual 2001	NFA ~~Agencies want more data~~ done
NA	IA	700-1102	Transformer Leak – 776-4	HRR[1] Feb	Annual 1996[2] Annual 1997[3] Annual 2000[26] Annual 2001	Rewrite w/ new basis for NFA State reviewing
179	15	800-179	Building 865 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	NFA State closed for RCRA in OU15 doc EPA concerns wrt CERCLA issues.
180	15	800-180	Building 883 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	NFA
NA	IA	900-1308	Gasoline Spill Outside of Building 980	Quarterly 6[16]	Quarterly 8[15] Annual 2001	NFA
2000 Annual (CDPHE Approval Only)						
NA	BZ	NE-1409	Modular Tanks and 910 Treatment System Spill (formerly 000-503)	Quarterly 5[10]	Quarterly 7[9] Annual 2000[26]	NFA See regulatory actions to close all as NFAs in mtng minutes.
156.1	IA	300-156.1	Building 371 Parking Lot (2 locations designated on Plate #2)	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA
164.1	IA	600-164.1	Radioactive Slab from Bldg. ~~776~~ 771	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	600-1001(a)	Waste Oil Identified in PAC-1001	Annual 1997[3]	Annual 1997[3] Annual 2000[26]	NFA
123.1	IA	700-123.1	Valve Vault 7	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA
108	BZ	900-108	Trench T-1	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 2000[26]	NFA
NA	IA	900-1311	Septic Tank East of Building 991	Quarterly 7[9]	Annual 1999[23] Annual 2000[26]	NFA
NA	IA	900-1318	Release of F001 Listed Waste Water to Soil (identified as 900-1307 in Annual 1997; reassigned 900-1318 in Annual 1998)	Annual 1997[3]	Annual 1998[7] Annual 2000[26]	NFA
183	BZ	900-183	Gas Detoxification Area	HRR[1]	Annual 1997[3] Annual 2000[26]	NFA
110	BZ	NE-110	Trench T-3	HRR[1]	Annual 1996[2] Annual 1997[3] Annual 2000[26]	NFA
1999 Annual						
170	BZ	NW-170	PU&D Storage Yard - Waste Spills	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 1999[7]	NFA pending [illegible]
1998 Annual						
142.6	BZ	NE-1404	Diesel Spill at Pond B-2 Spillway	Quarterly 2[5]	Quarterly 3[6] Annual 1998[7]	NFA

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
1997 Annual						
216.2	BZ	NE-216.2	East Spray Field	HRR[1]	Annual 1997[3] Annual 2001	Nick has new data from area NE of IHSS with spraying in same timeframe tested per Kruchecks' Report closeout.
216.3	BZ	NE-216.3	East Spray Field	HRR[1]	Annual 1997[3] Annual 2001	
212	IA	300-212	Building 371 Drum Storage Area, Unit 63 (deferred to Part VIII of the RFETS RCRA Mixed Residues Modification; see Annual 1997)	HRR[1]	Annual 1997[3]	NFA
NA	IA	700-1114a	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA
NA	IA	700-1114b	Release During Liquid Transfer Operations from Bldg. ~~774~~ 745 (update)	Annual 1997[3]	-	NFA
109	BZ	900-109	Trench T-2 - Ryan's Pit	HRR[1]	Annual 1996[2] Annual 1997[3]	Rads c/c PCE/TCE
1996 Annual						
166.1	6	NE-166.1	Trench A	HRR[1]	Annual 1996[2]	NFA
166.2	6	NE-166.2	Trench B	HRR[1]	Annual 1996[2]	NFA
166.3	6	NE-166.3	Trench C	HRR[1]	Annual 1996[2]	NFA

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
167.2	7	NE-167.2	Pond Area Spray Field (Center Area)	HRR[1]	Annual 1996[2]	NFA
167.3	7	NE-167.3	South Area Spray Field	HRR[1]	Annual 1996[2]	NFA
216.1	6	NE-216.1	East Spray Fields - North Area	HRR[1]	Annual 1996[2]	NFA
NA	IA	300-708	Transformers North of Building 371	HRR[1]	Annual 1996[2]	
NA	IA	300-709	Transformer Leak 334-1	HRR[1]	Annual 1996[2]	
204	15	400-204	Original Uranium Chip Roaster	HRR[1]	Annual 1996[2]	NFA
NA	IA	500-900	Transformer Leak – 515/516	HRR[1]	Annual 1996[2]	
NA	IA	500-901	Transformer Leak – 555	HRR[1]	Annual 1996[2]	
NA	IA	500-902	Transformer Leak – 559	HRR[1]	Annual 1996[2]	
NA	IA	500-905	Transformer Leak – 558-1	HRR[1]	Annual 1996[2]	

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
158	IA	500-909	Release of Spent Photographic Fixer Solution	Annual 1996[2]	-	NFA
NA	IA	600-1000	Transformer Storage Building 662	HRR[1]	Annual 1996[2]	
NA	IA	600-1002	Transformer Storage - West of Building 666	HRR[1]	Annual 1996[2]	
NA	IA	600-1003	Transformers North and South of 661-675 Substation	HRR[1]	Annual 1996[2]	
NA	IA	700-1103	Leaking Transformers - Building 707	HRR[1]	Annual 1996[2]	
NA	IA	700-1104	Leaking Transformers - Building 708	HRR[1]	Annual 1996[2]	
NA	IA	700-1111	Leaking Transformer - Building 750	HRR[1]	Annual 1996[2]	
NA	IA	700-1112	Leaking Transformer - 776-5	HRR[1]	Annual 1996[2]	
NA	IA	800-1207	Transformer 883-4	HRR[1]	Annual 1996[2]	
NA	IA	800-1208	Transformer 881-4	HRR[1]	Annual 1996[2]	

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	800-1209	Leaking Transformers, 800 Area	HRR[1]	Annual 1996[2]	
NA	IA	800-1210	Transformer 865-1 and 865-2	HRR[1]	Annual 1996[2]	
NA	IA	900-1306	Transformers 991-1 and 991-2	HRR[1]	Annual 1996[2]	
Quarterly 12						
156.1, 186	IA	500-908	Oil Released from Air Compressor	Quarterly 12[17]	-	
Quarterly 11						
101	IA	700-1113	Water Released from 207C Solar Evaporation Pond	Quarterly 11[18]	-	
NA	IA	900-1315	Tanker Truck Release on East Patrol Road, North of Spruce Ave.	Quarterly 10[11]	Quarterly 11[18]	
176	IA	900-1317	Soil Released from Wooden Crate in 964 Laydown Yard	Quarterly 11[18]	-	
Quarterly 10						
NA	IA	300-714	Laundry Waste Water Spill From Tank T-803, North of Building 374	Quarterly 10[11]	-	
NA	BZ	900-1316	Elevated Chromium (total) Identified During Geotechnical Drilling	Quarterly 10[11]	-	

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
Quarterly 9						
101	IA	900-1314	Solar Evaporation Pond 207B Sludge Release	Quarterly 9[13]	-	
Quarterly 8						
NA	IA	300-713	Caustic Spill North of Building 331	Quarterly 8[15]	-	
NA	IA	400-814	Air Conditioner Compressor Release, Bldg. 444 Roof	Quarterly 8[15]	-	
Quarterly 7						
NA	BZ	NE-1410	Diesel Fuel Spill at Field Treatability Unit	Quarterly 7[9]	-	NFA
NA	BZ	NE-1411	Diesel Fuel Overflowed from Tanker at OU 2 Field Treatability Unit	Quarterly 7[9]	-	NFA
414	7	NW-1502	Improper Disposal of Diesel-Contaminated Material at Landfill (formerly NW-177)	Quarterly 2[5]	Quarterly 3[6] Quarterly 7[9]	NFA
114	7	NW-1503	Improper Disposal of Fuel Contaminated Material at Landfill	Quarterly 1[24]	Quarterly 7[9]	NFA
114	7	NW-1504	Improper Disposal of Thorosilane Contaminated Material at Landfill	Quarterly 7[9]	-	NFA Cont to √ w/ [illegible]
NA	IA	000-503	Solar Pond Water Spill Along Central Avenue	Quarterly 7[9]	-	NFA

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	100-613	Asphalt Surface in Lay Down Yard North of Building 130 (identified as 000-501 in Quarterly 4[8]; reassigned as 100-613 in Quarterly 7[9])	Quarterly 4[8]	Quarterly 7[9] Feb	NFA
NA	IA	300-711	Ni-Cad Battery Spill Outside of Building 373	Quarterly 1[24]	Quarterly 7[9]	NFA
NA	IA	300-712	1/2 gal Antifreeze Spilled by Street Sweeper Outside of Building 373	Quarterly 7[9]	-	NFA
Miscellaneous Sites EPA approved in 1992. CDPHE reviewed and verbally concurred. Need written concurrence.						
NA	BZ	NE-1400	Tear Gas Powder Release OK	HRR[1]	-	NFA ~~will confirm (cal) lab no long lasting effects but don't think a problem~~
NA	BZ	NE-1401	NE Buffer Zone Gas Line Break	HRR[1]	-	NFA
NA	BZ	NE-1402	East Inner Gate PCB Spill	HRR[1]	-	NFA
NA	BZ	NE-1403	Gasoline Spill - Building 920 Guard Post	HRR[1]	-	NFA
NA	BZ	SE-1600	Pond 7 – Steam Condensate Releases ?	HRR[1]	- Feb	'71 sampling indicated ↑gross alpha. Need to go ck.
NA	BZ	SE-1601	Pond 8 - Cooling Tower Discharge Releases ?	HRR[1]	- Feb	↓
NA	BZ	SW-1700	Fuel Spill into Woman Creek Drainage	HRR[1]	-	NFA OK; happened 27 yrs ago!

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	BZ	000-501	Roadway Spraying OK	HRR[1]	-	~~Rodamine dye, brine solutions & waste oils. Pretty inaccurate need to check w/ lab also. Limits in activities in solutions. Pretty dilute & spread out~~ NFA line
NA	IA	100-600	Mercury Spill – Valve Vault 124-B, Building 124 OK	HRR[1]	-	~~wanted to confirm .2 mg/L acceptable level reference~~ NFA line
NA	IA	100-601	Building 123 Phosphoric Acid Spill	HRR[1]	-	NFA
NA	IA	100-604	T130 Complex Sewer Line Leaks	HRR[1]	-	NFA
NA	IA	100-605	Building 115 Hydraulic Oil Spill	HRR[1]	-	NFA
NA	IA	100-606	Building 125 TCE Spill	HRR[1]	-	NFA
NA	IA	100-610	Asbestos Release – Building 123	HRR[1]	-	NFA
NA	IA	100-612	Battery Solution Spill - Building 119	HRR[1]	-	NFA
NA	IA	300-700	Scrap Roofing Disposal	HRR[1]	-	NFA
NA	IA	300-701	Sulfuric Acid Spill – Building 371	HRR[1]	-	NFA

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	300-703	Building 331 North Area	HRR[1]	-	✓ NFA
NA	IA	300-704	Roof Fire, Building 381	HRR[1]	-	✓ NFA
NA	IA	300-705	Potassium Hydroxide Spill North of Building 374	HRR[1]	-	✓ NFA
NA	IA	300-706	Evaporator Tanks North of Building 374	HRR[1]	-	✓ NFA
NA	IA	300-707	Sanitizer Spill OK	HRR[1]	-	✓ ~~Carl to ✓ w/ lab staff. Think ok.~~ done ✓ NFA
NA	IA	300-710	Gasoline Spill North of Building 331	HRR[1]	-	✓ NFA
NA	IA	400-805	Building 443 Tank #9 Leak	HRR[1]	-	✓ NFA Nick provide more accurate description & differentiate from IHSS 129. Carl thinks will go NFA eventually. done 12/
NA	IA	400-806	Catalyst Spill, Building 440	HRR[1]	-	✓ NFA
NA	IA	400-808	Vacuum Pump Leak - Building 442	HRR[1]	-	✓ NFA
NA	IA	400-809	Oil Leak - 446 Guard Post	HRR[1]	-	✓ NFA

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	500-903	RCRA Storage Unit #1	HRR[1]	-	NFA
NA	IA	700-1107	Compressor Waste Oil Spill - Building 776	HRR[1]	-	NFA
NA	IA	700-1109	Uranium Incident - Building 778	HRR[1]	-	NFA
NA	IA	700-1110	Nickel Carbonyl Burial West of Building 771	HRR[1]	- FEB ~~JAN~~ mtng	Logic says NFA; Nick to pull references & provide for review. IHSS150.2 overlays this area too & requires further action already.
NA	IA	800-1202	Sulfuric Acid Spill, Building 883	HRR[1]	-	NFA
NA	IA	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	HRR[1]	-	NFA
NA	IA	800-1206	Fire, Building 883	HRR[1]	-	NFA
NA	IA	800-1211	Capacitor Leak, Building 883	HRR[1]	-	NFA
NA	IA	900-1300	RO Plant Sludge Drying Beds	HRR[1]	- FEB ~~JAN~~	Confirm gw monitoring in area per write up.
NA	IA	900-1302	Gasoline Spill	HRR[1]	-	NFA

List of Pending NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES
NA	IA	900-1303	Natural Gas Leak	HRR[1]	-	NFA
NA	IA	900-1304	Chromic Acid Spill - Building 991	HRR[1]	-	NFA
NA	IA	900-1305	Building 991 Roof	HRR[1]	-	NFA

1 *Historical Release Report for the Rocky Flats Plant*, Rocky Flats Plant, Golden, CO, June, 1992.

2 *Annual Update for the Historical Release Report*, RF/ER-96-0046, Rocky Flats Environmental Technology Site, Golden, CO, September, 1996.

3 *Annual Update for the Historical Release Report*, RF/RMRS-97-073.UN, Rocky Flats Environmental Technology Site, Golden, CO, September, 1997.

4 EPA, 1992. Correspondence to R. Schassburger, DOE RFO, from M. Hestmark, EPA Region VIII, RE: Potential Area of Concern Needing Further Investigation, December 23.

5 *Historical Release Report Second Quarterly Update, October 1, 1992 to January 1, 1993.*

6 *Historical Release Report, Third Quarterly Update, January 1, 1993 to April 1, 1993.*

7 *Annual Update for the Historical Release Report*, RF/RMRS-98-269.UN, Rocky Flats Environmental Technology Site, Golden, CO, September.

8 *Historical Release Report, Fourth Quarterly Update, April 1, 1993 to July 1, 1993.*

9 *Historical Release Report, Seventh Quarterly Update, January 1, 1994 to March 31, 1994.*

10 *Historical Release Report, Fifth Quarterly Update, July 1, 1993 to October 1, 1993.*

11 *Historical Release Report, Tenth Quarterly Update, October 1, 1994 to December 31, 1994.*

12 *Corrective Action Decision/Record of Decision for OU16: Low Priority Sites*, Rocky Flats Environmental Technology Site, Golden, CO August, 1994

13 *Historical Release Report, Ninth Quarterly Update, July 1, 1994 to September 30, 1994.*

14 *Operable Unit 11 Final Combined Phases RFI/RI Report*, Rocky Flats Environmental Technology Site, Golden, CO, June, 1995.

15 *Historical Release Report, Eighth Quarterly Update, April 1, 1994 to June 30, 1994.*

16 *Historical Release Report, Sixth Quarterly Update, October 1, 1993 to January 1, 1994.*

17 *Historical Release Report, Twelfth Quarterly Update, April 1, 1995 to June 30, 1995.*

18 *Historical Release Report, Eleventh Quarterly Update, January 1, 1995 to March 31, 1995.*

19 CDPHE, 1998, *Excavated Soil Adjacent to Building 701 (cc mail from C. Spreng to L. Brooks)*, Rocky Flats Environmental Technology Site, Golden, CO, July.

20 *Corrective Action Decision/Record of Decision, Operable Unit 1: 881 Hillside Area, IHSS 119.1*, Department of Energy, Rocky Flats Environmental Technology Site, Golden, CO, February, 1997.

21 *Corrective Action Decision/Record of Decision for OU 15: Inside Building Closures*, Rocky Flats Environmental Technology Site, Golden, CO, August, 1995.

22 *Final Corrective Action Decision/Record of Decision Declaration, Operable Unit 3*, Department of Energy, Rocky Flats Environmental Technology Site, Golden, CO, July, 1997.

23 *Annual Update for the Historical Release Report*, RF/RMRS-99-428.UN, Rocky Flats Environmental Technology Site, Golden, CO, September, 1999.

24 *Historical Release Report, First Quarterly Report submitted September 30, 1992.*

25 KH, 2000, *Historical Release Report (Interim Update) and Response to Comments for HRR Annual Updates (1997, 1998 & 1999)*, Flats Environmental Technology Site, Golden, CO, September.

26 *Annual Update for the Historical Release Report, KH-00-900.UN*, Rocky Flats Environmental Technology Site, Golden, CO, September, 2000.

27 EPA, CDPHE, 1999. Correspondence to J. Legare, DOE RFO, from T. Rehder, EPA Region VIII, S. Gunderson, CDPHE, RE: 1997 Annual HRR Review, July 9, 1999.

28 EPA, CDPHE, 1999. Correspondence to J. Legare, DOE RFO, from T. Rehder, EPA Region VIII, S. Gunderson, CDPHE, RE: 1998 Annual HRR Review, July 9, 1999.

29 EPA, CDPHE, 2000. Correspondence to J. Legare, DOE RFO, from T. Rehder, EPA Region VIII, S. Gunderson, CDPHE, RE: 1999 Annual HRR Review, June 23, 2000.

30 EPA, CDPHE, 2001. Correspondence to J. Legare, DOE RFO, from T. Rehder, EPA Region VIII, S. Gunderson, CDPHE, RE: NFA PAC 100-607, April 12, 2001.

31 CDPHE, 2001, Preliminary Electronic Correspondence to M.C. Broussard, from C. Speng CDPHE, RE: 2000 Annual HRR Review, September 2001.

MEETING MINUTES

Subject: NFA Status Meeting
Date: April 3, 2002
Time: 8:30 – 10:00 a.m.
Location: CDPHE

I ER Update

B123 – Work is finishing up this week.

CERCLA 5-Year Review Report – The report was distributed to the Agencies for review.

B125 UBC – The NFA concurrence letter was prepared and signed by the State. EPA will sign and transmit to the Site.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) Four sites carried over from the **1992 IHSS List** (State only)

PAC 700-1110: Remaining questions were addresses and it was concurred the site is an NFA.

PAC 900-1300: The State concurred it is a NFA site.

PAC SE-1600: Remaining questions were addresses and it was concurred the site is an NFA.

PAC SE-1601: Remaining questions were addresses and it was concurred the site is an NFA.

(B) One site carried over from **2001 HRR Update** (State only)

PAC 700-1102: There was discussion concluding that retardation of the PCBs and lack of pathway to surface water are logical reasons to do no further action. Carla provided a printout and summary from the Science Advisory Board to clarify that the paper previously referenced by the State was based on air emissions and not soils and hence is not applicable. Carl, you were going to confirm the site as an NFA by the end of the week.....were you able to get answers to your outstanding questions yet? This would also guide NFA determinations for the remainig transformer locations. [KH will correct the Table and Figure references in the revised write-up (to be placed in the 2002 HRR if designated a NFA site) as agreed upon at the previous meeting.]

(C) Additional Discussions

1997 Annual Update

PAC 900-109: Concurred as a NFA site.

11th Quarterly Update

PAC 900-1317: Concurred as a NFA site.

IV List of NFA's for Next Meeting

There are no outstanding sites proposed as NFAs. The working group will reconvene in the fall when additional sites are proposed.

V PIC discussion

The list of PICs from the original HRR was described, summarized and select ones reviewed in brief. It was agreed that forty-eight of the sixty-one locations were NFA sites. PICs 4,6,9,11,14,15,17,18, 41,42,44,47,& 57 will be further discussed (&/or investigated) when the Working Group reconvenes in the fall.

VI Closing

The **next meeting** will be scheduled in the fall, after issuance of the 2002 HRR Annual Update.

CONCURRENCE:

DOE	**EPA**	**CDPHE**

Attendance Sheet
NFA Meeting
Wednesday, April 3, 2002

Name	Organization	Phone	Fax
1. Elizabeth Pottorff	CDPHE	303-692-3429	303-759-5355
2. Carla Rellergert	RFETS - sub-contractor	303-966-2518	303-966-7991
3. Reg Tyler	DOE	303-966-5927	
4. Carl Spreng	CDPHE	303-692-3358	303-759-5355
5. Gary Kleeman	EPA	3033126246	X6067
6. Nick Damas	SSOC	303 966 4605	5180
7. Marla Broussard	KH	303-966-6007	X5180
8.			
9.			
10.			
12.			
3.			
14.			
15.			

Actual Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:30 to1:00 p.m.	COMPLETE
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at B060	10:00 a.m. to 12:00 p.m.	COMPLETE
03/13/02	Group 8 at EPA	2:00 to 4:00 p.m.	COMPLETE
04/03/02	Group 9 at CDPHE	8:30 to 10:30 a.m.	COMPLETE

MEETING MINUTES

Subject: NFA Status Meeting
Date: March 13, 2002
Time: 2:00 – 4:00 p.m.
Location: EPA Conference Center

I ER Update

RI/FS Workplan – The State has verbally approved the document.

BZ SAP and SAP Addenda – The EPA has signed a letter approving the BZ SAP, with limitations, along with Group 900-2 from the SAP Addendum.

ER RSOP – The EPA approved the ER RSOP with conditions. A letter is forthcoming.

B886 – The pre-evolution brief was completed today for six samples; Outstanding comments to the SAP Addendum and RSOP Notification must be resolved prior to additional work.

B123 – The stockpiled soil is clean.

CERCLA 5-Year Review Report – The report is currently being revised based on internal comments and should be out to the Agencies for review next week.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) Four sites carried over from the **1992 IHSS List** (State only)

PAC 700-1110: KH needs to reconstruct the timeframe and determine the actual length of time the containers were buried. The State is concerned if they were buried for a lengthy amount of time, leakage may have occurred and sampling would need to be performed. Both the State and KH are to research the behavior of carbonyl nickle in the environment. It may react and become non-toxic.

PAC 900-1300: The State will check over their notes on information provided at the December meeting and send an e-mail if there are additional questions. Anticipate concurrence as a NFA site.

PAC SE-1600: KH needs to identify three pieces of information for the State: The exact location, existing sampling data, and whether or not the location was disturbed as part of the OU1 activities.

PAC SE-1601: KH needs to identify three pieces of information for the State: The exact location, existing sampling data, and whether or not the location was disturbed as part of the OU1 activities.

(B) One site carried over from **2001 HRR Update** (State only)

PAC 700-1102: There was discussion concluding that retardation of the PCBs and lack of pathway to surface water are logical reasons to do no further action, however the site may need to be deferred until the PCB issue is resolved internally by the State. Carl will provide additional feedback after looking into what the Arsenal did with respect to their PCBs and KH will look into the authority question (TSCA vs RFCA). Additional discussion will occur at the next meeting. KH will correct the Table and Figure references in the revised write-up (to be placed in the 2002 HRR if designated a NFA site).

(C) New Discussions

1997 Annual Update

PAC 900-109: The State will re-review the Report from this area. KH will provide a table of values of what was left in the trench along with any other pertinent information.

12th Quarterly Update

PAC 500-908: Concurred as a NFA site.

11th Quarterly Update

PAC 700-1113: Concurred as a NFA site.

PAC 900-1315: Concurred as a NFA site.

PAC 900-1317: The data was not provided as stated on page 8 of the write-up. KH to provide the data to the Agencies for review.

10th Quarterly Update

PACs 300-714: Concurred as a NFA site.

PAC 900-1316: Concurred as a NFA site.

9th Quarterly Update

PAC 900-1314: Concurred as a NFA site.

8th Quarterly Update

PAC 300-713: Concurred as a NFA site.

PAC 400-814: Concurred as a NFA site.

(D) Recent Submittal (Separate write-up provided prior to meeting)

Building 125 UBC: Concurred as a NFA site. The State will initiate a joint letter to the DOE in support of upcoming planned D&D activities. KH will revise the write-up as discussed, forward it to the Agencies and include in the 2002 HRR Annual Update.

(E) KH and the State reviewed the RCRA/IHSS List and made several edits based on Carla's comparison to other Site documentation. There were no follow-on activities scheduled at this time.

IV List of NFA's for Next Meeting

The final **four locations from the 1992 list** (PACs 700-1110, 900-1300, SE-1600 and SE-1601

PAC 700-1102 from the 2001 Annual Update (and other PCB sites?)

PAC 900-109 from the 1997 Annual Update

PAC 900-1317 from the 11th Quarterly Update

V Closing

The **next meeting** will be April 3, 2002, at 8:30 a.m. at CDPHE.

CONCURRENCE:

DOE	**EPA**	**CDPHE**

MEETING MINUTES

Subject: NFA Status Meeting
Date: February 27, 2002
Time: 10:00 – 12:00 p.m.
Location: RFETS

I ER Update

Building 123 – The current status of the project was discussed and it was noted that the work has been progressing nicely.

IHSS Group 400-10 – The project was delayed due to weather but will be starting this week.

Building 886 – The RSOP Notification (02-03) was distributed at the meeting today in support of initiating work at B886 in mid-March. The DOE transmittal letter will follow shortly. (IA SAP Addendum 02-03 was also provided.)

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) There were four sites carried over from the **1992 list**, 700-1110, 900-1300, SE-1600 and SE-1601. These were now deferred to the March meeting.

(B) In response to a previous action, Kaiser – Hill provided copies of the **OU15 ROD Declaration** and reviewed the language to ensure there was nothing preventing the previous agreement to designate PACs 800-179 and 800-180 as NFAs at this time. The designation stands.

(C) Kaiser – Hill provided additional information for the two remaining sites from the **2001 HRR.** After reviewing key pages from the approved OU 10 Workplan and discussing the step during treatment where the water is identified as off-spec, it was concurred with that PAC 300-206 is a NFA site. A revised write-up was provided for PAC 700-1102 as previously requested. The State requested time to confer internally prior to discussing further. It will be deferred to the March meeting.

(D) The write-up for **PAC 100-613** was provided. It was previously listed as being contained in the 7th Quarterly Update but was actually only in the 4th Quarterly Update. The PAC was accepted as a NFA site. It is in 97 pages 86-87

(E) There was one remaining site (PAC NE-1411) from the **7th Quarterly Update**. Copies of pages from the operations logbook were provided to document the diesel spill was cleaned up. The PAC was accepted as a NFA site.

(F) There was new discussion on five PACs from the **1997, 1998, and 1999 Annual Updates**. It was agreed that all five sites; PACs NW-170 (1999), NE 1404 (1998), 300-212, 700-1114a and 700-1114b (1997) were all NFA sites. It was clarified that 700-1114b is actually associated with B765 (not 774 as listed). This will be corrected in the 2002 Update. The write-up for PAC NW-170 also requires a revision to be included in the 2002 Annual Update to correct references to Tier 1 and associated impacts.

IV List of NFA's for Next Meeting

The State will complete its' review of the final **four locations from the 1992 list** (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

The State will complete its' review of **PAC 700-1102** from the 2001 Annual Update (and other PCB sites?).

The new locations for review include the remaining PAC (900-109) from the **1997 Annual Update**. PAC 500-908 from the **12th Quarterly Update**; PACs 700-1113, 900-1315 and 900-1317 from the **11th Quarterly Update**; PACs 300-714 and 900-1316 from the **10th Quarterly Update**; PAC 900-1314 from the **9th Quarterly Update**; and PACs 300-713 and 400-814 from the **8th Quarterly Update**.

This will complete the list of sites currently proposed by the Site as NFAs.

(See attached March 13, Agenda for a concise listing of the sites requiring review prior to the meeting.)

V Closing

The **next meeting** will be March 13, 2002, at 2:00 p.m. at EPA. Laura Brooks and Susan Serreze will arrive at 3:00 p.m. to discuss the RCRA Unit List with the State.

CONCURRENCE:

DOE	**EPA**	Carl Spreng **CDPHE**

MEETING MINUTES

Subject: NFA Status Meeting
Date: January 31, 2002
Time: 11:30 – 2:00 p.m.
Location: RFETS

I ER Update

ER RSOP – The State approved the document and DOE is working with EPA to close their remaining issue. Approval is expected in February.

Pathway Analysis – Kaiser – Hill is working on a pathway analysis to evaluate the subsurface.

Building 889 – The DOE lead is Lisa O'Mary and Elizabeth Pottorff is the State lead. The notification requires 30-days because it contains a RCRA unit.

Quarterly Letter – The draft letter was reviewed and edits made. The CDPHE took the lead to finalize the joint Agency letter and issue to DOE. PAC NE-1409 was further discussed. The Site referenced published action levels from Appendix 5 of RFCA in a previous write-up. It appears the value in RFCA may be incorrect for methylene chloride. Carl took the action to verify the correct value with Laura Brooks. The discrepency does not affect the NFA determination agreed to for this PAC. The Quarterly letter will not contain a corrected value. If an error exists, Attachment 5 to RFCA will need to be amended. In the meantime, other Site documents are consistent with the existing RFCA values.

RCRA Units - Kaiser – Hill provided the State with a spreadsheet containing the requested information on PACs that contain RCRA Units. Laura Brooks and Susan Serreze will be invited to the March Meeting to discuss the list.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written (a typo was lined out in the first sentence of Section IV).

III NFA Discussions

(A) There were four sites carried over from the **1992 list**, 700-1110, 900-1300, SE-1600 and SE-1601. These were deferred to the February meeting.

(B) The two **East Spray Field** IHSS's (216.2 and 216.3) from the 1997 HRR were discussed. The EPA stated they could not concur with the recommendation for NFA at these locations. They need to be sure the Site has actual data from the AOC; not just from the area adjacent to the AOC. Gary stated there was a lot of run-off from the spraying and he wants to ensure adequate characterization in locations where sediments may have accumulated from the run-off. Additional biased sampling in accordance with the BZ SAP must be performed. Gary requested to walk the AOC and designate biased sampling locations. The State said no further sampling for groundwater is required based on review of the existing downgradient monitoring wells.

(C) Kaiser – Hill provided additional information for two of the three remaining sites from the **2001 HRR** as previously requested. It was concurred with that PAC 600-189 was an NFA site. Kaiser – Hill was unable to adequately answer the questions regarding PCOCs associated with PAC 300-206. After reviewing the OU 10 Workplan, further information will be provided at the next meeting. The remaining PAC (700-1102) could possibly go as NFAs once a revised write-up is provided by Kaiser - Hill.

(D) The remaining site (NW-1504) associated with the **Present Landfill** from the 7th Quarterly Update was reviewed and accepted as an NFA site. Additional data had been provided at the previous meeting for Agency review.

(E) New discussion occurred regarding the six remaining sites from the 7th **Quarterly Update.** Four of the sites were agreed to as NFAs (PACs NE-1410, 000-503, 300-711 and 300-712). Kaiser – Hill was unable to locate the write-up for PAC 100-613, hence it was deferred to the next meeting. The agencies requested additional information for the last site, PAC NE-1411, at least equivalent to that provided for NE-1410, or demonstrate that the area of the spill was part of the previously completed east trench area remediations.

(F) The 18 **Transformer Sites** from the 1996 HRR were discussed in general. Per RFCA, using the existing ALF, the sites meet the NFA criteria. The concern was raised that once subsurface RSALs are determined, the status may change. The clean-up work was done under TSCA via an approved PAM. This does not however pre-empt clean-up under other authorities. RFCA may be the ultimate authority and if a risk based number is more conservative, it may end up being applied. PCB-like-dioxins would possibly need to be evaluated based on yet to be promulgated EPA guidance if TSCA is applied, which are orders of magnitude lower than those for PCBs. The State and EPA requested we table the discussion until they could evaluate the issues further.

IV List of NFA's for Next Meeting

The State will complete its' review of the final **four locations from the 1992 list** (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

Kaiser – Hill will present the requested data for the **two remaining sites from the 2001 HRR** (PACs 300-206 and 700-1102) and discuss as appropriate.

Kaiser – Hill will provide the write-up for Agency review for PAC 100-613 and additional information as requested for NE-1411 from the 7th **HRR Quarterly Update.**

The new write-up for PAC (700-1102) from the **2001 HRR Update** will be provided by Kaiser - Hill.

The new locations for review includes PAC NW-170 from the **1999 Annual Update**; PAC NE-1404 from the **1998 Annual Update;** four remaining PACs from the **1997 Annual Update** (PACs 300-212, 700-1114a, 7001114b and 900-109); PAC 500-908 from the **12th Quarterly Update**; and PACs 700-113, 900-1315 and 900-1317 from the **11th Quarterly Update.**

Since the transformer sites are being tabled, I would like to add the following five sites to the list for the next meeting. They include: PACs 300-714 and 900-1316 from the **10th Quarterly Update;** PAC 900-1314 from the **9th Quarterly Update;** and PACs 300-713 and 400-814 from the **8th Quarterly Update.** *This will complete the list of sites currently proposed by the Site as NFAs.*

(See attached February 27, Agenda for a concise listing of the sites requiring review prior to the meeting.)

V Closing

The **next meeting** will be February 27, 2002, at 10:00 a.m. in B060/Rm 114.

CONCURRENCE:

DOE	**EPA**	**CDPHE**

MEETING MINUTES

Subject: NFA Status Meeting
Date: December 19, 2001
Time: 2:00 – 4:00 p.m.
Location: EPA Conference Center

I ER Update

ER RSOP – There is a meeting scheduled for tomorrow to resolve all remaining issues. No one leaves until there is concurrence.

BZ SAP – The final copy is being put together. The Windsite is not included in the Site boundary definition.

EM-50 Funding – The Site was successful (per a verbal announcement) in obtaining EM-50 funds for the ET cover (.5M in FY'02 and 2.5M in FY'03).

Solar Ponds – ER would like to discuss a path forward with both the State and EPA regarding data to support no action at the solar ponds; just push in the berms. Elizabeth stated that there is a USGS study that showed no precipitate below groundwater, need to check with Chris on its conclusiveness. Carl stated since there is no human health risk the only concern is any pathway to surface water. The 10^{-6} risk base for the landfill (Att 10) is ok once define subsurface pathways. Need to compare the IASAP requirements to what is in the Solar Ponds Area. Lane said he would be following up soon since ER wants to push in the berms this summer and must know if a subsurface action is required prior to that time.

IA SAP Addendum for 900-4&5 – The Site inquired if the Agencies are ready to approve since the clock has run out and no comments have been received.

B123 RSOP Notification – The Draft is out for review. Hope to officially transmit final in early Janaury.

B335 and B442 – Both are being accelerated by D&D so the associated UBC/IHSS would follow. ER is awaiting funding to add the scope.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) Revised tables were distributed showing the data broken out between the 133.2 and 133.4 real and "ghost" **Ash Pit** sites. There was consensus that the data supports elimination of the two "ghost" pits as discussed at the previous meeting.

(B) There were eight sites carried over from the **1992 list** that were further discussed. Four of the sites were concurred with as NFAs, NE-1400, 000-501, 100-600, and 300-707. Kaiser – Hill provided additional information for two sites, 700-1110 and 900-1300, which the State will review for the January meeting. The last two Sites, SE-1600 and SE-1601, are still awaiting confirmation by the State's chemist. A complete list of the updated status of the 1992 sites is included in Table 1. Updates based on this meeting are in bold.

(C) The two **East Spray Field** IHSS's from the 1997 HRR were again deferred. The State and EPA will evaluate the data further to make a decision on whether the existing data is sufficient to make a NFA determination for these IHSSs.

(D) New Discussion occurred regarding the **eight remaining sites proposed as NFA in the 2001 HRR**. Five of these (PACs 100-603, 400-812, 800-179, 800-180, and 900-1308) were agreed upon as NFAs, and the remaining three (PACs 300-206, 600-189 & 700-1102) could possibly go as NFAs once additional questions can be answered. See Table 3 for details.

(E) **Three sites associated with the Present Landfill** proposed as NFA in the 7th Quarterly Update were reviewed. Two of these sites (NW-1502 & NW-1503) were accepted as NFAs and the third (NW-1504) is awaiting concurrence by the State's chemist. See Table 2 for details.

IV List of NFA's for Next Meeting

The State will ~~review~~ complete its' review of the final **four locations from the 1992 list** (700-1110, 900-1300, SE-1600 and SE-1601) Both the State and EPA will complete review of **the East Spray Fields** from the 1997 HRR and the **thorosilane site** (NW-1504) from the 7th HRR Quarterly Update.

Kaiser – Hill will present the requested data for the **three remaining sites from the 2001 HRR** and discuss as appropriate.

The new locations for review include the **18 transformer sites from the 1996 HRR** and the **6 remaining sites from the 7th HRR Quarterly Update.**

The State also requested information on PACs that contain **RCRA Units** as these need additional work to close via a change to Interim Status or through a permit modification. Kaiser – Hill continues to work on assembling this list and may have it prepared by the next meeting.

V Closing

It was noted we again made progress and that these meetings have been very helpful.

The **next meeting** will be January 31, 2002, at 11:30 a.m. in B060/Rm 114.
(Note: If the Focus Group meeting ends earlier, we will begin at 11:00 a.m. in their room.)

CONCURRENCE:

DOE	**EPA**	**CDPHE**

TABLE 1

1992 List	**NE-1400**	**Tear Gas Powder Release**	**CONSENSUS: Approved NFA.**
	NE-1401	NE Buffer Zone Gas Line Break	CONSENSUS: Approved NFA.
	NE-1402	East Inner Gate PCB Spill	CONSENSUS: Approved NFA.
	NE-1403	Gasoline Spill – Building 920 Guard Post	CONSENSUS: Approved NFA.
	SE-1600	Pond 7 – Steam Condensate Releases	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SE-1601	Pond 8 – Cooling Tower Discharge Release	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SW-1700	Fuel Spill into Women Creek Drainage	CONSENSUS: Approved NFA.
	000-501	**Roadway Spraying**	**CONSENSUS: Approved NFA.**
	100-600	**Mercury Spill – Valve Vault 124-B, Building 123**	**CONSENSUS: Approved NFA.**
	100-601	B123 Phosphoric Acid Spill	CONSENSUS: Approved NFA.
	100-604	T130 Complex Sewer Line Leaks	CONSENSUS: Approved NFA.
	100-605	B115 Hydraulic Oil Spill	CONSENSUS: Approved NFA.
	100-606	B125 TCE Spill	CONSENSUS: Approved NFA.
	100-610	Asbestos Release – Building 123	CONSENSUS: Approved NFA.
	100-612	Battery Solution Spill – Building 119	CONSENSUS: Approved NFA.
	300-700	Scrap Roofing Disposal	CONSENSUS: Approved NFA.
	300-701	Sulfuric Acid Spill – Building 371	CONSENSUS: Approved NFA.
	300-703	Building 331 North Area	CONSENSUS: Approved NFA.
	300-704	Roof Fire, Building 381	CONSENSUS: Approved NFA.
	300-705	Potassium Hydroxide Spill North of Building 374	CONSENSUS: Approved NFA.
	300-706	Evaporator Tanks North of Building 374	CONSENSUS: Approved NFA.
	300-707	**Sanitizer Spill**	**CONSENSUS: Approved NFA.**
	300-710	Gasoline Spill North of Building 331	CONSENSUS: Approved NFA.
	400-805	Building 443 Tank #9 Leak	CONSENSUS: Approved NFA.
	400-806	Catalyst Spill, Building 440	CONSENSUS: Approved NFA.
	400-808	Vacuum Pump Leak - Building 442	CONSENSUS: Approved NFA.
	400-809	Oil Leak - 446 Guard Post	CONSENSUS: Approved NFA.
	500-903	RCRA Storage Unit #1	CONSENSUS: Approved NFA.
	700-1107	Compressor Waste Oil Spill - Building 776	CONSENSUS: Approved NFA.

TABLE 1 cont.

	700-1109	Uranium Incident - Building 778	CONSENSUS: Approved NFA.
	700-1110	**Nickel Carbonyl Burial West of Building 771**	**Kaiser – Hill provided copies of the cited references for review. Note: IHSS 150.2 overlays the area and requires further action. The State believes this will eventually go as an NFA but needs to review the additional information.** **CONSENSUS: No decision. Awaiting review of additional information.**
	800-1202	Sulfuric Acid Spill, Building 883	CONSENSUS: Approved NFA.
	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	CONSENSUS: Approved NFA.
	800-1206	Fire, Building 883	CONSENSUS: Approved NFA.
	800-1211	Capacitor Leak, Building 883	CONSENSUS: Approved NFA.
	900-1300	**RO Plant Sludge Drying Beds**	**Kaiser – Hill provided groundwater monitoring information for the area.** **CONSENSUS: No decision. Awaiting review of additional information.**
	900-1302	Gasoline Spill	CONSENSUS: Approved NFA.
	900-1303	Natural Gas Leak	CONSENSUS: Approved NFA.
	900-1304	Chromic Acid Spill - Building 991	CONSENSUS: Approved NFA.
	900-1305	Building 991 Roof	CONSENSUS: Approved NFA.

TABLE 2

7th HRR Quarterly Update	NW-1502	Improper disposal of diesel contaminated material at Landfill	CONSENSUS: Approved NFA
	NW-1503	Improper disposal of fuel contaminated material at Landfill	CONSENSUS: Approved NFA
	NE-1504	Improper disposal of thorosilane contaminated material at Landfill	CONSENSUS: Agencies to review thorosilane data (provided) with chemist. Anticipate NFA upon review.

TABLE 3

2001 HRR	100-603	B123 Bioassay Waste Spill	There are mis-statements on pages 50 and 51 that will be corrected in the Quarterly Letter regarding rainwater and the presumption the site is an NFA. CONSENSUS: Approved NFA.
	300-206	Inactive D-836 Hazardous Waste Tank	CONCENSUS: Kaiser – Hill will provide additional information regarding tank contents and definition of "off-specification" in order for the Agencies to determine applicability of provided data set. In future, if discussing tanks; include in the write-up if it is above or below ground, whether it has been removed, etc.
	400-812	Tank T-2 Spill in B460	If referenced in future, provide citation for regulatory limits in Table 2.9 as 6CCR1007-3 part 261.24 Table 1. CONSENSUS: Approved NFA.
	600-189	Nitric Acid Tank	CONSENSUS: Kaiser – Hill to provide additional information regarding where from and integrity at closure. Reference D&D documents or tank release report. Upon review, the site should go NFA. For future reports; The footnotes to Tier I and Tier II should be included on any Table referencing these values.
	700-1102	Transformer Leak-776-4	CONSENSUS: Kaiser – Hill to provide a revised write-up clarifying the basis for the NFA proposal [impact to surface water would be negligible due to slow movement of PCBs in clays in the subsurface. The PCBs would degrade long before they hit surface water. (seepage rate is 0.2 feet /year)] and then this site can probably go NFA. In addition, references on pages 73 & 74 should be 2.22. Correct mis-statement regarding "clean" groundwater in the wells and verify screened interval for accuracy with respect to contamination depth.
	800-179	B865 Drum Storage	CONSENSUS: Approved NFA (Verify not in deference to the OU15 ROD)
	800-180	B883 Drum Storage	CONSENSUS: Approved NFA. (Verify not in deference to the OU15 ROD)
	900-1308	Gasoline Spill outside B980	CONSENSUS: Approved NFA

MEETING MINUTES

Subject: NFA Status Meeting
Date: December 5, 2001
Time: 2:00 – 4:00 p.m.
Location: RFETS Building 060

I ER Update

ER RSOP – KH explained they were waiting for final feedback to comment dispositions. Carl stated all his items were either addressed or adequately explained. Carl said stewardship issues were still outstanding with Steve Tarlton at the State. Gary's copy of the document was sent to the EPA offices Monday but he had not received it. He was provided an additional copy at this meeting to facilitate review.

Original Landfill – There was a conference call this morning with Bob Scheck and Carl Spreng to discuss the status of the project. It was agreed to have monthly meetings with the Site and Agencies to facilitate alternative selection in late Spring.

Other Topics – Carl did not get a response from the State chemist on the five questions pertaining to the 1992 sites. They will be delayed to the next meeting. Kaiser-Hill will defer discussion of two of the three sites they were to investigate until the next meeting as well.

It was stated that there is possibly a typo on page 39 of the 2001 HRR Update for the ALF reference date. Kaiser – Hill took the action to verify the correct date and issue an errata page if necessary. *NOTE: The March 21, 2000 date is the correct reference per L. Brooks, no errata page required.*

II Correction of Prior Meeting' Minutes

A corrected Table 1 was distributed. A clarification on Table 2 was requested: In the summary section for Trenches A, B, and C, the last sentence should be removed from each. In addition, *passes* should be changed to *passed* in the previous sentence. The **minutes were approved** and signed with the noted corrections.

III NFA Discussions

(A) Eight IHSSs from the 2001 HRR were reviewed. These include six **Ash Pit** sites, a concrete wash pad and the site of an old incinerator facility. An errata sheet was distributed for page 29 of the 2001 HRR Update to coincide with the corrected Table distributed at the previous meeting. In response to State questions, the Site affirmed the ash was all from the incinerator (IHSS 133.5) prior to 1968, and that the reason there is elevated uranium is likely due to B444. Carl reminded everyone that rethinking of subsurface action levels may impact decisions made regarding the ash pits and that we should proceed cautiously. Lane responded that while that is true, he believes they will all pass a risk evaluation as is the current thinking. The risks calculated for the ash pits as part of the OU5 RFI/RI risk assessment were in the 10^{-6} risk range or lower.

KH explained that two of the ash pits (133.2 & 133.4) have a second "ghost location" south of the true ash pit due to past activities and subsequent boundary revisions. It was requested that the Site be allowed to remove the old ghost locations from the maps and only address the real pits. This was concurred with by all as long as it is confirmed by KH that all existing data is really below Tier II in the southern trench footprints. The data was not previously presented in this format.

Detailed discussions of the individual site data followed. It was agreed that two of the eight locations were NFAs, two more would become NFAs following confirmation sampling and the remaining four sites were deferred pending subsurface action level outcome (see Table 1). If actions were required, then the remedial approach will be to excavate around the boreholes with exceedances and use in-process sampling to determine the extent of the excavation.

(B) The two **East Spray Field** IHSS's from the 1997 HRR were discussed. Kaiser – Hill distributed a new data package characterizing an area east and north of the existing IHSS's (Site 35 from the BZ contamination Report) used earlier this year to confirm the original boundary of IHSS 216.2 did not need to be expanded. The area was sampled for SW846 Total Metals in accordance with agreements made between the Site, EPA and CDPHE on January 10, 2001. The data shows there is nothing of concern in the area. The original data used in the 1997 summary is TCLP, which is not directly applicable. Kaiser – Hill then asked the State and EPA if the combination of the original TCLP data and the newly acquired Totals data from the adjacent area, also impacted by spraying in the same year, was sufficient to make an NFA determination. Both Carl and Gary said they would evaluate the data further and then make a decision.

(C) At the previous meeting, the State requested additional information regarding **PAC 400-805 (Building 443 Tank #9 Leak).** This included clarification of the location and differentiation from IHSS 129 (Tank #'s 1-4). Kaiser – Hill provided a Site location map showing the diesel fuel tank (Tank #9) as being completely separate from the #6 fuel oil tanks (Tanks 1-4). Also provided was the historical information referenced in the original HRR Document. The PAC was concurred with as a NFA site.

IV List of NFA's for Next Meeting

The State and EPA will review the remaining **eight sites** proposed as NFAs in the 2001 HRR Update (PACs 100-603, 300-206, 400-812, 600-189, 700-1102, 800-179, 800-180,and 900-1308) and the **three sites** associated with the present landfill proposed as NFAs in the 7th Quarterly HRR Update (NW-1502, NW-1503, and NW-15-04).

There remain **seven PACs** carried over from the previous meeting to close out with the State and **the East Spray Fields** from this meeting to close out with both the EPA and State.

The State also requested information on PACs that contain RCRA Units as these need additional work to close via a change to Interim Status or through a permit modification. Kaiser – Hill continues to work on assembling this list.

V Closing

It was noted we again made progress and that these meetings have been very helpful.

The **next meeting** will be December 19, 2001, at 2:00 p.m. in the EPA Conference Center.

CONCURRENCE:

DOE	**EPA**	**CDPHE**

TABLE 1

2001 HRR	SW-133.1	Ash Pit 1	Uranium 238 was detected above Tier I and Tier II action levels in the central part of the pit. Metals were above background but below Tier II. The aggregate from all data will probably fall below action levels. Could do hotspot removals for area above Tier I but since existing action levels are based on human health and not directly applicable to the subsurface, there is currently no clear path forward. CONSENSUS: Determination on hold pending subsurface action level outcome.
	SW-133.2	Ash Pit 2	Kaiser – Hill will verify data for this pit. Believe there are additional results that exceeded action levels. CONSENSUS: Approved NFA if no Tier I exceedances (Be @ 23 accepted); The determination is on hold pending subsurface action level outcome if there are exceedances. *NOTE: KH confirmed additional results were above Tier I; hence the determination is deferred.*
	SW-133.3	Ash Pit 3	This pit is immediately adjacent to 133.1. There are six data points (4 in the pit, 1 outside & 1 from a downgradient well) characterizing the site and all are below Tier II except arsenic and beryllium which do exceed Tier II but are below the Site backgound values. CONSENSUS: Approved NFA.
	SW-133.4	Ash Pit 4	There are Tier I exceedances. CONSENSUS: Determination on hold pending subsurface action level outcome.
	SW-133.5	Incinerator Facility	The building and ash were previously removed with the ash temporarily staged adjacent to the old building for some period of time. The area includes a very steep slope which limited previous sampling efforts. Sampling was concentrated down slope where it thought any contaminants would have been carried. Nothing was identified in the downgradient areas. CONSENSUS: Take five (5) additional surface soil samples where actually thought the incinerator pad was located, one (1) in the pad area and four (4) around the old pad location and south of the area. The samples will be composites (0 – 6" and 6 – 12") and analyzed for uranium, beryllium and lead. If all data are below Tier II, the IHSS will be an NFA.
	SW-133.6	Concrete Wash Pad	All data was below Tier II. CONSENSUS: Approved NFA pending post concrete removal surveys and confirmation samples under the slab.
	SW-1701	Recently Identified Ash Pit (TDEM-1)	Determined to be a real pit but no contamination found. All analyses were at background. CONSENSUS: Approved NFA.
	SW-1702	Recently Identified Ash Pit (TDEM-2)	There are Tier I exceedances. CONSENSUS: Determination on hold pending subsurface action level outcome.

MEETING MINUTES

Subject: NFA Status Meeting
Date: November 14, 2001
Time: 8:30 – 11:30 a.m.
Location: CDPHE Offices

I ER Update

Kaiser – Hill reviewed the current status of the following documents:

ER RSOP - Revised copy to Agencies November 30, responses back December 7, 2001.
BZ SAP - Agencies currently have revised version for review.
IA Addendum – Gary requested a response to his comments. Carl stated a revised letter forthcoming approving all except 900-4&5. Lane said a response to Gary's comments (which involved 900-4&5) was being completed. Area 900-4&5 is being redone and will be submitted separately.

In addition, the following information was provided:

ER Closure Contracts awarded; URS and Envirocon. Expect Site mobilization this month. ER Group to be included in first wave of **offsite moves** sometime early this spring.
Buildings are falling !!! The three guard towers & B333 are down. B111 is on its way down. The B888 Guard shack will be coming down soon and the B886 complex will follow in April.
EM50/ASTD Submittal being finalized. Request Agency letter of support to include. Carl said he hoped to finalize one today.

II Correction of Prior Meeting' Minutes

There were no additions or deletions. The **minutes were approved** and signed.

III NFA Discussions

(A) Ten PACs from the **2000 HRR** were previously reviewed by the State and approved per comments in the prior meeting minutes' summary. The EPA concurred with this and agreed they were all no further action sites. The PACs are: NE-1409, 300-156.1, 600-164.1, 600-1001(a), 700-123.1, 900-108, 900-1311, 900-1318, 900-183 and NE-110. These actions are repeated in the following table since EPA consensus was provided at this meeting (Table 1).

(B) Eight PACs from the **1996 HRR** were reviewed by both the EPA and CDPHE in preparation for the meeting. Comments are summarized in the attached table (Table 2). Both CDPHE and EPA agreed all eight PACs are no further action sites. The PACs are: NE-166.1, NE-166.2, NE-166.3, NE-167.2, NE167.3, NE-216.1, 400-204 and 500-909.

(C) **Forty PACs** previously reviewed and approved as NFAs by the EPA in **1992** were reviewed by CDPHE. Thirty-one of the sites were concurred with as requiring no further action. Additional information was requested for three of the remaining nine PACs and the State needed to verify a few things regarding the remaining six. The attached table summarizes the information (Table 3).

IV List of NFA's for Next Meeting

The State and EPA will review the **eight Ash Pit sites** proposed as NFAs in the 2001 HRR and the **two East Spray Field sites** proposed as NFAs in the 1997 HRR. A revised data table for the Ash Pits was distributed to assist in the review.

At the last meeting, it was requested that Kaiser – Hill provide information regarding the PACs requiring immediate review due to the potential landfill cover. These PACs are NE-166.1, NE-166.2, NE-166.3, NE-167.2 and NE167.3. All of these were reviewed and concurred with as NFAs at this meeting.

The State also requested information on PACs that contain RCRA Units as these need additional work to close via a change to Interim Status or through a permit modification. Kaiser – Hill is still working on assembling this list.

V Closing

It was noted we agreed on forty-nine out of a possible fifty-eight PACs as NFAs. This was a great start towards cleaning up the outstanding list.

The **next meeting** will be December 5, 2001, at 2:00 p.m. in B060 Conference Room 112/113 at RFETS.

TABLE 1

2000 HRR	NE-1409	Modular Tanks	CONSENSUS: Approved NFA. Correct the Tier I action level for methylene chloride as noted in the State's letter and document in the Quarterly Letter.
	300-156.1	Building 371 Parking Lot	CONSENSUS: Approved NFA.
	600-164.1	Radioactive Slab from B771	CONSENSUS: Approved NFA. Clarify in Quarterly Letter that the PAC is really B771, not B776 and correct in Appendix 1 of 2002 HRR.
	600-1001(a)	Waste Oil identified in PAC 1001	CONSENSUS: Clarify in Quarterly Letter that the underlying PAC (600-1001) will be investigated and that PAC 600-1001(a) is approved as NFA.
	700-123.1	Valve Vault 7	CONSENSUS: Approved NFA.
	900-108	Trench T-1	CONSENSUS: Approved NFA.
	900-1311	Septic Tank east of B991	CONSENSUS: Approved NFA.
	900-1318	Release of F001 Water to Soil	CONSENSUS: Approved NFA.
	900-183	Gas Detoxification Area	CONSENSUS: Approved NFA. Provide updated section in the '02 HRR to include reference to the 1995 Revised Closure Plan as discussed in the State's October 2, 2001 letter.
	NE-110	Trench T-3	CONSENSUS: The State needs an explanation of why the reference to the 2000g of lathe coolant was removed from the text in the recent HRR. Provide a written response and then revise the write-up per that response in the '02 HRR for a complete record.

TABLE 2

1996 HRR	NE-166.1	Trench A	Groundwater exceedances were noted however the groundwater is not part of this NFA determination. Groundwater is being handled separately. The borehole data presented seems sufficient and they were shown to have passed the CDH conservative screen in 1996. ~~All of these were basically given NFAs previously under the old OU6.~~ CONSENSUS: Approved NFA.
	NE-166.2	Trench B	Groundwater exceedances were noted however the groundwater is not part of this NFA determination. Groundwater is being handled separately. The borehole data presented seems sufficient and they were shown to have passed the CDH conservative screen in 1996. ~~All of these were basically given NFAs previously under the old OU6.~~ CONSENSUS: Approved NFA.
	NE-166.3	Trench C	Groundwater exceedances were noted however the groundwater is not part of this NFA determination. Groundwater is being handled separately. The borehole data presented seems sufficient and they were shown to have passed the CDH conservative screen in 1996. ~~All of these were basically given NFAs previously under the old OU6.~~ CONSENSUS: Approved NFA.
	NE-167.2	Pond Area Spray Field (Center Area)	There has been a lot of sampling and have found nothing of consequence. CONSENSUS: Approved NFA.
	NE167.3	South Area Spray Field	There has been a lot of sampling and have found nothing of consequence. CONSENSUS: Approved NFA.
	NE-216.1	East Spray Fields – North Area	There has been a lot of sampling and have found nothing of consequence. CONSENSUS: Approved NFA.
	400-204.	Original Uranium Chip Roaster	There are other Sites within the complex trying to figure out alternatives to incineration. Might be able to sell them the two roasters. The site is located within the building and has already gone through RCRA closure. This PAC can be closed because any remaining CERCLA concerns will be addressed through the building UBC. CONSENSUS: Approved NFA.
	500-909.	Release of Spent Photographic Fixer Solution	The spilled fixer was dealt with at the time and samples were collected. The confirmation data is attached to these meeting minutes (Attachment 1). CONSENSUS: Approved NFA.

TABLE 3

1992 List	NE-1400	Tear Gas Powder Release	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	NE-1401	NE Buffer Zone Gas Line Break	CONSENSUS: Approved NFA.
	NE-1402	East Inner Gate PCB Spill	CONSENSUS: Approved NFA.
	NE-1403	Gasoline Spill – Building 920 Guard Post	CONSENSUS: Approved NFA.
	SE-1600	Pond 7 – Steam Condensate Releases	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SE-1601	Pond 8 – Cooling Tower Discharge Release	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SW-1700	Fuel Spill into Women Creek Drainage	CONSENSUS: Approved NFA.
	000-501	Roadway Spraying	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA, pending chemist review.
	100-600	Mercury Spill – Valve Vault 124-B, Building 123	The State believes this will go as an NFA but wants to confirm the provided reference value. CONSENSUS: Approved NFA pending reference review.
	100-601	B123 Phosphoric Acid Spill	CONSENSUS: Approved NFA.
	100-604	T130 Complex Sewer Line Leaks	CONSENSUS: Approved NFA.
	100-605	B115 Hydraulic Oil Spill	CONSENSUS: Approved NFA.
	100-606	B125 TCE Spill	CONSENSUS: Approved NFA.
	100-610	Asbestos Release – Building 123	CONSENSUS: Approved NFA.
	100-612	Battery Solution Spill – Building 119	CONSENSUS: Approved NFA.
	300-700	Scrap Roofing Disposal	CONSENSUS: Approved NFA.
	300-701	Sulfuric Acid Spill – Building 371	CONSENSUS: Approved NFA.
	300-703	Building 331 North Area	CONSENSUS: Approved NFA.
	300-704	Roof Fire, Building 381	CONSENSUS: Approved NFA.
	300-705	Potassium Hydroxide Spill North of Building 374	CONSENSUS: Approved NFA.
	300-706	Evaporator Tanks North of Building 374	CONSENSUS: Approved NFA.
	300-707	Sanitizer Spill	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	300-710	Gasoline Spill North of Building 331	CONSENSUS: Approved NFA.

TABLE 3, cont.

	400-805	Building 443 Tank #9 Leak	Kaiser – Hill to provide a more accurate description and differentiate this PAC from IHSS 129 to assist the State in their review. The State believes this will eventually go as an NFA but needs to review the additional information. CONSENSUS: No decision. Awaiting review of additional data.
	400-806	Catalyst Spill, Building 440	CONSENSUS: Approved NFA.
	400-808	Vacuum Pump Leak - Building 442	CONSENSUS: Approved NFA.
	400-809	Oil Leak - 446 Guard Post	CONSENSUS: Approved NFA.
	500-903	RCRA Storage Unit #1	CONSENSUS: Approved NFA.
	700-1107	Compressor Waste Oil Spill - Building 776	CONSENSUS: Approved NFA.
	700-1109	Uranium Incident - Building 778	CONSENSUS: Approved NFA.
	700-1110	Nickel Carbonyl Burial West of Building 771	Kaiser – Hill to provide copies of the cited references for review. Note: IHSS 150.2 overlays the area and requires further action. The State believes this will eventually go as an NFA but needs to review the additional information. CONSENSUS: No decision. Awaiting review of additional information.
	800-1202	Sulfuric Acid Spill, Building 883	CONSENSUS: Approved NFA.
	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	CONSENSUS: Approved NFA.
	800-1206	Fire, Building 883	CONSENSUS: Approved NFA.
	800-1211	Capacitor Leak, Building 883	CONSENSUS: Approved NFA.
	900-1300	RO Plant Sludge Drying Beds	Kaiser – Hill to confirm groundwater monitoring in the area as described in the text and provide to CDPHE. CONSENSUS: No decision. Awaiting review of additional information.
	900-1302	Gasoline Spill	CONSENSUS: Approved NFA.
	900-1303	Natural Gas Leak	CONSENSUS: Approved NFA.
	900-1304	Chromic Acid Spill - Building 991	CONSENSUS: Approved NFA.
	900-1305	Building 991 Roof	CONSENSUS: Approved NFA.

CONCURRENCE:

DOE	EPA	CDPHE

MEETING MINUTES

Subject: NFA Status Meeting
Date: October 24, 2001
Time: 2:00 – 4:00 p.m.
Location: EPA Conference Center

I PURPOSE

DOE explained the **purpose** of this meeting is to initiate a process for reviewing and coming to consensus on the disposition of the outstanding 118 proposed NFAs. DOE would like to establish a schedule and format to conduct collaborative discussions regarding each proposed NFA. The intent is to come to agreement on each proposed NFAs status. The burden is on KH to prepare and present adequate information regarding a proposed NFA and the agencies then have the burden to make a decision.

Meeting **minutes** will be prepared after each meeting and sent in advance of the next meeting for review. Minutes will be amended as necessary and approved at the beginning of the following meeting.

DOE will prepare letters for CDPHE and EPA signature documenting the determinations made at each meeting. The letters will be prepared as necessary, but usually quarterly unless a significant number of NFAs are addressed earlier, at which time a letter will be sent. These letters will formally close out agreed upon NFAs and serve as the **formal record** to be submitted to the Administrative Record.

The State clarified that per RFCA Attachment 6, if institutional controls are being imposed, we are actually talking about **NFRAs.** Only sites that are being released for unrestricted use can be documented as NFAs in a CAD/ROD. This was explained in the State's letter dated October 2, 2001, in response to the 2000 HRR proposed NFAs.

II Future Meeting Agenda

Kaiser – Hill walked through the proposed **Agenda**. There were no additions or deletions.

III Meeting Schedule and Locations

Kaiser – Hill walked through the proposed **schedule** of future meetings to address the NFA list. It was noted that all the meetings listed in January and out should be in the year 2002. It was also brought up that the meetings seem to fall on Stakeholder Meeting days and we should coordinate timing and locations. If meeting days are moved, we should look at other meetings to combine with as well for best efficiency of participants time. A new schedule will be distributed at the next meeting.

IV Master List of Outstanding Proposed NFA's

Kaiser – Hill distributed the **revised list** of outstanding NFAs. Two additional locations were added to the list previously faxed, PAC 300-156.1 and PAC 600-1001(a). The State asked if the IHSSs with-in the proposed footprint of the landfill cover were identified and prioritized. Kaiser – Hill agreed to confirm the list of affected IHSSs and/or PACs and provide input at the next meeting.

V Discussion of "00 Proposed NFA's

Kaiser – Hill explained that the list of NFAs proposed in the **'00 HRR** had been commented upon by the State but not EPA. The purpose of the following discussion was to clarify the State's responses, addressed the questions posed in the written response and provide additional information to EPA to assist in their review of the ten sites. *The stated concensus is pending EPA's review of these 10 sites which will be provided at the next meeting.* The proposed NFAs were reviewed in the order they appears on the Master List.

NE-1409	Modular Tanks	Kaiser – Hill discussed the differences in the two tables in response to the State's written question. CONCENSUS: Correct the Tier I action level for methylene chloride as noted in the State's letter and document in the Quarterly Letter.
300-156.1	Building 371 Parking Lot	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
600-164.1	Radioactive Slab from B771	CONCENSUS: No issues. Approved in State's October 2, 2001 letter. Clarify in Quarterly Letter that the PAC is really B771, not B776 and correct in Appendix 1 of 2002 HRR. [The 2000 HRR corrected this in the narrative (p.38) however the Appendix was never updated.]
600-1001(a)	Waste Oil identified in PAC 1001	Kaiser – Hill explained that the '00 HRR stated that the PAC had previously been approved but was included here as clarification. Upon review of the documentation however, the paperwork is not clean. The 1999 Agency letter regarding the '97 proposed NFA sites does not approve PAC 600-1001(a) as an NFA (it requests additional information), however the attachment to that letter does provide approval with the stated condition that the underlying PAC be investigated. CONCENSUS: Clarify in Quarterly Letter that the underlying PAC (600-1001) will be investigated and that PAC 600-1001(a) is approved as NFA.
700-123.1	Valve Vault 7	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-108	Trench T-1	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-1311	Septic Tank east of B991	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-1318	Release of F001 Water to Soil	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-183	Gas Detoxification Area	CONCENSUS: Provide updated section in the '02 HRR to include reference to the 1995 Revised Closure Plan as discussed in the State's October 2, 2001 letter.
NE-110	Trench T-3	CONCENSUS: The State needs an explanation of why the reference to the 2000g of lathe coolant was removed from the text in the recent HRR. Provide a written response and then revise the write-up per that response in the '02 HRR for a complete record.

In the October 2, 2001 letter from the State, it is stated that the Site did not propose PAC 100-607 as an NFA, hence no comments are being provided. PAC 100-607 had previously been proposed for NFA and both EPA and CDPHE concurred in a joint letter dated April 12, 2001. This will be clarified in the forthcoming Quarterly Letter.

The review was then directed to page 9 where a list of 40 potential NFA sites begins. These sites were discussed in the original HRR and concurred with as NFAs by EPA. The State has discussed some of these locations with Kaiser – Hill but no formal concurrence has been received. The State agreed to initiate review of these forty sites and provide feedback at the next meeting.

VI List of NFA's for Next Meeting

The State and EPA will review the **eight non-transformer sites** proposed as NFA in the 1996 HRR. In addition, EPA will review the ten sites discussed above and CDPHE will initiate review of the forty sites previously reviewed by EPA. Kaiser – Hill will prepare/provide information of PACs requiring immediate review due to the potential landfill cover. The State requests information on PACs that contain RCRA Units as these need additional work to close via a change to Interim Status or through a permit modification.

VII Closing

It was noted we could potentially address 58 PACs at the next meeting and substantially reduce the list of outstanding NFAs.

The **next meeting** will be November 14, 2001, at 8:30 a.m. in CDPHE's offices.

Actual Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:30 to1:00 p.m.	COMPLETE
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at B060	10:00 a.m. to 12:00 p.m.	COMPLETE
03/13/02	Group 8 at EPA	2:00 to 4:00 p.m.	COMPLETE
04/03/02	Group 9 at CDPHE	8:30 to 10:30 a.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:30 to1:00 p.m.	COMPLETE
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at B060	10:00 a.m. to 12:00 p.m.	COMPLETE
03/13/02	Group 8 at EPA	2:00 to 4:00 p.m.	
04/03/02	Group 9 at CDPHE	~~2:00 to 4:00 p.m.~~ 8:30 a.m ??	B2H

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:30 to1:00 p.m.	COMPLETE
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at B060	10:00 a.m. to 12:00 p.m.	
03/13/02	Group 8 at B060	2:00 to 4:00 p.m.	
04/03/02	Group 9 at EPA	2:00 to 4:00 p.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:00 to1:00 p.m.	Complete
02/~~13~~ 14/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at ~~CDPHE~~ B060	~~2:00 to 4:00 p.m.~~ 10:00am – 12:00pm	
03/13/02	Group 8 at B060	2:00 to 4:00 p.m.	
04/03/02	Group 9 at EPA	2:00 to 4:00 p.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

BOLD DATES These have been changed from the original schedule

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	
~~01/09/02~~	~~Group 4 at CDPHE~~	~~2:00 to 4:00 p.m.~~	
01/~~23~~ 31/02	Group 5 at B060	10:00 - 12:00 ~~2:00 to 4:00 p.m.~~	Get Rm confirm w/ Carl his schedule..
~~02/06/02~~	~~Group 6 at EPA~~	~~2:00 to 4:00 p.m.~~	
02/~~20~~ 13/02	Group 7 at CDPHE	2:00 to 4:00 p.m.	
03/06/02	Group 8 at B060	2:00 to 4:00 p.m.	
03/20/02	Group 9 at EPA	2:00 to 4:00 p.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

Agenda

NFA Status Meeting
April 3, 2002 @ EPA
8:30 – 10:00 a.m.

I ER Update

II Correction of prior meetings' minutes and sign-off

III Interactive discussion of NFA justification

- Four sites carried over from the **1992 IHSS List** (State only)
  (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

- One site carried over from **2001 HRR Update** (State only)
  (PAC 700-1102)

- The following additional locations:
  PAC 900-109 from the **1997 Annual Update**
  PAC 900-1317 from the **11th Quarterly Update**

IV Summary of sites discussed and consensus reached for each location

V PIC Discussion

VI List of actions for next meeting (?)

VII Next meeting location and time (?)

Adjourn

Agenda

NFA Status Meeting
March 13, 2002 @ EPA
2:00 p.m. – 4:00 p.m.

I ER Update

II Correction of prior meetings' minutes and sign-off

III Interactive discussion of NFA justification

- Four sites carried over from the **1992 IHSS List** (State only)
  (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

- One site carried over from **2001 HRR Update** (State only)
  (PAC 700-1102)

- The following new locations:
  PAC 900-109 from the **1997 Annual Update**
  PAC 500-908 from the **12th Quarterly Update**
  PACs 700-1113, 900-1315 and 900-1317 from the **11th Quarterly Update**

  PACs 300-714 and 900-1316 from the **10th Quarterly Update**
  PAC 900-1314 from the **9th Quarterly Update**
  PACs 300-713 and 400-814 from the **8th Quarterly Update**

  B125 UBC (Separate write-up provided prior to meeting)

IV Summary of sites discussed and consensus reached for each location

V Review and discussion of the Site IHSS/RCRA Table provided 1/31/02

VI List of actions for next meeting

VII Next meeting location and time

Adjourn

Agenda

NFA Status Meeting
January 31, 2002 @ RFETS
11:30 a.m. – 1:00 p.m.

I ER Update (DOE/K-H)

II Correction of prior meetings' minutes and sign-off (KH)

III Review of Draft Quarterly Letter
- Explanation of reference used in NE-1409

IV Interactive discussion of NFA justification (All)
- Four sites carried over from the 1992 IHSS List
- Two East Spray Field sites carried over from 1997 HRR Update
- Three Sites carried over from 2001 HRR Update
- Eighteen transformer sites from the 1996 HRR Update
- Six remaining sites from the 7th Quarterly HRR Update

V Summary of sites discussed and consensus reached for each location (K-H)

VI List of sites for next meeting (K-H)

VII Next meeting location and time (DOE)

Adjourn

Agenda

NFA Status Meeting
December 19, 2001 @ EPA
2:00 – 4:00 p.m.

I ER Update (DOE/K-H)

II Correction of prior meetings' minutes and sign-off (KH)

III Interactive discussion of NFA justification (All)
- Seven sites carried over from the 1992 IHSS List
- Two East Spray Field sites carried over from 1997 HRRUpdate
- Eight remaining sites from the 2001 HRR Update
- Three sites associated with the present landfill from the 7th Quarterly HRR Update

IV Summary of sites discussed and consensus reached for each location (K-H)

V List of sites for next meeting (K-H)

VI. Next meeting location and time (DOE)

Adjourn

Agenda

NFA Status Meeting
December 5, 2001 @ B060
2:00 – 4:00 p.m.

I ER Update (DOE/K-H)

II Correction of prior meetings' minutes and sign-off (KH)

III Interactive discussion of NFA justification (All)
- Eight Ash Pit sites from 2001 HRR
- Two East Spray Field sites from 1997 HRR

IV Summary of sites discussed and consensus reached for each location (K-H)

V List of sites for next meeting (K-H)

VI. Next meeting location and time (DOE)

Adjourn

Agenda

NFA Status Meeting
November 14, 2001 @ CDPHE
8:30 – 10:00 a.m.

I. ER update (DOE/K-H)

II. Correction of prior meetings' minutes and sign-off (KH)

III. Interactive discussion of NFA justification (All)
   (a) 10 sites from 2000 HRR
   (b) 8 sites from 1996 HRR
   (c) 40 sites from 1992 HRR

IV. Summary of sites discussed and consensus reached for each location (K-H)

V. List of sites for next meeting (K-H)

VI. Next meeting location and time (DOE)

Adjourn

Agenda
NFA Status Meeting
10-24-01
2:00 – 4:00 p.m.

I. Purpose (DOE)

II. Future Meeting Agenda (K-H)

III. Meeting Schedule and Locations (DOE)

IV. Master List of Outstanding Proposed NFA's (K-H)

V. Discussion of '00 proposed NFA's (if time) and/or List of NFA's for Next Meeting (K-H)

VI. Closure (DOE)

Adjourn

Proposed Format

I. ER update (DOE/K-H)

II. Correction of prior meetings' minutes and sign-off (DOE)

III. Interactive presentation of NFA justification. Anticipate 5 to 10 individual NFA sites to be covered at each meeting. (K-H)

IV. Summary of sites discussed and consensus reached for each location (K-H)

V. List of sites for next meeting (K-H)

VI. Next meeting location and time (DOE)

Adjourn

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.
11/07/01	Group 1 at CDPHE	2:00 to 4:00 p.m.
11/28/01	Group 2 at B060	2:00 to 4:00 p.m.
12/12/01	Group 3 at EPA	2:00 to 4:00 p.m.
01/09/01	Group 4 at CDPHE	2:00 to 4:00 p.m.
01/23/01	Group 5 at B060	2:00 to 4:00 p.m.
02/06/01	Group 6 at EPA	2:00 to 4:00 p.m.
02/20/01	Group 7 at CDPHE	2:00 to 4:00 p.m.
03/06/01	Group 8 at B060	2:00 to 4:00 p.m.
03/20/01	Group 9 at EPA	2:00 to 4:00 p.m.

Attendance Sheet
NFA Meeting
Wednesday, April 3, 2002

Name	Organization	Phone	Fax
1. Elizabeth Pottorff	CDPHE	303-692-3424	303-759-5355
2. Carla Rellergert	RFETS - sub-contractor	303-966-2518	303-966-7991
3. Reg Tyler	DOE	303-966-5927	
4. Carl Spreng	CDPHE	303-692-3358	303-759-5355
5. Gary Kleeman	EPA	3033126246	x6067
6. Nick Demos	SSOC	303 966 4605	5180
7. Marla Broussard	KH	303-966-6007	x5180
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Attendance Sheet
NFA Meeting
Wednesday, March 13, 2002

Name	Organization	Phone	Fax
1. Gary Kleeman	EPA	3033126246	x6067
2. Elizabeth Pottoff	CDPHE	303-692-3429	
3. Carl Spreng	CDPHE	303-692-3358	303-759-5355
4. Nick DEMOS	SSOC	(303) 966-4605	
5. Reg Tyler	DOE	303-966-5922	
6. Marla Broussard	KH	303-966-6007	
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Attendance Sheet

NFA Meeting

Wednesday, February 27, 2002

Name	Organization	Phone	Fax
1. Elizabeth Pottorff			
2. Carl Spreng			
3. Gary Kleeman			
4. Nicie Demos			
5. Lisa O'Marey			
6. Roy Tyler			
7. M Broussard			
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Attendance Sheet
NFA Meeting
Thursday, January 31, 2002

Name	Organization	Phone	Fax
1. Elizabeth Pottorff	CDPHE	303-692-3429	303-759-5355
2. Carl Spreng	CDPHE	303-692-3358	303-759-5355
3. Gary Kleeman	EPA	303 3126246	x6067
4. Norma Castañeda	DOE	303-966-4226	x2995
5. Lisa O'Mary	DOE	303 966-3780	2994
6. Nick Demos	SSOC	303 966-4605	
7. Reg Tyler	DOE	303-966-5927	
8. Marla Broussard	KH	303-966-6007	
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Attendance Sheet
NFA Meeting
Wednesday, December 19, 2001

Name	Organization	Phone	Fax
1. Lisa O'Mary	DOE	303-966-3780	303-966-2994
2. Reg Tyler	DOE	303-966-5927	303-966-4728
3. Gary Kleeman	EPA	303 312 6246	303 312 6067
4. Elizabeth Pottorff	CDPHE	303-692-3429	303-759-5355
5. Carl Spreng	CDPHE	303-692-3358	303-759-5355
6. Lane Butler	KH	303-966-5245	303-966-5180
7. Nick Demos	SSOC	303-966-4605	303-966-5180
8. Marla Broussard	KH	303-966-6009	303-966-5180
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Attendance Sheet
NFA Meeting
Wednesday, December 5, 2001

Name	Organization	Phone	Fax
1. Marla Broussard	KH-ER	303-966-6007	303-966-5180
2. Lisa O'Mery	DOE/ER	966-3780	966-2995
3. Nick Demos	SSOL/ER	966-4605	966-5180
4. Norma Castaneda	DOE/ER	966-4226	966-2995
5. Reg Tyler	DOE/ER	966-5927	966-4728
6. Gary Kleeman	EPA	3033126246	x6067
7. Lane Butler	KH	303-966-5245	5180
8. Annette Primrose	KH	303-966-4385	5180
9. Carl Spreng	CDPHE	303-692-3358	303-759-5355
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Attendance Sheet
NFA Meeting
Wednesday, November 14, 2001

Name	Organization	Phone	Fax
1. Norma Castañeda	DOE	966-4226	966-2995
2. Reg Tyler	DOE	966-5927	966-4728
3. Lisa O'Malley	DOE	966-3780	966-4728
4. Nick Demos	SSOL	966-4605	
5. Carl Spreng	CDPHE	303-692-3358	303-759-5355
6. LANE BUTLER	KH	303-966-5245	303-966-5180
7. GARY KLEEMAN	EPA	303-312-6246	303-312-6067
8. Marla Broussard	KH	303-966-6007	303-966-5180
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Attendance Sheet
NFA Kick-Off Meeting
Wednesday, October 24, 2001

Name	Organization	Phone	Fax
1. Carl Spreng	CDPHE	303-692-3358	303-759-5355
2. Gary Kleeman	EPA	3033126246	3033126067
3. Marla Broussard	KH	303-966-6007	303-966-5180
4. LANE BUTLER	KH	303-966-5245	303 966-5180
5. Reg Tyler	DOE	303-966-5927	303-966-4728
6. NORMA CASTAÑEDA	DOE	303-966-4226	303-966-4728
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Colorado Department
of Public Health
and Environment

September 26, 2002

Mr. Joe Legare
Assistant Administrator for Environment and Infrastructure
U.S. Department of Energy-RFFO
10808 Highway 93, Unit A
Golden CO 80401-8200

RE: Approval of NFA designation for IHSSs, PACs, and PICs

Dear Mr. Legare:

Since 1994 the Site has been proposing IHSSs and PACs for No Further Action (NFA) or No Further Remedial Action (NFRA) in the annual and quarterly Updates to the Historic Release Report (HRR). In the fall of 2001 an NFA Working Group developed and implemented a systematic approach for reviewing NFA/NFRA proposals in accordance with RFCA Attachment 6 and the Implementation Guidance Document. Using this systematic approach, 28 additional sites were approved as NFA/NFRA sites at Working Group meetings during January through April 2002. In addition, 48 of the 61 Potential Incidents of Concern (PICs) described in the original 1992 HRR were approved as NFAs. The remaining 13 PICs will be discussed further during future Working Group meetings. This letter provides formal approval of the 28 NFA/NFRA sites and the 48 PICs listed in the attached table. Approved meeting minutes are located in the Site Project File and provide a record of discussions and agreements reached among NFA Working Group members.

If you have any questions please contact Gary Kleeman (EPA), 303-312-6246, Carl Spreng (CDPHE), 303-692-3358 or Reginald Tyler (DOE), 303-966-5927.

Sincerely,

Steven H. Gunderson
RFCA Project Coordinator
Colorado Department of Public
Health and Environment

Tim Rehder for
Rocky Flats Project Manager
Environmental Protection Agency

cc: Reg Tyler, DOE
Dave Shelton, K-H
Marla Broussard, K-H
Administrative Record, T130G

Dan Miller, AGO
Susan Chaki, CDPHE
Steve Tarlton, CDPHE-RFOU

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
2001 Annual							
206	IA	300-206	Inactive D-836 Hazardous Waste Tank	HRR[1]	Annual 2001	NFA	2/27/02
189	IA	600-189	Nitric Acid Tank	HRR[1]	Annual 1997[3] Annual 2000[26] Annual 2001	NFA	1/31/02
1998 Annual							
170	BZ	NW-170	PU&D Storage Yard - Waste Spills	HRR[1]	Annual 1997[3] Annual 1998[4] Annual 1999[1]	NFA	2/27/02
1996 Annual							
142.6	BZ	NE-1404	Diesel Spill at Pond B-2 Spillway	Quarterly 2[5]	Quarterly 3[6] Annual 1998[7]	NFA	2/27/02
1997 Annual							
212	IA	300-212	Building 371 Drum Storage Area, Unit 63 (deferred to Part VIII of the RFETS RCRA Mixed Residues Modification; see Annual 1997)	HRR[1]	Annual 1997[3]	NFA	2/27/02
NA	IA	700-1114a	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA	2/27/02
NA	IA	700-1114b	Release During Liquid Transfer Operations from Bldg. 774	Annual 1997[3]	-	NFA	2/27/02
109	BZ	900-109	Trench T-2 - Ryan's Pit	HRR[1]	Annual 1996[8] Annual 1997[3]	NFA	4/03/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
Quarterly 12							
156.1, 186	IA	500-908	Oil Released from Air Compressor	Quarterly 12[17]	-	NFA	3/13/02
Quarterly 11							
101	IA	700-1113	Water Released from 207C Solar Evaporation Pond	Quarterly 11[18]	-	NFA	3/13/02
NA	IA	900-1315	Tanker Truck Release on East Patrol Road, North of Spruce Ave.	Quarterly 10[11]	Quarterly 11[18]	NFA	3/13/02
176	IA	900-1317	Soil Released from Wooden Crate in 964 Laydown Yard	Quarterly 11[18]	-	NFA	4/03/02
Quarterly 10							
NA	IA	300-714	Laundry Waste Water Spill From Tank T-803, North of Building 374	Quarterly 10[11]	-	NFA	3/13/02
NA	BZ	900-1316	Elevated Chromium (total) Identified During Geotechnical Drilling	Quarterly 10[11]	-	NFA	3/13/02
Quarterly 9							
101	IA	900-1314	Solar Evaporation Pond 207B Sludge Release	Quarterly 9[13]	-	NFA	3/13/02
Quarterly 8							
NA	IA	300-713	Caustic Spill North of Building 331	Quarterly 8[15]	-	NFA	3/13/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	IA	400-814	Air Conditioner Compressor Release, Bldg. 444 Roof	Quarterly 8[15]	-	NFA	3/13/02
Quarterly 7							
NA	BZ	NE-1410	Diesel Fuel Spill at Field Treatability Unit	Quarterly 7[9]	-	NFA	1/31/02
NA	BZ	NE-1411	Diesel Fuel Overflowed from Tanker at OU 2 Field Treatability Unit	Quarterly 7[9]	-	NFA	2/27/02
114	7	NW-1504	Improper Disposal of Thorosilane Contaminated Material at Landfill	Quarterly 7[9]	-	NFA	1/31/02
NA	IA	000-503	Solar Pond Water Spill Along Central Avenue	Quarterly 7[9]	-	NFA	1/31/02
NA	IA	100-613	Asphalt Surface in Lay Down Yard North of Building 130 (identified as 000-501 in Quarterly 4[8], reassigned as 100-613 in Quarterly 7[9])	Quarterly 4[8]	Quarterly 7[9]	NFA	2/27/02
NA	IA	300-711	Ni-Cad Battery Spill Outside of Building 373	Quarterly 1[24]	Quarterly 7[9]	NFA	1/31/02
NA	IA	300-712	1/2 gal Antifreeze Spilled by Street Sweeper Outside of Building 373	Quarterly 7[9]	-	NFA	1/31/02
Miscellaneous Sites IPA approved in 1992. CDPHE reviewed and verbally concurred. Need written concurrence							
NA	BZ	SE-1600	Pond 7 – Steam Condensate Releases	HRR[8]		NFA	4/03/02

STATUS OF PROPOSED NFAs

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	NOTES	MEETING DATE
NA	BZ	SE-1601	Pond 8 - Cooling Tower Discharge Releases	HRR[1]	-	NFA	4/03/02
NA	IA	700-1110	Nickel Carbonyl Burial West of Building 771	HRR[1]	-	NFA	4/03/02
NA	IA	900-1300	RO Plant Sludge Drying Beds	HRR[1]	-	NFA	4/03/02
NA	NA	NA	PICs 1, 2, 3, 5, 7, 8, 10, 12, 13, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 43, 45, 46, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58, 59, 60, 61			NFA	4/03/02

Approved NFA

GREEN Approved NFA but requires additional information or clarification in the FY02 HRR.

1/15/02

Revised 01/02

CORRES. CONTROL
INCOMING LTR NO.

OO120RF02

DUE DATE
ACTION

DIST.	LTR	ENC
BOGENBERGER, V.		
BOGNAR, E.	X	X
BRAILSFORD, M.D		
BURNS, T. F.		
DECK, C. A.	X	X
DEGENHART, K		
DIETERLE, S. E.		
FERRERA, D.W.		
FERRI, M.S.		
GERMAIN, A. L.		
GIACOMINI, J.		
HALL, L.		
ISOM, J. H.		
MARTINEZ, L.A.	X	X
NORTH, K.	X	X
PARKER, A.M.		
POWERS, K.		
RAAZ, R. D.		
RODGERS, A. D.		
SCOTT, G.K.		
SHELTON, D.C.	X	X
SPEARS, M.S.		
TRICE, K.D.		
[illegible]OR, N.R.		
[illegible]RHEIS, G.M.		
[illegible]LIAMS, J. L.		
SUTLER, L.	X	X
BROUSSARD, M.	X	X
McLaughlin, T.	X	X
ROSENMAN, A.	X	X

COR. CONTROL	X	X
ADMN. RECORD		
PATS/130		

Reviewed for Addressee
Corres. Control RFP

2/26/02 Date By

Ref. Ltr. #

ORDER #
5400 1

RECEIVED

2002 FEB 26 A 9:31

CORRESPONDENCE
CONTROL

Colorado Department
of Public Health
and Environment

February 14, 2002

Joe Legare
Assistant Administrator for Environment and Infrastructure
U.S. Department of Energy-RFFO
10808 Highway 93, Unit A
Golden CO 80401-8200

RE: Approval of NFA designation for IHSSs and PACs

Dear Mr. Legare:

Since 1994 the Site has been proposing IHSSs and PACs for No Further Action (NFA) or No Further Remedial Action (NFRA) in the annual and quarterly Updates to the Historic Release Reports (HRR). No formal process was in place for the agencies to disposition the proposed NFA/NFRA sites. This fall an NFA Working Group developed and implemented a systematic approach for reviewing NFA/NFRA proposals in accordance with RFCA Attachment 6 and the Implementation Guidance Document. Using this systematic approach, 79 proposed sites were discussed during November and December 2001. It was agreed that 63 of the 79 sites meet the criteria for NFA/NFRA sites. This letter provides formal approval of these 63 sites listed in the attached table (Table 1). The remaining sixteen sites either require additional information, additional characterization, or limited remediation prior to approval as NFA/NFRA sites. Approved meeting minutes are located in the Site Project File and provide a record of discussions and agreements reached among the NFA Working Group members.

NFA meeting discussions also resulted in several corrections or clarifications to previous HRR Updates and associated correspondence. Some of the items are significant enough that they will be addressed in the 2002 Annual HRR Update. Other items only require documentation here in order to complete the process. Table 2 describes these clarifications and corrections.

If you have any questions please contact Gary Kleeman (EPA), 303-312-6246, Carl Spreng (CDPHE), 303-692-3358 or Reginald Tyler (DOE), 303-966-5927.

Sincerely,

Steven H. Gunderson
RFCA Project Coordinator
Colorado Department of Public
Health and Environment

Tim Rehder
Rocky Flats Project Manager
Environmental Protection Agency

Enclosure
cc w/Enc:
L. Butler, KH
M. Broussard, KH
R. Tyler, ERWM, RFFO
G. Kleeman, EPA
C. Spreng, CDPHE

List of Recently Approved NFAs
Table 1

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	APPROVED	NOTES
2001 Annual HRR Update							
133.3	5	SW-133.3	Ash Pit 3	HRR[1]	Annual 2001	12/5/01	
NA	5	SW-1701	Recently Identified Ash Pit (also referred to as TDEM-1)	Quarterly 9[13]	Annual 1997[3] Annual 2001	12/5/01	
NA	IA	100-603	Building 122 Bioassay Waste Spill	HRR[1]	Annual 2001	12/19/01	See edit in Table 2
NA	IA	400-812	Tank T-2 Spill in Building 460	Quarterly 6[16]	Quarterly 7[9] Quarterly 8[15] Annual 2001	12/19/01	
179	15	800-179	Building 865 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	12/19/01	
180	15	800-180	Building 883 Drum Storage	HRR[1]	Annual 1996[2] Annual 2001	12/19/01	
NA	IA	900-1308	Gasoline Spill Outside of Building 980	Quarterly 6[16]	Quarterly 8[15] Annual 2001	12/19/01	
2000 Annual HRR Update							
NA	BZ	NE-1409	Modular Tanks and 910 Treatment System Spill (formerly 000-503)	Quarterly 5[10]	Quarterly 7[9] Annual 2000[26]	11/14/01	
156.1	IA	300-156.1	Building 371 Parking Lot (2 locations designated on Plate #2)	HRR[1]	Annual 1997[3] Annual 2000[26]	11/14/01	

List of Recently Approved NFAs
Table 1

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	APPROVED	NOTES
164.1	IA	900-164.1	Radioactive Slab from Bldg. 776	HRR[1]	Annual 1997[3] Annual 2000[26]	11/14/01	See edit in Table 2 Will also be updated in 2002 HRR
NA	IA	900-1001(a)	Waste Oil Identified in PAC-1001	Annual 1997[3]	Annual 1997[3] Annual 2000[26]	11/14/01	See edit in Table 2
123.1	IA	700-123.1	Valve Vault 7	HRR[1]	Annual 1997[3] Annual 2000[26]	11/14/01	
108	BZ	900-108	Trench T-1	HRR[1]	Annual 1997[3] Annual 1998[7] Annual 2000[26]	11/14/01	
NA	IA	900-1311	Septic Tank East of Building 991	Quarterly 7[9]	Annual 1999[23] Annual 2000[26]	11/14/01	
NA	IA	900-1318	Release of F001 Listed Waste Water to Soil (identified as 900-1307 in Annual 1997; reassigned 900-1318 in Annual 1998)	Annual 1997[3]	Annual 1998[7] Annual 2000[26]	11/14/01	
183	BZ	900-183	Gas Decontamination Area	HRR[1]	Annual 1997[3] Annual 2000[26]	11/14/01	Will be updated in 2002 HRR
110	BZ	NE-110	Trench T-3	HRR[1]	Annual 1995[1] Annual 1997[3] Annual 2000[26]	11/14/01	Will be updated in 2002 HRR

List of Recently Approved NFAs
Table 1

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	APPROVED	NOTES
1996 Annual HRR Update							
166.1	6	NE-166.1	Trench A	HRR[1]	Annual 1996[2]	11/14/01	
166.2	6	NE-166.2	Trench B	HRR[1]	Annual 1996[2]	11/14/01	
166.3	6	NE-166.3	Trench C	HRR[1]	Annual 1996[2]	11/14/01	
167.2	7	NE-167.2	Pond Area Spray Field (Center Area)	HRR[1]	Annual 1996[2]	11/14/01	
167.3	7	NE-167.3	South Area Spray Field	HRR[1]	Annual 1996[2]	11/14/01	
216.1	6	NE-216.1	East Spray Fields - North Area	HRR[1]	Annual 1996[2]	11/14/01	
204	15	400-204	Original Uranium Chip Roaster	HRR[1]	Annual 1996[2]	11/14/01	
158	IA	500-909	Release of Spent Photographic Fixer Solution	Annual 1996[2]	-	11/14/01	
Quarterly HRR Update 7							
114	7	NW-1502	Improper Disposal of Diesel-Contaminated Material at Landfill (formerly NW-177)	Quarterly 2[5]	Quarterly 3[6] Quarterly 7[9]	12/19/01	

List of Recently Approved NFAs
Table 1

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	APPROVED	NOTES
114	7	NW-1503	Improper Disposal of Fuel Contaminated Material at Landfill	Quarterly 1[24]	Quarterly 7[9]	12/19/01	
Sites approved by EPA in 1992; awaiting CDPHE concurrence.							
NA	BZ	NE-1400	Tear Gas Powder Release	HRR[1]	-	12/19/01	
NA	BZ	NE-1401	NE Buffer Zone Gas Line Break	HRR[1]	-	11/14/01	
NA	BZ	NE-1402	East Inner Gate PCB Spill	HRR[1]	-	11/14/01	
NA	BZ	NE-1403	Gasoline Spill - Building 920 Guard Post	HRR[1]	-	11/14/01	
NA	BZ	SW-1700	Fuel Spill into Woman Creek Drainage	HRR[1]	-	11/14/01	
NA	BZ	000-501	Roadway Spraying	HRR[1]	-	12/19/01	
NA	IA	100-600	Mercury Spill – Valve Vault 124-B, Building 124	HRR[1]	-	12/19/01	
NA	IA	100-601	Building 123 Phosphoric Acid Spill	HRR[1]	-	11/14/01	
NA	IA	100-604	T130 Complex Sewer Line Leaks	HRR[1]	-	11/14/01	

List of Recently Approved NFAs
Table 1

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	APPROVED	NOTES
NA	IA	100-605	Building 115 Hydraulic Oil Spill	HRR[1]	-	11/14/01	
NA	IA	100-606	Building 125 TCE Spill	HRR[1]	-	11/14/01	
NA	IA	100-610	Asbestos Release – Building 123	HRR[1]	-	11/14/01	
NA	IA	100-612	Battery Solution Spill - Building 119	HRR[1]	-	11/14/01	
NA	IA	300-700	Scrap Roofing Disposal	HRR[1]	-	11/14/01	
NA	IA	300-701	Sulfuric Acid Spill – Building 371	HRR[1]	-	11/14/01	
NA	IA	300-703	Building 331 North Area	HRR[1]	-	11/14/01	
NA	IA	300-704	Roof Fire, Building 381	HRR[1]	-	11/14/01	
NA	IA	300-705	Potassium Hydroxide Spill North of Building 374	HRR[1]	-	11/14/01	
NA	IA	300-706	Evaporator Tanks North of Building 374	HRR[1]	-	11/14/01	

List of Recently Approved NFAs
Table 1

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	APPROVED	NOTES
NA	IA	300-707	Sanitizer Spill	HRR[1]	-	12/19/01	
NA	IA	300-710	Gasoline Spill North of Building 331	HRR[1]	-	11/14/01	
NA	IA	400-805	Building 443 Tank #9 Leak	HRR[1]	-	12/5/01	
NA	IA	400-806	Catalyst Spill, Building 440	HRR[1]	-	11/14/01	
NA	IA	400-808	Vacuum Pump Leak - Building 442	HRR[1]	-	11/14/01	
NA	IA	400-809	Oil Leak - 446 Guard Post	HRR[1]	-	11/14/01	
NA	IA	500-903	RCRA Storage Unit #1	HRR[1]	-	11/14/01	
NA	IA	700-1107	Compressor Waste Oil Spill - Building 776	HRR[1]	-	11/14/01	
NA	IA	700-1109	Uranium Incident - Building 778	HRR[1]	-	11/14/01	
NA	IA	800-1202	Sulfuric Acid Spill, Building 883	HRR[1]	-	11/14/01	

List of Recently Approved NFAs
Table 1

IHSS	OU	PAC	DESCRIPTION	IDENTIFIED	UPDATED	APPROVED	NOTES
NA	IA	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	HRR[1]	-	11/14/01	
NA	IA	800-1206	Fire, Building 883	HRR[1]	-	11/14/01	
NA	IA	800-1211	Capacitor Leak, Building 883	HRR[1]	-	11/14/01	
NA	IA	900-1302	Gasoline Spill	HRR[1]	-	11/14/01	
NA	IA	900-1303	Natural Gas Leak	HRR[1]	-	11/14/01	
NA	IA	900-1304	Chromic Acid Spill - Building 991	HRR[1]	-	11/14/01	
NA	IA	900-1305	Building 991 Roof	HRR[1]	-	11/14/01	

TABLE 2: Clarifications to documentation associated with recently approved NFA/NFRA sites

YEAR	PAC	TITLE	CORRECTION / CLARIFICATION
2000	600-164.1	B771 Radioactive Slab	Appendix 1, pg 124: The correct title should read *Radioactive Slab from Building 771*.
2000	600-1001(a)	Waste Oil in PAC 1001	Page 47: As stated; PAC 600-1001 *will be* investigated. It is only the waste oil spill identified as 600-1001(a) which was cleaned up upon discovery that is agreed to as NFA.
2000	100-607	B111 Transformer PCB Leak	As way of clarification to a statement in the October 2, 2001 CDPHE letter stating that the Site had not proposed this PAC as a potential NFA; This PAC was not proposed in the 2001 Annual Update to the HRR because PAC 600-607 was approved NFA via separate letter dated April 12, 2001, and required no further evaluation.
2001	100-603	B123 Bioassay Waste Spill.	Clarification is required due to confusion over the write-up provided under Description of Operation or Occurrence and Physical/Chemical Description Constituent Released in the 2001 HRR. The release was contained with-in the trench and 8 feet of the building with berms as confirmed by sampling. Based on this, rainwater being pumped from the trench at the time of the release at locations greater than 8 feet from the building and both south and southeast of the building was not contaminated by the release. The contaminated rainwater contained with-in the bermed area of the trench totaled approximately 100 gallons and was neutralized, pumped and treated at 374.

11/8/01
MARLA, D'
[illegible] THIS TO
NICK
Doug

FAX 5180

To: Doug Shafer
From: Reg Tyler & Norma Castañeda
Need info for Thursday, Nov. 15 – morning RSAL meeting
Need Lane's support at RSAL Meeting too.

INFORMAL MEMORANDUM

To: Joe Legare
From: Reg Tyler, ER/WM Closure Projects Team, RFFO
Subject: Known and Potential Uranium Contamination Sites
Date: 11/8/01
CC:

The following is a list of known and potential uranium contamination sites: Also, did we miss any U sites

1. Original Landfill – U238 Ash disposal
2. IHSS 157.2 – Rad Site South (in the B 440 area)
3. North of B 883
4. Some of the Ash Pits – U238 found at 4 sites
5. B 899 (uranyl nitrate)
6. Solar pond area
7. Original Process Waste Lines – not well characterized but there is the potential of U contamination particularly in the south side.
8. Potential for UBC contamination at uranium processing building (B886, 881) although no evidence of U contamination found to date.

For each site =
1. Location + Background description of site
2. If Known, U concentration levels, Also other Major PCOCs
3. current plans – NFA, Remediation, etc.
4. Map if available

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado

Laboratory and Radiation Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

http://www.cdphe.state.co.us

Colorado Department of Public Health and Environment

October 2, 2001

Post-it® Fax Note 7671	Date 10/02/01	# of pages ▶ 4
To Joe Legare	From S Gunderson	
Co./Dept.	Co. HMWM/RF	
Phone #	Phone # 303-692-3387	
Fax # 303-966-2995	Fax #	

Joe Legare
Assistant Manager for Environment
and Infrastructure
Department of Energy-RFFO
P.O. Box 928
Golden, CO 80402-0928

RE: Annual Update for the Historical Release Report, September 2000

Dear Mr. Legare;

The Colorado Department of Public Health and Environment has reviewed the September 2000 Annual Update for the Historical Release Report. This report updates IHSSs/PACs with additional information including the results of characterization and remediation activities, and makes recommendations for No Further Action (NFA). It should be noted that in concurring with NFA recommendations, CDPHE is using the term generically to include the meaning of the term, "No Further Remedial Action" as described in RFCA Attachment 6. That is, NFA determinations based on values derived from restricted land uses cannot be considered approved for No Further Action in a CAD/ROD without further evaluation. Only those areas meeting unrestricted release criteria can be designated NFA in a CAD/ROD document; all other areas will require use restrictions.

CDPHE concurs with the recommendations for No Further Action for the following PACs/IHSSs:

- PAC 300-156.1, Building 371 Parking Lot
- PAC 600-164.1, Radioactive Slab from Bldg. 771
- PAC 700-123.1, Valve Vault 7
- PAC 900-108, Trench T-1
- PAC 900-1311, Septic Tank East of Bldg. 991
- PAC 900-1318, Release of F001 Listed Waste Water to Soil

CDPHE concurs with the recommendations for No Further Action for the following PACs/IHSSs, but with recommendations for some minor changes/corrections to documentation:

- PAC NE-1409, Interceptor Trench Pump House
- NE-110, Buffer Zone Operable Unit, Trench T-3
- PAC 600-1001(a), Spills of Unknown Oil in PAC 600-1001 (SIR #318) previously approved; clarified in '00HRR per report '99 letter on '97 ...
- PAC 900-183, Gas Detoxification Area

NO meeting min

For the following PACs, it is recognized that the Site has not made any recommendation for NFA, and the CDPHE has no specific comments to offer at this time.

- PAC NE-1404, Diesel Spill at Pond B-2 Spillway
- PAC 100-607, Building 111 Transformer PCB Leak Separate NFA letter exists in file
- PAC 500-169, Waste Drum Peroxide Burial
- PAC 600-189, Nitric Acid Tanks
- PAC 700-1102, Transformer Leak 776-4
- PAC 903-112, 903 Pad
- PAC 900-140, Hazardous Disposal Area
- PAC 900-155, 903 Lip Area

The enclosed attachment contains comments on specific PACs/IHSSs in this HRR Annual Update.

If you have any questions concerning these comments, please contact Rich Horstmann at 303-692-3377, or Carl Spreng at 303-692-3358.

Sincerely,

Steven H. Gunderson
RFCA Project Coordinator

xc: Tim Rehder, EPA
Dave Shelton, Kaiser-Hill
Dan Miller, AGO
Susan Chaki, CDPHE
Administrative Records, Building 850

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division

Comments on
Annual Update for Historical Release Report
September 2000

(KH-00-900.UN)

PAC NE-110, Buffer Zone Operable Unit, Trench T-3

In general we concur with the NFA recommendation, based upon this site having been excavated as much as required by a decision document and the subsequent installation of a groundwater remediation system.

However, we still have some concerns that were first noted in our comments on the 1997 report. On page 18 of the 1997 HRR report, there is a statement that "Analytical data from this removal action indicate that disposal of the 2,400 gallons of lathe coolant from Building 444 occurred in another trench and not T-3". We asked for documentation about what happened to this coolant for consideration in the ER ranking for other East Trenches. In the 2000 HRR report, all the text about this coolant was removed with no explanation, and so our comment remains unanswered.

Also, there still needs to be a correction to the definition of the East Trenches. It should read, "Trenches T-1 through T-13 are referred to as the East Trenches."

PAC NE-1404, Diesel Spill at Pond B-2 Spillway

CDPHE sent comments on this PAC to the Site in relation to the 1998 HRR report. The Site is planning on doing soil sampling in accordance with the Buffer Zone Sampling and Analysis Plan, and has not recommended this PAC for NFA. CDPHE has no additional comments at this time.

PAC NE-1409, Interceptor Trench Pump House

Tables 2.1 and 2.2 both list Potential Contaminants of Concern, but the only contaminant they have in common is methylene chloride. The text should explain this discrepancy and the rationale for selecting the contaminants in Table 2.2, which form the basis for the NFA proposal.

The Tier I action level value for methylene chloride in Table 2.2 is in error because of a mistake in the action level tables. The Tier I value for methylene chloride in surface soil should be 5.98E+04 – two orders of magnitude higher than the Tier II value. This error does not change the basis for the NFA recommendation; we concur with the proposal for NFA.

PAC 100-607, Building 111 Transformer PCB Leak

Sampling is to be done in association with Building 111 Cluster D&D. No NFA determination has been requested yet.

Yes, concurrence received in FY01.

PAC 300-156.1, Building 371 Parking Lot

We concur with the recommendation for NFA.

PAC 500-169, Waste Drum Peroxide Burial

Further characterization is needed. There has been no recommendation for NFA.

PAC 600-164.1, Radioactive Slab from Bldg. 771

We concur with the request NFA determination.

PAC 600-189, Nitric Acid Tanks

Soil sampling is to be conducted in accordance with IA SAP. No NFA recommendation has been made yet.

PAC 600-1001(a), Spills of Unknown Oil in PAC 600-1001 (SIR #318)

We concur with the NFA recommendation for 600-1001(a), provided that the underlying PAC 600-1001 is investigated.

PAC 700-123.1, Valve Vault 7

We concur with the NFA recommendation for this PAC.

PAC 700-1102, Transformer Leak 776-4

We have not seen any of the data that was supposed to be collected for this PAC yet. There is currently no recommendation for NFA.

PAC 900-108, Trench T-1

We concur with the NFA recommendation for this PAC.

PAC 900-112, 903 Pad

There currently is no recommendation for NFA. An IM IRA will be written.

PAC 900-140, Hazardous Disposal Area

Additional assessment of this PAC will be done in relation to the 903 Drum Storage, Lip Area and Americium Zone interim measures/interim remedial action (IM/IRA). There is currently no recommendation for NFA.

PAC 900-155, 903 Lip Area

No NFA concurrence has been requested. An IM/IRA will be done. In light of new RSALs, we may need to re-evaluate this IHSS.

'02 HRR again w/ new reference

PAC 900-183, Gas Detoxification Area

We concur with the NFA recommendation based upon the RCRA Revised Closure Plan dated September 1995. The revised Closure Plan states, "Because this unit only stored expired or excess compressed gas cylinders, and all the compounds were gases, sampling of a surface rinse and soils for verification of decontamination is not necessary to confirm their absence." A reference to this document should be included as part of the NFA justification for this PAC.

PAC 900-1311, Septic Tank East of Bldg. 991

We concur with the NFA recommendation for this PAC.

PAC 900-1318, Release of F001 Listed Waste Water to Soil

We concur with the NFA recommendation for this PAC.

Colorado Department
of Public Health
and Environment

April 12, 2001

Mr. Joe Legare
Assistant Administrator for Environment and Infrastructure
U.S. Department of Energy-RFFO
10808 Highway 93, Unit A
Golden CO 80401-8200

RE: NFA Justification Document for the Building 111 Transformer Area (PAC 100-607)

Dear Mr. Legare:

The Colorado Department of Public Health and Environment and the Environmental Protection Agency have reviewed the Interim Update for the Historical Release Report dated April 6, 2001. The agencies concur with the justification for no further action. A No-Further-Action status is therefore approved for PAC 100-607.

If you have any questions concerning the approval of this document, please contact Carl Spreng of CDPHE at 303-692-3358 or Gary Kleeman of EPA at 303-312-6246.

Sincerely,

Steven H. Gunderson
RFCA Project Coordinator
Colorado Department of Public
Health and Environment

Tim Rehder
Rocky Flats Project Manager
Environmental Protection Agency

cc: Norma Castaneda, DOE
Dave Shelton, K-H
Lane Butler, K-H
Administrative Record, B850

Dan Miller, AGO
Susan Chaki, CDPHE
Steve Tarlton, CDPHE-RFOU

Attachment 2

Colorado Department
of Public Health
and Environment

July 9, 1999

Mr. Joe Legare
RFCA Coordinator
Department of Energy-RFFO
P.O. Box 928
Golden CO 80402-0928

RE: Annual Update for the Historical Release Report (September 1998)

Dear Mr. Legare:

The Colorado Department of Public Health and Environment (CDPHE) and the Environmental Protection Agency (EPA) have reviewed the 1998 Annual Update for the Historical Release Report. CDPHE and EPA are providing the attached comments and are also responding to recommendations for No Action or No Further Action (NFA) by categorizing each PAC/IHSS into three groups: 1. Concur with NFA, 2. More information required, and 3. Do not concur with NFA. To adequately justify NFA, each recommendation should include the specific criteria from RFCA Appendix 6 (as also described in the RFCA Implementation Guidance Document) which allow NFA to be proposed. If the justification is based on specific measurements or risk evaluations, then those values, exposure scenarios, etc. should be extracted from the original data source and summarized in text or tables. The adequacy of QA/QC that was performed on analyses should also be mentioned. In some cases, providing maps showing sampling locations would make a review of the narratives more complete and efficient.

1. The agencies concur with the recommendation for NFA for the following PACs/IHSSs:

[redacted]	NW-203	400-800
NE-1405	NW-1500	400-811
NE-1406	000-172	100-150.5
NW-174B	100-608	

2. The agencies require more information to be able to approve NFA for the following PACs/IHSSs:

NW-170 NE-1404 900-1318

500-169[redacted]

3. The agencies do not concur with the recommendation for NFA for the following PAC/IHSS:

NW-174A 900-140[redacted]

[redacted]

If you have any questions concerning these comments, please contact Carl Spreng at 303-692-3358 or Gary Kleeman at 303-312-6246.

Sincerely,

Steven H. Gunderson
RFCA Project Coordinator
Colorado Department of Public Health and Environment

Tim Rehder
Rocky Flats Project Manager
Environmental Protection Agency

cc: Norma Casteñeda, DOE
Laura Brooks, K-H
Nick Demos, RMRS
Dan Miller, AGO
Steve Tarlton, CHPHE-RFOU
Susan Chaki, CDPHE

Attachment 1

Colorado Department
of Public Health
and Environment

July 9, 1999

Mr. Joe Legare
RFCA Coordinator
Department of Energy-RFFO
P.O. Box 928
Golden CO 80402-0928

RE: Annual Update for the Historical Release Report (September 1997)

Dear Mr. Legare:

The Colorado Department of Public Health and Environment (CDPHE) and the Environmental Protection Agency (EPA) have reviewed the 1997 Annual Update for the Historical Release Report. CDPHE and EPA are providing the attached comments and are also responding to recommendations for No Action or No Further Action (NFA) by categorizing each PAC/IHSS into three groups: 1. Concur with NFA, 2. More information required, and 3. Do not concur with NFA. To adequately justify NFA, each recommendation should include the specific criteria from RFCA Appendix 6 (as also described in the RFCA Implementation Guidance Document) which allow NFA to be proposed. If the justification is based on specific measurements or risk evaluations, then those values, exposure scenarios, etc. should be extracted from the original data source and summarized in text or tables. The adequacy of QA/QC that was performed on analyses should also be mentioned. In some cases, providing maps showing sampling locations would make a review of the narratives more complete and efficient.

1. The agencies concur with the recommendation for NFA for the following PACs/IHSSs:

300-715	400-191	800-107
700-1115	600-117.3	800-145
NE-111.1	600-152	800-147.2
NE-156.2	800-102	900-113
NE-167.	800-103	900-119.1
SE-209	800-104	900-119.2
300-135	800-105.1	900-130
300-151	800-105.2	900-141
300-181	800-106	900-210
300-188		

2. The agencies require more information to be able to approve NFA for the following PACs/IHSSs:

900-1307
NE-110
NE-216.2
NE-216.3
SW-133.5
SW-133.6
SW-1701
[redacted]
600-164.1
600-189
600-1001
700-123.1
700-1102

3. The agencies do not concur with the recommendation for NFA for the following PACs/IHSSs:

[redacted]
[redacted]
[redacted]
[redacted]
NE-142.5
B. Powers NE-142.6
NE-142.7
[redacted]
[redacted]
[redacted]
[redacted]
900-183
900-109

If you have any questions concerning these comments, please contact Carl Spreng at 303-692-3358 or Gary Kleeman at 303-312-6246.

Sincerely,

Steven H. Gunderson
RFCA Project Coordinator
Colorado Department of Public Health and Environment

Tim Rehder
Rocky Flats Project Manager
Environmental Protection Agency

cc: Norma Casteñeda, DOE
Laura Brooks, K-H
Nick Demos, RMRS
Dan Miller, AGO
Steve Tarlton, CDPHE-RFOU
Susan Chaki, CDPHE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

DEC 23 1992

Ref: 8HWM-FF

Mr. Richard Schassburger
Department of Energy
Rocky Flats Office
P.O. Box 928
Golden, Colorado 80402-0928

RE: **Potential Areas of Concern needing further investigation.**

Dear Mr. Schassburger:

In reviewing the table enclosed with our letter of November 30, 1992 on this subject, PAC #600-1001 was mistakenly identified as PAC #600-1101. Enclosed is a corrected summary table. For your information, we are enclosing a second table that lists all of the newly identified potential areas of concern along with pertinent summaries and rationales for conducting further investigations.

If you have any questions regarding these matters, please contact Gary Kleeman at 294-1071.

Sincerely,

Martin Hestmark

Martin Hestmark, Manager
Rocky Flats Project

Enclosures

cc: Mike Arndt, EG&G
Susan Nachtrieb, City of Westminster (TRG)

Printed on Recycled Paper

TABLE 1

SUMMARY OF PROPOSED OPERABLE UNITS FOR
NEWLY IDENTIFIED POTENTIAL AREAS OF CONCERN (PACs) REQUIRING FURTHER INVESTIGATION

PAC	900-1307	700-1100 700-1101 700-1108 900-1301 PIC #44	000-500	400-803 400-804 400-807 400-810 600-1001 800-1201 800-1204 800-1205	100-602 100-603 100-609 100-611 300-702 400-802 PIC #9			100-607 111 100-608 131 300-708 371 300-709 334-1 400-800 443-1 400-801 447 Rod 500-900 515/516 500-901 555 500-902 500-904 223-1 500-905 223-2 600-1000 N.06549 600-1002 662 600-1003 661-675 700-1102 700-1103 700-1104 700-1105 700-1111 700-1112 800-1207 800-1208 800-1209 800-1210 900-1306 PIC #41		UBC-371 UBC-374 UBC-528 UBC-559 UBC-701 UBC-707 UBC-731 UBC-770 UBC-771 UBC-774 UBC-776 UBC-777 UBC-778 UBC-779 UBC-991	UBC-122 UBC-123 UBC-125 UBC-331 UBC-439 UBC-440 UBC-441 UBC-442 UBC-444 UBC-447 UBC-865 UBC-881 UBC-883 UBC-886 UBC-887 UBC-889
TOTALS	1	5	1	8	7			26		15	16

334-1
559
558-1
666

TABLE 2

NEWLY IDENTIFIED POTENTIAL AREAS OF CONCERN

PAC Number	Located Near OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
NE-1400	N/A	Spill of tear gas powder onto roadway (1987)	5 pounds CS tear gas powder	The area was hosed down.	No	Hosing down the area is considered a sufficient remedial action.
NE-1401	6	Rupture in Coors Company natural gas line	5 million cubic feet of natural gas were released	The line was repaired and returned to service.	No	The natural gas was dissipated to the atmosphere, so no remediation is necessary.
NE-1402	2	Contaminated transformer oil leaked onto asphalt in 1983	PCB-contaminated fuel	One square foot of contaminated asphalt was removed.	No	Appropriate remedial actions were already conducted.
NE-1403	6	Gas from portable generator spilled onto parking lot in 1991	1 quart gasoline	Spill contained with Oil-Dri and removed, packaged material transferred to Building 531 Storage Area.	No	Appropriate remedial actions were already conducted.
SE-1600	1	Former pond received steam condensate from Building 881 in 1955	5,400 gallons of steam condensate	None	No	The subsurface soil in the vicinity of this former pond has been sampled in the soil sampling program for OU1. Surface soils have been completely disturbed by construction of the French Drain.
SE-1601.1 & SE-1601.2	1	Pond 8-north (SE-1601.1) and Pond 8-South (SE-1601.2) received overflow/blowdown from Building 881 Cooling Towers	Chromium-based biocides	None	No	The subsurface soil in the vicinity of these former ponds has been sampled in soil sampling program for OU1. Surface soils adjacent to 1601.2 were also sampled in the OU1 investigation.
SW-1700	5	Fuel spill into Woman Creek drainage in 1975	Either diesel or gasoline	There is no evidence that remedial actions were conducted.	No	Because 18 years have passed since the fuel was spilled into the creek, the fuel has degraded and is no longer a concern.
000-500	Site wide	Releases from the sanitary sewer system	Plutonium contaminated laundry waste, laboratory waste, photographic waste (included tritium, uranium, plutonium) tritium, chromic acid	Remedial actions were conducted in the areas of four known releases (PAC 800-145, 900-141, 700-144, and 100-604). The actions consisted of repairing the broken line and removing soil at PAC 700-144.	Yes	The sanitary sewer system has probably leaked at locations in addition to the four already identified. To determine if there are other areas of contamination, it is suggested that the sludge from several sewer junctions be sampled for plutonium, americium, and uranium. Results for this sampling could guide the selection of additional soil sampling along the sewer pipelines.
000-501	Site wide	Spraying waste oil on unpaved roads to suppress dust	Waste oils/diesel fuel number 2	None	No	The last instance of roadway spraying with waste oil is cited as having been in Sept. 1983. It is improbable that contaminants from the waste oil and/or brines would still be present on the dirt roads or nearby sediments after nine years of exposure.
100-600	13	Spill onto concrete and soil, 1990	2.75 pounds of mercury	The mercury was vacuumed from the valve floor and contaminated soil was excavated.	No	Appropriate remedial actions were already conducted.

SITE Number	Location Number OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
100-601	13	Spill onto ground, 1989	8 ounces 1,2-ethylhexyl phosphoric acid	None	No	The small size of the spill (8 ounces) and the caustic nature of 1,2-ethylhexyl phosphoric acid indicates that this spill does not require remediation.
100-602	13	Break in Building 123 process waste line in 1989	25 gallons urine, 12.5 gallons nitric acid, 20 gallons hydrochloric acid, 1.5 pounds ammonium thiocyanate, 1.0 pound ammonium iodide, 2.5 gallons ammonium hydroxide	The spill was near two IHSSs scheduled for remediation investigation, so no action was taken.	Yes (Could be easily incorporated in OU13 RI process)	The soil was contaminated as a result of the break in the process waste line. This area is not being studied as part of OU9. (OU9 deals exclusively with abandoned process waste lines.) Therefore all breaks or releases from currently operating process waste lines will require a separate remedial investigation.
100-603	13	Overflow of process waste from Building 123 in 1989	Hydrochloric and nitric acids, urine, ammonium thiocyanate, ammonium iodide, and ammonium hydroxide	The spill was neutralized and soil samples were collected to confirm that contamination was restricted to the area.	Yes (Could be easily incorporated in OU13 RI process)	The soil was contaminated as a result of the break in the process waste line. This area is not being studied as part of OU9. (OU9 deals exclusively with abandoned process waste lines.) Therefore all breaks or releases from currently operating process waste lines will require a separate remedial investigation.
100-604	13	Leaking sanitary sewer pipes, 1990	Unknown	The pipes were repaired.	No	Sanitary sewer lines from trailers are not likely to contain any impacting contaminants, therefore investigation is not warranted.
100-605	13	Spill onto asphalt or soil, 1989	2 gallons hydraulic oil	No documentation was found which detailed a response.	No	Because of the small size of this spill and the type of material involved, (hydraulic oil does not contain PCBs), no remedial actions are warranted.
100-606	13	Spill onto asphalt, 1989	8 ounces of TCE	None	No	TCE is very volatile, so an 8-ounce spill in 1989 would no longer be of concern.
100-607	13	Transformer leak onto gravel basement floor, 1984-1986	PCB bearing cooling oil	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
100-608	13	Transformer leak onto ground, 1989	0.25 gallons of PCB containing oil	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
100-609	13	Incinerator releases to the air, 1980-1985	Dioxins and furans	None	Yes	Dioxins and furans are toxic and their presence should be examined. If the incinerator is still in place, building smear samples should be collected. In addition, soil samples should be collected from downwind of the incinerator (southern edge of the 600 Area) and analyzed for dioxins.
100-610	13	Asbestos insulation disturbed in 1987	12 linear feet of asbestos	Related asbestos was wetted down and pipes were repaired.	No	The disturbed asbestos was released to the atmosphere, so no remedial actions are necessary.

PAC Number	Located Near Building OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
100-611	13	Liquid spill into containment area and 3 pits under Building 123 in 1989	Several hundred gallons of acidic scrubbing solutions	All spilled materials were contained and transferred to process waste lines.	Yes	Berms and pits into which the spilled solution overflowed may not have completely contained the release.
100-612	13	Nickel-cadmium battery fell onto pavement in 1991	3 quarts potassium hydroxide	Spill contained and cleanup using Oil-Dri. Residue placed in drum for disposal	No	Appropriate remedial actions were already taken.
300-700	14	Unknown, scrap building material was buried in trench from 1955-1981	Buried material consisted of roofing material, styrofoam, asphalt, and plastic sheeting	The material was removed and taken to the sanitary landfill. No radioactivity was discovered in the trench.	No	There is no evidence that burying scrap building material had any impact on the environment.
300-701	13	Liquid spill onto loading dock in 1989	20 gallons diluted sulfuric acid	Solution removed with vacuum and floor washed, waste sent to process waste system	No	Appropriate remedial actions were already taken.
300-702	13	Spills and leaks of pesticides and herbicides stored in Building 367 between 1952 and 1988. Contaminants released onto soil and possibly nearby drainage ditch.	Pesticides and herbicides in unknown quantities	Soil sampling was scheduled in 1988, but there is no record verifying that the sampling was conducted.	Yes	Soil around Building 367 and along drainage pathways are probably contaminated with residual pesticides and herbicides. Further investigations could include select soil and ditch sampling with analysis for organophosphorus and chlorinated herbicides.
300-703	13	Road oil vapors were ignited in 1970	Oil vapors and burned road oil residual	Fire was extinguished by fire department with water and dry chemical.	No	Residuals and releases from fire 22 years ago would not be present.
300-704	10 and 8	Fire on roof of Building 381 in 1982	Smoke and fluorine vapors	None	No	Fluorine vapors have already been dispersed to the atmosphere.
300-705	10 and 8	Spill into containment berm from storage tank north of Building 374 in 1989	Potassium hydroxide	The liquid was pumped back into the process waste line.	No	Appropriate remedial actions were already conducted.
300-706	10 and 8	Spill from Tank 805 north of Building 374 in 1989. Liquid spilled onto plywood deck, dripped onto concrete slab, migrated toward sump embedded in sand	2 gallons of process waste stream included a variety of chemicals	The plywood and concrete were washed with soap, the liquid was pumped to the waste system, and saturated sand and cleaning materials were removed and treated as low-level mixed waste.	No	Appropriate remedial actions were already conducted.
300-707	13 and 10	Liquid spill from tank onto asphalt in 1985	3 gallons of water and sanitizer (water and formaldehyde)	None	No	The 3 gallons of sanitizer have already evaporated.
300-708	10	Transformers leaking onto pad of unknown composition until 1987	PCB containing oil	The transformers were retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
300-709	13	Transformer leak	772 ppm PCB oil	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey should evaluate the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
300-710	13	Gasoline spill from supply truck in 1991	2 gallons unleaded gasoline	Waste was cleaned up and packaged.	No	Appropriate remedial actions were already conducted.

AOC Number	Located Near Unit OD Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
400-800	13	Small leak from a transformer (19877)	Dielectric fluid; smear samples contained 10,964 ppm PCBs	The transformer was removed.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
400-801	12	Transformer leak on roof of Building 447 (19877)	PCB contaminated transformer oil; smear samples contained 120-94 mg of PCBs	The roofing material was removed.	Yes	Need to confirm that all material contaminated with PCBs has been removed.
400-802	14	Drums leaking on a concrete slab from 1955-1969. Equipment stored on slab was also contaminated by the leaking drums	Depleted uranium chips immersed in oil stored in 125 30-gallon drums	The drums were removed in 1956 and the concrete was decontaminated with perchloroethene. The equipment was moved to another area. After cleanup, parts of the slab registered 108 disintegrations/minute (d/m).	Yes	Soil around the concrete storage area and possibly under the area may be contaminated with uranium. Collection of soil samples around this storage area is suggested.
400-803	12	Miscellaneous materials were dumped into storm drain near Building 446 in 1972. Mixture found along open ditch south of Cottonwood Ave. northeastward to Seventh Ave.	Silver paint, oil, and aluminum paint	There is no evidence to suggest that remedial actions were conducted.	Yes	Dumping silver and aluminum paint would release heavy metals to the soil. It is suggested that soil samples be collected from the area around the storm drain and along the ditch and analyzed for lead, cadmium, chromium, and arsenic.
400-804	14	Four ingots of unknown composition fell from a truck onto asphalt in 1957.	Radioactivity	The ignots removed, the area was dry vacuumed, and hot spots were covered with asphalt.	Yes	Field sampling activities (rad survey and asphalt sampling) in OU12 work plan will sufficiently investigate this location.
400-805	13	Leak from a filler pipe near tank #9 in 1990	Fuel	The filler pipe was repaired.	No	Appropriate remedial actions were already conducted.
400-806	10(?)	Leak from production tank north of Building 440 onto pavement in 1989	5 gallons polymethylene polyphylisocyanate	The liquid was cleaned up using Oil-Dri and residue was placed in hazardous material waste drums.	No	Appropriate remedial actions were already conducted.
400-807	12	Sandblasting of railroad cars released contaminants to the air. Sandblasting may still be in operation.	Unknown	None	Yes	Field sampling activities (rad survey, surficial soils and sediment sampling) in OU12 work plan will sufficiently investigate this location.
400-808	12	Oil leaked from vacuum pump	1 quart vacuum pump oil	Contaminated soils were removed	No	Appropriate remedial actions were already taken.
400-809	12	Oil leak was found in motorcycle parking lot in 1991	1 quart motor oil	Spill cleaned up with absorbant material and packaged for disposal.	No	Appropriate remedial actions were already taken.
400-810	12	Fire in the inlet-duct of the beryllium air plenum for Building 444 in 1978	14.5 grams beryllium	None	Yes	Field sampling activities (surficial soils and sediment sampling) in OU12 work plan will sufficiently investigate this location.
500-900	8	Transformer oil	50-500 mg/L PCBs	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.

PAC Number	Located Near or in OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
500-901	8	Transformer oil	55 ppm PCBs	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
500-902	8	Transformer leak	>500 ppm PCBs	The transformer was retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
500-903	8	1988 - Drum leaked in RCRA storage unit #1 1991 - Release in storage unit	1988: <4 ounces of S9-63 ppm PCBs 1991: 40 gallons of "Trim-sol" lubricant mixed with waste oil	1988: Leaking drum and cleanup debris placed in overpack drum. 1991: Leak was completely contained within secondary containment pan. Leaking drum placed into overpack drum. Spill pumped into new drum.	No	The 1991 incident had no impact on the environment. The 1988 event consisted of a release of less than 4 fluid oz. into a cargo container. It is unclear whether any release was made to the environment, but due to the small amount of release and the ambiguity involved, further investigation seems to be unnecessary.
500-904	8	Transformer leaks	Transformer 223-1 contained >500 ppm PCBs Transformer 223-2 contained <50 ppm PCBs	The transformers were retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
500-905	8	Transformer leak	PCBs	None	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
600-1000	14	Transformer oil	>500 mg/L PCBs	Action was proposed, but completion was not documented.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
600-1001	14	Nov. 1954 - Drums leaked still bottoms and oils from Building 444 onto slab	Still bottoms and oils	The drums were repacked and the south end of the slab decontaminated.	Yes	Soil around this concrete slab and possibly under the pad may be contaminated with uranium. Collection of soil samples around this slab are suggested.
		Sept. 1958 - Punctured drum leaked highly contaminated waste coolant from Building 776	Contaminated waste coolant	The area was cleaned "to an extent" and leaking drum contents transferred to a second drum. (Smear count in 1959 found 100,000 counts/min, not related to specific release.)		
		Mar. 1960 - Drums with loose lids contaminated 2 square feet of slab with solid material from Building 883.	3,000 counts/min.	The contamination (up to 3,000 d/m) was removed. Leaking drums were returned to Building 881.		
		Drum leaked waste from Building 881 onto slab.	Up to 300 counts/min.			

PAC Number	Located Near or in OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
		May 1960 - Corroded drums leaked acidic waste material from Building 881 onto loading facility	No contamination detected	None		
		June 1960 - Drum leaked waste from Building 881 onto slab	Waste from Building 881	None		
600-1001 (cont.)	14	Aug. 1961 - Drums leaked waste from Buildings 444 and 776 in Building 663	Waste from Buildings 444 and 776	Equipment was decontaminated or replaced.	Above	Above
		Mar. 1968 - Three drums leaked waste and contaminated trailers, forklifts, work area, and personnel clothing and shoes.	Not specified	None		
		Sept. 1963 - Drum contaminated a fork truck, panel truck, and semitrailer in Building 663.	Not specified			
600-1002	14	Transformer Storage Area Leak	PCBs	None	Yes	A PC[illegible]rvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil conta[illegible]ted with PCBs from transformer leaks shoul[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.
600-1003	14	Transformer leak	PCBs	None	Yes	A PC[illegible]rvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil conta[illegible]ted with PCBs from transformer leaks shoul[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.
700-1100	14	1964 and 1969-Plutonium contamination from incidents potentially transported along french drain.	Possible plutonium	None	Yes	The p[illegible]tial for radioactive contamination in the area v[illegible]nts further investigation along the french[illegible]ain
700-1101	14	Laundry wastewater tank overflowed west of Building 778 into tank pit.	Laundry wastewater (probably low-level)	None	Yes	Laun[illegible]waste water may contain low level radio[illegible]e contamination. The extent of this radio[illegible]ity warrants further investigation
700-1102	8	Transformer oil	14,900 mg/L PCBs	The transformer was removed for retro-filling and relocation several feet to the north. The pad was partially removed to 4 inches deep and appears to have had fill recently placed around it.	Yes	A PC[illegible]rvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil conta[illegible]ted with PCBs from transformer leaks shoul[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.
700-1103	8	Transformer oil	135-7,200 µg PCBs	PCBs were to be cleaned up with Building 707 under the Toxic Substances Control Act.	Yes	A PC[illegible]rvey was conducted in October 1991 (EG& 1991). This survey evaluated the conte[illegible]f all transformers at RFP. Soil conta[illegible]ted with PCBs from transformer leaks shoul[illegible] remediated, since PCBs do not degra[illegible]nd are not transported readily.

PAC Number	Located Near or in OU Number	Type of Release	Contaminants	Potential Actions	Further Investigation Warranted	Rationale
700-1104	8	Transformer oil	1,035-3,350 µg PCBs	Transformers were moved and retrofilled. Rock and gravel fill was placed around the transformer pad west of Building 708.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
700-1105	8	Transformer oil	PCBs	Transformers were retrofilled and moved several feet east and north.	Yes	A PCB survey was conducted in October 1991 (EG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
700-1106	8	Process wastewater from valve vault 12 leak spilled onto street from tank truck at entrance to portal 1	10 gallons radioactive process wastewater (no radioactivity found on street at the time)	None	Yes	The magnitude of the rad contamination from samples of the process wastewater warrants further investigation.
700-1107	8	June 10, 1986 - Open oil drum filled with water from compressor house roof overflowed and soil flowed onto road past Building 776 June 12, 1986 - Compressor waste oil spilled from overfilled drum outside door 15T north of Building 776	1 to 2 gallons oil 2 to 3 gallons oil	"Oil-Dri" was poured over the area to absorb the spilled oil. "Oil-Dri" was to be swept up, placed in a drum, and disposed in Present Landfill (PAC NW-114). Two bags of oil absorbent were used to absorb the spill.	No	Appropriate remedial actions were already conducted.
700-1108	8	Process waste storage tanks leaked chemical and radioactive contamination to the soil around Building 774, and minor leakage seeped to building footing drain tiles. July 21, 1980 - Process waste line leaked June 22, 1987 - Caustic overflowed in bermed area beneath 8,000-gallon above-ground condensate tank. Drained into western condensate receiving tank.	Mar. 1971 - 500 disintegrations per minute per liter (d/m/L) gross alpha Apr. 1971 - 400 d/m/L plutonium and 800 ppm nitrate 1,000 gallons - 2,500 pCi/L total alpha; 4000 pCi/L gross beta; 10,000 mg/L NO_3; pH 12.	1975 - Wet-well with a submersible pump installed at Building 771/774 footing drain outfall pond. 1981 - Interceptor trench pump house installed. The initial response - stop flow through waste line to stop leak. FIDLER survey to determine extent of contamination. Broken waste line excavated and loose flange identified. Contents of western condensate tank sampled, and solution pumped to sanitary sewer or Building 774 for processing.	Yes	Levels of radioactivity warrant conducting further scans of radioactive contamination.
700-1109	8	Piece of uranium found on ground between Buildings 778 and 729	Depleted uranium disk 1" diameter by 1/2-inch thick	The uranium was transported to Building 776 then to Building 779 Nuclear Material Control custodian; stored in 55-gallon drum. Site where U found surveyed (counts within background).	No	Depleted uranium is not a serious hazard.
700-1110	8	Fire in Building 771. Nickel carbonyl cylinders drummed and buried.	Nickel carbonyl	Four 55-gallon drums; 1 GI can with two cylinders and 6 loose cylinders of nickel carbonyl removed from burial pit west of Building 771 to pit east of Solar Evaporation Ponds. Explosive charges used to destructively vent the cylinders and ignite any residual gas.	No	Appropriate remedial actions were already conducted.

PAC Number	Located Near on IHS Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
700-1111	8	Transformer leak	PCBs	The transformer unit was retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (BG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
700-1112	8	Transformer leak	807 ppm PCBs	Cleanup scheduled during 1989, but not confirmed.	Yes	The previous remedial action should be confirmed. A PCB survey was conducted in October 1991 (BG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1200	12	South process transfer line leaked Mar. 15, 1989 Mar. 16, 1989 Apr. 13, 1989 June 1989 - Secondary chase pipe leak detected	Partially neutralized HNO_3 or dilute water contaminated with depleted uranium (pH = 1.2) 5 gallons 7 gallons (>1 lb radionuclides) 15 gallons (>100 lbs corrosives)	Discharge valves were closed and locked out; plumbing was changed and hydrostatically tested. The inner line was removed.	Yes	Since both the inner and the outer chase pipe were found to be leaking, further investigation is warranted.
800-1201	14	1957 - Plutonium fire contamination	Building 881 (NW corner) total activity = 4.5×10^4 d/m/kg 20 feet west, total activity = 1.5×10^5 d/m/kg; with some plutonium; uranium-235 in soil (1978)	April 1981 - Contaminated soil removed in two small areas near Building 883. May not be same areas.	Yes	The radioactive contamination in soil in 1978 warrants further investigation in the area around Building 881.
800-1202	12	Battery fell from truck and battery acid spilled on road	1 qt.-1/2 gallon H_2SO_4	$NaHCO_3$ applied to spill and area washed down. Battery disposed in present landfill.	No	Appropriate remedial actions were already conducted.
800-1203	12	Broken sanitary sewer line between Building 865 and 886	Sanitary sewage waste	None	No	No specific contaminants are associated with this break in the sanitary sewer line, however the site-wide sanitary sewer system (PAC 000-500) is listed as needing further investigation.
800-1204	12	Building 886 spills Jan. 1978 - vent pipe overflow onto ground 1984 - Tank overflow onto roof and ground 1986 - Tank overflow onto roof through downspouts and onto ground	2 gallons on about 16 sq. ft. 410,000 d/m/L alpha Decontamination water radioactivity 20 gallons process waste	None	Yes	Levels of radioactivity warrant conducting further scans of radioactive contamination.
800-1205	12	Uranium and plutonium and condensate contaminated east dock of Building 881	Uranium, plutonium, and condensate	None	Yes	The presence of uranium and plutonium contamination warrants further investigation specifically, the collection of wipe samples of the dock outside Building 881.

PAC Number	Located Near or in OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
800-1206	12	Trash container fire in Building 883	Contaminated trash	The shift superintendent was responsible for improper cleanup activities, and Health Physics was to follow up on the incident with the proper department.	No	The drum is probably not at the same location.
800-1207	12	Transformer leak	>500 ppm PCBs	The transformer was required to be removed or replaced by fiscal year 1987 or 1988.	Yes	A PCB survey was conducted in October 1991 (BG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1208	12	Transformer leak	435 gallons 110 ppm PCBs	The transformer was retrofilled in 1987	Yes	A PCB survey was conducted in October 1991 (BG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1209	12	Transformer leaks	PCBs	The transformers were retrofilled in 1987.	Yes	A PCB survey was conducted in October 1991 (BG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1210	12	Transformer leaks	Possibly PCBs	The transformers were removed from the old pad, retrofilled, and placed on a new pad.	Yes	A PCB survey was conducted in October 1991 (BG&G, 1991). This survey evaluated the contents of all transformers at RFP. Soil contaminated with PCBs from transformer leaks should be remediated, since PCBs do not degrade and are not transported readily.
800-1211	12	Capacitor leak	1 pint oil (no PCBs)	A smear sample was taken from the concrete where the leak occurred. A glass bottle was placed under the leak, absorbent pads were put on the spill, and the area was barricaded.	No	Appropriate remedial actions were already conducted.
900-1300	8	Sludge from sanitary sewage treatment reverse osmosis plant	Low-level radioactive waste sludge from sanitary treatment plant	Monitoring ground water and the vadose zone are planned.	No	Monitoring is sufficient to evaluate the potential contamination from sewage sludge.
900-1301	8	79 drums containing concreted wastes from Building 991	Drummed concreted wastes contaminated with enriched and depleted uranium	None	Yes	Further investigation of this area is recommended, because concrete stabilization has not always been successful at RFP. In addition, drums were stored outside, above the headwaters of Walnut Creek. Water could have leached radioactivity from waste drums into Walnut Creek where it may be transported to ponds downstream.
900-1302	10	Gasoline spill sprayed into the air or leaked onto the ground from 55-gallon drum	Approximately 2 gallons gasoline	The Hazardous Materials Team sealed the leak, and a concrete containment berm was to be installed around the contractor's fuel storage facility.	No	Contamination was not severe and has probably degraded.
900-1303	6	Natural gas leak	Natural gas	The pipe was repaired and 400 feet of gas line near Building 991 were slated to be replaced in 1971.	No	The natural gas was dissipated to the atmosphere, so no remediation is necessary.

STL DENVER

TOTAL METALS

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BLANKS

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C		M
Mercury	0.026	U	0.026	U	0.026	U	-0.052	B	0.0022	U		CV

STL DENVER

TOTAL METALS

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BLANKS

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: _____ SAS No.: _____ SDG NO.: 01S0110

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Mercury			-0.029	B	-0.037	B					CV

STL DENVER

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DUPLICATES

SAMPLE NO.

LAB MS/MSD

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: _____ SAS No.: _____ SDG NO.: 01S0110

Matrix (soil/water): SOIL Level (low/med): MED

% Solids for Sample: 100.0 % Solids for Duplicate: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Mercury	0-20	0.283		0.161		55	*	CV

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DUPLICATES

SAMPLE NO.

0180110-001.001SD

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: _____ SAS No.: _____ SDG NO.: 0180110

Matrix (soil/water): SOIL Level (low/med): MED

% Solids for Sample: 100.0 % Solids for Duplicate: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	0-20	17000		17600		3.2		P
Antimony		7.45		6.76		9.7		P
Arsenic		23.1		22.8		1.1		P
Barium		125		126		1.2		P
Beryllium		20.0		19.6		2.0		P
Boron		101		99.0		2.1		P
Cadmium		18.3		17.9		2.1		P
Calcium		33600		32200		4.3		P
Chromium		43.8		42.8		2.4		P
Cobalt		24.7		25.1		1.7		P
Copper		42.4		44.6		5.1		P
Iron		17000		18400		7.8		P
Lead		26.7		26.7		0.070		P
Lithium		109		108		1.7		P
Magnesium		8310		8450		1.7		P
Manganese		442		384		14		P
Molybdenum		17.1		16.6		3.0		P
Nickel		36.1		34.6		4.2		P
Selenium		19.5		19.5		0.27		P
Silver		19.2		18.8		2.2		P
Sodium		4700		4590		2.5		P
Potassium		7790		7900		1.3		P
Silica		904		805		12		P
Strontium		131		127		3.6		P
Thallium		20.2		20.4		0.99		P
Tin		191		186		2.5		P
Titanium		741		729		1.7		P
Uranium		228		224		2.0		P
Vanadium		58.8		60.4		2.6		P
Zinc		73.7		91.0		21	*	P

STL DENVER

TOTAL METALS

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LABORATORY CONTROL SAMPLE

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: _____ SAS No.: _____ SDG NO.: 01S0110

Solid LCS Source: _____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				200	203		87.0	107.0	102
Antimony				20	18.8		82.0	113.0	94
Arsenic				20	19.8		80.0	120.0	99
Barium				20	20.7		86.0	114.0	104
Beryllium				20	20.6		90.0	110.0	103
Boron				100	99.7		85.0	125.0	100
Cadmium				20	20.0		89.0	109.0	100
Calcium				5000	4810		89.0	109.0	96
Chromium				20	20.8		88.0	110.0	104
Cobalt				20	19.7		86.0	106.0	98
Copper				20	21.1		90.0	110.0	106
Iron				100	108		90.0	116.0	108
Lead				20	20.5		82.0	114.0	102
Lithium				100	93.7		80.0	120.0	94
Magnesium				5000	4900		91.0	113.0	98
Manganese				20	20.5		90.0	110.0	103
Molybdenu				20	18.7		87.0	107.0	94
Nickel				20	20.1		88.0	108.0	100
Selenium				20	19.6		83.0	113.0	98
Silver				20	19.7		88.0	108.0	98
Sodium				5000	4800		81.0	115.0	96
Potassium				5000	4760		86.0	112.0	95
Silica				2140	918		80.0	120.0	43
Strontium				100	97.7		80.0	120.0	98
Thallium				20	19.9		79.0	115.0	100
Tin				200	199		84.0	108.0	100
Titanium				100	104		80.0	120.0	104
Uranium				220	240		80.0	120.0	109
Vanadium				20	20.5		88.0	110.0	103
Zinc				20	19.3		86.0	107.0	97

TOTAL METALS

-7-

LABORATORY CONTROL SAMPLE

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Solid LCS Source:

Aqueous LCS Source:

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Mercury				.417	0.439		82.0	113.0	105

PAC REFERENCE NUMBER: 400-805

IHSS Reference Number: Not Applicable

Unit Name: Building 443 Tank #9 Leak Possibly TANK 90 JOE LUCERIA 12/5/01 DIESEL FUEL.

Approximate Location: N748,000; E2,080,000

Date(s) of Operation or Occurrence

1990

Description of Operation or Occurrence

While conducting tightness tests on tanks within RFP, tank #9 located near the steam plant indicated a filler pipe leak. Fuel was found around the filler pipe area.[1]

Physical/Chemical Description of Constituents Released

The leak consisted of fuel.[1]

Responses to Operation or Occurrence

Maintenance personnel were to repair the leak by either tightening, repairing or replacing the filler pipe.[1]

Fate of Constituents Released to Environment

No documentation was found that detailed the fate of constituents to the environment.

Comments

None.

References

[1] 1501770

443	1598	N/A	ROOM 101A	NO. 2 DIESEL	- #2 DIESEL	N		14-JUL-92
443	1599	N/A	ROOM 104 A	NO. 2 DIESEL	- #2 DIESEL	N		14-JUL-92
443	1600	N/A	30 FT EAST OF DOOR #1	#2 DIESEL FUEL	OUT OF SERVICE - FILLED/FOAM	N	1500 GALS	25-FEB-97
443	1904	N/A	BOILER ROOM	WATER SOFTENER TANK		N		12-MAY-97
443	1905	N/A	BOILER ROOM	WATER SOFTENER TANK		N		12-MAY-97
443	2851	N/A	15 FT EAST OF DOOR #3	#2 DIESEL FUEL	OUT OF SERVICE - FILLED W FOAM	N	2000 GALS	25-FEB-97
443	2852	N/A	MEZZANINE SW. CORNER 12 FT ABOVE FLOOR	STEAM CONDENSATE	STEAM CONDENSATE	N		18-MAR-97
443	2853	N/A	MEZZANINE NE CORNER	HOT WATER	HOT WATER	N	40 GALS	18-MAR-97
443	2998	N/A	OUSIDE NTE. OF DOOR 1	DIESEL	Diesel Fuel	N	1550 GALS	27-FEB-97
443	2999	N/A	OUTSIDE SE OF DOOR 3	DIESEL	Diesel Fuel	N	1550 GALS	27-FEB-97
443		N/A	Courtyard	#6 Fuel Oil	#6 Fuel Oil		20,000 Gals	---------
443		N/A	Courtyard	#6 Fuel Oil	#6 Fuel Oil		20,000 Gals	"
928	1397	N/A	OUTSIDE OF BLDG. 928 ON WEST SIDE	FUEL OIL #2	FUEL OIL #2	N		15-JUN-95
928	1419	N/A	OUTSIDE OF BLDG. 928 ON NORTHWEST CORNER	T215C FIRE WATER	WATER	N	500,000 GALS	21-JUN-95

1501776

Post-it® Fax Note			
To Nick Dimmer		From Lorette Dolan	
Co./Dept.		Co.	
Phone # 4605		Phone # 5438	
Fax # ~~5108~~		Fax # 3264	

~~[illegible]~~ 5180 ~~5303~~

SPMS-90-1549 RFP 90-010 RFP

UNDERGROUND DIESEL RELEASES

MERRICK
ENGINEERS & ARCHITECTS

COPY

RECEIVED
NOV 05 1990
OCCURRENCE MANAGEMENT SYSTEMS

MEETING MINUTES

RFP - 90-040

Date: October 25, 1990
Ref: 086-7235
BA#: 75504 HJ

Project Identification: Annual Underground Storage Tank Study

Subject: Underground Storage Tightness Test Findings for Tanks #1, #2, #9, #32

Meeting Location: Rocky Flats Plant Bldg. 130 Room: Auditorium

Meeting Date: 10/09/90

Submitted: Dorthea Hoyt/EG&G Project Engineer

Attendees:

Name	Company	Telephone
D.L. Hoyt	EG&G, WP & DE	966-6063
Laurie Gregory-Frost	EG&G, RCRA Permitting	966-5877
M.L. Johnson	EG&G	966-5033
C. David White	EG&G PA/OMS	966-6060
K.E. Shirk	EG&G Utilities	966-4240
Steve Mobley	EG&G Construction Co.	966-6142
Tim Jackson	Ryan/Murphy Inc.	293-3835
R.L. Reade	Merrick & Company	751-0741
D.A. Williams	Merrick & Company	751-0741

Recorder: Danny Williams, Merrick & Company RLReade for

The following is the Recorder's understanding of items discussed and decisions reached during this meeting. It shall be assumed that this understanding is correct unless notice to the contrary is brought to the attention of the Recorder at (303) 751-0741 within five (5) working days of receipt.

COPY

(10855 East Bethany Drive) ■ P.O. Box 22026 ■ Denver, Colorado 80222 ■ (303) 751-0741 ■ FAX (303) 751-2581

1. This meeting was considered to be similar to a Critique. The purpose of this meeting was to review the results of the tightness tests for tanks #1, 2, and 9, discuss the status of regulatory compliance for these tanks, evaluate the procedures in testing and reporting among EG&G and determine action required to resolve the issues and continue the project. The attendees represented EG&G engineering, operations, regulatory and management functions and the contract tank testing crew.

A. TANK #1 BLDG. 120 WEST GUARD GATE

Comment: Tank High Level Test Results: Indicates a vent pipe leak, low level test indicated no apparent leak. Visual inspection showed that the vent pipe is too low to ground level and that the vent pipe is bent. There is no barrier protection for the vent pipe or filler pipe.

Discussion: Test/Inspection

Tester used a stand pipe when running the high level test. Tim Jackson of Ryan/Murphy will talk to his tester why he used the stand pipe and if the product level was being forced into the day tank. Vent pipe needs to be replaced and extended twelve feet above ground level. Barriers need to be installed around vent pipe and filler pipe to protect from future damage.

Action: EG&G Maintenance Personnel will repair vent line and install barriers. Merrick will have Ryan/Murphy retest tank after repairs have been made.

B. TANK #32 BLDG. 920 EAST GUARD GATE

Comment: Tank High and Low Level Test Results: Indicated no apparent leaks. Visual inspection showed vent pipe is too low to ground level and has no barrier protection.

Discussion: Test/Inspection

Vent pipe needs to be raised twelve feet above ground level. Barriers need to be installed around vent pipe and filler pipe to protect from future damage.

Action: EG&G Maintenance Personnel will repair vent line and install barriers. Merrick will have Ryan/Murphy retest tank after repairs have been made.

C. TANK #2 BLDG. 124 WATER TREATMENT PLANT

Comment: Tank High Level Test Results: Indicated a vent pipe leak. Visual inspection showed leaks around ninety day tank and pump areas.

Discussion: Test/Inspection

EG&G would like to have this tank retested for reasons that fuel from the ninety day tank was siphoning back to the main tank. This may be the reason that the test indicated vent pipe leak. Leaks around ninety day tank and pump area should be repaired.

Action: EG&G Personnel will repair leaks around ninety day tank and pump area. Merrick will have Ryan/Murphy retest tank after repairs have been made.

D. TANK #9 BLDG. 443 STEAM PLANT

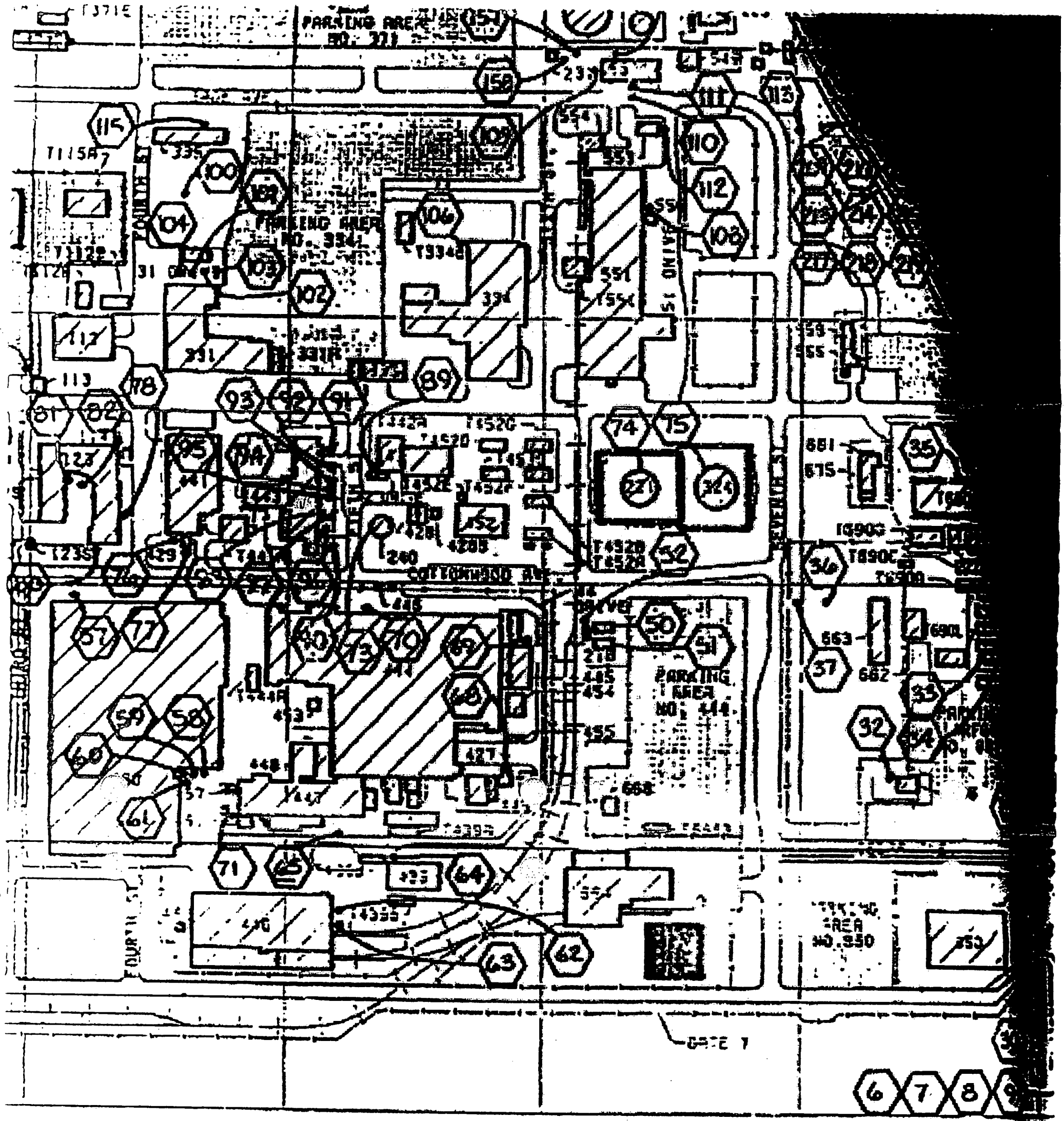
Comment: Tank High Level Test Results: Indicated a filler pipe leak. Visual inspection indicated fuel around filler pipe area.

Discussion: Test/Inspection

Filler pipe needs to be tighten, repaired, or replaced. Tank tester indicated fuel around filler pipe.

Action: EG&G Maintenance Personnel will repair filler pipe. Merrick will have Ryan/Murphy retest tank after repairs have been made.

cc: Attendees
R. Bawiec, EG&G, Rocky Flats, Inc.
D. Sweet, EG&G, Rocky Flats, Inc.
dasfile


PARKING AREA NO. 321
PARKING AREA NO. 334
PARKING AREA NO. 444
PARKING AREA NO. 350
COTTONWOOD AVE
1ST DRIVE
SEVENTH ST
FOURTH ST
GATE 7

SITE PLAN

UNDERGROUND STORAGE TANK SPECII | :S

Tank Numbering	Tank Designation	Substance	Size (Gal)	Material a/	Status	Installed	Interviewed	Drawings b/
1	120 SE	#2 Diesel	1,000	CS	in use	1985	R.Ringer	37184-026
2	124 S	#2 Diesel	500	FRP	in use	1971	R.Ringer	NA
3	127 W	#2 Diesel	550	FRP	in use	1978	R.Ringer	25741-6, 25741-002
4	381 E	#2 Diesel	48,750	FRP	in use	1977	C.Ross	25001-117
5	331 M-1	60% #2 Diesel & 40%] Diesel	6,000	FRP	in use	1971	R.Erwin	24974-3, 24974-8, 24974-6,28134-01
6	331 M-1A	60% #2 Diesel & 40%] Diesel	6,000	FRP	out of service, 1983	1971	R.Erwin	Same as 331 M-1
7	331 M-2	Unleaded Gas / Ethynol	6,000	FRP	in use	1971	R.Erwin	24974-3, 24974-8, 24974-6
8	331 M-3	Unleaded Gas / 10% Ethynol	18,800	CS	in use	1976	R.Erwin	24974-3, 28134-01, 28134-001, 284134-02, 28134-03
9	443 SE	Diesel	1,500	CS	in use	1970	J.Walker	20555-76, 20555-77
10	443 E-2	#6 Fuel Oil	20,000	CS	in use	1952	B.Abbott	14262-3
11	443 E-3	#6 Fuel Oil	20,000	CS	in use	1952	B.Abbott	14262-3
12	443 E-4	#6 Fuel Oil	20,000	CS	in use	1956	B.Abbott	14262-3
13	443 NE	#1 & #2 Diesel	2,133	FRP	in use	1976	B.Abbott	28082-1, 27058-6, 28082-2, 28081-2, 28080-1
14	559 NE	#2 Diesel	1,000	CS	in use	1967	A.Sempreban	NA
15	562 E	#2 Diesel	3,000	CS	in use	1975	J.Reed	23450-203, 23450-205, 25608-1, 23451-201
16	709 NW	#2 Diesel	4,000	CS	in use	1958	F.Hughes	RF-82-20221-04, 20221-09
17	718 SE	#2 Diesel	4,000	CS	out of service ?	1969	B.Fridges	NA
18	727 W	#2 Diesel	3,000	CS	in use	1975	J.Reed	23470-405, 23471-405
19	729 E	#2 Diesel	650	CS	in use	1974	J.Reed	19675-4, 19675-22
20	771 SE	#2 Diesel	3,000	CS	out of service, 1972	1952	J.Quayle	1-13295-71
21	771 S	#2 Diesel	5,260	FRP	in use	1973	J.Reed	25486-001, 25483-003
22	776 N	#2 Diesel	1,000	CS	in use	1985	J.Reed	28166-027, 37515-10
23	776 NW	Diesel	500 ?	CS	out of service	1968	J.Reed	28166-027, 37515-10
24	778 NE	#2 Diesel	500	CS	in use	1975	J.Reed	E-14019-5
25	807 S	#2 Diesel	2,000	CS	in use	1973	J.Lyons	21154-06
26	881 A-NE	#2 Diesel	1,000	CS	Abandoned	1956	J.Lyons	28086-1
27	881 S	#2 Diesel	2,100	CS	Abandoned, 1977	1956	J.Lyons	28086-1, 37004-251, 37004-202, 37004-254, 37004-200, 28086-2
28	881 S-1A	#6 Fuel Oil	21,000	CS	Abandoned, 1977	1959	J.Lyons	Same as 881 S
29	881 S-2A	#6 Fuel Oil	21,000	CS	Abandoned, 1977	1956	J.Lyons	Same as 881 S
30	881 S-3A	#6 Fuel Oil	21,000	CS	Abandoned, 1977	1956	J.Lyons	Same as 881 S
31	880 N	#2 Diesel	500	CS	Abandoned, 1979	1958	J.Lyons	25673-1
32	920 NW	#2 Diesel	1,000	CS	in use	1985	R.Ringer	37178-021
33	989 E	#2 Diesel	3,000	CS	in use	1973	R.Ringer	23495-402, 23490-402, 23492-401, 23491-401
34	371 FW-1	Potential Firewater	3,000	CS	in use	1976	C.Ross	25155-305
35	371 FW-2	Potential Firewater	3,000	CS	in use	1976	C.Ross	25155-305
36	429 1	Potential Firewater ?	3,000	CONC	Poss. abandoned, 1982	1953	W.Edwards	NA
37	561 FW	Potential Firewater	3,000	SST	in use	1973	A.Sempreban	23450-204, 23451-202
38	728 1	Potential Firewater	25,000	CONC	in use	1953	J.Quayle	23815-2
39	728 2	Potential Firewater	25,000	CONC	in use	1953	J.Quayle	23815-2
40	730 1	Potential Firewater	22,500	CONC	in use	1956	J.Reed	27830-D16, 25847-3, 28714-401, 28714-X11
41	730 2	Potential Firewater	22,500	CONC	in use	1956	J.Reed	Same as 730-1
42	730 3	Radionuclides	4,500	CONC	Abandoned, 1982	1956	J.Reed	Same as 730-1
43	730 4	Radionuclides	4,500	CONC	Abandoned, 1982	1956	J.Reed	Same as 730-1
44	730 CT	Carbon Tetrachloride	5,000	CS	removed	1953	J.Reed	NA
45	731 1	Secondary Containment	2,000	Upgraded to FRP	FRP tank in use	1960	J.George	27097-1, 27367-4, 23815-1, 27368-1, 27367-1, 27367-6, 27367-13
46	731 2	Secondary Containment	2,000	Upgraded to FRP	FRP tank in use	1960	J.George	27097-1, 27367-4, 23815-1, 27368-1, 27367-1, 27367-13, 27367-6
47	731 FW	Potential Firewater	1,000	SST	in use	1979	J.George	NA
48	771 C	Radionuclides	500	SST	Abandoned, 1984	1968	J.Quayle	NA
49	771 FW	Potential Firewater	3,000	CS	in use	1972	J.Quayle	26629-2, 25958-002, 25958-04
50	774	Radionuclides	30,000	CONC	Abandoned, 1982	1953	J.Gonzales	26629-1, RF-74-654-E, RF-7454-B
51	774 T-66	Radionuclides	12,550	CONC	RCRA subtitle C	1952	-	-
52	774 T-67	Radionuclides	12,550	CONC	RCRA subtitle C	1952	-	-
53	774 T-68	Radionuclides	30,850	CONC	RCRA subtitle C	1957	-	-
54	774 T-40	Radionuclides	7,200	CONC	RCRA subtitle C	1952	-	-
55	776 FW	Potential Firewater	3,000 ?	FRP	in use	1971	-	25846-1S, 25846-13S
56	782 FW	Potential Firewater	3,000	SST	in use	1973	J.Reed	23474-302, 23470-304, 23471-301
57	828 1	Radionuclides	250	SST	Abandoned, 1978	1954	-	23484-303, 23480-301
58	828 2	Radionuclides	250	SST	Abandoned, 1978	1964	-	23484-303, 23480-301
59	865 1	Radionuclides	3,000	CONC	Abandoned, 1982	1970	J.Morris	26377-4, 26378-3, 21151-04, 26378-X01, 21151-14
60	865 2	Radionuclides	3,000	CONC	Abandoned, 1982	1970	J.Morris	26377-4, 26378-3, 21151-04, 26378-X01, 21151-14
61	875 FW	Potential Firewater	3,000	SST	in use	1972	R.Roth	23484-302
62	889 W1	Radionuclides	1,000	CONC	in use as sump	1966	L.Chavez	26378-4
63	889 W2	Radionuclides	1,000	CONC	in use as sump	1966	L.Chavez	26378-4
64	985 FW	Potential Firewater	3,000	SST	in use	1973	J.Reed	23490-302
65	443 W-1	#6 Fuel Oil	20,000	CS	Poss. abandoned ?	1966	B.Abbott	-
66	891 SE	#2 Diesel	5,000	?	in use	1986	J.Lyons	37004-251, 37004-202, 37004-209, 37004-550, 37004-651

a/ Material: Conc = concrete; SST = stainless steel; CS = carbon steel; FRP = fiberglass reinforced plastic.
b/ Drawings: NA = not available; (-) = no information.

Enclosure 2

90-RF-Control #

REGULATORY STATUS OF TANKS

Tank No.	Tank Name	Contents	Operational Status	Regulatory Status
1 *	120 SE	Diesel	In use	Regulated by 7 CCR 1101-14
2 *	124 S	Diesel	In use	Regulated by 7 CCR 1101-14
3 *	127 W	Diesel	In use	Regulated by 7 CCR 1101-14
4 *	381 N	Diesel	In use	Regulated by 7 CCR 1101-14
5 *	331 N-1	Diesel	In use	Regulated by 7 CCR 1101-14
6 *	331 N-1A	Diesel	In use	Regulated by 7 CCR 1101-14
7 *	331 N-2	Gasoline	In use	Regulated by 7 CCR 1101-14
8 *	331 N-3	Gasoline	In use	Regulated by 7 CCR 1101-14
9 *	443 SE	Diesel	In use	Regulated by 7 CCR 1101-14
10	443 E-2	#6 Fuel Oil	In use	Heating Oil--Consumptive Use Not regulated by 7 CCR 1101-14
11	443 E-3	#6 Fuel Oil	In use	Heating Oil--Consumptive Use Not regulated by 7 CCR 1101-14
12	443 E-4	#6 Fuel Oil	In use	Heating Oil--Consumptive Use Not regulated by 7 CCR 1101-14
13 *	443 NE	Diesel	In use	Regulated by 7 CCR 1101-14
14 *	559 NE	Diesel	In use	Regulated by 7 CCR 1101-14
15 *	562 E	Diesel	In use	Regulated by 7 CCR 1101-14
16 *	709 NW	Diesel	In use	Regulated by 7 CCR 1101-14
17	718 SE	Diesel	OS **	Abandoned prior to December 22, 1988
18 *	727 W	Diesel	In use	Regulated by 7 CCR 1101-14
19 *	729 E	Diesel	In use	Regulated by 7 CCR 1101-14
20	771 SE	Diesel	OS **	Abandoned prior to December 22, 1988
21 *	771 S	Diesel	In use	Regulated by 7 CCR 1101-14
22 *	776 N	Diesel	In use	Regulated by 7 CCR 1101-14
23 *	776 NW	Diesel	In use	Regulated by 7 CCR 1101-14
24 *	779 NE	Diesel	In use	Regulated by 7 CCR 1101-14
25 *	827 S	Diesel	In use	Regulated by 7 CCR 1101-14
26	881 A-NE	Diesel	OS **	Abandoned prior to December 22, 1988
27	881 SE	Diesel	In use	Regulated by 7 CCR 1101-14
28	881 S-1A	#6 Fuel Oil	OS **	Abandoned prior to December 22, 1988
29	881 S-2A	#6 Fuel Oil	OS **	Abandoned prior to December 22, 1988
30	881 S-3A	#6 Fuel Oil	OS **	Abandoned prior to December 22, 1988
31	883 N	Diesel	OS **	Abandoned prior to December 22, 1988
32 *	920 NW	Diesel	In use	Regulated by 7 CCR 1101-14
33 *	989 E	Diesel	In use	Regulated by 7 CCR 1101-14
34	371 FW-1	Firewater	In use	Fully inspectable and contents not regulated by 7 CCR 1101-14
35	371 FW-2	Firewater	In use	Fully inspectable and contents not regulated by 7 CCR 1101-14
36	4291	Firewater	In use	Contents not regulated by 7 CCR 1101-14

Ash Pits

The ash pits consist of six sites associated with an incinerator (IHSS 133.5) that was located south of the west access road. The incinerator was used to burn general Rocky Flats wastes between the 1952 and 1968. Initially, the ashes and noncombustible material were placed around the incinerator and to the south near the concrete wash pad area (IHSS 133.6). Later, they were placed in pits (IHSSs 133.1-4 and PACs 1701 and 1702) to the east. These pits are approximately 150 to 200 feet long, 8 to 12 feet wide, and 8 to 10 feet deep. Each pit is covered with 0.5 to 2 feet of soil and native vegetation. Contaminated materials containing an estimated 100 grams of depleted uranium were burned in the incinerator and might be in the buried ash.

Data collected in the late 1980s and early 1990s as part of the Operable Unit 5 remedial investigation indicates that uranium-238, beryllium and lead are present above RFCA Tier I levels at four out of 48 borehole locations. Groundwater data indicate that lead and beryllium do not appear to be impacting groundwater and that there are sporadic cases of uranium isotopes slightly exceeding Tier II levels.

Nearby surface water locations have had contaminant concentrations above RFCA standards and action levels for aluminum, antimony, cadmium, copper, iron, lead , manganese, mercury, silver, americium-241, gross alpha, gross beta, and plutonium-239/240. Many of these may be from natural sources (aluminum, antimony, iron, manganese, and silver) or from other sources in the area. Of these, only lead has been found above Tier II levels in any of the 44 boreholes made in and around the Ash Pits. The lead concentrations (maximum of 8 mg/L) are slightly above the RFCA stream standards (6.5 mg/L). Further downgradient at SW027 (surface water point of evaluation) and at C-2 pond, the ash pit contaminants of concern have never been detected above RFCA surface water standards.

Potential Alternatives for the Ash Pits include the following:

No Further Action – The Ash Pits would be left undisturbed without any additional action except for monitoring.

Hot Spot Removal – the isolated area or areas with elevated contaminant concentrations would be removed, backfilled, and revegetated.

Total Removal – All waste above action levels would be removed from the area. (The baseline assumption is that all waste will be removed.)

Capping – A small cap or caps would be placed in areas with elevated soil concentrations to reduce percolation and run-off.

Table 2.X August 2001 Uranium Results For the Ash Pits

	Result	Unit	Minimum Detection Activity	Tier I Action Level	Tier II Action Level
Well 5686					
Uranium-233,-234	0.65	PCi/L	0.046	106	1.06
Uranium-235	U	PCi/L	0.060	101	1.01
Uranium-238	0.53	PCi/L	0.046	76.8	0.768
Well 58793					
Uranium-233,-234	0.84	pCi/L	0.15	106	1.06
Uranium-235	U	pCi/L	0.037	101	1.01
Uranium-238	0.66	pCi/L	0.13	76.8	0.768
Well 59093					
Uranium-233,-234	16.4	pCi/L	0.096	106	1.06
Uranium-235	0.46	pCi/L	0.017	101	1.01
Uranium-238	11.5	pCi/L	0.017	76.8	0.768
Well 55194					
Uranium-233,-234	1.47	pCi/L	0.11	106	1.06
Uranium-235	0.066	pCi/L	0.044	101	1.01
Uranium-238	1.79	pCi/L	0.016	76.8	0.768
Well 63093					
Uranium-233,-234	2.58	pCi/L	0.068	106	1.06
Uranium-235	0.093	pCi/L	0.048	101	1.01
Uranium-238	1.92	pCi/L	0.014	76.8	0.768

Above Tier II Values

Table XX: IHSS 133.2 Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	17400	mg/kg	11160	1000000.0	1000000	35373.17
Americium-241	5	pCi/g	0.3	215.0	38	0.02
Antimony	149	mg/kg	55.3	768.0	768	16.97
Arsenic	8	mg/kg	3.5	299.0	2.99	13.14
Barium	414	ug/Kg	151.7	133000.0	133000	289.38
Beryllium	131	mg/kg	16.4	104	1.04	14.2
Cadmium	25	mg/kg	10.7	1920.0	1920	1.7
Calcium	8580	mg/kg	3632.0			39382.27
Chromium	8310	mg/kg	429.7	44300.0	4410	68.3
Cobalt	68	mg/kg	11.3	115000.0	115000	29.04
Copper	1380	mg/kg	108.0	71100.0	71100	38.21
Gross Alpha	191	pCi/g	27.2			43.5
Gross Beta	662	pCi/g	65.8			36.8
Iron	85800	mg/kg	20031	576000.0	576000	41046.52
Lead	878	mg/kg	81.7	1000.0	1000	24.97
Lithium	14	mg/kg	7.6	38400.0	38400	34.66
Magnesium	4450	mg/kg	2714.0			9315.44
Manganese	1260	mg/kg	254	83600	83600	901.62
Mercury	0	mg/kg	0.0	576.0	576	1.52
Molybdenum	470	mg/kg	151.3	9610.0	9610	25.61
Nickel	4750	mg/kg	254.0	38400.0	38400	62.21
Plutonium-238	10	pCi/g	2.0			
Plutonium-239/240	1	pCi/g	0.3	1429.0	252	0.02
Potassium	2290	mg/kg	1573.9			6196.81
Selenium	1	mg/kg	1.0	9610.0	9610	4.8
Silver	190	mg/kg	65.5	9610.0	9610	24.54
Sodium	1200	mg/kg	274.9			1251.24
Strontium	44	mg/kg	26.5	1000000.0	1000000	211.38
Thallium	0	mg/kg	0.0			1.84
Tin	36	mg/kg	30.0	1000000	1000000	286.31
Uranium-234	106	pCi/g	8.5	1738	307	2.6
Uranium-235	38	pCi/g	2.0	0.9	24	0.12
Uranium-238	1160	pCi/g	58.7	586	103	1.5
Vanadium	57	mg/kg	32.6	13400	13400	88.49
Zinc	1290	mg/kg	170.4	576000	576000	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

Data Tables reformatted per Agency request to show "ghost" Trenches really do not have analytes of concern and really can be eliminated as agreed at previous meeting. "Confirmation Agencies did right thing." Tables will be numbered & put in '02 HRR.

TABLE XX: IHSS 133.2 "Ghost" Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	23200	mg/kg	14186.7	1000000.0	1000000	35373.17
Americium-241	0	pCi/g	0.0	215.0	38	0.02
Arsenic	17	mg/kg	5.1	299.0	2.99	13.14
Barium	272	ug/Kg	165.0	133000.0	133000	289.38
Beryllium	1	mg/kg	1	104	1.04	14.2
Cadmium	1	mg/kg	1.0	1920.0	1920	1.7
Calcium	9970	mg/kg	5362.7			39382.27
Chromium	28	mg/kg	16.8	44300.0	4410	68.3
Cobalt	15	mg/kg	9.5	115000.0	115000	29.04
Copper	34	mg/kg	16.4	71100.0	71100	38.21
Gross Alpha	41	pCi/g	23.9			43.5
Gross Beta	49	pCi/g	33.7			36.8
Iron	25400	mg/kg	18085.3	576000.0	576000	41046.52
Lead	27	mg/kg	14.1	1000.0	1000	24.97
Lithium	19	mg/kg	14.0	38400.0	38400	34.66
Magnesium	6900	mg/kg	4000.7			9315.44
Manganese	1070	mg/kg	360.9	83600	83600	901.62
Nickel	31	mg/kg	15.4	38400.0	38400	62.21
Plutonium-239/240	0	pCi/g	0.0	1429.0	252	0.02
Potassium	2660	mg/kg	1705.0			6196.81
Selenium	0	mg/kg	0.0	9610.0	9610	4.8
Silicon	237	mg/kg	97.8			
Sodium	1590	mg/kg	364.7			1251.24
Strontium	96	mg/kg	46.6	1000000.0	1000000	211.38
Thallium	0	mg/kg	0.0			1.84
Uranium-234	3	pCi/g	1.5	1738	307	2.6
Uranium-235	0	pCi/g	0.0	0.9	24.0	0.1
Uranium-238	2	pCi/g	1.6	586.0	103.0	1.5
Vanadium	51	mg/kg	33.3	13400.0	13400.0	88.5
Zinc	74	mg/kg	47.7	576000.0	576000.0	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

TABLE XX: IHSS 133.4 Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	21200	mg/kg	12253.6	1000000.0	1000000.0	35373.17
Americium-241	0	pCi/g	0.0	215.0	38.0	0.02
Antimony	28	mg/kg	16.0	768.0	768.0	16.97
Arsenic	8	mg/kg	3.9	299.0	3.0	13.14
Barium	637	mg/kg	199.9	133000.0	133000.0	289.38
Beryllium	4	mg/kg	2.1	104.0	1.0	14.2
Cadmium	42	mg/kg	18.3	1920.0	1920.0	1.7
Calcium	15100	mg/kg	6572.7			39382.27
Cesium	17	mg/kg	17.0			
Chromium	62	mg/kg	22.6	44300.0	4410.0	68.3
Cobalt	34	mg/kg	11.5	115000.0	115000.0	29.04
Copper	2520	mg/kg	609.5	71100.0	71100.0	38.21
Gross Alpha	363	pCi/g	109.6			43.5
Gross Beta	606	pCi/g	172.6			36.8
Iron	107000	mg/kg	29549.1	576000.0	576000.0	41046.52
Lead	935	mg/kg	149.2	1000.0	1000.0	24.97
Lithium	18	mg/kg	11.0	38400.0	38400.0	34.66
Magnesium	5190	mg/kg	3228.2			9315.44
Manganese	998	mg/kg	326.7	83600.0	83600.0	901.62
Mercury	1	mg/kg	0.25	576.0	576.0	1.52
Molybdenum	20	mg/kg	13.5	9610.0	9610.0	25.61
Nickel	93	mg/kg	32.7	38400	38400	62.21
Plutonium-239/240	1	pCi/g	0.1	1429.0	252.0	0.02
Potassium	2280	mg/kg	1416.1			6196.81
Silicon	368	mg/kg	316.0			
Silver	311	pCi/g	81.7	9610.0	9610.0	24.54
Sodium	1220	mg/kg	648.2			1251.24
Strontium	72	mg/kg	42.7	1000000.0	1000000.0	211.38
Thallium	0	mg/kg	0.0			1.84
Tin	579	mg/kg	168.0	1000000.0	1000000.0	286.31
Uranium-234	241	pCi/g	50.5	1738.0	307.0	2.6
Uranium-235	17	pCi/g	4.5	135.0	24.0	0.12
Uranium-238	848	pCi/g	150.1	586.0	103.0	1.5
Vanadium	60	mg/kg	33.0	13400.0	13400	88.49
Zinc	2390	mg/kg	531.2	576000.0	576000	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

Table XX: IHSS 133.4 "Ghost" Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	32800	mg/kg	17799.1	1000000.0	1000000.0	35373.17
Americium-241	0	pCi/g	0.0	215.0	38.0	0.02
Antimony	16	mg/kg	16.0	768.0	768.0	16.97
Arsenic	6	mg/kg	3.5	299.0	3.0	13.14
Barium	248	mg/kg	143.8	133000.0	133000.0	289.38
Beryllium	2	mg/kg	1.2	104.0	1.0	14.2
Cadmium	1	mg/kg	1.0	1920.0	1920.0	1.7
Calcium	31700	mg/kg	7304.5			39382.27
Chromium	34	mg/kg	19.6	44300.0	4410	68.3
Cobalt	22	mg/kg	10.4	115000.0	115000.0	29.04
Copper	26	mg/kg	18.9	71100.0	71100.0	38.21
Gross Alpha	34	pCi/g	18.9			43.5
Gross Beta	37	pCi/g	30.5			36.8
Iron	29700	mg/kg	17400.0	576000.0	576000.0	41046.52
Lead	25	mg/kg	13.5	1000.0	1000.0	24.97
Lithium	29	mg/kg	14.8	38400.0	38400.0	34.66
Magnesium	6000	mg/kg	3899.7			9315.44
Manganese	473	mg/kg	210.2	83600.0	83600.0	901.62
Mercury	0	mg/kg	0.0	576.0	576.0	1.52
Nickel	30	mg/kg	16.4	38400	38400	62.21
Plutonium-239/240	0	pCi/g	0.0	1429.0	252.0	0.02
Potassium	7040	mg/kg	2575.8			6196.81
Sodium	1370	mg/kg	453.5			1251.24
Strontium	72	mg/kg	45.6	1000000.0	1000000.0	211.38
Tin	5	mg/kg	3.5	1000000.0	1000000.0	286.31
Uranium-234	2	pCi/g	1.3	1738.0	307.0	2.6
Uranium-235	0	pCi/g	0.0	135.0	24.0	0.12
Uranium-238	3	pCi/g	1.4	586.0	103.0	1.5
Vanadium	94	mg/kg	39.1	13400.0	13400	88.49
Zinc	77	mg/kg	43.1	576000.0	576000	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

Table XX: IHSS 133.2 Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	17400	mg/kg	11160	1000000.0	1000000	35373.17
Americium-241	5	pCi/g	0.3	215.0	38	0.02
Antimony	149	mg/kg	55.3	768.0	768	16.97
Arsenic	8	mg/kg	3.5	299.0	2.99	13.14
Barium	414	ug/Kg	151.7	133000.0	133000	289.38
Beryllium	131	mg/kg	16.4	104	104	14.2
Cadmium	25	mg/kg	10.7	1920.0	1920	1.7
Calcium	8580	mg/kg	3632.0			39382.27
Chromium	8310	mg/kg	429.7	44300.0	4410	68.3
Cobalt	68	mg/kg	11.3	115000.0	115000	29.04
Copper	1380	mg/kg	108.0	71100.0	71100	38.21
Gross Alpha	191	pCi/g	27.2			43.5
Gross Beta	662	pCi/g	65.8			36.8
Iron	85800	mg/kg	20031	576000.0	576000	41046.52
Lead	878	mg/kg	81.7	1000.0	1000	24.97
Lithium	14	mg/kg	7.6	38400.0	38400	34.66
Magnesium	4450	mg/kg	2714.0			9315.44
Manganese	1260	mg/kg	254	83600	83600	901.62
Mercury	0	mg/kg	0.0	576.0	576	1.52
Molybdenum	470	mg/kg	151.3	9610.0	9610	25.61
Nickel	4750	mg/kg	254.0	38400.0	38400	62.21
Plutonium-238	10	pCi/g	2.0			
Plutonium-239/240	1	pCi/g	0.3	1429.0	252	0.02
Potassium	2290	mg/kg	1573.9			6196.81
Selenium	1	mg/kg	1.0	9610.0	9610	4.8
Silver	190	mg/kg	65.5	9610.0	9610	24.54
Sodium	1200	mg/kg	274.9			1251.24
Strontium	44	mg/kg	26.5	1000000.0	1000000	211.38
Thallium	0	mg/kg	0.0			1.84
Tin	36	mg/kg	30.0	1000000	1000000	286.31
Uranium-234	106	pCi/g	8.5	1738	307	2.6
Uranium-235	38	pCi/g	2.0	0.9	24	0.12
Uranium-238	1160	pCi/g	58.7	586	103	1.5
Vanadium	57	mg/kg	32.6	13400	13400	88.49
Zinc	1290	mg/kg	170.4	576000	576000	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

TABLE XX: IHSS 133.2 "Ghost" Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	23200	mg/kg	14186.7	1000000.0	1000000	35373.17
Americium-241	0	pCi/g	0.0	215.0	38	0.02
Arsenic	17	mg/kg	5.1	299.0	2.99	13.14
Barium	272	ug/Kg	165.0	133000.0	133000	289.38
Beryllium	1	mg/kg	1	104	1.04	14.2
Cadmium	1	mg/kg	1.0	1920.0	1920	1.7
Calcium	9970	mg/kg	5362.7			39382.27
Chromium	28	mg/kg	16.8	44300.0	4410	68.3
Cobalt	15	mg/kg	9.5	115000.0	115000	29.04
Copper	34	mg/kg	16.4	71100.0	71100	38.21
Gross Alpha	41	pCi/g	23.9			43.5
Gross Beta	49	pCi/g	33.7			36.8
Iron	25400	mg/kg	18085.3	576000.0	576000	41046.52
Lead	27	mg/kg	14.1	1000.0	1000	24.97
Lithium	19	mg/kg	14.0	38400.0	38400	34.66
Magnesium	6900	mg/kg	4000.7			9315.44
Manganese	1070	mg/kg	360.9	83600	83600	901.62
Nickel	31	mg/kg	15.4	38400.0	38400	62.21
Plutonium-239/240	0	pCi/g	0.0	1429.0	252	0.02
Potassium	2660	mg/kg	1705.0			6196.81
Selenium	0	mg/kg	0.0	9610.0	9610	4.8
Silicon	237	mg/kg	97.8			
Sodium	1590	mg/kg	364.7			1251.24
Strontium	96	mg/kg	46.6	1000000.0	1000000	211.38
Thallium	0	mg/kg	0.0			1.84
Uranium-234	3	pCi/g	1.5	1738	307	2.6
Uranium-235	0	pCi/g	0.0	0.9	24.0	0.1
Uranium-238	2	pCi/g	1.6	586.0	103.0	1.5
Vanadium	51	mg/kg	33.3	13400.0	13400.0	88.5
Zinc	74	mg/kg	47.7	576000.0	576000.0	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

1600330-00000510-208

326-79-0007

9THRR19 8 00007799

Industrial Hygiene Log 1962 1963 1964 1965 1966

6-12 - M Delmay, Jordan (Eng) Bostman meeting on filters for 41-106G hood. Also will check hood exhausts in 41-119

With safety at al on moving $Ni(CO)_4$ next Monday 6-17.

6-13. Possibility of Be reaching 41 stack from Rm 119 hoods. Duct sample ordered. Duct velocity 1200 fpm in a 12" ID duct - sample tube 3/8" ID - 0.98 cfm for isokinetics

6-13 - Purchasing requested Unico catalog - interested in gasoline powered ~~vacuum~~ pump, personal sampler - Material said generator not [illegible] - not on market.

6-17 - Nickel carbonyl removed from burial west of 71. 34-55 gal drums, one G1 Can with 2 bottles and six loose ones to pit east of nitrate ponds - vented with plastic explosives - wind light and very variable. Two samples in impinger with conc H_2SO_4 - one about 30 ft south and one 60 ft south of pit 1 cfm 1256 to 1400, 1420 to 1446 - total 90 min, 90 ft^3.

~~Side~~

6-18 - Continued above $Ni(CO)_4$ - used ~~sampler~~ same samples - ran 0832 - 0946 at 1 cfm 78 ft^3, total 168 ft^3. Heavy black smoke and gentle flame following detonation. Two samples 20 & 60 ft NW of pit, wind very gentle from E and SE. Samples showed trace of Ni only (probably ≈ 1 ug)

TABLE XX: IHSS 133.4 Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	21200	mg/kg	12253.6	1000000.0	1000000.0	35373.17
Americium-241	0	pCi/g	0.0	215.0	38.0	0.02
Antimony	28	mg/kg	16.0	768.0	768.0	16.97
Arsenic	8	mg/kg	3.9	299.0	3.0	13.14
Barium	637	mg/kg	199.9	133000.0	133000.0	289.38
Beryllium	4	mg/kg	2.1	104.0	1.0	14.2
Cadmium	42	mg/kg	18.3	1920.0	1920.0	1.7
Calcium	15100	mg/kg	6572.7			39382.27
Cesium	17	mg/kg	17.0			
Chromium	62	mg/kg	22.6	44300.0	4410.0	68.3
Cobalt	34	mg/kg	11.5	115000.0	115000.0	29.04
Copper	2520	mg/kg	609.5	71100.0	71100.0	38.21
Gross Alpha	363	pCi/g	109.6			43.5
Gross Beta	606	pCi/g	172.6			36.8
Iron	107000	mg/kg	29549.1	576000.0	576000.0	41046.52
Lead	935	mg/kg	149.2	1000.0	1000.0	24.97
Lithium	18	mg/kg	11.0	38400.0	38400.0	34.66
Magnesium	5190	mg/kg	3228.2			9315.44
Manganese	998	mg/kg	326.7	83600.0	83600.0	901.62
Mercury	1	mg/kg	0.25	576.0	576.0	1.52
Molybdenum	20	mg/kg	13.5	9610.0	9610.0	25.61
Nickel	93	mg/kg	32.7	38400	38400	62.21
Plutonium-239/240	1	pCi/g	0.1	1429.0	252.0	0.02
Potassium	2280	mg/kg	1416.1			6196.81
Silicon	368	mg/kg	316.0			
Silver	311	pCi/g	81.7	9610.0	9610.0	24.54
Sodium	1220	mg/kg	648.2			1251.24
Strontium	72	mg/kg	42.7	1000000.0	1000000.0	211.38
Thallium	0	mg/kg	0.0			1.84
Tin	579	mg/kg	168.0	1000000.0	1000000.0	286.31
Uranium-234	241	pCi/g	50.5	1738.0	307.0	2.6
Uranium-235	17	pCi/g	4.5	135.0	24.0	0.12
Uranium-238	848	pCi/g	150.1	586.0	103.0	1.5
Vanadium	60	mg/kg	33.0	13400.0	13400	88.49
Zinc	2390	mg/kg	531.2	576000.0	576000	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

Table XX: IHSS 133.4 "Ghost" Summary Table

	Maximum	Unit	Average	Tier I Action Level	Tier II Action Level	Background
Aluminum	32800	mg/kg	17799.1	1000000.0	1000000.0	35373.17
Americium-241	0	pCi/g	0.0	215.0	38.0	0.02
Antimony	16	mg/kg	16.0	768.0	768.0	16.97
Arsenic	6	mg/kg	3.5	299.0	3.0	13.14
Barium	248	mg/kg	143.8	133000.0	133000.0	289.38
Beryllium	2	mg/kg	1.2	104.0	1.0	14.2
Cadmium	1	mg/kg	1.0	1920.0	1920.0	1.7
Calcium	31700	mg/kg	7304.5			39382.27
Chromium	34	mg/kg	19.6	44300.0	4410	68.3
Cobalt	22	mg/kg	10.4	115000.0	115000.0	29.04
Copper	26	mg/kg	18.9	71100.0	71100.0	38.21
Gross Alpha	34	pCi/g	18.9			43.5
Gross Beta	37	pCi/g	30.5			36.8
Iron	29700	mg/kg	17400.0	576000.0	576000.0	41046.52
Lead	25	mg/kg	13.5	1000.0	1000.0	24.97
Lithium	29	mg/kg	14.8	38400.0	38400.0	34.66
Magnesium	6000	mg/kg	3899.7			9315.44
Manganese	473	mg/kg	210.2	83600.0	83600.0	901.62
Mercury	0	mg/kg	0.0	576.0	576.0	1.52
Nickel	30	mg/kg	16.4	38400	38400	62.21
Plutonium-239/240	0	pCi/g	0.0	1429.0	252.0	0.02
Potassium	7040	mg/kg	2575.8			6196.81
Sodium	1370	mg/kg	453.5			1251.24
Strontium	72	mg/kg	45.6	1000000.0	1000000.0	211.38
Tin	5	mg/kg	3.5	1000000.0	1000000.0	286.31
Uranium-234	2	pCi/g	1.3	1738.0	307.0	2.6
Uranium-235	0	pCi/g	0.0	135.0	24.0	0.12
Uranium-238	3	pCi/g	1.4	586.0	103.0	1.5
Vanadium	94	mg/kg	39.1	13400.0	13400	88.49
Zinc	77	mg/kg	43.1	576000.0	576000	139.1

	Above Background
	Above Tier II Values and Below Background
	Above Background and Tier II Values
	Above Tier I Values

Attachment 1 -

500-909 Release of Spent Photographic Fixer Solution
Confirmation Data

Meeting #2
11-14-01

RFP-1325.02 (Rev. 2/96)
Previously RF-46522

CORRES. CONTROL
INCOMING LTR NO.

642 RF 96

D
DATE

ACTION

DIST.	LTR	ENC
ALLEN, R.C.		
BENSUSSEN, S.J.		
BRENNAN, P.D.		
BRYNER, C.J.		
BUHL, T.R.		
CARD, R.G.		
DEAN, C.		
EVANS, B.L.		
FERRERA, D.W.		
GILLISON, W.R.		
HEDAHL, T.G.		
HERRING, C.L.		
HILL, J.A.	X	X
KELL, R.E.		
KELLY, G.M.		
MANI, V.		
MARTINEZ, L.A.		
McANALLY, J.L.		
McGOVERN, L.J.		
McKIBBIN, J.G.		
MEADOWS, S.M.		
NORTH, K.	X	X
O'BRIEN, G.D.		
SANDLIN, N.B.		
SHUMWAY, W.K.		
[illegible]S, M.S.		
[illegible]AN, M.		
[illegible] N.R.		
TURNER, K.A.		
VOORHEIS, G.M.		
WALLER, C.A.		
Pretzer D	X	X
Phillips, E	X	X

CORRES. CONTROL	X	X
ADMN RECORD/080		
PATS/T130G		

Reviewed for Addressee
Corres. Control RFP

5/8/96 DK
DATE BY

DOE ORDER # 5480.19

MAY 96 10:27

RFETS-CC-1

Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

MAY 7 1996

96-DOE-07503

Mr. Frederick W. Dowsett, PhD.
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Dear Mr. Dowsett:

In accordance with the site's RCRA Contingency Plan requirements, enclosed is the RCRA CPIR No. 96-001, which outlines the events and response actions associated with a discharge of spent photographic fixer solution resulting in a release of hazardous waste to the soil.

The Colorado Department of Public Health and the Environment (CDPHE) Emergency Management Unit was notified by telephone at 2:50 p.m. on April 23, 1996, that the RCRA Contingency Plan had been implemented. A facsimile containing a brief written description of the event was sent to CDPHE Hazardous Material and Waste Management Division and to the Environmental Protection Agency, Region VIII on April 23, 1996.

If you have any questions regarding this matter please call David Maxwell, of my staff, at 966-4017.

Sincerely,

Bob April

Bob April, Group Lead
Environmental Liaison Group

Enclosure

cc w/enc:
T. Rehder, EPA, Region VIII
J. Roberson, ESHPA, RFFO
D. Maxwell, ELG, RFFO
S. Tower, EA, RFFO
J. Hill, K-H
K. North, K-H
D. Pretzer, K-H

RCRA CONTINGENCY PLAN
Implementation Report No. 96-001
Rocky Flats Environmental Technology Site
Post Office Box 928
Golden , Colorado 80402
(303) 966-4017
Facility Contact: David Maxwell

Pursuant to 6 CCR 1007-3, Section 265.56(j) this report is being submitted to notify you that the RCRA Contingency Plan was implemented on April 23, 1996, due to a release of approximately five to six gallons of hazardous waste (D011) to soil west of Building 551.

The Colorado Department of Public Health and the Environment (CDPHE) Emergency Management Unit was notified by telephone at 2:50 p.m. on April 23, 1996, that the RCRA Contingency Plan had been implemented. A facsimile containing a brief written description of the event was sent to CDPHE Hazardous Material and Waste Management Division and to the Environmental Protection Agency, Region VIII on April 23, 1996.

At approximately 3:30 p.m. on April 22, 1996, workers discovered that a locked secondary containment system for a drum used to accumulate spent photographic fixer solution had overturned. The containment system and drum were immediately righted and the contents of the drum and containment system examined to determine whether a release had occurred. It was determined that approximately five to six gallons of the fixer solution (8.8 ppm TCLP silver) had been released.

Efforts were initiated within 24 hours to remove soil in the immediate area of impact. Approximately one 55-gallon drum of soil was removed and will be properly managed. Two composite soil samples were taken in the area after cleanup and verified that the contaminated soil had been completely removed. This incident did not result in any injury or potential hazard to human health or the environment.

Actions have been completed to secure the secondary containment to ensure that this incident will not recur.

The following documents are associated with this Cont. Plan 96-001:
Lab Reports: 96L184301
Lyonne Rezza 96L184302
x-5682 Y0006505510057

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories **Sample No.:** 1

Lab Sample ID: X-96L1842-01 West Side of 551, Liquid Spill Sample

Section: ICPAES

Lab Sample I.D.s beginning with X' indicates TCLP Extract.

% Solids for Sample : 0.1715

Date Sampled: 4/23/96 **SDG No. :** APR23

Lab Receipt Date: 4/23/96 **QC Report No.:** SD042396.RPT

Matrix:

Water	
Soil	
Sludge	
Other	X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q (N V * E O O S +)	M
Aluminum	928.9260	B		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.1603	B		P
Beryllium	0.0085	B		P
Cadmium	0.0200	U		P
Calcium	37.7127	B		P
Chromium	2.4387	B		P
Cobalt	0.0500	U		P
Copper	0.1000	U		P
Iron	11.4861	B		P
Lead	0.2308	B		P
Magnesium	3.5670	B		P
Manganese	0.3135	B		P
Molybdenum	0.0500	U		P
Nickel	1.0502	B		P
Phosphorus	0.5000	U		P
Selenium	0.2261	B		P
Silver	8.7505			P
Strontium	0.2250	B		P
Thallium	0.2991	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	0.7735	B		P

Color Before: Light Yellow **Clarity Before:** Cloudy

Color After: Light Yellow **Clarity After:** Clear

Texture:

Artifacts: Fine mesh white solids left on TCLP Filter.

Comments: Sample < 0.50 % solids. Therefore, the filtered sample is taken to be the final TCLP extract. Pressure filtration of the initial sample through a standard TCLP pressure filtration unit, containing a 0.7 micron borosilicate glass fiber filter, was performed to obtain the final TCLP filtered sample extract.

00018 N
6/19/9

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 2

Lab Sample ID: X-96L1843-01 West Side of 551, Solid Spill Sample

Section: ICPAES

Lab Sample I.D.s beginning with X' indicates TCLP Extract.

% Solids for Sample : 100.0000

Date Sampled: 4/23/96 SDG No. : APR23

Lab Receipt Date: 4/23/96 QC Report No.: SD042396.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q (N V * E O O S +)	M
Aluminum	0.7080	B		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.5050	B		P
Beryllium	0.0050	U		P
Cadmium	0.1301	B		P
Calcium	23.5156	B		P
Chromium	0.0500	U		P
Cobalt	0.0500	U		P
Copper	0.1000	U		P
Iron	0.4777	B		P
Lead	0.1312	B		P
Magnesium	1.6291	B		P
Manganese	1.0871	B		P
Molybdenum	0.0500	U		P
Nickel	0.0500	U		P
Phosphorus	0.5000	U		P
Selenium	0.0750	U		P
Silver	0.0300	U		P
Strontium	0.0692	B		P
Thallium	0.2438	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	0.8984	B		P

Color Before: Brown Clarity Before: Cloudy

Color After: Colorless Clarity After: Clear

Texture:

Artifacts: Fine mesh brown solids left on TCLP Filter.

Comments: Sample = 100 % solids. Pressure filtration of the TCLP solids extract through a standard TCLP pressure filtration unit, containing a 0.7 micron borosilicate glass fiber filter, was performed to obtain the TCLP final sample extract.

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories **Sample No.:** 3

Lab Sample ID: X-96L1843-02 West Side of 551, Solid Spill Sample

Section: ICPAES

Lab Sample I.D.s beginning with X' indicates TCLP Extract.

% Solids for Sample : 100.0000

Date Sampled: 4/23/96 **SDG No. :** APR23

Lab Receipt Date: 4/23/96 **QC Report No.:** SD042396.RPT

Matrix:

Water	
Soil	
Sludge	
Other	X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q (N V * E O O S +)	M
Aluminum	0.3538	B		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.7889	B		P
Beryllium	0.0050	U		P
Cadmium	0.0200	U		P
Calcium	282.1715	B		P
Chromium	0.0500	U		P
Cobalt	0.0500	U		P
Copper	0.1000	U		P
Iron	0.2516	B		P
Lead	0.0500	U		P
Magnesium	4.3258	B		P
Manganese	2.7693	B		P
Molybdenum	0.0500	U		P
Nickel	0.0500	U		P
Phosphorus	0.5000	U		P
Selenium	0.0750	U		P
Silver	0.0452	B		P
Strontium	0.2953	B		P
Thallium	0.2497	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	0.5418	B		P

Color Before: Brown **Clarity Before:** Cloudy

Color After: Colorless **Clarity After:** Clear

Texture:

Artifacts: Fine mesh brown solids left on TCLP Filter.

Comments: Sample = 100 % solids. Pressure filtration of the TCLP solids extract through a standard TCLP pressure filtration unit, containing a 0.7 micron borosilicate glass fiber filter, was performed to obtain the TCLP final sample extract.

ACTION LIST

QUARTERLY LETTER

YEAR	IHSS #	PAC #	NAME	ACTION	STATUS
2000		NE-1409	Modular Tanks	Correct the Tier I action level for methylene chloride as noted in the State's letter.	CLOSED: Confirmed the error may be in the actual RFCA Table, not in the reference. Action transferred to review and update of RFCA Attachment 5 if error exists.
2000	164.1	600-164.1	Radioactive Slab from B771	Clarify that the underlying PAC is really B771, not B776.	CLOSED:
2000		600-1001(a)	Waste Oil Identified in PAC 1001	Clarify that the underlying PAC (600-1001) will be investigated and the PAC 600-1001(a) is approved NFA.	CLOSED:
2000		100-607	B111 Transformer PCB Leak	In the October 2, 2001 letter from the State, it is stated that the Site did not propose PAC 100-607 as an NFA, hence no comments are being provided. PAC 100-607 had previously been proposed for NFA and both EPA and CDPHE concurred in a (dinuletter dated April 12, 2001. Clarify this to close the loop.	CLOSED:
2001		100-603	B123 Bioassay Waste Spill	There are this statements on pages 58 and 61 that will be corrected in the Quarterly Letter regarding rainwater and the presumption the site is an NFA.	CLOSED:

2002 ANNUAL REPORT

YEAR	IHSS#	PAC#	NAME	ACTION	STATUS
Q7		100-613	Asphalt Surface in Laydown Yard N of B130	Correct Appendix 1 to reference this write-up as being contained in Q4 rather than Q7.	
1997		700-1114b	Release during liquid transfer operations from B774.	Correct the reference to show it is associated with B765, not B774.	
1999		NW-170	PU&D Storage Yard waste spills.	Correct the write-up to remove references to Tier 1 and associated impacts as noted in 2/27/02 meeting (pg 42).	
2000	164.1	600-164.1	Radioactive Slab from B771	Correct the underlying PAC is really B771, not B776 in Appendix 1.	
2000	183	900-183	Gas Detoxification Area	Provide updated narrative to include reference to the 1995 Revised Closure Plan as discussed in the State's October 2, 2001 letter.	
2000	110	NE-110	Trench T-3	Provide an explanation of why the reference to the 2000g of lathe coolant was removed from the text in the recent HRR. Draft due prior to "02 HRR.	
2001	133.2 & 133.4	SW133.2 & SW133.4	Ash Pits 2 & 4	Insert "ghost" pit Tables and Map in '02 HRR.	
2001		400-812	Tank T-2 Spill in B460	If referenced in future, provide citation for regulatory limits in Table 2.9 as 6CCR1007-3 part 261.24 Table 1.	
2001	ALL		TANKS	In future, if discussing tanks; include in the write-up if it is above or below ground, whether it has been removed, etc.	
2001	B125 UBC		Building 125 UBC	Write-up (w/ noted revisions from 3/13/02 working group meeting) to be included.	
2001	ALL		ACTION LEVELS	For future reports; The footnotes to Tier I and Tier II should be included on any Table referencing these values.	

ADDITIONAL INFORMATION REQUESTS

YEAR	IHSS #	PAC #	NAME	ACTION	STATUS
1992		NE-1400	Tear Gas Release	State to check with chemist to verify NFA.	CLOSED: NFA (12/19)
1992		SE-1600	Pond 7 – Steam Condensate Releases	State to check with chemist to verify NFA.	**KH to provide additional information: exact location, existing sampling data, y/n disturbed during OU1 work.**
1992		SE-1601	Pond 8 – Cooling Tower Discharge Release	State to check with chemist to verify NFA.	**KH to provide additional information: exact location, existing sampling data, y/n disturbed during OU1 work.**
1992		000-501	Roadway Spraying	State to check with chemist to verify NFA.	CLOSED: NFA (12/19)
1992		100-600	Mercury Spill – Valve Vault 1244-B, B123	State to verify reference value prior to confirming a NFA.	CLOSED: NFA (12/19)
1992		300-707	Sanitizer Spill	State to check with chemist to verify NFA.	CLOSED: NFA (12/19)
1992		700-1110	Nickyl Carbonyl Burial West of B771	KH to provide copies of the cited references for review. Note: IHSS 150.2 overlays the area and requires further action.	KH provided additional data on December 19, for the State to review. **3/13/02: State request confirmation of time buried and chemical information wrt degradation.**
1992		900-1300	RO Plant Sludge Drying Beds	KH to confirm groundwater monitoring in the area as described in the text and provide to CDPHE.	KH provided additional data on December 19, for the State to review. State may want additional sample. **3/13/02: State will review notes and let us know their thoughts.**
Q7		NW-1504	Improper disposal of thorosilane-contaminated material and Landfill	Agencies to review thorosilane data (provided) with chemist. Anticipate NFA upon review.	CLOSED: NFA
Q7		100-613		Locate write-up and provide to Agencies.	CLOSED: Existed in Q4 rather than Q7. Reviewed at 2/27/02 meeting. NFA.

ADDITIONAL INFORMATION REQUESTS

YEAR	IHSS #	PAC #	NAME	ACTION	STATUS
Q7		NE-1411		Provide additional information to mimic 1410 write-up or evidence the spill was removed via another east trench area excavation.	CLOSED: Copies of pages from Ty's logbook provided to confirm spill was actually remediated. NFA.
Q11		900-1317	Soil Release in 964 Laydown Yard	KH to provide data referenced on page 8.	
1996	Transformer Sites			Determine evaluation criteria.	
1996	Transformer Sites			Develop ALF comparison table for internal review.	
1997		900-109	Ryan's Pit	The State will re-review the report for this area. KH will provide a table of residual contamination along with any other pertinent information.	
1997	216.2 & 216.3	NE-216.2 & NE- 216.3	East Spray Fields	Invite Gary out to review Air Photo and determine biased sampling locations for run-off areas.	CLOSED: Gary met with ALP and NSD after 2/27/02 meeting and identified six area for biased sampling.
2000	110	NE-110	Trench T-3	Provide an explanation of why the reference to the 2000g of lathe coolant was removed from the text in the recent HRR. Draft due prior to "02 HRR.	
2000		NE-1409	Modular Tanks	Determine if an error exists in RFCA Att 5 wrt methylene chloride. Revise Table if necessary	CLOSED: Carl met w/ Laura and RFCA is in error. The attachment will be revised in the future by the RFCA parties.
2001			Pg. 39 ALF Reference	KH to verify correct data and issue errata page	CLOSED: Per L. Brooks, date is correct. No errata sheet required.
2001	133.2 & 133.4 (Ghosts)	SW-133.2 & SW-133.4 (Ghosts)	Ghost Ash Pits 2 & 4	KH to provide confirmation data table showing all data from southern ghost pits are indeed below Tier II	CLOSED: KH provided tables as requested (12/19/01). Ghost pits to be removed from future maps et al.

ADDITIONAL INFORMATION REQUESTS

YEAR	IHSS #	PAC #	NAME	ACTION	STATUS
2001		300-206	Inactive D-836 Hazardous Waste Tank	Kaiser-Hill will provide additional information regarding tank contents and definition of "off-specification" in order for the Agencies to determine applicability of provided data set.	Provided Information at the 1/31/02 meeting. Remaining questions to answer regarding why Pu/Am were not COCs. CLOSED: Provided copies of relevant sections from the OU10 WP discussing COCs and explained the treatment process and actual step in process where the water becomes off-spec and was pumped to tanker. Questions were adequately addressed. NFA.
2001		700-1102	Transformer Leak – 776-4	Kaiser-Hill will provide a revised write-up clarifying the basis for the NFA proposal (impact to surface water would be negligible due to slow movement of PCBs in clays in the subsurface). In addition, references on pages 73 & 74 should be 2.22. Correct mis-statement regarding "clean" groundwater in the wells and verify screened interval for accuracy with respect to contamination depth.	DELAY UNTIL WHOLE DIOXIN-LIKE PCB ISSUE ADDRESSED (?) **3/13/02 KH presented a revised write-up justifying determination at this time. Carl with look into how the Arsenal handled the issue.**
2001		600-189	Nitric Acid Tank	KH to provide additional information regarding where from and integrity at closure. Reference D&D documents or closure report	CLOSED: Information presented at the 1/31/02 meeting. Agreed NFA.
2001	125 UBC		Building 125 UBC	State to send NFA Letter in support of D&D Activities.	
2001		800-179	B865 Drum Storage	Approved NFA, Verify not in deference to the OU 15 ROD.	CLOSED: ROD Declaration reviewed at 2/27/02 meeting and no reason the NFA can't be assigned.

ADDITIONAL INFORMATION REQUESTS

YEAR	IHSS #	PAC #	NAME	ACTION	STATUS
2001		800-180	B883 Drum Storage	Approved NFA, Verify not in deference to the OU 15 ROD.	CLOSED: ROD Declaration reviewed at 2/27/02 meeting and no reason the NFA can't be assigned.
ALL			RCRA Units	KH to prepare a list of PACs that also contain RCRA Units.	CLOSED: Provided to Carl at the 1/31/02 meeting.
GNRL			PIC List	Should they be discussed individually or as a group in this forum?	Put on 4/2/02 Agenda.
GNRL			RCRA Units	Invite L. Brooks and S. Serreze to the March meeting in order to discuss the RCRA Unit list provided to the State on 1/31/02.	CLOSED: Both confirmed their attendance at the meeting.

NFA'S

MEETING MINUTES

Subject: NFA Status Meeting
Date: October 24, 2001
Time: 2:00 – 4:00 p.m.
Location: EPA Conference Center

I PURPOSE

DOE explained the **purpose** of this meeting is to initiate a process for reviewing and coming to consensus on the disposition of the outstanding 118 proposed No Further Action Sites (NFAs). DOE would like to establish a schedule and format to conduct collaborative discussions regarding each proposed No Further Action Site (NFA). The intent is to come to agreement on each proposed NFA status. The burden is on Kaiser – Hill to prepare and present adequate information regarding a proposed NFA and the agencies then have the burden to make a decision.

Meeting **minutes** will be prepared after each meeting and sent in advance of the next meeting for review. Minutes will be amended as necessary and approved at the beginning of the following meeting.

DOE will prepare letters for CDPHE and EPA signature documenting the determinations made at each meeting. The letters will be prepared as necessary, but usually quarterly unless a significant number of NFAs are addressed earlier, at which time a letter will be sent. These letters will formally close out agreed upon NFAs and serve as the **formal record** to be submitted to the Administrative Record.

The State clarified that per RFCA Attachment 6, if institutional controls are being imposed, we are actually talking about No Further Remedial Action Sites **(NFRAs).** Only sites that are being released for unrestricted use can be documented as NFAs in a CAD/ROD. This was explained in the State's letter dated October 2, 2001, in response to the fiscal year 2000 Historical Release Report (HRR) proposed NFAs.

II Future Meeting Agenda

Kaiser – Hill walked through the proposed **Agenda**. There were no additions or deletions.

III Meeting Schedule and Locations

Kaiser – Hill walked through the proposed **schedule** of future meetings to address the NFA list. It was noted that all the meetings listed in January and out should be in the year 2002. It was also brought up that the meetings seem to fall on Stakeholder Meeting days and we should coordinate timing and locations. If meeting days are moved, we should look at other meetings to combine with as well for best efficiency of participants time. A new schedule will be distributed at the next meeting.

IV Master List of Outstanding Proposed NFA's

Kaiser – Hill distributed the **revised list** of outstanding NFAs. Two additional locations were added to the list previously faxed, PAC 300-156.1 and PAC 600-1001(a). The State asked if the IHSSs with-in the proposed footprint of the landfill cover were identified and prioritized. Kaiser – Hill agreed to confirm the list of affected IHSSs and/or PACs and provide input at the next meeting.

V Discussion of '00 Proposed NFA's

Kaiser – Hill explained that the list of NFAs proposed in the **'00 HRR** had been commented upon by the State but not EPA. The purpose of the following discussion was to clarify the State's responses, addressed the questions posed in the written response and provide additional information to EPA to assist in their review of the ten sites. *The stated concensus is pending EPA's review of these 10 sites which will be provided at the next meeting.* The proposed NFAs were reviewed in the order they appears on the Master List.

NE-1409	Modular Tanks	Kaiser – Hill discussed the differences in the two tables in response to the State's written question. CONCENSUS: Correct the Tier I action level for methylene chloride as noted in the State's letter and document in the Quarterly Letter.
300-156.1	Building 371 Parking Lot	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
600-164.1	Radioactive Slab from B771	CONCENSUS: No issues. Approved in State's October 2, 2001 letter. Clarify in Quarterly Letter that the PAC is really B771, not B776 and correct in Appendix 1 of 2002 HRR. [The 2000 HRR corrected this in the narrative (p.38) however the Appendix was never updated.]
600-1001(a)	Waste Oil identified in PAC 1001	Kaiser – Hill explained that the '00 HRR stated that the PAC had previously been approved but was included here as clarification. Upon review of the documentation however, the paperwork is not clean. The 1999 Agency letter regarding the '97 proposed NFA sites does not approve PAC 600-1001(a) as an NFA (it requests additional information), however the attachment to that letter does provide approval with the stated condition that the underlying PAC be investigated. CONCENSUS: Clarify in Quarterly Letter that the underlying PAC (600-1001) will be investigated and that PAC 600-1001(a) is approved as NFA.
700-123.1	Valve Vault 7	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-108	Trench T-1	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-1311	Septic Tank east of B991	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-1318	Release of F001 Water to Soil	CONCENSUS: No issues. Approved in State's October 2, 2001 letter.
900-183	Gas Detoxification Area	CONCENSUS: Provide updated section in the '02 HRR to include reference to the 1995 Revised Closure Plan as discussed in the State's October 2, 2001 letter.
NE-110	Trench T-3	CONCENSUS: The State needs an explanation of why the reference to the 2000g of lathe coolant was removed from the text in the recent HRR. Provide a written response and then revise the write-up per that response in the '02 HRR for a complete record.

In the October 2, 2001 letter from the State, it is stated that the Site did not propose PAC 100-607 as an NFA, hence no comments are being provided. PAC 100-607 had previously been proposed for NFA and both EPA and CDPHE concurred in a joint letter dated April 12, 2001. This will be clarified in the forthcoming Quarterly Letter.

The review was then directed to page 9 where a list of forty potential NFA sites begins. These sites were discussed in the original HRR and concurred with as NFAs by EPA. The State has discussed most of these locations with Kaiser – Hill but no formal concurrence has been received. The State agreed to initiate review of these forty sites and provide feedback at the next meeting.

VI List of NFA's for Next Meeting

The State and EPA will review the **eight non-transformer sites** proposed as NFA in the 1996 HRR. In addition, EPA will review the ten sites discussed above and CDPHE will initiate review of the forty sites previously reviewed by EPA. Kaiser – Hill will prepare/provide information of PACs requiring immediate review due to the potential landfill cover. The State requests information on PACs that contain RCRA Units as these need additional work to close via a change to Interim Status or through a permit modification.

VII Closing

It was noted we could potentially address fifty-eight PACs at the next meeting and substantially reduce the list of outstanding NFAs.

The **next meeting** will be November 14, 2001, at 8:30 a.m. in CDPHE's offices.

CONCURRENCE:

DOE

EPA

Carl Spreng
CDPHE

MEETING MINUTES

Subject: NFA Status Meeting
Date: November 14, 2001
Time: 8:30 – 11:30 a.m.
Location: CDPHE Offices

I ER Update

Kaiser – Hill reviewed the current status of the following documents:

ER RSOP - Revised copy to Agencies November 30, responses back December 7, 2001.
BZ SAP - Agencies currently have revised version for review.
IA Addendum – Gary requested a response to his comments. Carl stated a revised letter forthcoming approving all except 900-4&5. Lane said a response to Gary's comments (which involved 900-4&5) was being completed. Area 900-4&5 is being redone and will be submitted separately.

In addition, the following information was provided:

ER Closure Contracts awarded; URS and Envirocon. Expect Site mobilization this month. ER Group to be included in first wave of **offsite moves** sometime early this spring.
Buildings are falling !!! The three guard towers & B333 are down. B111 is on its way down. The B888 Guard shack will be coming down soon and the B886 complex will follow in April.
EM50/ASTD Submittal being finalized. Request Agency letter of support to include. Carl said he hoped to finalize one today.

II Correction of Prior Meeting' Minutes

There were no additions or deletions. The **minutes were approved** and signed.

III NFA Discussions

(A) Ten PACs from the **2000 HRR** were previously reviewed by the State and approved per comments in the prior meeting minutes' summary. The EPA concurred with this and agreed they were all no further action sites. The PACs are: NE-1409, 300-156.1, 600-164.1, 600-1001(a), 700-123.1, 900-108, 900-1311, 900-1318, 900-183 and NE-110. These actions are repeated in the following table since EPA consensus was provided at this meeting (Table 1).

(B) Eight PACs from the **1996 HRR** were reviewed by both the EPA and CDPHE in preparation for the meeting. Comments are summarized in the attached table (Table 2). Both CDPHE and EPA agreed all eight PACs are no further action sites. The PACs are: NE-166.1, NE-166.2, NE-166.3, NE-167.2, NE167.3, NE-216.1, 400-204 and 500-909.

(C) **Forty PACs** previously reviewed and approved as NFAs by the EPA in **1992** were reviewed by CDPHE. Thirty-one of the sites were concurred with as requiring no further action. Additional information was requested for three of the remaining nine PACs and the State needed to verify a few things regarding the remaining six. The attached table summarizes the information (Table 3).

IV List of NFA's for Next Meeting

The State and EPA will review the **eight Ash Pit sites** proposed as NFAs in the 2001 HRR and the **two East Spray Field sites** proposed as NFAs in the 1997 HRR. A revised data table for the Ash Pits was distributed to assist in the review.

At the last meeting, it was requested that Kaiser – Hill provide information regarding the PACs requiring immediate review due to the potential landfill cover. These PACs are NE-166.1, NE-166.2, NE-166.3, NE-167.2 and NE167.3. All of these were reviewed and concurred with as NFAs at this meeting.

The State also requested information on PACs that contain RCRA Units as these need additional work to close via a change to Interim Status or through a permit modification. Kaiser – Hill is still working on assembling this list.

V Closing

It was noted we agreed on forty-nine out of a possible fifty-eight PACs as NFAs. This was a great start towards cleaning up the outstanding list.

The **next meeting** will be December 5, 2001, at 2:00 p.m. in B060 Conference Room 112/113 at RFETS.

TABLE 1

2000 HRR	NE-1409	Modular Tanks	CONSENSUS: Approved NFA. Correct the Tier I action level for methylene chloride as noted in the State's letter and document in the Quarterly Letter.
	300-156.1	Building 371 Parking Lot	CONSENSUS: Approved NFA.
	600-164.1	Radioactive Slab from B771	CONSENSUS: Approved NFA. Clarify in Quarterly Letter that the PAC is really B771, not B776 and correct in Appendix 1 of 2002 HRR.
	600-1001(a)	Waste Oil identified in PAC 1001	CONSENSUS: Clarify in Quarterly Letter that the underlying PAC (600-1001) will be investigated and that PAC 600-1001(a) is approved as NFA.
	700-123.1	Valve Vault 7	CONSENSUS: Approved NFA.
	900-108	Trench T-1	CONSENSUS: Approved NFA.
	900-1311	Septic Tank east of B991	CONSENSUS: Approved NFA.
	900-1318	Release of F001 Water to Soil	CONSENSUS: Approved NFA.
	900-183	Gas Detoxification Area	CONSENSUS: Approved NFA. Provide updated section in the '02 HRR to include reference to the 1995 Revised Closure Plan as discussed in the State's October 2, 2001 letter.
	NE-110	Trench T-3	CONSENSUS: The State needs an explanation of why the reference to the 2000g of lathe coolant was removed from the text in the recent HRR. Provide a written response and then revise the write-up per that response in the '02 HRR for a complete record.

TABLE 2

1996 HRR	NE-166.1	Trench A	Groundwater exceedances were noted however the groundwater is not part of this NFA determination. Groundwater is being handled separately. The borehole data presented seems sufficient and they were shown to have passed the CDH conservative screen in 1996. CONSENSUS: Approved NFA.
	NE-166.2	Trench B	Groundwater exceedances were noted however the groundwater is not part of this NFA determination. Groundwater is being handled separately. The borehole data presented seems sufficient and they were shown to have passed the CDH conservative screen in 1996. CONSENSUS: Approved NFA.
	NE-166.3	Trench C	Groundwater exceedances were noted however the groundwater is not part of this NFA determination. Groundwater is being handled separately. The borehole data presented seems sufficient and they were shown to have passed the CDH conservative screen in 1996. CONSENSUS: Approved NFA.
	NE-167.2	Pond Area Spray Field (Center Area)	There has been a lot of sampling and have found nothing of consequence. CONSENSUS: Approved NFA.
	NE167.3	South Area Spray Field	There has been a lot of sampling and have found nothing of consequence. CONSENSUS: Approved NFA.
	NE-216.1	East Spray Fields – North Area	There has been a lot of sampling and have found nothing of consequence. CONSENSUS: Approved NFA.
	400-204.	Original Uranium Chip Roaster	There are other Sites within the complex trying to figure out alternatives to incineration. Might be able to sell them the two roasters. The site is located within the building and has already gone through RCRA closure. This PAC can be closed because any remaining CERCLA concerns will be addressed through the building UBC. CONSENSUS: Approved NFA.
	500-909.	Release of Spent Photographic Fixer Solution	The spilled fixer was dealt with at the time and samples were collected. The confirmation data is attached to these meeting minutes (Attachment 1). CONSENSUS: Approved NFA.

TABLE 3

1992 List	NE-1400	Tear Gas Powder Release	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	NE-1401	NE Buffer Zone Gas Line Break	CONSENSUS: Approved NFA.
	NE-1402	East Inner Gate PCB Spill	CONSENSUS: Approved NFA.
	NE-1403	Gasoline Spill – Building 920 Guard Post	CONSENSUS: Approved NFA.
	SE-1600	Pond 7 – Steam Condensate Releases	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SE-1601	Pond 8 – Cooling Tower Discharge Release	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SW-1700	Fuel Spill into Women Creek Drainage	CONSENSUS: Approved NFA.
	000-501	Roadway Spraying	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA, pending chemist review.
	100-600	Mercury Spill – Valve Vault 124-B, Building 123	The State believes this will go as an NFA but wants to confirm the provided reference value. CONSENSUS: Approved NFA pending reference review.
	100-601	B123 Phosphoric Acid Spill	CONSENSUS: Approved NFA.
	100-604	T130 Complex Sewer Line Leaks	CONSENSUS: Approved NFA.
	100-605	B115 Hydraulic Oil Spill	CONSENSUS: Approved NFA.
	100-606	B125 TCE Spill	CONSENSUS: Approved NFA.
	100-610	Asbestos Release – Building 123	CONSENSUS: Approved NFA.
	100-612	Battery Solution Spill – Building 119	CONSENSUS: Approved NFA.
	300-700	Scrap Roofing Disposal	CONSENSUS: Approved NFA.
	300-701	Sulfuric Acid Spill – Building 371	CONSENSUS: Approved NFA.
	300-703	Building 331 North Area	CONSENSUS: Approved NFA.
	300-704	Roof Fire, Building 381	CONSENSUS: Approved NFA.
	300-705	Potassium Hydroxide Spill North of Building 374	CONSENSUS: Approved NFA.
	300-706	Evaporator Tanks North of Building 374	CONSENSUS: Approved NFA.
	300-707	Sanitizer Spill	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	300-710	Gasoline Spill North of Building 331	CONSENSUS: Approved NFA.

TABLE 3, cont.

	400-805	Building 443 Tank #9 Leak	Kaiser – Hill to provide a more accurate description and differentiate this PAC from IHSS 129 to assist the State in their review. The State believes this will eventually go as an NFA but needs to review the additional information. CONSENSUS: No decision. Awaiting review of additional data.
	400-806	Catalyst Spill, Building 440	CONSENSUS: Approved NFA.
	400-808	Vacuum Pump Leak - Building 442	CONSENSUS: Approved NFA.
	400-809	Oil Leak - 446 Guard Post	CONSENSUS: Approved NFA.
	500-903	RCRA Storage Unit #1	CONSENSUS: Approved NFA.
	700-1107	Compressor Waste Oil Spill - Building 776	CONSENSUS: Approved NFA.
	700-1109	Uranium Incident - Building 778	CONSENSUS: Approved NFA.
	700-1110	Nickel Carbonyl Burial West of Building 771	Kaiser – Hill to provide copies of the cited references for review. Note: IHSS 150.2 overlays the area and requires further action. The State believes this will eventually go as an NFA but needs to review the additional information. CONSENSUS: No decision. Awaiting review of additional information.
	800-1202	Sulfuric Acid Spill, Building 883	CONSENSUS: Approved NFA.
	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	CONSENSUS: Approved NFA.
	800-1206	Fire, Building 883	CONSENSUS: Approved NFA.
	800-1211	Capacitor Leak, Building 883	CONSENSUS: Approved NFA.
	900-1300	RO Plant Sludge Drying Beds	Kaiser – Hill to confirm groundwater monitoring in the area as described in the text and provide to CDPHE. CONSENSUS: No decision. Awaiting review of additional information.
	900-1302	Gasoline Spill	CONSENSUS: Approved NFA.
	900-1303	Natural Gas Leak	CONSENSUS: Approved NFA.
	900-1304	Chromic Acid Spill - Building 991	CONSENSUS: Approved NFA.
	900-1305	Building 991 Roof	CONSENSUS: Approved NFA.

CONCURRENCE:

DOE EPA CDPHE

Attendance Sheet
NFA Meeting
Wednesday, November 14, 2001

Name	Organization	Phone	Fax
1. Norma Castaneda	DOE	966-4226	966-2995
2. Reg Tyler	DOE	966-5927	966-4728
3. Cesar O Mairy	DOE	966-3780	966-4728
4. Nick Demos	SSOC	966-4605	
5. Carl Spreng	CDPHE	303-692-3358	303-759-5355
6. LANE BUTLER	KH	303-966-5245	303-966-5180
7. GARY KLEEMAN	EPA	303-312-6246	303-312-6067
8. Maila Broussard	KH	303-966-6007	303-966-5180
9.			
10.			
11.			
12.			
13.			
14.			
15.			

Agenda

NFA Status Meeting
December 5, 2001 @ B060
2:00 – 4:00 p.m.

I ER Update (DOE/K-H)

II Correction of prior meetings' minutes and sign-off (KH)

III Interactive discussion of NFA justification (All)
- Eight Ash Pit sites from 2001 HRR
- Two East Spray Field sites from 1997 HRR

IV Summary of sites discussed and consensus reached for each location (K-H)

V List of sites for next meeting (K-H)

VI. Next meeting location and time (DOE)

Adjourn

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	
01/23/02	Group 5 at B060	2:00 to 4:00 p.m.	
02/06/02	Group 6 at EPA	2:00 to 4:00 p.m.	
02/20/02	Group 7 at CDPHE	2:00 to 4:00 p.m.	
03/06/02	Group 8 at B060	2:00 to 4:00 p.m.	
03/20/02	Group 9 at EPA	2:00 to 4:00 p.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

Attachment 1 -

500-909 Release of Spent Photographic Fixer Solution Confirmation Data

RFP-1323.03 (Rev. 2/96)
Previously RF-46522

CORRES. CONTROL
INCOMING LTR NO.

0642 RF 96

DUE
DATE

ACTION

DIST.	LTR	ENC
ALLEN, R.C.		
BENSUSSEN, S.J.		
BRENNAN, P.D.		
BRYNER, C.J.		
BUHL, T.R.		
CARD, R.G.		
DEAN, C.		
EVANS, B.L.		
FERRERA, D.W.		
GILLISON, W.R.		
HEDAHL, T.G.		
HERRING, C.L.		
HILL, J.A.	✓	X
KELL, R.E.		
KELLY, G.M.		
MANI, V.		
MARTINEZ, L.A.		
McANALLY, J.L.		
McGOVERN, L.J.		
McKIBBIN, J.G.		
MEADOWS, S.M.		
NORTH, K.	X	X
O'BRIEN, G.D.		
SANDLIN, N.B.		
SHUMWAY, W.K.		
SPE[illegible], M.S.		
ST[illegible]AN, M.		
T[illegible] N.R.		
TURNER, K.A.		
VOORHEIS, G.M.		
WALLER, C.A.		
Pretzer, D	X	X
Phillips, F	X	X
CORRES. CONTROL	X	X
ADMN RECORD/080		
PATS/T130G		

Reviewed for Addressee
Corres. Control RFP

5/8/96 DK
DATE BY

DOE ORDER # 5480.19

RFETS-CC-

MAY 96 10:27

Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

MAY 7 1996

96-DOE-07503

Mr. Frederick W. Dowsett, PhD.
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Dear Mr. Dowsett:

In accordance with the site's RCRA Contingency Plan requirements, enclosed is the RCRA CPIR No. 96-001, which outlines the events and response actions associated with a discharge of spent photographic fixer solution resulting in a release of hazardous waste to the soil.

The Colorado Department of Public Health and the Environment (CDPHE) Emergency Management Unit was notified by telephone at 2:50 p.m. on April 23, 1996, that the RCRA Contingency Plan had been implemented. A facsimile containing a brief written description of the event was sent to CDPHE Hazardous Material and Waste Management Division and to the Environmental Protection Agency, Region VIII on April 23, 1996.

If you have any questions regarding this matter please call David Maxwell, of my staff, at 966-4017.

Sincerely,

Bob April

Bob April, Group Lead
Environmental Liaison Group

Enclosure

cc w/enc:
T. Rehder, EPA, Region VIII
J. Roberson, ESHPA, RFFO
D. Maxwell, ELG, RFFO
S. Tower, EA, RFFO
J. Hill, K-H
K. North, K-H
D. Pretzer, K-H

RCRA CONTINGENCY PLAN
Implementation Report No. 96-001
Rocky Flats Environmental Technology Site
Post Office Box 928
Golden, Colorado 80402
(303) 966-4017
Facility Contact: David Maxwell

Pursuant to 6 CCR 1007-3, Section 265.56(j) this report is being submitted to notify you that the RCRA Contingency Plan was implemented on April 23, 1996, due to a release of approximately five to six gallons of hazardous waste (D011) to soil west of Building 551.

The Colorado Department of Public Health and the Environment (CDPHE) Emergency Management Unit was notified by telephone at 2:50 p.m. on April 23, 1996, that the RCRA Contingency Plan had been implemented. A facsimile containing a brief written description of the event was sent to CDPHE Hazardous Material and Waste Management Division and to the Environmental Protection Agency, Region VIII on April 23, 1996.

At approximately 3:30 p.m. on April 22, 1996, workers discovered that a locked secondary containment system for a drum used to accumulate spent photographic fixer solution had overturned. The containment system and drum were immediately righted and the contents of the drum and containment system examined to determine whether a release had occurred. It was determined that approximately five to six gallons of the fixer solution (8.8 ppm TCLP silver) had been released.

Efforts were initiated within 24 hours to remove soil in the immediate area of impact. Approximately one 55-gallon drum of soil was removed and will be properly managed. Two composite soil samples were taken in the area after cleanup and verified that the contaminated soil had been completely removed. This incident did not result in any injury or potential hazard to human health or the environment.

Actions have been completed to secure the secondary containment to ensure that this incident will not recur.

The following documents are associated with this Cont. Plan 96-001:
Lab Reports: 96L184301
Yvonne Mazza 96L184302
X-5682 Y0006505510057

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 1

Lab Sample ID: X-96L1842-01 West Side of 551, Liquid Spill Sample

Section: ICPAES

Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample : 0.1715

Date Sampled: 4/23/96 SDG No.: APR23

Lab Receipt Date: 4/23/96 QC Report No.: SD042396.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q	M
Aluminum	928.9260	B		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.1603	B		P
Beryllium	0.0085	B		P
Cadmium	0.0200	U		P
Calcium	37.7127	B		P
Chromium	2.4387	B		P
Cobalt	0.0500	U		P
Copper	0.1000	U		P
Iron	11.4861	B		P
Lead	0.2308	B		P
Magnesium	3.5670	B		P
Manganese	0.3135	B		P
Molybdenum	0.0500	U		P
Nickel	1.0502	B		P
Phosphorus	0.5000	U		P
Selenium	0.2261	B		P
Silver	8.7505			P
Strontium	0.2250	B		P
Thallium	0.2991	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	0.7735	B		P

Color Before: Light Yellow Clarity Before: Cloudy

Color After: Light Yellow Clarity After: Clear

Texture:

Artifacts: Fine mesh white solids left on TCLP Filter.

Comments: Sample < 0.50 % solids. Therefore, the filtered sample is taken to be the final TCLP extract. Pressure filtration of the initial sample through a standard TCLP pressure filtration unit, containing a 0.7 micron borosilicate glass fiber filter, was performed to obtain the final TCLP filtered sample extract.

00018 N
6/19/9

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 2

Lab Sample ID: X-96L1843-01 West Side of 551, Solid Spill Sample

Section: ICPAES

Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample : 100.0000

Date Sampled: 4/23/96 SDG No. : APR23

Lab Receipt Date: 4/23/96 QC Report No.: SD042396.RPT

Matrix: Water ___ Soil ___ Sludge ___ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q	M
Aluminum	0.7080	B		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.5050	B		P
Beryllium	0.0050	U		P
Cadmium	0.1301	B		P
Calcium	23.5156	B		P
Chromium	0.0500	U		P
Cobalt	0.0500	U		P
Copper	0.1000	U		P
Iron	0.4777	B		P
Lead	0.1312	B		P
Magnesium	1.6291	B		P
Manganese	1.0871	B		P
Molybdenum	0.0500	U		P
Nickel	0.0500	U		P
Phosphorus	0.5000	U		P
Selenium	0.0750	U		P
Silver	0.0300	U		P
Strontium	0.0692	B		P
Thallium	0.2438	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	0.8984	B		P

Color Before: Brown Clarity Before: Cloudy

Color After: Colorless Clarity After: Clear

Texture:

Artifacts: Fine mesh brown solids left on TCLP Filter.

Comments: Sample = 100 % solids. Pressure filtration of the TCLP solids extract through a standard TCLP pressure filtration unit, containing a 0.7 micron borosilicate glass fiber filter, was performed to obtain the TCLP final sample extract.

FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 3

Lab Sample ID: X-96L1843-02 West Side of 551, Solid Spill Sample

Section: ICPAES Lab Sample I.D.s beginning with X indicates TCLP Extract.

% Solids for Sample : 100.0000

Date Sampled: 4/23/96 SDG No. : APR23

Lab Receipt Date: 4/23/96 QC Report No.: SD042396.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	N V * E O O S + Q	M
Aluminum	0.3538	B		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.7889	B		P
Beryllium	0.0050	U		P
Cadmium	0.0200	U		P
Calcium	282.1715	B		P
Chromium	0.0500	U		P
Cobalt	0.0500	U		P
Copper	0.1000	U		P
Iron	0.2516	B		P
Lead	0.0500	U		P
Magnesium	4.3258	B		P
Manganese	2.7693	B		P
Molybdenum	0.0500	U		P
Nickel	0.0500	U		P
Phosphorus	0.5000	U		P
Selenium	0.0750	U		P
Silver	0.0452	B		P
Strontium	0.2953	B		P
Thallium	0.2497	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	0.5418	B		P

Color Before: Brown Clarity Before: Cloudy

Color After: Colorless Clarity After: Clear

Texture:

Artifacts: Fine mesh brown solids left on TCLP Filter.

Comments: Sample = 100 % solids. Pressure filtration of the TCLP solids extract through a standard TCLP pressure filtration unit, containing a 0.7 micron borosilicate glass fiber filter, was performed to obtain the TCLP final sample extract.

MEETING MINUTES

Subject: NFA Status Meeting
Date: December 5, 2001
Time: 2:00 – 4:00 p.m.
Location: RFETS Building 060

I ER Update

ER RSOP – KH explained they were waiting for final feedback to comment dispositions. Carl stated all his items were either addressed or adequately explained. Carl said stewardship issues were still outstanding with Steve Tarlton at the State. Gary's copy of the document was sent to the EPA offices Monday but he had not received it. He was provided an additional copy at this meeting to facilitate review.

Original Landfill – There was a conference call this morning with Bob Scheck and Carl Spreng to discuss the status of the project. It was agreed to have monthly meetings with the Site and Agencies to facilitate alternative selection in late Spring.

Other Topics – Carl did not get a response from the State chemist on the five questions pertaining to the 1992 sites. They will be delayed to the next meeting. Kaiser-Hill will defer discussion of two of the three sites they were to investigate until the next meeting as well.

It was stated that there is possibly a typo on page 39 of the 2001 HRR Update for the ALF reference date. Kaiser – Hill took the action to verify the correct date and issue an errata page if necessary. *NOTE: The March 21, 2000 date is the correct reference per L. Brooks, no errata page required.*

II Correction of Prior Meeting' Minutes

A corrected Table 1 was distributed. A clarification on Table 2 was requested: In the summary section for Trenches A, B, and C, the last sentence should be removed from each. In addition, *passes* should be changed to *passed* in the previous sentence. The **minutes were approved** and signed with the noted corrections.

III NFA Discussions

(A) Eight IHSSs from the 2001 HRR were reviewed. These include six **Ash Pit** sites, a concrete wash pad and the site of an old incinerator facility. An errata sheet was distributed for page 29 of the 2001 HRR Update to coincide with the corrected Table distributed at the previous meeting. In response to State questions, the Site affirmed the ash was all from the incinerator (IHSS 133.5) prior to 1968, and that the reason there is elevated uranium is likely due to B444. Carl reminded everyone that rethinking of subsurface action levels may impact decisions made regarding the ash pits and that we should proceed cautiously. Lane responded that while that is true, he believes they will all pass a risk evaluation as is the current thinking. The risks calculated for the ash pits as part of the OU5 RFI/RI risk assessment were in the 10^{-6} risk range or lower.

KH explained that two of the ash pits (133.2 & 133.4) have a second "ghost location" south of the true ash pit due to past activities and subsequent boundary revisions. It was requested that the Site be allowed to remove the old ghost locations from the maps and only address the real pits. This was concurred with by all as long as it is confirmed by KH that all existing data is really below Tier II in the southern trench footprints. The data was not previously presented in this format.

Detailed discussions of the individual site data followed. It was agreed that two of the eight locations were NFAs, two more would become NFAs following confirmation sampling and the remaining four sites were deferred pending subsurface action level outcome (see Table 1). If actions were required, then the remedial approach will be to excavate around the boreholes with exceedances and use in-process sampling to determine the extent of the excavation.

(B) The two **East Spray Field** IHSS's from the 1997 HRR were discussed. Kaiser – Hill distributed a new data package characterizing an area east and north of the existing IHSS's (Site 35 from the BZ contamination Report) used earlier this year to confirm the original boundary of IHSS 216.2 did not need to be expanded. The area was sampled for SW846 Total Metals in accordance with agreements made between the Site, EPA and CDPHE on January 10, 2001. The data shows there is nothing of concern in the area. The original data used in the 1997 summary is TCLP, which is not directly applicable. Kaiser – Hill then asked the State and EPA if the combination of the original TCLP data and the newly acquired Totals data from the adjacent area, also impacted by spraying in the same year, was sufficient to make an NFA determination. Both Carl and Gary said they would evaluate the data further and then make a decision.

(C) At the previous meeting, the State requested additional information regarding **PAC 400-805 (Building 443 Tank #9 Leak).** This included clarification of the location and differentiation from IHSS 129 (Tank #'s 1-4). Kaiser – Hill provided a Site location map showing the diesel fuel tank (Tank #9) as being completely separate from the #6 fuel oil tanks (Tanks 1-4). Also provided was the historical information referenced in the original HRR Document. The PAC was concurred with as a NFA site.

IV List of NFA's for Next Meeting

The State and EPA will review the remaining **eight sites** proposed as NFAs in the 2001 HRR Update (PACs 100-603, 300-206, 400-812, 600-189, 700-1102, 800-179, 800-180,and 900-1308) and the **three sites** associated with the present landfill proposed as NFAs in the 7th Quarterly HRR Update (NW-1502, NW-1503, and NW-15-04).

There remain **seven PACs** carried over from the previous meeting to close out with the State and **the East Spray Fields** from this meeting to close out with both the EPA and State.

The State also requested information on PACs that contain RCRA Units as these need additional work to close via a change to Interim Status or through a permit modification. Kaiser – Hill continues to work on assembling this list.

V Closing

It was noted we again made progress and that these meetings have been very helpful.

The **next meeting** will be December 19, 2001, at 2:00 p.m. in the EPA Conference Center.

CONCURRENCE:

DOE EPA CDPHE

TABLE 1

2001 HRR	SW-133.1	Ash Pit 1	Uranium 238 was detected above Tier I and Tier II action levels in the central part of the pit. Metals were above background but below Tier II. The aggregate from all data will probably fall below action levels. Could do hotspot removals for area above Tier I but since existing action levels are based on human health and not directly applicable to the subsurface, there is currently no clear path forward. CONSENSUS: Determination on hold pending subsurface action level outcome.
	SW-133.2	Ash Pit 2	Kaiser – Hill will verify data for this pit. Believe there are additional results that exceeded action levels. CONSENSUS: Approved NFA if no Tier I exceedances (Be @ 23 accepted); The determination is on hold pending subsurface action level outcome if there are exceedances. *NOTE: KH confirmed additional results were above Tier I; hence the determination is deferred.*
	SW-133.3	Ash Pit 3	This pit is immediately adjacent to 133.1. There are six data points (4 in the pit, 1 outside & 1 from a downgradient well) characterizing the site and all are below Tier II except arsenic and beryllium which do exceed Tier II but are below the Site backgound values. CONSENSUS: Approved NFA.
	SW-133.4	Ash Pit 4	There are Tier I exceedances. CONSENSUS: Determination on hold pending subsurface action level outcome.
	SW-133.5	Incinerator Facility	The building and ash were previously removed with the ash temporarily staged adjacent to the old building for some period of time. The area includes a very steep slope which limited previous sampling efforts. Sampling was concentrated down slope where it thought any contaminants would have been carried. Nothing was identified in the downgradient areas. CONSENSUS: Take five (5) additional surface soil samples where actually thought the incinerator pad was located, one (1) in the pad area and four (4) around the old pad location and south of the area. The samples will be composites (0 – 6" and 6 – 12") and analyzed for uranium, beryllium and lead. If all data are below Tier II, the IHSS will be an NFA.
	SW-133.6	Concrete Wash Pad	All data was below Tier II. CONSENSUS: Approved NFA pending post concrete removal surveys and confirmation samples under the slab.
	SW-1701	Recently Identified Ash Pit (TDEM-1)	Determined to be a real pit but no contamination found. All analyses were at background. CONSENSUS: Approved NFA.
	SW-1702	Recently Identified Ash Pit (TDEM-2)	There are Tier I exceedances. CONSENSUS: Determination on hold pending subsurface action level outcome.

Attendance Sheet
NFA Meeting
Wednesday, December 5, 2001

Name	Organization	Phone	Fax
Marla Broussard	KH-ER	303-966-6007	303-966-5180
Lisa O'Mery	DOE/ER	966-3780	966-2995
3. Nick Demos	SSOL/ER	966-4605	966-5180
Norma Castaneda	DOE/ER	966-4226	966-2995
5. Reg Tyler	DOE/ER	966-5927	966-4728
6. Gary Kleeman	EPA	303 312 6246	x6067
Lane Butler	KH	303 966-5245	5180
8. Annette Primrose	KH	303 966-4585	5180
9. Carl Spreng	CDPHE	303-692-3358	303-759-5365
10.			
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KAISER-HILL COMPANY, LLC

Environmental Restoration
Rocky Flats Environmental Technology Site
10808 Hwy. 93, Unit B, Golden, CO 80403-8200

Fax

To:	Reg Tyler	**From:**	Marla Broussard
Fax:	x4728	**Pages:**	~~22~~ 4 + cover
Phone:	x5927	**Date:**	01/08/02
Re:	NFA Meeting minutes	**CC:**	

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

• **Comments:**

MEETING MINUTES

Subject: NFA Status Meeting
Date: December 19, 2001
Time: 2:00 – 4:00 p.m.
Location: EPA Conference Center

For Signature

I ER Update

ER RSOP – There is a meeting scheduled for tomorrow to resolve all remaining issues. No one leaves until there is concurrence.

BZ SAP – The final copy is being put together. The Windsite is not included in the Site boundary definition.

EM-50 Funding – The Site was successful (per a verbal announcement) in obtaining EM-50 funds for the ET cover (.5M in FY'02 and 2.5M in FY'03).

Solar Ponds – ER would like to discuss a path forward with both the State and EPA regarding data to support no action at the solar ponds; just push in the berms. Elizabeth stated that there is a USGS study that showed no precipitate below groundwater, need to check with Chris on its conclusiveness. Carl stated since there is no human health risk the only concern is any pathway to surface water. The 10^{-6} risk base for the landfill (Att 10) is ok once define subsurface pathways. Need to compare the IASAP requirements to what is in the Solar Ponds Area. Lane said he would be following up soon since ER wants to push in the berms this summer and must know if a subsurface action is required prior to that time.

IA SAP Addendum for 900-4&5 – The Site inquired if the Agencies are ready to approve since the clock has run out and no comments have been received.

B123 RSOP Notification – The Draft is out for review. Hope to officially transmit final in early Janaury.

B335 and B442 – Both are being accelerated by D&D so the associated UBC/IHSS would follow. ER is awaiting funding to add the scope.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) Revised tables were distributed showing the data broken out between the 133.2 and 133.4 real and "ghost" **Ash Pit** sites. There was consensus that the data supports elimination of the two "ghost" pits as discussed at the previous meeting.

(B) There were eight sites carried over from the **1992 list** that were further discussed. Four of the sites were concurred with as NFAs, NE-1400, 000-501, 100-600, and 300-707. Kaiser – Hill provided additional information for two sites, 700-1110 and 900-1300, which the State will review for the January meeting. The last two Sites, SE-1600 and SE-1601, are still awaiting confirmation by the State's chemist. A complete list of the updated status of the 1992 sites is included in Table 1. Updates based on this meeting are in bold.

(C) The two **East Spray Field** IHSS's from the 1997 HRR were again deferred. The State and EPA will evaluate the data further to make a decision on whether the existing data is sufficient to make a NFA determination for these IHSSs.

(D) New Discussion occurred regarding the **eight remaining sites proposed as NFA in the 2001 HRR**. Five of these (PACs 100-603, 400-812, 800-179, 800-180, and 900-1308) were agreed upon as NFAs, and the remaining three (PACs 300-206, 600-189 & 700-1102) could possibly go as NFAs once additional questions can be answered. See Table 3 for details.

(E) **Three sites associated with the Present Landfill** proposed as NFA in the 7th Quarterly Update were reviewed. Two of these sites (NW-1502 & NW-1503) were accepted as NFAs and the third (NW-1504) is awaiting concurrence by the State's chemist. See Table 2 for details.

IV List of NFA's for Next Meeting

The State will ~~review~~ complete its' review of the final **four locations from the 1992 list** (700-1110, 900-1300, SE-1600 and SE-1601) Both the State and EPA will complete review of **the East Spray Fields** from the 1997 HRR and the **thorosilane site** (NW-1504) from the 7th HRR Quarterly Update.

Kaiser – Hill will present the requested data for the **three remaining sites from the 2001 HRR** and discuss as appropriate.

The new locations for review include the **18 transformer sites from the 1996 HRR** and the **6 remaining sites from the 7th HRR Quarterly Update.**

The State also requested information on PACs that contain **RCRA Units** as these need additional work to close via a change to Interim Status or through a permit modification. Kaiser – Hill continues to work on assembling this list and may have it prepared by the next meeting.

V Closing

It was noted we again made progress and that these meetings have been very helpful.

The **next meeting** will be January 31, 2002, at 11:30 a.m. in B060/Rm 114.
(Note: If the Focus Group meeting ends earlier, we will begin at 11:00 a.m. in their room.)

CONCURRENCE:

DOE	**EPA**	Carl Spreng **CDPHE**

TABLE 1

1992 List	**NE-1400**	**Tear Gas Powder Release**	**CONSENSUS: Approved NFA.**
	NE-1401	NE Buffer Zone Gas Line Break	CONSENSUS: Approved NFA.
	NE-1402	East Inner Gate PCB Spill	CONSENSUS: Approved NFA.
	NE-1403	Gasoline Spill – Building 920 Guard Post	CONSENSUS: Approved NFA.
	SE-1600	Pond 7 – Steam Condensate Releases	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SE-1601	Pond 8 – Cooling Tower Discharge Release	The State believes this will go as an NFA but wants to confer with the chemist. CONSENSUS: Approved NFA pending chemist review.
	SW-1700	Fuel Spill into Women Creek Drainage	CONSENSUS: Approved NFA.
	000-501	**Roadway Spraying**	**CONSENSUS: Approved NFA.**
	100-600	**Mercury Spill – Valve Vault 124-B, Building 123**	**CONSENSUS: Approved NFA.**
	100-601	B123 Phosphoric Acid Spill	CONSENSUS: Approved NFA.
	100-604	T130 Complex Sewer Line Leaks	CONSENSUS: Approved NFA.
	100-605	B115 Hydraulic Oil Spill	CONSENSUS: Approved NFA.
	100-606	B125 TCE Spill	CONSENSUS: Approved NFA.
	100-610	Asbestos Release – Building 123	CONSENSUS: Approved NFA.
	100-612	Battery Solution Spill – Building 119	CONSENSUS: Approved NFA.
	300-700	Scrap Roofing Disposal	CONSENSUS: Approved NFA.
	300-701	Sulfuric Acid Spill – Building 371	CONSENSUS: Approved NFA.
	300-703	Building 331 North Area	CONSENSUS: Approved NFA.
	300-704	Roof Fire, Building 381	CONSENSUS: Approved NFA.
	300-705	Potassium Hydroxide Spill North of Building 374	CONSENSUS: Approved NFA.
	300-706	Evaporator Tanks North of Building 374	CONSENSUS: Approved NFA.
	300-707	**Sanitizer Spill**	**CONSENSUS: Approved NFA.**
	300-710	Gasoline Spill North of Building 331	CONSENSUS: Approved NFA.
	400-805	Building 443 Tank #9 Leak	CONSENSUS: Approved NFA.
	400-806	Catalyst Spill, Building 440	CONSENSUS: Approved NFA.
	400-808	Vacuum Pump Leak - Building 442	CONSENSUS: Approved NFA.
	400-809	Oil Leak - 446 Guard Post	CONSENSUS: Approved NFA.
	500-903	RCRA Storage Unit #1	CONSENSUS: Approved NFA.
	700-1107	Compressor Waste Oil Spill - Building 776	CONSENSUS: Approved NFA.

TABLE 1 cont.

	700-1109	Uranium Incident - Building 778	CONSENSUS: Approved NFA.
	700-1110	**Nickel Carbonyl Burial West of Building 771**	**Kaiser – Hill provided copies of the cited references for review. Note: IHSS 150.2 overlays the area and requires further action. The State believes this will eventually go as an NFA but needs to review the additional information.** **CONSENSUS: No decision. Awaiting review of additional information.**
	800-1202	Sulfuric Acid Spill, Building 883	CONSENSUS: Approved NFA.
	800-1203	Sanitary Sewer Line Break Between Buildings 865 and 886	CONSENSUS: Approved NFA.
	800-1206	Fire, Building 883	CONSENSUS: Approved NFA.
	800-1211	Capacitor Leak, Building 883	CONSENSUS: Approved NFA.
	900-1300	**RO Plant Sludge Drying Beds**	**Kaiser – Hill provided groundwater monitoring information for the area.** **CONSENSUS: No decision. Awaiting review of additional information.**
	900-1302	Gasoline Spill	CONSENSUS: Approved NFA.
	900-1303	Natural Gas Leak	CONSENSUS: Approved NFA.
	900-1304	Chromic Acid Spill - Building 991	CONSENSUS: Approved NFA.
	900-1305	Building 991 Roof	CONSENSUS: Approved NFA.

TABLE 2

7th HRR Quarterly Update	NW-1502	Improper disposal of diesel contaminated material at Landfill	CONSENSUS: Approved NFA
	NW-1503	Improper disposal of fuel contaminated material at Landfill	CONSENSUS: Approved NFA
	NE-1504	Improper disposal of thorosilane contaminated material at Landfill	CONSENSUS: Agencies to review thorosilane data (provided) with chemist. Anticipate NFA upon review.

TABLE 3

2001 HRR	100-603	B123 Bioassay Waste Spill	There are mis-statements on pages 50 and 51 that will be corrected in the Quarterly Letter regarding rainwater and the presumption the site is an NFA. CONSENSUS: Approved NFA.
	300-206	Inactive D-836 Hazardous Waste Tank	CONCENSUS: Kaiser – Hill will provide additional information regarding tank contents and definition of "off-specification" in order for the Agencies to determine applicability of provided data set. In future, if discussing tanks; include in the write-up if it is above or below ground, whether it has been removed, etc.
	400-812	Tank T-2 Spill in B460	If referenced in future, provide citation for regulatory limits in Table 2.9 as 6CCR1007-3 part 261.24 Table 1. CONSENSUS: Approved NFA.
	600-189	Nitric Acid Tank	CONSENSUS: Kaiser – Hill to provide additional information regarding where from and integrity at closure. Reference D&D documents or tank release report. Upon review, the site should go NFA. For future reports; The footnotes to Tier I and Tier II should be included on any Table referencing these values.
	700-1102	Transformer Leak-776-4	CONSENSUS: Kaiser – Hill to provide a revised write-up clarifying the basis for the NFA proposal [impact to surface water would be negligible due to slow movement of PCBs in clays in the subsurface. The PCBs would degrade long before they hit surface water. (seepage rate is 0.2 feet /year)] and then this site can probably go NFA. In addition, references on pages 73 & 74 should be 2.22. Correct mis-statement regarding "clean" groundwater in the wells and verify screened interval for accuracy with respect to contamination depth.
	800-179	B865 Drum Storage	CONSENSUS: Approved NFA (Verify not in deference to the OU15 ROD)
	800-180	B883 Drum Storage	CONSENSUS: Approved NFA. (Verify not in deference to the OU15 ROD)
	900-1308	Gasoline Spill outside B980	CONSENSUS: Approved NFA

Attendance Sheet
NFA Meeting
Wednesday, December 19, 2001

Name	Organization	Phone	Fax
Lisa O'Mary	DOE	303-966-3780	303-966-2994
2. Reg Tyler	DOE	303-966-5927	303-966-4728
3. Gary Kleeman	EPA	303 312 6246	303 312 6067
4. Elizabeth Pottorff	CDPHE	303-692-3429	303-759-5355
5. Carl Spreng	CDPHE	303-692-3358	303-759-5355
6. Lane Butler	KH	303-966-5245	303-966-5180
7. Nick Demos	SSOC	303-966-4605	303-966-5180
8. Marla Broussard	KH	303-966-6009	303-966-5180
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Agenda

NFA Status Meeting
January 31, 2002 @ RFETS
11:30 a.m. – 1:00 p.m.

I ER Update (DOE/K-H)

II Correction of prior meetings' minutes and sign-off (KH)

III Review of Draft Quarterly Letter
- Explanation of reference used in NE-1409

IV Interactive discussion of NFA justification (All)
- Four sites carried over from the 1992 IHSS List
- Two East Spray Field sites carried over from 1997 HRR Update
- Three Sites carried over from 2001 HRR Update
- Eighteen transformer sites from the 1996 HRR Update
- Six remaining sites from the 7th Quarterly HRR Update

V Summary of sites discussed and consensus reached for each location (K-H)

VI List of sites for next meeting (K-H)

VII Next meeting location and time (DOE)

Adjourn

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:00 to1:00 p.m.	
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	
02/27/02	Group 7 at CDPHE	2:00 to 4:00 p.m.	
03/13/02	Group 8 at B060	2:00 to 4:00 p.m.	
04/03/02	Group 9 at EPA	2:00 to 4:00 p.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

BOLD DATES These have been changed from the original schedule

MEETING MINUTES

Subject: NFA Status Meeting
Date: January 31, 2002
Time: 11:30 – 2:00 p.m.
Location: RFETS

I ER Update

ER RSOP – The State approved the document and DOE is working with EPA to close their remaining issue. Approval is expected in February.

Pathway Analysis – Kaiser – Hill is working on a pathway analysis to evaluate the subsurface.

Building 889 – The DOE lead is Lisa O'Mary and Elizabeth Pottorff is the State lead. The notification requires 30-days because it contains a RCRA unit.

Quarterly Letter – The draft letter was reviewed and edits made. The CDPHE took the lead to finalize the joint Agency letter and issue to DOE. PAC NE-1409 was further discussed. The Site referenced published action levels from Appendix 5 of RFCA in a previous write-up. It appears the value in RFCA may be incorrect for methylene chloride. Carl took the action to verify the correct value with Laura Brooks. The discrepency does not affect the NFA determination agreed to for this PAC. The Quarterly letter will not contain a corrected value. If an error exists, Attachment 5 to RFCA will need to be amended. In the meantime, other Site documents are consistent with the existing RFCA values.

RCRA Units - Kaiser – Hill provided the State with a spreadsheet containing the requested information on PACs that contain RCRA Units. Laura Brooks and Susan Serreze will be invited to the March Meeting to discuss the list.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written (a typo was lined out in the first sentence of Section IV).

III NFA Discussions

(A) There were four sites carried over from the **1992 list**, 700-1110, 900-1300, SE-1600 and SE-1601. These were deferred to the February meeting.

(B) The two **East Spray Field** IHSS's (216.2 and 216.3) from the 1997 HRR were discussed. The EPA stated they could not concur with the recommendation for NFA at these locations. They need to be sure the Site has actual data from the AOC; not just from the area adjacent to the AOC. Gary stated there was a lot of run-off from the spraying and he wants to ensure adequate characterization in locations where sediments may have accumulated from the run-off. Additional biased sampling in accordance with the BZ SAP must be performed. Gary requested to walk the AOC and designate biased sampling locations. The State said no further sampling for groundwater is required based on review of the existing downgradient monitoring wells.

(C) Kaiser – Hill provided additional information for two of the three remaining sites from the **2001 HRR** as previously requested. It was concurred with that PAC 600-189 was an NFA site. Kaiser – Hill was unable to adequately answer the questions regarding PCOCs associated with PAC 300-206. After reviewing the OU 10 Workplan, further information will be provided at the next meeting. The remaining PAC (700-1102) could possibly go as NFAs once a revised write-up is provided by Kaiser - Hill.

(D) The remaining site (NW-1504) associated with the **Present Landfill** from the 7th Quarterly Update was reviewed and accepted as an NFA site. Additional data had been provided at the previous meeting for Agency review.

(E) New discussion occurred regarding the six remaining sites from the **7th Quarterly Update**. Four of the sites were agreed to as NFAs (PACs NE-1410, 000-503, 300-711 and 300-712). Kaiser – Hill was unable to locate the write-up for PAC 100-613, hence it was deferred to the next meeting. The agencies requested additional information for the last site, PAC NE-1411, at least equivalent to that provided for NE-1410, or demonstrate that the area of the spill was part of the previously completed east trench area remediations.

(F) The 18 **Transformer Sites** from the 1996 HRR were discussed in general. Per RFCA, using the existing ALF, the sites meet the NFA criteria. The concern was raised that once subsurface RSALs are determined, the status may change. The clean-up work was done under TSCA via an approved PAM. This does not however pre-empt clean-up under other authorities. RFCA may be the ultimate authority and if a risk based number is more conservative, it may end up being applied. PCB-like-dioxins would possibly need to be evaluated based on yet to be promulgated EPA guidance if TSCA is applied, which are orders of magnitude lower than those for PCBs. The State and EPA requested we table the discussion until they could evaluate the issues further.

IV List of NFA's for Next Meeting

The State will complete its' review of the final **four locations from the 1992 list** (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

Kaiser – Hill will present the requested data for the **two remaining sites from the 2001 HRR** (PACs 300-206 and 700-1102) and discuss as appropriate.

Kaiser – Hill will provide the write-up for Agency review for PAC 100-613 and additional information as requested for NE-1411 from the **7th HRR Quarterly Update**.

The new write-up for PAC (700-1102) from the **2001 HRR Update** will be provided by Kaiser - Hill.

The new locations for review includes PAC NW-170 from the **1999 Annual Update**; PAC NE-1404 from the **1998 Annual Update;** four remaining PACs from the **1997 Annual Update** (PACs 300-212, 700-1114a, 7001114b and 900-109); PAC 500-908 from the **12th Quarterly Update**; and PACs 700-113, 900-1315 and 900-1317 from the **11th Quarterly Update.**

Since the transformer sites are being tabled, I would like to add the following five sites to the list for the next meeting. They include: PACs 300-714 and 900-1316 from the **10th Quarterly Update;** PAC 900-1314 from the **9th Quarterly Update;** and PACs 300-713 and 400-814 from the **8th Quarterly Update.** *This will complete the list of sites currently proposed by the Site as NFAs.*

(See attached February 27, Agenda for a concise listing of the sites requiring review prior to the meeting.)

V Closing

The **next meeting** will be February 27, 2002, at 10:00 a.m. in B060/Rm 114.

CONCURRENCE:

DOE	EPA	CDPHE

Attendance Sheet
NFA Meeting
Thursday, January 31, 2002

Name	Organization	Phone	Fax
1. Elizabeth Pottorff	CDPHE	303-692-3429	303-759-5355
2. Carl Spreng	CDPHE	303-692-3358	303-759-5355
3. Gary Kleeman	EPA	303 3126246	x6067
4. Norma Castañeda	DOE	303-966-4226	x2995
5. Lisa O'Mary	DOE	303-966-3780	3994
6. Nick Demos	SSOC	303 966-4605	
7. Reg Tyler	DOE	303-966-5927	
8. Marla Broussard	KH	303-966-6007	
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Agenda

NFA Status Meeting
February 27, 2002 @ RFETS
10:00 a.m. – 12:00 p.m.

I ER Update

II Correction of prior meetings' minutes and sign-off

III Interactive discussion of NFA justification

- Four sites carried over from the **1992 IHSS List** (State only)
  (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

- Two sites carried over from **2001 HRR Update** (KH to provide new information)
  (PACs 300-206 and 700-1102)

- PAC 100-613 and NE-1411 from the **7th HRR Quarterly Update** (KH to provide new information)

- The following new locations:
  PAC NW-170 from the **1999 Annual Update**
  PAC NE-1404 from the **1998 Annual Update**
  PACs 300-212, 700-1114a, 7001114b and 900-109 from the **1997 Annual Update**
  PAC 500-908 from the **12th Quarterly Update**
  PACs 700-113, 900-1315 and 900-1317 from the **11th Quarterly Update**

  PACs 300-714 and 900-1316 from the **10th Quarterly Update**
  PAC 900-1314 from the **9th Quarterly Update**
  PACs 300-713 and 400-814 from the **8th Quarterly Update**

IV Summary of sites discussed and consensus reached for each location (K-H)

V List of actions for next meeting (K-H)

VI Next meeting location and time (DOE)

Adjourn

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:30 to1:00 p.m.	COMPLETE
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at B060	10:00 a.m. to 12:00 p.m.	
03/13/02	Group 8 at B060	2:00 to 4:00 p.m.	
04/03/02	Group 9 at EPA	2:00 to 4:00 p.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

MEETING MINUTES

Subject: NFA Status Meeting
Date: February 27, 2002
Time: 10:00 – 12:00 p.m.
Location: RFETS

I ER Update

Building 123 – The current status of the project was discussed and it was noted that the work has been progressing nicely.

IHSS Group 400-10 – The project was delayed due to weather but will be starting this week.

Building 886 – The RSOP Notification (02-03) was distributed at the meeting today in support of initiating work at B886 in mid-March. The DOE transmittal letter will follow shortly. (IA SAP Addendum 02-03 was also provided.)

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) There were four sites carried over from the **1992 list**, 700-1110, 900-1300, SE-1600 and SE-1601. These were now deferred to the March meeting.

(B) In response to a previous action, Kaiser – Hill provided copies of the **OU15 ROD Declaration** and reviewed the language to ensure there was nothing preventing the previous agreement to designate PACs 800-179 and 800-180 as NFAs at this time. The designation stands.

(C) Kaiser – Hill provided additional information for the two remaining sites from the **2001 HRR.** After reviewing key pages from the approved OU 10 Workplan and discussing the step during treatment where the water is identified as off-spec, it was concurred with that PAC 300-206 is a NFA site. A revised write-up was provided for PAC 700-1102 as previously requested. The State requested time to confer internally prior to discussing further. It will be deferred to the March meeting.

(D) The write-up for **PAC 100-613** was provided. It was previously listed as being contained in the 7th Quarterly Update but was actually only in the 4th Quarterly Update. The PAC was accepted as a NFA site.

(E) There was one remaining site (PAC NE-1411) from the **7th Quarterly Update.** Copies of pages from the operations logbook were provided to document the diesel spill was cleaned up. The PAC was accepted as a NFA site.

(F) There was new discussion on five PACs from the **1997, 1998, and 1999 Annual Updates.** It was agreed that all five sites; PACs NW-170 (1999), NE 1404 (1998), 300-212, 700-1114a and 700-1114b (1997) were all NFA sites. It was clarified that 700-1114b is actually associated with B765 (not 774 as listed). This will be corrected in the 2002 Update. The write-up for PAC NW-170 also requires a revision to be included in the 2002 Annual Update to correct references to Tier 1 and associated impacts.

IV List of NFA's for Next Meeting

The State will complete its' review of the final **four locations from the 1992 list** (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

The State will complete its' review of **PAC 700-1102** from the 2001 Annual Update (and other PCB sites?).

The new locations for review include the remaining PAC (900-109) from the **1997 Annual Update**; PAC 500-908 from the **12th Quarterly Update**; PACs 700-1113, 900-1315 and 900-1317 from the **11th Quarterly Update**; PACs 300-714 and 900-1316 from the **10th Quarterly Update**; PAC 900-1314 from the **9th Quarterly Update**; and PACs 300-713 and 400-814 from the **8th Quarterly Update.**

This will complete the list of sites currently proposed by the Site as NFAs.

(See attached March 13, Agenda for a concise listing of the sites requiring review prior to the meeting.)

V Closing

The **next meeting** will be March 13, 2002, at 2:00 p.m. at EPA. Laura Brooks and Susan Serreze will arrive at 3:00 p.m. to discuss the RCRA Unit List with the State.

CONCURRENCE:

DOE	**EPA**	Carl Spreng **CDPHE**

Attendance Sheet
NFA Meeting
Wednesday, February 27, 2002

Name	Organization	Phone	Fax
1. Elizabeth Pottorff			
2. Carl Spreng			
3. Gary Kleiman			
4. Nicie Demos			
5. Lisa O'Neill			
6. Ray Tyler			
7. [illegible]			
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Agenda

NFA Status Meeting
March 13, 2002 @ EPA
2:00 p.m. – 4:00 p.m.

I ER Update

II Correction of prior meetings' minutes and sign-off

III Interactive discussion of NFA justification

- Four sites carried over from the **1992 IHSS List** (State only)
  (PACs 700-1110, 900-1300, SE-1600 and SE-1601)

- One site carried over from **2001 HRR Update** (State only)
  (PAC 700-1102)

- The following new locations:
  PAC 900-109 from the **1997 Annual Update**
  PAC 500-908 from the **12th Quarterly Update**
  PACs 700-1113, 900-1315 and 900-1317 from the **11th Quarterly Update**

  PACs 300-714 and 900-1316 from the **10th Quarterly Update**
  PAC 900-1314 from the **9th Quarterly Update**
  PACs 300-713 and 400-814 from the **8th Quarterly Update**

  B125 UBC (Separate write-up provided prior to meeting)

IV Summary of sites discussed and consensus reached for each location

V Review and discussion of the Site IHSS/RCRA Table provided 1/31/02

VI List of actions for next meeting

VII Next meeting location and time

Adjourn

Proposed Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:30 to1:00 p.m.	COMPLETE
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at B060	10:00 a.m. to 12:00 p.m.	COMPLETE
03/13/02	Group 8 at EPA	2:00 to 4:00 p.m.	
04/03/02	Group 9 at CDPHE	8:30 to 10:30 a.m.	

* These are scheduled on the opposite week from the Stakeholder Focus Group Meeting

MEETING MINUTES

Subject: NFA Status Meeting
Date: March 13, 2002
Time: 2:00 – 4:00 p.m.
Location: EPA Conference Center

I ER Update

RI/FS Workplan – The State has verbally approved the document.

BZ SAP and SAP Addenda – The EPA has signed a letter approving the BZ SAP, with limitations, along with Group 900-2 from the SAP Addendum.

ER RSOP – The EPA approved the ER RSOP with conditions. A letter is forthcoming.

B886 – The pre-evolution brief was completed today for six samples; Outstanding comments to the SAP Addendum and RSOP Notification must be resolved prior to additional work.

B123 – The stockpiled soil is clean.

CERCLA 5-Year Review Report – The report is currently being revised based on internal comments and should be out to the Agencies for review next week.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) Four sites carried over from the **1992 IHSS List** (State only)

PAC 700-1110: KH needs to reconstruct the timeframe and determine the actual length of time the containers were buried. The State is concerned if they were buried for a lengthy amount of time, leakage may have occurred and sampling would need to be performed. Both the State and KH are to research the behavior of carbonyl nickle in the environment. It may react and become non-toxic.

PAC 900-1300: The State will check over their notes on information provided at the December meeting and send an e-mail if there are additional questions. Anticipate concurrence as a NFA site.

PAC SE-1600: KH needs to identify three pieces of information for the State: The exact location, existing sampling data, and whether or not the location was disturbed as part of the OU1 activities.

PAC SE-1601: KH needs to identify three pieces of information for the State: The exact location, existing sampling data, and whether or not the location was disturbed as part of the OU1 activities.

(B) One site carried over from **2001 HRR Update** (State only)

PAC 700-1102: There was discussion concluding that retardation of the PCBs and lack of pathway to surface water are logical reasons to do no further action, however the site may need to be deferred until the PCB issue is resolved internally by the State. Carl will provide additional feedback after looking into what the Arsenal did with respect to their PCBs and KH will look into the authority question (TSCA vs RFCA). Additional discussion will occur at the next meeting. KH will correct the Table and Figure references in the revised write-up (to be placed in the 2002 HRR if designated a NFA site).

(C) New Discussions

1997 Annual Update

PAC 900-109: The State will re-review the Report from this area. KH will provide a table of values of what was left in the trench along with any other pertinent information.

12th Quarterly Update

PAC 500-908: Concurred as a NFA site.

11th Quarterly Update

PAC 700-1113: Concurred as a NFA site.

PAC 900-1315: Concurred as a NFA site.

PAC 900-1317: The data was not provided as stated on page 8 of the write-up. KH to provide the data to the Agencies for review.

10th Quarterly Update

PACs 300-714: Concurred as a NFA site.

PAC 900-1316: Concurred as a NFA site.

9th Quarterly Update

PAC 900-1314: Concurred as a NFA site.

8th Quarterly Update

PAC 300-713: Concurred as a NFA site.

PAC 400-814: Concurred as a NFA site.

(D) Recent Submittal (Separate write-up provided prior to meeting)

Building 125 UBC: Concurred as a NFA site. The State will initiate a joint letter to the DOE in support of upcoming planned D&D activities. KH will revise the write-up as discussed, forward it to the Agencies and include in the 2002 HRR Annual Update.

(E) KH and the State reviewed the RCRA/IHSS List and made several edits based on Carla's comparison to other Site documentation. There were no follow-on activities scheduled at this time.

IV List of NFA's for Next Meeting

The final **four locations from the 1992 list** (PACs 700-1110, 900-1300, SE-1600 and SE-1601

PAC 700-1102 from the 2001 Annual Update (and other PCB sites?)

PAC 900-109 from the 1997 Annual Update

PAC 900-1317 from the 11th Quarterly Update

V Closing

The **next meeting** will be April 3, 2002, at 8:30 a.m. at CDPHE.

CONCURRENCE:

DOE	**EPA**	**CDPHE**

MEETING MINUTES

Subject: NFA Status Meeting
Date: April 3, 2002
Time: 8:30 – 10:00 a.m.
Location: CDPHE

I ER Update

B123 – Work is finishing up this week.

CERCLA 5-Year Review Report – The report was distributed to the Agencies for review.

B125 UBC – The NFA concurrence letter was prepared and signed by the State. EPA will sign and transmit to the Site.

II Correction of Prior Meeting' Minutes

The **minutes were approved** and signed as written.

III NFA Discussions

(A) Four sites carried over from the **1992 IHSS List** (State only)

PAC 700-1110: Remaining questions were addresses and it was concurred the site is an NFA.

PAC 900-1300: The State concurred it is a NFA site.

PAC SE-1600: Remaining questions were addresses and it was concurred the site is an NFA.

PAC SE-1601: Remaining questions were addresses and it was concurred the site is an NFA.

(B) One site carried over from **2001 HRR Update** (State only)

PAC 700-1102: There was discussion concluding that retardation of the PCBs and lack of a pathway to surface water are logical reasons to do no further action. Carla provided a printout and summary from the Science Advisory Board to clarify that the paper previously referenced by the State was based on air emissions and not soils and hence is not applicable. The State requested this evaluation be deferred to the next round of working group meetings sometime in the fall of 2002. This decision will also guide NFA determinations for the remaining transformer locations. [KH will correct the Table and Figure references in the revised write-up (to be placed in the 2003 HRR if designated a NFA site) as agreed upon at the previous meeting.]

(C) Additional Discussions

1997 Annual Update

PAC 900-109: Concurred as a NFA site.

11th Quarterly Update

PAC 900-1317: Concurred as a NFA site.

IV List of NFA's for Next Meeting

There are no outstanding sites proposed as NFAs. The working group will reconvene in the fall when additional sites are proposed.

V PIC discussion

The list of PICs from the original HRR was described, summarized and select ones reviewed in brief. It was agreed that forty-eight of the sixty-one locations were NFA sites. PICs 4,6,9,11,14,15,17,18, 41,42,44,47 & 57 will be further discussed (&/or investigated) when the Working Group reconvenes in the fall.

VI Closing

The **next meeting** will be scheduled in the fall, after issuance of the 2002 HRR Annual Update.

VII Working Group 2002 Summary

The Working Group addressed an additional 39 sites since the last quarterly letter. Of the 39 proposed NFAs, 28 were approved as requiring no further action. A table is attached describing these 28 NFA sites. In addition, 61 PICs were reviewed and 48 of those sites were agreed with as requiring no further action. They are also listed on the attached table.

CONCURRENCE:

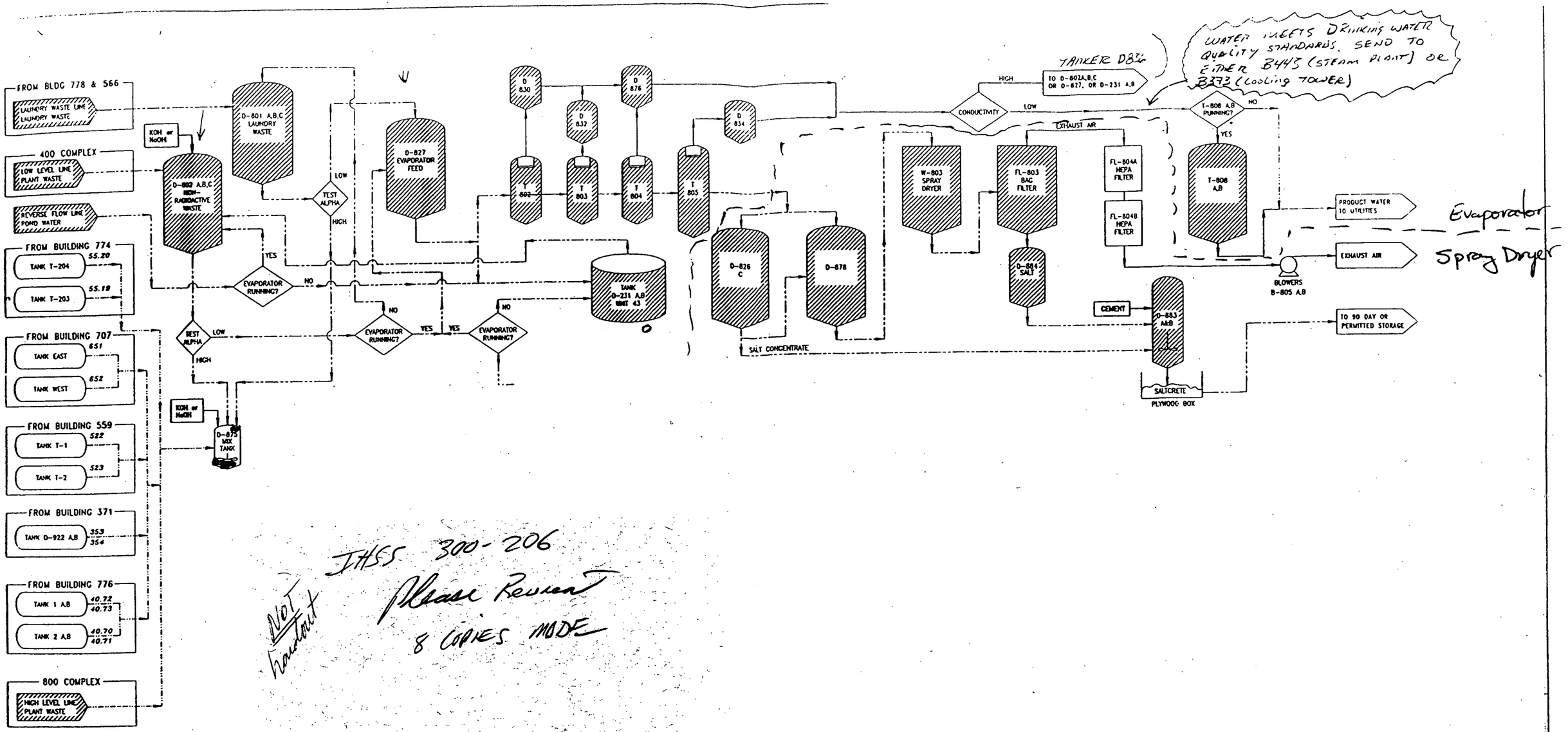
DOE	**EPA**	**CDPHE**

Attendance Sheet
NFA Meeting
Wednesday, April 3, 2002

Name	Organization	Phone	Fax
1. Elizabeth Pottorff	CDPHE	303-692-3429	303-759-5355
2. Carla Rellergert	RFETS - sub-contractor	303-966-2518	303-966-7991
3. Reg Tyler	DOE	303-966-5927	
4. Carl Spreng	CDPHE	303-692-3358	303-759-5355
5. Gary Kleeman	EPA	3033126246	X6067
6. Nina Damas	SSOC	303 966 4605	5180
7. Marla Broussard	KH	303-966-6007	X5180
8.			
9.			
10.			
12.			
3.			
14.			
15.			

Actual Schedule

10/24/01	Kick-off meeting at EPA	2:00 to 4:00 p.m.	COMPLETE
11/14/01	Group 1 at CDPHE	8:30 to 10:00 a.m.	COMPLETE
12/05/01*	Group 2 at B060	2:00 to 4:00 p.m.	COMPLETE
12/19/01*	Group 3 at EPA	2:00 to 4:00 p.m.	COMPLETE
01/09/02	Group 4 at CDPHE	2:00 to 4:00 p.m.	CANCELLED
01/31/02	Group 5 at B060	11:30 to1:00 p.m.	COMPLETE
02/13/02	Group 6 at EPA	8:30 to 10:00 a.m.	CANCELLED
02/27/02	Group 7 at B060	10:00 a.m. to 12:00 p.m.	COMPLETE
03/13/02	Group 8 at EPA	2:00 to 4:00 p.m.	COMPLETE
04/03/02	Group 9 at CDPHE	8:30 to 10:30 a.m.	COMPLETE



NOT hazardous

JHSS 300-206
Please Review
8 COPIES MADE

OU15 ROD
Verification of NFA
determination for PACs
700-179 & 700-120

CORRECTIVE ACTION DECISION/
RECORD OF DECISION DECLARATION

Site Name and Location

Rocky Flats Environmental Technology Site (Rocky Flats) Operable Unit 15: Inside Building Closures
Golden, Jefferson County, Colorado

Statement of Basis and Purpose

This decision document presents the selected remedial action/corrective action for the Rocky Flats Operable Unit (OU) 15: Inside Building Closures. The selected remedial action was chosen in accordance with the *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, the Colorado Hazardous Waste Act (CHWA) and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The Resource Conservation Recovery Act (RCRA) is administered through the CHWA by the Colorado Department of Public Health and the Environment (CDPHE). OU15 was investigated and a Preferred Alternative was selected in compliance with the Federal Facility Agreement and Consent Order Inter-Agency Agreement (IAG) signed by the U.S. Department of Energy (DOE), the State of Colorado, and the U.S. Environmental Protection Agency (EPA) on January 22,1991.

Description of the Selected Remedies

OU15: Inside Building Closures is composed of six Individual Hazardous Substance Sites (IHSSs). The preferred alternative for OU15 consists of the following actions: 1) Clean Closure under RCRA for all six of the OU15 IHSSs; 2) a No Action CERCLA decision for IHSSs 178, 211, and 217; and 3) a deferral of any CERCLA actions at IHSSs 179, 180, and 204 until final disposition of their respective buildings. RCRA closure certification for the six IHSSs, signed by an independent registered professional engineer, has been approved by CDPHE. The No Action CERCLA decision for IHSSs 178, 211, and 217 is based upon the NCP, which provides for the selection of a No Action alternative when a site or OU is already in a protective state. OU15 IHSSs 179, 180, and 204 will be closed as IAG IHSSs and any future CERCLA action decisions will be made based upon the ultimate disposition of the buildings, inclusive of the physical areas previously described as OU15 IHSSs. Evaluation of remedial alternatives and closure activities included waste minimization considerations.

Declaration Statement

DOE has determined that no remedial action is necessary to be protective of human health and the environment at IHSSs 178, 211, and 217 because they meet the clean closure requirements of the Rocky Flats RCRA Permit (RFRP) and the Federal occupational radiation protection standards. At IHSSs 179, 180, and 204, no remedial action is currently necessary, because they meet the clean closure requirements of the RFRP and the Rocky Flats radiological control program is in compliance with Applicable or Relevant and Appropriate Requirements (ARARs)/To Be Considered (TBC) criteria and other identified protective standards. Future CERCLA actions may be required at the time of ultimate disposition of the buildings. Because the remedy will not result in hazardous substances remaining onsite above ARARs, TBCs, or protective standards, a five-year review is not required.

Mark N. Silverman, Manager
U.S. Department of Energy, Rocky Flats Field Office

9/21/95
Date

Jack W. McGraw
Deputy Regional Administrator, Region VIII
U.S. Environmental Protection Agency

10/18/95
Date

Thomas P. Looby, Director, Office Of Environment,
Colorado Department of Public Health and Environment

9/29/95
Date

Table 4 - Subsurface Soil Action Levels

Analyte	CAS Reference Number	H' [a] (unitless)	[Reference]	Kd [b] (L/kg)	[Reference]	Tier I [c] (mg/kg)	Tier II [c] (mg/kg)
ORGANICS:							
Acenaphthene	83-32-9	0.00636	[1]	5.07E+01	[1]	5.34E+04	5.34E+02
Acetone	67-64-1	0.00159	[1]	4.12E-03	[1]	2.72E+04	2.72E+02
Aldrin	309-00-2	0.00697	[1]	1.75E+04	[1]	4.22E+01	4.22E-01
Anthracene	120-12-7	0.00267	[1]	2.11E+02	[1]	>1E+06	1.12E+04
Aroclor-1016	12674-11-2	0.0439	[3,d]	2.21E+03	[1]	5.31E+02	5.31E+00
Aroclor-1221	11104-28-2	0.0439	[3,d]	2.21E+03	[1]	5.31E+02	5.31E+00
Aroclor-1232	11141-16-5	0.0439	[3,d]	2.21E+03	[1]	5.31E+02	5.31E+00
Aroclor-1242	53469-21-9	0.0439	[3]	2.21E+03	[1]	5.31E+02	5.31E+00
Aroclor-1248	12672-29-6	0.0439	[3]	2.21E+03	[1]	5.31E+02	5.31E+00
Aroclor-1254	11097-69-1	0.0439	[3]	2.21E+03	[1]	5.31E+02	5.31E+00
Aroclor-1260	11096-82-5	0.0439	[3]	2.21E+03	[1]	5.31E+02	5.31E+00
Benzene	71-43-2	0.228	[1]	4.22E-01	[1]	1.41E+00	1.41E-02
alpha-BHC	319-84-6	0.000435	[1]	8.81E+00	[1]	5.80E-02	5.80E-04
beta-BHC	319-85-7	0.0000305	[1]	9.02E+00	[1]	2.08E-01	2.08E-03
gamma-BHC [Lindane]	58-89-9	0.000574	[1]	7.66E+00	[1]	7.50E-01	7.50E-03
Benzo(a)anthracene	56-55-3	0.000137	[1]	2.85E+03	[1]	1.60E+02	1.60E+00
Benzo(a)pyrene	50-32-8	0.0000463	[1]	7.30E+03	[1]	7.01E+02	7.01E+00
Benzo(b)fluoranthene	205-99-2	0.00455	[1]	8.81E+03	[1]	4.95E+02	4.95E+00
Benzo(k)fluoranthene	207-08-9	0.000034	[1]	8.81E+03	[1]	4.95E+03	4.95E+01
Benzoic Acid	65-85-0	0.0000631	[1]	4.30E-03	[1]	1.09E+04	1.09E+02
Benzyl Alcohol	100-51-6	—		—		NV	NV
Bromodichloromethane	75-27-4	0.0656	[1]	3.94E-01	[1]	2.64E+01	2.64E-01
Bromoform [Tribromomethane]	75-25-2	0.0219	[1]	6.23E-01	[1]	3.72E+01	3.72E-01
Bromomethane [Methyl Bromide]	74-83-9	0.256	[1]	7.52E-02	[1]	5.98E+00	5.98E-02
2-Butanone [Methylethyl Ketone]	78-93-3	—		—		NV	NV
Butylbenzylphthalate	85-68-7	0.0000517	[1]	4.12E+02	[1]	>1E+06	1.44E+04
Carbon disulfide	75-15-0	1.24	[1]	3.27E-01	[1]	9.88E+02	9.88E+00
Carbon tetrachloride	56-23-5	1.25	[1]	1.25E+00	[1]	3.56E+00	3.56E-02
alpha-Chlordane	5103-71-9	0.00199	[1]	8.59E+02	[1]	8.25E+02	8.25E+00
beta-Chlordane	5103-74-2	0.00199	[1]	8.59E+02	[1]	8.25E+02	8.25E+00
gamma-Chlordane	12789-03-9	0.00199	[1]	8.59E+02	[1]	8.25E+02	8.25E+00
4-Chloroaniline	106-47-8	0.0000136	[1]	4.73E-01	[1]	4.37E+01	4.37E-01
Chlorobenzene	108-90-7	0.152	[1]	1.57E+00	[1]	8.30E+01	8.30E-01
Chloroethane	75-00-3	—		—		NV	NV
bis(2-Chloroethyl)ether	111-44-4	0.000738	[1]	1.11E-01	[1]	9.73E-03	9.73E-05
Chloroform [Trichloromethane]	67-66-3	0.15	[1]	2.85E-01	[1]	2.14E+01	2.14E-01
bis(2-Chloroisopropyl)ether	39638-32-9	—		—		NV	NV
Chloromethane [Methyl Chloride]	74-87-3	—		—		NV	NV
2-Chloronaphthalene	91-58-7	—		—		NV	NV
2-Chlorophenol	95-57-8	0.016	[1]	2.78E+00	[1]	2.57E+02	2.57E+00
Chrysene	208	0.00388	[1]	2.85E+03	[1]	1.60E+04	1.60E+02
4,4-DDD	72-54-8	0.000164	[1]	7.16E+03	[1]	1.22E+03	1.22E+01
4,4-DDE	72-55-9	0.000861	[1]	3.20E+04	[1]	3.84E+03	3.84E+01
4,4-DDT	50-29-3	0.000332	[1]	1.88E+04	[1]	2.26E+03	2.26E+01
Dibenzo(a,h)anthracene	53-70-3	0.000000603	[1]	2.72E+04	[1]	1.53E+02	1.53E+00
Dibromochloromethane	124-48-1	—		—		NV	NV
Di-n-butylphthalate	84-74-2	3.85E-08	[1]	2.43E+02	[1]	4.26E+05	4.26E+03
1,2-Dichlorobenzene	95-50-1	0.0779	[1]	4.42E+00	[1]	1.32E+03	1.32E+01
1,4-Dichlorobenzene	106-46-7	0.0996	[1]	4.42E+00	[1]	1.65E+02	1.65E+00
3,3-Dichlorobenzidine	91-94-1	0.000000164	[1]	5.18E+00	[1]	4.84E-01	4.84E-03
1,1-Dichloroethane	75-34-3	0.23	[1]	2.26E-01	[1]	6.89E+02	6.89E+00
1,2-Dichloroethane	107-06-2	0.0401	[1]	1.25E-01	[1]	6.68E-01	6.68E-03
1,1-Dichloroethene	75-35-4	1.07	[1]	4.27E-01	[1]	2.19E+00	2.19E-02
1,2-Dichloroethene (total)	75-35-4	0.187	[1,e]	2.54E-01	[1,e]	1.40E+01	1.40E-01
2,4-Dichlorophenol	120-83-2	0.00013	[1]	1.05E+00	[1]	6.35E+01	6.35E-01

					Comparison Values (mg/kg) for Industrial Surface Soils		Comparison Values (mg/kg) for Industrial Sub-surface Soils		
HRR/ PAC#	TSCA Loc. #	Bldg. #	Pre-Remediation (PPM) Highest Concentration	Post-Remediation (PPM)	RFCA Tier I 286 PPM	RFCA Tier II 2.86 PPM	RFCA Tier I 531 PPM	RFCA Tier II 5.31 PPM	Comments
300-708	PCB-33	371	>50 (chlor. in soil)*	U			<	<	
300-709	PCB-4	334	.2 (1260)	NR	<	<			
500-900	PCB-20 PCB-32	515/516	.23 (1254) 26 (1260)	0.9 (1260)			<	<	
500-901	PCB-11	555	4.0 (1260)	NR	<	>			
500-902	PCB-23	559	190 (1248) .21 (1254)	2.4 (1248) 0.6 (1254)			<	<	
500-905	PCB-10	558	480 (1260)	1.3 (1260)			<	<	
600-1000	PCB-37	662	73 (1248) 86 (1260)	1.2 (1248) 3.1 (1260)			<	<	
600-1002	PCB-14	666	1.6 (1260)	NR	<	<			
600-1003	PCB-12/13	661/675	540 (1260)	0.7 (1260)			<	<	
700-1102	PCB-21	776	480 (1260)	70.0 (1260)			>		17.6 ft depth
700-1103	PCB-25	707	1600 (1260)	7.0 (1254) 5.0 (1260)			<	>	
700-1104	PCB-24	708	860 (1254)	3.2 (1254)			<	<	
700-1111	PCB-26	750	.12 (1260) 160 (1248)	5.9 (1248)			<	>	
700-1112	PCB-28	776	U	NR	<	<			
800-1207	PCB-17	883(S)	160 (1248)	3.1 (1248)			<	<	
800-1208	PCB-18	881	4.3 (1260)	NR	<	>			
800-1209	PCB-15	883(N)	6.8 (1260) .35 (1242)	NR	<	>			
800-1210	PCB-16	865	1.3 (1254)	NR	<	<			
900-1306	PCB-30	991	.50 (1260)	NR	<	<			

ALL VERIFICATION SAMPLES (I.E. POST REMEDIATION) ARE SW 846 METHOD 8080
*** Chlor-in Soil Test Kit**
NR = Not Remediated
U = Undetected at MDL

Table 3-1. PCB Post-Removal Levels in Soil[1]

Location Code	Location	Sample Number	Aroclor 1248 (ppm)	Aroclor 1254 (ppm)	Aroclor 1260 (ppm)
PCB-10	555/558	SS00033RM	U	U	1.3
PCB-12/13	661/675	SS00455RM	U	U	0.7
PCB-17	883	SS00090RM	3.1	U	U
PCB-20	515/516	SS00011RM	U	U	0.9
PCB-21	776	SS00533RM	U	U	70.0
PCB-23	559	SS00132RM	2.4	0.6	U
PCB-24	708	SS00301RM	U	3.2	U
PCB-25	707	SS00206RM	U	7.0	5.0
PCB-26	750	SS00162RM	5.9	U	U
PCB-33	371	SS00002RM	U	U	U
PCB-37	662	SS00569RM	1.2	U	3.1
PCB-37	662	SS00616RM	U	2.5	0.6

[1]Maximum concentrations

From: Exposure & Human Health Reassessment of 2,3,7,8-TCDD & Related Compds. Part I: Estimating Exposure to Dioxin-like Compds
Vol 2 Sources of Dioxin-like Compds in the US
EPA/600/P-00/001B Draft Final Report

Chapter 11. SOURCES OF DIOXIN-LIKE PCBs

The purpose of this chapter is twofold: (1) to identify sources that release dioxin-like polychlorinated biphenyls (PCB) congeners into the environment and (2) to derive national estimates for releases from these sources in the United States. PCBs have been found in all media and all parts of the world. PCBs were produced in relatively large quantities for use in commercial products such as dielectrics, hydraulic fluids, plastics, and paints. They are no longer commercially produced in the United States, but continue to be released to the environment through the use and disposal of these products. PCBs may also be inadvertently produced as by-products during the manufacture of certain organic chemicals and also as products of the incomplete combustion of some waste materials.

11.1. GENERAL FINDINGS OF THE EMISSIONS INVENTORY

Table 11-1 provides a list of known or suspected dioxin-like PCB-emitting source categories in the United States. The source categories included in this table represent a compilation of source categories for which dioxin-like PCB congener, PCB Aroclor, or PCB congener group emission measurements have been reported in government, industry, and trade association reports; in conference proceedings and journal articles; and in comments submitted to the Agency on previous versions of this document. The intent of Table 11-1 is to clearly present those source categories and media (i.e., air, water, land, and products) for which available data are either adequate or inadequate for reliably quantifying emissions of dioxin-like PCBs.

Nationwide emission estimates for the United States inventory are presented in Table 11-2 (emissions to air, water, land, and product) for those source categories for which emission estimates can be reliably quantified (i.e., the category has been assigned a confidence rating of A, B, or C) (see Section 1.3 of this report for details on confidence ratings). Table 11-2 also lists, in the far right column, preliminary estimates of the potential magnitude of emissions from "unquantified" sources (i.e., sources assigned a confidence rating of D) in reference year 1995. Because of large uncertainties for these category D estimates, they are not included in the "quantitative inventory."

Releases of "old" dioxin-like PCBs (i.e., dioxin-like PCBs manufactured prior to the ban) to the environment can occur from ongoing use and disposal practices. Prior to

Table 11-3. Weight Percent Concentrations of Dioxin-like PCBs in Aroclors, Clophens, and Kanechlors (continued)

Dioxin-Like PCB Congener	IUPAC Number	Number of Samples Analyzed	Number of Detections	Mean Conc (ND = 0) (g/kg)	TEQ_p-WHO_{98} Conc (ND = 0) (mg/kg)	Mean Conc (ND = 1/2DL) (g/kg)	TEQ_p-WHO_{98} Conc (ND = 1/2DL) (mg/kg)
AROCLOR 1254, Clophen A-50, and Kanechlor 500							
3,3',4,4'-TCB	77	12	9	0.59	0.06	0.64	0.06
3,4,4',5-TCB	81	3	1	15.70	1.57	15.70	1.57
2,3,3',4,4'-PeCB	105	9	9	26.68	2.67	26.68	2.67
2,3,4,4',5-PeCB	114	6	3	15.98	7.99	16.07	8.04
2,3',4,4',5-PeCB	118	8	8	66.30	6.63	66.30	6.63
2',3,4,4',5-PeCB	123	5	5	5.35	0.53	5.35	0.53
3,3',4,4',5-PeCB	126	11	9	1.23	122.95	1.26	125.68
2,3,3',4,4',5-HxCB	156	7	7	11.22	5.61	11.22	5.61
2,3,3',4,4',5'-HxCB	157	6	5	1.49	0.75	1.54	0.77
2,3',4,4',5,5'-HxCB	167	7	6	2.47	0.02	2.47	0.02
3,3',4,4',5,5'-HxCB	169	11	6	0.10	1.01	0.15	1.50
2,2',3,3',4,4',5-HpCB	170	5	5	5.80	0	5.80	0
2,2',3,4,4',5,5'-HpCB	180	4	4	6.63	0	6.63	0
2,3,3',4,4',5,5'-HpCB	189	4	1	0.07	0.01	0.20	0.02
				Total TEQ_p-WHO_{98} =	149.81	Total TEQ_p-WHO_{98} =	153.11
				Total TEQ_p-WHO_{94} =	149.12	Total TEQ_p-WHO_{94} =	152.44
AROCLOR 1260, Clophen A-60, and Kanechlor 600							
3,3',4,4'-TCB	77	12	6	0.16	0.02	0.21	0.02
3,4,4',5-TCB	81	3	1	0.15	0.02	0.18	0.02
2,3,3',4,4'-PeCB	105	8	8	1.56	0.16	1.56	0.16
2,3,4,4',5-PeCB	114	6	3	1.00	0.50	1.10	0.55
2,3',4,4',5-PeCB	118	8	7	11.13	1.11	11.13	1.11
2',3,4,4',5-PeCB	123	5	1	0.0008	0.00	0.11	0.01
3,3',4,4',5-PeCB	126	11	7	2.30	230.22	2.33	233.27
2,3,3',4,4',5-HxCB	156	8	8	7.54	3.77	7.54	3.77
2,3,3',4,4',5'-HxCB	157	5	5	2.28	1.14	2.28	1.14
2,3',4,4',5,5'-HxCB	167	7	6	3.23	0.03	3.23	0.03
3,3',4,4',5,5'-HxCB	169	11	5	0.21	2.09	0.24	2.37
2,2',3,3',4,4',5-HpCB	170	5	5	28.98	0	28.98	0
2,2',3,4,4',5,5'-HpCB	180	4	4	66.30	0	66.30	0
2,3,3',4,4',5,5'-HpCB	189	5	5	2.16	0.22	2.16	0.22
				Total TEQ_p-WHO_{98} =	239.27	Total TEQ_p-WHO_{98} =	242.66
				Total TEQ_p-WHO_{94} =	242.88	Total TEQ_p-WHO_{94} =	246.29

[a] Calculated for a congener only when at least one sample contained detectable levels of that congener.

References:
Schulz et al. (1989)
Duinker and Hillebrand (1983)
deBoer et al. (1993)
Schwartz et al. (1993)
Larsen, et al. (1992)
Kannan et al. (1987)
Huckins et al. (1980)
Albro and Parker (1979)
Jensen et al. (1974)
Albro et al. (1981)
Duinker et al. (1988)
Tanabe et al. (1987)
Himberg and Sippola (1990)

g/kg = grams per kilogram.
mg/kg = milligrams per kilogram.

Table 11-3. Weight Percent Concentrations of Dioxin-like PCBs in Aroclors, Clophens, and Kanechlors

Dioxin-like PCB Congener	IUPAC Number	Number of Samples Analyzed	Number of Detections	Mean Conc (ND = 0) (g/kg)	TEQ WHO Conc (ND = 0) (mg/kg)	Mean Conc (ND = 1/2DL) (g/kg)	TEQ WHO Conc (ND = 1/2DL) (mg/kg)
AROCLOR 1016							
3,3',4,4'-TCB	77	2	0	0	0	0	0
3,4,4',5-TCB	81	0	--	--	--	--	--
2,3,3',4,4'-PeCB	105	1	0	0	0	0	0
2,3,4,4',5-PeCB	114	1	0	0	0	0	0
2,3',4,4',5-PeCB	118	1	0	0	0	0	0
2',3,4,4',5-PeCB	123	1	0	0	0	0	0
3,3',4,4',5-PeCB	126	1	0	0	0	0	0
2,3,3',4,4',5-HxCB	156	1	0	0	0	0	0
2,3,3',4,4',5'-HxCB	157	1	0	0	0	0	0
2,3',4,4',5,5'-HxCB	167	1	0	0	0	0	0
3,3',4,4',5,5'-HxCB	169	2	0	0	0	0	0
2,2',3,3',4,4',5-HpCB	170	1	0	0	0	0	0
2,2',3,4,4',5,5'-HpCB	180	1	0	0	0	0	0
2,3,3',4,4',5,5'-HpCB	189	1	0	0	0	0	0
				Total TEQ_p-WHO_{98} =	0	Total TEQ_p-WHO_{98} =	0
				Total TEQ_p-WHO_{94} =	0	Total TEQ_p-WHO_{94} =	0
AROCLOR 1221							
3,3',4,4'-TCB	77	1	1	4.00	0.40	4.00	0.40
3,4,4',5-TCB	81	1	0	0	0	0	0
2,3,3',4,4'-PeCB	105	1	0	0	0	0	0
2,3,4,4',5-PeCB	114	1	0	0	0	0	0
2,3',4,4',5-PeCB	118	1	1	4.50	0.45	4.50	0.45
2',3,4,4',5-PeCB	123	1	0	0	0	0	0
3,3',4,4',5-PeCB	126	1	0	0	0	0	0
2,3,3',4,4',5-HxCB	156	1	0	0	0	0	0
2,3,3',4,4',5'-HxCB	157	1	0	0	0	0	0
2,3',4,4',5,5'-HxCB	167	1	0	0	0	0	0
3,3',4,4',5,5'-HxCB	169	1	0	0	0	0	0
2,2',3,3',4,4',5-HpCB	170	0	--	--	--	--	--
2,2',3,4,4',5,5'-HpCB	180	0	--	--	--	--	--
2,3,3',4,4',5,5'-HpCB	189	1	0	0	0	0	0
				Total TEQ_p-WHO_{98} =	0.85	Total TEQ_p-WHO_{98} =	0.85
				Total TEQ_p-WHO_{94} =	2.45	Total TEQ_p-WHO_{94} =	2.45
AROCLOR 1242, Clophen A-30, and Kanechlor 300							
3,3',4,4'-TCB	77	12	12	3.39	0.34	3.39	0.34
3,4,4',5-TCB	81	4	3	1.81	0.18	1.83	0.18
2,3,3',4,4'-PeCB	105	8	8	3.66	0.37	3.66	0.37
2,3,4,4',5-PeCB	114	5	2	1.55	0.77	1.66	0.83
2,3',4,4',5-PeCB	118	6	6	8.27	0.83	8.27	0.83
2',3,4,4',5-PeCB	123	6	4	1.53	0.15	1.58	0.16
3,3',4,4',5-PeCB	126	11	8	0.06	6.29	0.11	11.29
2,3,3',4,4',5-HxCB	156	6	5	0.48	0.24	0.52	0.26
2,3,3',4,4',5'-HxCB	157	5	1	0.004	0.002	0.11	0.06
2,3',4,4',5,5'-HxCB	167	5	1	0.004	0.00004	0.11	0.001
3,3',4,4',5,5'-HxCB	169	11	2	0.00002	0.0002	0.05	0.54
2,2',3,3',4,4',5-HpCB	170	3	2	0.38	0	0.46	0
2,2',3,4,4',5,5'-HpCB	180	2	1	0.30	0	0.43	0
2,3,3',4,4',5,5'-HpCB	189	4	0	0	0	0	0
				Total TEQ_p-WHO_{98} =	9.17	Total TEQ_p-WHO_{98} =	14.84
				Total TEQ_p-WHO_{94} =	10.38	Total TEQ_p-WHO_{94} =	16.07
AROCLOR 1248, Clophen A-40, and Kanechlor 400							
3,3',4,4'-TCB	77	10	10	4.56	0.46	4.56	0.46
3,4,4',5-TCB	81	3	2	3.44	0.34	3.45	0.34
2,3,3',4,4'-PeCB	105	6	6	7.77	0.78	7.77	0.78
2,3,4,4',5-PeCB	114	4	3	5.06	2.53	5.07	2.53
2,3',4,4',5-PeCB	118	5	5	19.99	2.00	19.99	2.00
2',3,4,4',5-PeCB	123	4	4	2.12	0.21	2.12	0.21
3,3',4,4',5-PeCB	126	8	6	0.15	14.51	0.18	18.26
2,3,3',4,4',5-HxCB	156	5	5	1.41	0.70	1.41	0.70
2,3,3',4,4',5'-HxCB	157	4	3	0.33	0.16	0.34	0.17
2,3',4,4',5,5'-HxCB	167	4	2	0.25	0.002	0.26	0.003
3,3',4,4',5,5'-HxCB	169	9	3	0.01	0.13	0.05	0.47
2,2',3,3',4,4',5-HpCB	170	2	2	2.05	0	2.05	0
2,2',3,4,4',5,5'-HpCB	180	1	1	2.60	0	2.60	0
2,3,3',4,4',5,5'-HpCB	189	3	1	0.004	0.0004	0.10	0.01
				Total TEQ_p-WHO_{98} =	21.83	Total TEQ_p-WHO_{98} =	25.94
				Total TEQ_p-WHO_{94} =	23.54	Total TEQ_p-WHO_{94} =	27.64

January 31, 2002

Additional Information Requested by the Regulatory Agencies

IHSS 300-206

It was requested that Kaiser-Hill define the term "Off Specification" with respect to Building 374 Process Water. It was also requested that "process water" be described.

Building 374 personnel were interviewed and define "Off Spec" water as Process water that is above 150 microhms conductivity. Once the water (diverted to the tanker) cooled, it was pumped back into the liquid waste stream for reprocessing.

Process water is generated from evaporation of liquid process waste as a result of 3 stage boiling. Hence, water stored in the D-836 Tank was essentially steam condensate.

IHSS 600-189

It was requested that Kaiser-Hill confirm the condition of the Nitric Acid Tanks removed from the IHSS location.

Per the Operable Unit 12, Tech. Memo 2 Investigation Report, the tank is reported to be in excellent condition (page 129). Further, communication with Site employee's working with the Property Use and Disposal (PU&D) group confirmed that the tank was either sold or traded back to the vendor in 1996.

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division

PAC NE-1409

Comments on
Annual Update for Historical Release Report
September 2000

(KH-00-900.UN)

PAC NE-110, Buffer Zone Operable Unit, Trench T-3

In general we concur with the NFA recommendation, based upon this site having been excavated as much as required by a decision document and the subsequent installation of a groundwater remediation system.

However, we still have some concerns that were first noted in our comments on the 1997 report. On page 18 of the 1997 HRR report, there is a statement that "Analytical data from this removal action indicate that disposal of the 2,400 gallons of lathe coolant from Building 444 occurred in another trench and not T-3". We asked for documentation about what happened to this coolant for consideration in the ER ranking for other East Trenches. In the 2000 HRR report, all the text about this coolant was removed with no explanation, and so our comment remains unanswered.

Also, there still needs to be a correction to the definition of the East Trenches. It should read, "Trenches T-1 through T-13 are referred to as the East Trenches."

PAC NE-1404, Diesel Spill at Pond B-2 Spillway

CDPHE sent comments on this PAC to the Site in relation to the 1998 HRR report. The Site is planning on doing soil sampling in accordance with the Buffer Zone Sampling and Analysis Plan, and has not recommended this PAC for NFA. CDPHE has no additional comments at this time.

PAC NE-1409, Interceptor Trench Pump House

Tables 2.1 and 2.2 both list Potential Contaminants of Concern, but the only contaminant they have in common is methylene chloride. The text should explain this discrepancy and the rationale for selecting the contaminants in Table 2.2, which form the basis for the NFA proposal.

The Tier I action level value for methylene chloride in Table 2.2 is in error because of a mistake in the action level tables. The Tier I value for methylene chloride in surface soil should be 5.98E+04 – two orders of magnitude higher than the Tier II value. This error does not change the basis for the NFA recommendation; we concur with the proposal for NFA.

PAC 100-607, Building 111 Transformer PCB Leak

Sampling is to be done in association with Building 111 Cluster D&D. No NFA determination has been requested yet.

PAC 300-156.1, Building 371 Parking Lot

We concur with the recommendation for NFA.

PAC 500-169, Waste Drum Peroxide Burial

Further characterization is needed. There has been no recommendation for NFA.

Table 5 - Surface Soil Action Levels

Analyte	CAS Reference Number	Tier I [a] Industrial Use (mg/kg)	Tier I [a] Open Space Use (mg/kg)	Tier II [b] Industrial Use (mg/kg)	Tier II [b] Open Space Use (mg/kg)
4,4-DDD	72-54-8	2.38E+03	1.87E+03	2.38E+01	1.87E+01
4,4-DDE	72-55-9	1.68E+03	1.32E+03	1.68E+01	1.32E+01
4,4-DDT	50-29-3	1.68E+03	1.32E+03	1.68E+01	1.32E+01
Dibenzo(a,h)anthracene	53-70-3	7.84E+01	6.14E+01	7.84E-01	6.14E-01
Dibenzofuran	132-64-9	8.18E+03	7.68E+03	8.18E+03	7.68E+03
Dibromochloromethane	124-48-1	6.81E+03	5.34E+03	6.81E+01	5.34E+01
Di-n-butylphthalate	84-74-0	2.04E+05	1.92E+05	2.04E+05	1.92E+05
1,2-Dichlorobenzene	95-50-1	1.84E+05	1.73E+05	1.84E+05	1.73E+05
1,4-Dichlorobenzene	106-46-7	2.38E+04	1.87E+04	2.38E+02	1.87E+02
3,3-Dichlorobenzidine	91-94-1	1.27E+03	9.96E+02	1.27E+01	9.96E+00
1,1-Dichloroethane	75-34-3	2.04E+05	1.92E+05	2.04E+05	1.92E+05
1,2-Dichloroethane	107-06-2	6.29E+03	4.93E+03	6.29E+01	4.93E+01
1,1-Dichloroethene	75-35-4	9.54E+02	7.47E+02	9.54E+00	7.47E+00
1,2-Dichloroethene (total)	540-59-0	1.84E+04	1.73E+04	1.84E+04	1.73E+04
2,4-Dichlorophenol	120-83-2	6.13E+03	5.76E+03	6.13E+03	5.76E+03
1,2-Dichloropropane	78-87-5	8.42E+03	6.59E+03	8.42E+01	6.59E+01
cis-1,3-Dichloropropene	1006-01-5	3.18E+03	2.49E+03	3.18E+01	2.49E+01
trans-1,3-Dichloropropene	10061-02-6	3.18E+03	2.49E+03	3.18E+01	2.49E+01
Dieldrin	60-57-1	3.57E+01	2.80E+01	3.57E-01	2.80E-01
Diethylphthalate	84-66-2	>1E+06	>1E+06	>1E+06	>1E+06
2,4-Dimethylphenol	105-67-9	4.09E+04	3.84E+04	4.09E+04	3.84E+04
Dimethylphthalate	131-11-3	>1E+06	>1E+06	>1E+06	>1E+06
4,6-Dinitro-2-methylphenol	534-52-1	2.04E+02	1.92E+02	2.04E+02	1.92E+02
2,4-Dinitrophenol	51-28-5	4.09E+05	3.84E+05	4.09E+03	3.84E+03
2,4-Dinitrotoluene	121-14-2	8.42E+02	6.59E+02	8.42E+00	6.59E+00
2,6-Dinitrotoluene	606-20-2	8.42E+02	6.59E+02	8.42E+00	6.59E+00
Di-n-octylphthalate	117-84-0	>1E+06	>1E+06	4.09E+04	3.84E+04
Endosulfan I [c]	959-98-8	>1E+06	>1E+06	1.23E+04	1.15E+04
Endosulfan II [c]	33213-65-9	>1E+06	>1E+06	1.23E+04	1.15E+04
Endosulfan sulfate [c]	1031-07-8	>1E+06	>1E+06	1.23E+04	1.15E+04
Endosulfan (technical) [c]	115-29-7	>1E+06	>1E+06	1.23E+04	1.15E+04
Endrin (technical)	72-26-8	6.13E+02	2.30E+03	6.13E+02	5.76E+02
Ethylbenzene	100-41-4	2.04E+05	1.92E+05	2.04E+05	1.92E+05
bis(2-Ethylhexyl)phthalate	117-81-7	4.09E+04	3.20E+04	4.09E+02	3.20E+02
Fluoranthene	206-44-0	8.18E+04	7.68E+04	8.18E+04	7.68E+04
Fluorene	86-73-7	8.18E+04	7.68E+04	8.18E+04	7.68E+04
Fluoride	16984-48-8	1.23E+05	1.15E+05	1.23E+05	1.15E+05
Heptachlor	76-44-8	1.27E+02	9.96E+01	1.27E+00	9.96E-01
Heptachlor epoxide	1024-57-3	6.29E+01	4.93E+01	6.29E-01	4.93E-01
Hexachlorobenzene	118-74-1	3.58E+02	2.80E+02	3.58E+00	2.80E+00
Hexachlorobutadiene	87-68-3	7.34E+03	5.75E+03	7.34E+01	5.75E+01
Hexachlorocyclopentadiene	77-47-4	1.37E+04	1.33E+04	1.37E+04	1.33E+04
Hexachloroethane	67-72-1	4.09E+04	1.25E+05	4.09E+02	3.20E+02
Indeno(1,2,3-cd)pyrene	193-39-5	7.84E+02	6.14E+02	7.84E+00	6.14E+00
Iron	7439-89-6	6.13E+05	5.76E+05	6.13E+05	5.76E+05
Isophorone	78-59-1	6.02E+05	>1E+06	6.02E+03	4.72E+03
Lead [d]	7439-92-1	1.00E+03	-	1.00E+03	-
Lithium [c]	7439-93-2	4.09E+04	3.84E+04	4.09E+04	3.84E+04
Manganese	7439-96-5	6.68E+04	8.36E+04	6.68E+04	8.36E+04
Mercury	7439-97-6	6.13E+02	5.76E+02	6.13E+02	5.76E+02
Methoxychlor	72-43-5	1.02E+04	9.61E+03	1.02E+04	9.61E+03
Methylene chloride (Dichloromethan	75-09-2	7.63E+04	2.39E+05	7.63E+02	5.98E+02
2-Methylnaphthalene	91-57-6	8.18E+04	7.68E+04	8.18E+04	7.68E+04

Table 5 - Surface Soil Action Levels

Analyte	CAS Reference Number	Tier I [a] Industrial Use (mg/kg)	Tier I [a] Open Space Use (mg/kg)	Tier II [b] Industrial Use (mg/kg)	Tier II [b] Open Space Use (mg/kg)
4,4-DDD	72-54-8	2.38E+03	1.87E+03	2.38E+01	1.87E+01
4,4-DDE	72-55-9	1.68E+03	1.32E+03	1.68E+01	1.32E+01
4,4-DDT	50-29-3	1.68E+03	1.32E+03	1.68E+01	1.32E+01
Dibenzo(a,h)anthracene	53-70-3	7.84E+01	6.14E+01	7.84E-01	6.14E-01
Dibenzofuran	132-64-9	8.18E+03	7.68E+03	8.18E+03	7.68E+03
Dibromochloromethane	124-48-1	6.81E+03	5.34E+03	6.81E+01	5.34E+01
Di-n-butylphthalate	84-74-0	2.04E+05	1.92E+05	2.04E+05	1.92E+05
1,2-Dichlorobenzene	95-50-1	1.84E+05	1.73E+05	1.84E+05	1.73E+05
1,4-Dichlorobenzene	106-46-7	2.38E+04	1.87E+04	2.38E+02	1.87E+02
3,3-Dichlorobenzidine	91-94-1	1.27E+03	9.96E+02	1.27E+01	9.96E+00
1,1-Dichloroethane	75-34-3	2.04E+05	1.92E+05	2.04E+05	1.92E+05
1,2-Dichloroethane	107-06-2	6.29E+03	4.93E+03	6.29E+01	4.93E+01
1,1-Dichloroethene	75-35-4	9.54E+02	7.47E+02	9.54E+00	7.47E+00
1,2-Dichloroethene (total)	540-59-0	1.84E+04	1.73E+04	1.84E+04	1.73E+04
2,4-Dichlorophenol	120-83-2	6.13E+03	5.76E+03	6.13E+03	5.76E+03
1,2-Dichloropropane	78-87-5	8.42E+03	6.59E+03	8.42E+01	6.59E+01
cis-1,3-Dichloropropene	1006-01-5	3.18E+03	2.49E+03	3.18E+01	2.49E+01
trans-1,3-Dichloropropene	10061-02-6	3.18E+03	2.49E+03	3.18E+01	2.49E+01
Dieldrin	60-57-1	3.57E+01	2.80E+01	3.57E-01	2.80E-01
Diethylphthalate	84-66-2	>1E+06	>1E+06	>1E+06	>1E+06
2,4-Dimethylphenol	105-67-9	4.09E+04	3.84E+04	4.09E+04	3.84E+04
Dimethylphthalate	131-11-3	>1E+06	>1E+06	>1E+06	>1E+06
4,6-Dinitro-2-methylphenol	534-52-1	2.04E+02	1.92E+02	2.04E+02	1.92E+02
2,4-Dinitrophenol	51-28-5	4.09E+05	3.84E+05	4.09E+03	3.84E+03
2,4-Dinitrotoluene	121-14-2	8.42E+02	6.59E+02	8.42E+00	6.59E+00
2,6-Dinitrotoluene	606-20-2	8.42E+02	6.59E+02	8.42E+00	6.59E+00
Di-n-octylphthalate	117-84-0	>1E+06	>1E+06	4.09E+04	3.84E+04
Endosulfan I [c]	959-98-8	>1E+06	>1E+06	1.23E+04	1.15E+04
Endosulfan II [c]	33213-65-9	>1E+06	>1E+06	1.23E+04	1.15E+04
Endosulfan sulfate [c]	1031-07-8	>1E+06	>1E+06	1.23E+04	1.15E+04
Endosulfan (technical) [c]	115-29-7	>1E+06	>1E+06	1.23E+04	1.15E+04
Endrin (technical)	72-26-8	6.13E+02	2.30E+03	6.13E+02	5.76E+02
Ethylbenzene	100-41-4	2.04E+05	1.92E+05	2.04E+05	1.92E+05
bis(2-Ethylhexyl)phthalate	117-81-7	4.09E+04	3.20E+04	4.09E+02	3.20E+02
Fluoranthene	206-44-0	8.18E+04	7.68E+04	8.18E+04	7.68E+04
Fluorene	86-73-7	8.18E+04	7.68E+04	8.18E+04	7.68E+04
Fluoride	16984-48-8	1.23E+05	1.15E+05	1.23E+05	1.15E+05
Heptachlor	76-44-8	1.27E+02	9.96E+01	1.27E+00	9.96E-01
Heptachlor epoxide	1024-57-3	6.29E+01	4.93E+01	6.29E-01	4.93E-01
Hexachlorobenzene	118-74-1	3.58E+02	2.80E+02	3.58E+00	2.80E+00
Hexachlorobutadiene	87-68-3	7.34E+03	5.75E+03	7.34E+01	5.75E+01
Hexachlorocyclopentadiene	77-47-4	1.37E+04	1.33E+04	1.37E+04	1.33E+04
Hexachloroethane	67-72-1	4.09E+04	1.25E+05	4.09E+02	3.20E+02
Indeno(1,2,3-cd)pyrene	193-39-5	7.84E+02	6.14E+02	7.84E+00	6.14E+00
Iron	7439-89-6	6.13E+05	5.76E+05	6.13E+05	5.76E+05
Isophorone	78-59-1	6.02E+05	>1E+06	6.02E+03	4.72E+03
Lead [d]	7439-92-1	1.00E+03	-	1.00E+03	-
Lithium [c]	7439-93-2	4.09E+04	3.84E+04	4.09E+04	3.84E+04
Manganese	7439-96-5	6.68E+04	8.36E+04	6.68E+04	8.36E+04
Mercury	7439-97-6	6.13E+02	5.76E+02	6.13E+02	5.76E+02
Methoxychlor	72-43-5	1.02E+04	9.61E+03	1.02E+04	9.61E+03
Methylene chloride [Dichloromethan	75-09-2	7.63E+04	2.39E+05	7.63E+02	5.98E+02
2-Methylnaphthalene	91-57-6	8.18E+04	7.68E+04	8.18E+04	7.68E+04

Table 2.2 Summary of Results for PAC NE-1409

Potential Contaminants of Concern[1]	Number of Surface Soil Samples	Number of Detects > RFCA Tier II [2]	Comparison Values (mg/Kg or pCi/g) Open Space		Range of Values Detected (mg/Kg or pCi/g)	
			RFCA Tier II [3,4]	RFCA Tier I [5,6]	Minimum	Maximum
Volatile Organic Compounds						
Acetone	4	0	1.92E+05	1.92E+05	0.019	0.028
Methylene Chloride	4	0	5.98E+02	2.39E+05	0.008	0.011
Total Metals						
Molybdenum	4	0	9.61E+03	9.61E+03	0.26	0.46
Thallium	4	0[7]	--[7]	--[7]	0.67[7]	1.2[7]
Radionuclides						
Plutonium-239/241	4	0	252	1429	0.092	0.142
Uranium-235	4	0	24	135	Not detected	0.081
Nitrate						
Nitrate	4	0	>1E+06	>1E+06	2.1	31.8

1 Contaminants of concern are those chemicals detected above background concentrations presented in the Geochemical Characterization of Background Surface Soils: Background Soils Characterization Program (DOE, 1995).

2 PAC NE-1409 is within the Buffer Zone OU; Open Space RFCA Action Levels Apply
3 Tier II values for non-radionuclides represent either 1E+06 carcinogenic risk or a hazard index of 1 for non-carcinogenic toxicity.
4 Tier II values for radionuclides are based on an annual dose limit of 15 mrem to a hypothetical future resident.
5 Tier I values for non-radionuclides represent either 1E+04 carcinogenic risk or a hazard index of 1 for non-carcinogenic toxicity.
6 Tier I values for radionuclides are based on an annual dose limit of 85 mrem to a hypothetical future resident.
7 RFCA action levels do not exist for thallium because of a lack of toxicity information. The value is in excess of RFETS background concentrations but within the background range 0.8 to 1.2 mg/Kg.

Action/No Further Action Recommendation

Results of the analyses are summarized in Table 2.2 along with the appropriate RFCA action level. All of the analytical results were below RFCA action levels.

Based upon the results of the soil samples collected, no current or potential contaminant source was identified. The incident occurred in 1993 and was not a continuing release. Potential Contaminants of Concern (PCOCs) for PAC NE-1409 were not detected and therefore PAC NE-1409 is proposed for NFA consistent with criteria set forth in the RFCA (DOE, 1996).

Comments:

All of the analytical results are presented in the Draft No Further Action Justification Document for Incorporation into the HRR for PACs NW-1501, NE-1408, NE-1409, 900-1309, 900-1311, 900-1312, 900-1313(RMRS, 1999).

In response to comments received from the Regulatory Agencies on June 23, 2000, this PAC narrative update was submitted as part of an Interim Update to the HRR in August, 2000 (KH, 2000). The Interim Update included detailed attachments consisting of CPIR Report No. 93-007 (with amendments), critique meeting notes, analytical data, and maps (36 pages total). The 36-page attachment is not provided in this Annual Update to the HRR, but is available in the Administrative Record.

PAC REFERENCE NUMBER: 700-1110

IHSS Reference Number: Not Applicable

Unit Name: Nickel Carbonyl Burial West of Building 771

Approximate Location: N751,000; E2,083,500

Date(s) of Operation or Occurrence

September 11, 1957[1] - June 18, 1957[2] 1958?

Description of Operation or Occurrence

On September 11, 1957, a fire occurred in Building 771. The fire soon spread to the box exhaust booster filters and the main filter plenum.[1] Canisters were stored in the anteroom outside the exhaust filter plenum of Building 771 at the time of the fire. During the fire seven nickel carbonyl cylinders were moved from the anteroom to a storage position in the Pipe Shop area. Fourteen nickel carbonyl cylinders were found in the exhaust filter plenum about twenty feet from the west end of the plenum. Several of these cylinders were found burning around the top. The burning cylinders were sprayed with water. The cylinders were loaded into waste barrels, four cylinders to each barrel, and the barrels were filled with vermiculite. The barrels were carted to the access shaft and lifted out with a crane. A burial pit was excavated to the north of the access shaft and the barrels were lifted from the access shaft to the burial pit. The drums were filled with water before the lids were replaced.[3]

Physical/Chemical Description of Constituents Released

Nickel carbonyl was the constituent released to the environment.

Responses to Operation or Occurrence

Four 55-gallon drums, one GI can with two cylinders, and six loose cylinders of nickel carbonyl were removed from the burial pit west of Building 771 to a pit east of the Solar Evaporation Ponds (PIC-48). Explosives charges were used to destructively vent the cylinders and ignite any residual gas.[2]

Fate of Constituents Released to Environment

No documentation was found which further details the fate of the constituents released to the environment.

Comments

None.

References	Other References of Interest
[1] 1500772	1500914
[2] 1600236	1601057
[3] 1501771	1600104
[illegible]	

- no mention of CC in document
- log book entries confirming canisters removed from temp storage.
- personal account describing location & state of cylinders during fire in 771 & packaging & placement into temporary pit outside bldg.
- chemical description of compound ①
- SAME
- confirms excavation from temp. site & destruction

Demos, Nick

From: Guthrie, Vern
Sent: Thursday, March 29, 2001 9:47 AM
To: Gibbs, Frank; Nesta, Stephen; Freiboth, Cameron; Parsons, Duane
Cc: Tower, Steven
Subject: Pad 132 and AF Tower Foundations

This memo documents my discussion yesterday with Dave Krucheck of CDPHE. Following the 1:30 PM meeting with the State and DOE in T124A, Dave K, Deinise Onyskiw, and I visited the 132 concrete pad area south of the T130 complex and the Air Force tower foundations at the east end of the site. The purpose was to present Dave with a proposed plan regarding removal of the foundations.

I stated that we would present to him documentation i.e.: Letter/PRE, PCB information from Colorado Public Service/Xcell Energy on the 132 pad, rad survey data, pictures showing unstained concrete, and other information that might be helpful, and like information for the Air Force towers. He was very supportive of this disposal approach. I explained that we may use the B123 concrete as backfill in the B111 basement, but that decision would not be made until the bids are received. Dave had concern regarding the Air Force foundations in that they were placed in an area that at one time was included in the east area spray field project. I agreed to address this concern in the documentation.

PAC REFERENCE NUMBER: NW-1503

IHSS Number: 114

Unit Name: Improper Disposal of Fuel-Contaminated Material at Landfill

CPIR: 92-004

Approx. Location: N752,668; E2,083,573

Date(s) of Operation or Occurrence:

February 26, 1992

Description of Operation or Occurrence

On February 26,1992, empty motor oil containers, used oil filters and oil-stained debris were inadvertently disposed of in the present landfill.[1]

Physical/Chemical Description of Constituents Released

The used oil filters are regulated as RCRA hazardous waste due to lead levels at 99 ppm, which exceed the Toxicity Characteristic Leaching Procedure (TCLP) limit of 5 ppm.[1]

Responses to Operation or Occurrence

The materials of concern were immediately recovered and drummed by landfill personnel. The RCRA Contingency Plan was implemented and a determination was made that due to the prompt recovery of the material, no actual or potential threat to the environment or human health was posed.[1]

Fate of Constituents Released to Environment

The materials were recovered; therefore, they are no longer present in the landfill and do not pose a threat to the environment.[1]

Action/No-Action Recommendation

No further action is recommended based on recovery of the materials from the landfill.

Comments

This CPIR was identified in the First Quarterly Update of the HRR, but no formal PAC narrative was ever written; therefore, it is being included with this Seventh Quarterly Update.

References

[1]RCRA Contingency Plan Implementation Report 92-004. February 10, 1992.

PAC REFERENCE NUMBER: NW-1504

IHSS Number: 114

Unit Name: Improper Disposal of Thorosilane-Contaminated Material at Landfill

CPIR: 94-002

Approx. Location: N752,613; E2,083,537

Date(s) of Operation or Occurrence:

January 28, 1994

Description of Operation or Occurrence

On January 28, 1994, materials potentially contaminated with Thorosilane were disposed of in the sanitary landfill.[1]

This incident occurred as a result of a January 27, 1994 spill in Building 551 when a 5-gallon bucket containing approximately 5 gallons of Thorosilane product leaked into the double bags surrounding the can. Thorosilane is an ignitable liquid which was stored in the Building 551 Warehouse Flammable Storage Vault #4. The material released into the surrounding bags was cleaned up by a warehouse employee. The employee had been given proper disposal instructions by the Environmental Coordinator (EC) to dispose of the spilled material, but misunderstood the cleanup procedure. As a result, the spill was cleaned up by placing the bucket containing the un-spilled Thorsilane and the bags containing the released Thorosilane in a 20-gallon poly-pack drum and adding 75-pounds of Oil-Dri™ to the top without properly agitating the drum contents. The drum was then sealed and placed in a dumpster. The contents of the dumpster were transferred to the trash truck and subsequently placed into the sanitary landfill.[1]

Physical/Chemical Description of Constituents Released

When disposed of in liquid form, Thorosilane is considered a hazardous waste exhibiting the characteristic of ignitability (D001). Thorosilane consists of mineral spirits, naptha and diacetone alcohol.[1]

Responses to Operation or Occurrence

On the afternoon of January 28, two ECs went to the Warehouse to follow-up the incident in Building 551 and to discuss the usability of the contents remaining in the five-gallon bucket. Upon arrival, they discovered that improper procedures had been followed and that both the spilled material and the bucket of the residual unspilled Thorosilane had been sent to the landfill.

Upon further investigation on January 31, it was determined that because of the addition of Oil-Dri™ to the drum without proper agitation, it was possible that free liquids could have leaked

from the drum into the trash in the truck. The RCRA Contingency Plan was implemented as a precautionary measure because Thorosilane, when disposed of in liquid form, is considered a hazardous waste.[1]

On February 1, 1994, the poly-pack was located in the landfill; however, the lids and approximately half of the waste were not found. It was presumed that the hydraulic compaction system in the trash truck crushed both the overpack and metal bucket and that the lids from both containers were dislodged as a result of being crushed. Thus, the contents of the overpack could have been commingled with the trash in the truck prior to placement in the landfill. The crushed poly-pack and product bucket containing part of the Oil-Dri™ were packaged in a 55-gallon drum and returned to the warehouse for proper handling and disposition.[1] A determination was made that the drummed material no longer constituted hazardous waste. The drums remain in the warehouse awaiting a decision for the appropriate final disposal location.[2]

Fate of Constituents Released to Environment

Based on the removal of the crushed poly-pack, product bucket and approximately 50 pounds of the Oil-Dri™ and absorbed liquid, it is believed approximately one-half of the contaminated material was recovered from the landfill. Upon observation of the recovered containers, no free liquids were found to be present. Based on these observations, no evidence of RCRA-regulated ignitable hazardous waste material was present; however, approximately 50% of the material was not recovered.[1]

The CPIR indicated that the incident had not contributed any measurable deterioration to the landfill condition prior to this incident.

Action/No-Action Recommendation

No further immediate action is recommended; however, the possible presence of Thorosilane-contaminated material in the sanitary landfill should be noted by the Project Manager of OU 7.

Comments

This PAC is located within the boundaries of PAC NW-114, the sanitary landfill, which is currently being addressed as part of OU 7.

References

[1]RCRA Contingency Plan Implementation Report 94-002. February 9, 1994.

[2]EG&G, 1994. Personal Communication with Mickey Johnson, Waste Regulatory Programs. May 20, 1994.

PAC REFERENCE NUMBER: NW-177 — NW-1502

IHSS Number: 114, Operable Unit 7, Sanitary Landfill

Unit Name: Present Landfill

Approx. Location: N752,500; E2,083,000

Date(s) of Operation or Occurrence

The present sanitary landfill has been in operation from August 14, 1968 to present.

An occurrence was reported on September 25, 1992

Description of Operation or Occurrence

A release to the environment of greater than the reportable quantity (RQ) of RCRA-regulated hazardous waste was reported on September 25, 1992. The hazardous substance release was the result of improper disposal of cleanup materials (soil and absorbent) from a diesel fuel spill at the present landfill location.

Approximately one gallon of fuel was spilled onto the asphalt surface while patching the building 850 parking lot. The release was cleaned up with 50 pounds of soil and oil-dri absorbent and inadvertently taken to the landfill for disposal.

Physical/Chemical Description of Constituents Released

Based upon process knowledge, cleanup materials from diesel spills are managed as RCRA-regulated waste because the material could contain levels of benzene that exceed the TCLP limit. The EPA waste code for this waste is D018.

Responses to Operation or Occurrence

CDH was notified on September 25, 1992 that the RCRA Contingency Plan had been implemented as a precautionary measure. The Environmental Protection Agency, Region V111 was notified by facsimile on September 28, 1992. An estimated 100 pounds of material suspected to be contaminated were recovered from the landfill release location and disposed of properly.

Fate of Constituents Released to Environment

The area impacted by this release is submitted in accordance with the IAG, Sections I.B.3 Notification, and I.B.5 Historical Release Report for final disposition. Any material not recovered, will be remediated with the landfill as part of Operable Unit 7.

Comments

This release does not add additional scope or cost variables for incorporation into Operable Unit 7 and will be incorporated under existing work plans.

References

As enclosed:

RCRA Contingency Plan Implementation Report No. 92-021

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.
ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

October 9, 1992 — 92-RF-11851

Frederick R. Dowsett, PhD., Unit Leader
Monitoring and Enforcement
Hazardous Materials and
Waste Management Division
Colorado Department of Health
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CONTINGENCY PLAN IMPLEMENTATION REPORT 92-021 - JMK-0969-92

Enclosed is RCRA Contingency Plan Implementation Report No. 92-021 which documents the status and information concerning a release to the environment of greater than one pint/one pound of RCRA-regulated hazardous waste. The release was a result of improper disposal at the sanitary landfill located at the Rocky Flats Plant (RFP) of cleanup materials (soil and absorbent) from a diesel fuel spill. Approximately one gallon of diesel fuel was spilled onto an asphalt surface while patching Building 850 parking lot. The fuel release was cleaned up with approximately 50 pounds of soil and oil-dri which were used to absorb the liquid residue from the asphalt surface. The contaminated soil and absorbent were then inappropriately placed in the back of a subcontractor's dump truck which was en route to the sanitary landfill with approximately eight yards of dirt. The dirt and cleanup materials were subsequently unloaded at the sanitary landfill. Based on process knowledge, cleanup materials from diesel fuel spills at RFP are managed as RCRA-regulated waste because the material could contain levels of benzene that exceed the Toxicity Characteristic Leaching Procedure (TCLP) limit. The Environmental Protection Agency (EPA) waste code for this waste is D018. An attempt was made to recover the cleanup material from the eight yards of dirt which were deposited at the landfill. Approximately 100 pounds of soil (which released an odor of petroleum product), with small quantities of absorbent, was collected and removed from the landfill.

Your office was notified on September 25, 1992, that the RCRA Contingency Plan Implementation Report had been implemented as a precautionary measure. The EPA, Region VIII was notified by facsimile on September 28, 1992. The National Response Center was also notified on September 25, 1992, because the quantity of material (contaminated soil and absorbent) released (disposed of) into the environment (sanitary landfill) exceeded the reportable quantity (ten pounds of waste) for the unlisted hazardous waste characteristic of toxicity for benzene (D018).

ITEM STATUS
CLOSED
PARTIAL

TYPIST INITIALS
:KAM

5 (Rev. 9/92)

If you have any questions regarding this subject, please contact K. A Holstein at 966-2435 or J. M. Mynard at 966-6087.

J. M. Kersh, Associate General Manager
Environmental and Waste Management
EG&G Rocky Flats, Inc.

MLJ: kam

Enclosure:
As Stated

cc:
D. M. Maxwell - EPA, Region VIII
B. Brainard - DOE, RFO
D. Grosek - DOE, RFO
T. E. Lukow - DOE, RFO
W. E. Seyfert - DOE, RFO

RCRA CONTINGENCY PLAN
Implementation Report No. 92-021

RCRA CONTINGENCY PLAN
IMPLEMENTATION REPORT
ROCKY FLATS PLANT
EPA ID NUMBER CO7890010526

This report is made in compliance with the requirements of 6 CCR 1007-3, Parts 264.56 (j) and 265.56 (j) for a written report within 15 days of the implementation of the RCRA Contingency Plan. The requirements for this are given below and will be addressed in the order listed, excerpted from 6 CCR 1007-3, Parts 264.56 and 265.56:

"(j)...Within 15 days after the incident, he must submit a written report on the incident to the department. The report must include:

(1) Name, address, and telephone number of the owner or operator
(2) Name, address, and telephone number of the facility
(3) Date, time, and type of incident (fire, explosion)
(4) Name and quantity of material(s) involved
(5) The extent of injuries, if any
(6) An assessment of actual or potential hazards to human health and the environment, where this is applicable; and
(7) Estimated quantity and disposition of recovered material resulted from the incident."

---

(1) Name, address and telephone number of the owner of the facility:

United States Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

Facility Contact:
Terry A. Vaeth, Manager

(2) Name, address and telephone number of the facility:

U.S. Department of Energy
Rock Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

A. SUMMARY

The RCRA Contingency Plan Implementation Report was implemented on September 25, 1992, due to a release to the environment of greater than one pint/one pound of RCRA-regulated hazardous waste. The release was a result of improper disposal at the sanitary landfill located at RFP of cleanup materials (soil and absorbent) from a diesel fuel spill. Approximately one gallon of diesel fuel was spilled onto an asphalt surface while patching the building 850 parking lot. The fuel release was cleaned up with approximately 50 pounds of soil and oil-dri which were used to absorb the liquid residue from the asphalt surface. The contaminated soil and absorbent were then inappropriately placed in the back of a subcontractor's dump truck which was en route to the sanitary landfill with approximately eight yards of dirt. The dirt and cleanup materials were subsequently unloaded at the sanitary landfill. Based on process knowledge, cleanup materials from diesel fuel spills are managed as RCRA-regulated waste because the material could contain levels of benzene that exceed the TCLP limit. The EPA waste code for this waste is D018. Approximately 100 pounds of soil (which released an odor of petroleum product), with small quantities of absorbent, was collected and removed from the landfill.

B. DESCRIPTION OF INCIDENT:

At approximately 12:00 p.m. on September 25, 1992, a container of diesel fuel located on the back of a subcontractors truck was overturned and approximately one gallon of fuel was spilled onto the asphalt. The diesel fuel was being used to clean and lubricate the asphalt paving tools used in patching the Building 850 parking lot. The subcontractor immediately shoveled dirt from the side of the road to contain and clean up the spill. At approximately 12:15 p.m. a Construction Management Coordinator called the Shift Superintendent who then notified the RFP Fire Department as a non-emergency response. At approximately 12:16 p.m. the RFP Fire Department's Hazardous Materials Team responded to the spill. At that time, Garage personnel also arrived at the scene. When the Shift Superintendent, the response team and the Area Construction Manager arrived, the spill had been covered and raked into a pile per industry standards for containing and cleaning up diesel fuel spills. The RFP Fire Department is responsible for containing releases of hazardous substances and material. Since the spill was contained, the Hazardous Materials Team did not take any action. Per RFP plant procedures which require that excess petroleum liquids are picked up with absorbent, the Garage personnel placed approximately 20 pounds of oil-dri (absorbent) on the dirt to absorb all visible liquid. The Shift Superintendent then erroneously directed Construction Management to have the subcontractor place the soil and absorbent with a truckload of dirt that was being taken to the sanitary landfill. At approximately 12:45 p.m. the truck proceeded to the landfill, where the driver dumped the load as instructed by landfill employees. This dirt was unloaded within the fenced landfill area.

Upon returning to his office from the Building 850 parking lot, the Shift Superintendent contacted the "on-call" Waste Programs (WP) representative. The WP representative was concerned with the way the incident was handled, so the representative contacted the Spill Response and Reporting Program Manager. The Program Manager made the determination that it was a hazardous waste

decision made to declare this material a RCRA-regulated hazardous waste. This determination had been previously made because the cleanup materials could contain quantities of benzene greater then the TCLP limit; therefore, the cleanup material from diesel spills has been managed as a RCRA-regulated hazardous waste with EPA waste code D018.

The Operations Manager responsible for the Building 850 parking lot and the landfill, as well as, the Associate General Manager of Environmental and Waste Management were notified of the events.

C. CORRECTIVE ACTION:

An attempt was made to locate and recover the cleanup material from the eight yards of dirt located at the landfill. Organic vapor detection equipment was used to survey the surface of the dirt but no detectable organic vapors were found. Holes were dug into the mound in an attempt to locate the cleanup material. Evidence of absorbent material (Oil-dri) was located near the top of the mound. No organic vapors were detected with the monitoring equipment; however the odor of petroleum products was smelled. Approximately 100 pounds of soil (which released an odor of petroleum product), with small quantities of absorbent, was collected and removed from the landfill. No other absorbent was discovered. It is believed that the majority of the cleanup materials was recovered; however, some of the cleanup material may still be in the landfill.

On September 28, 1992, the subcontractor was notified by Construction Management that when a spill occurs they are to make immediate notifications to the plant and wait for the plant spill response teams for the containment, collection and disposal of the spill. The pre-construction checklist for subcontractors will be modified to include a requirement that any release of a hazardous material is reported to Construction Management prior to taking any corrective actions.

Waste Programs will issue a letter of guidance to the participants (Shift Superintendent, RFP Fire Department and the Garage) of this incident reminding them of the requirements of handling petroleum product spills. These requirements had been outlined in existing plant procedures.

In the future, as part of the Waste Stream and Residue Identification and Characterization program, samples of cleanup material from similar diesel fuel spills will be collected and analyzed to provide analytical data to be used to characterize cleanup materials future diesel fuel spills. The analytical results will be forwarded to your office.

(4) NAME AND QUANTITY OF MATERIAL INVOLVED:

A mixture of approximately one gallon of diesel fuel and approximately 50 pounds of cleanup material (soil and absorbent) was released (disposed of) into the environment (sanitary landfill). EG&G Rocky Flats had declared cleanup materials from diesel fuel spills at the RFP as RCRA-regulated hazardous waste based on process knowledge that the cleanup material could fail TCLP for benzene (D018).

There were no injuries to personnel.

(6) AN ASSESSMENT OF ACTUAL OR POTENTIAL THREAT TO HUMAN HEALTH AND ENVIRONMENT:

An attempt was made to locate and recover the cleanup material (0.7 cubic feet) from the eight yards of dirt. Approximately 100 pounds of soil (which released an odor of petroleum product), with small quantities of absorbent, was collected and removed from the dirt. The impact to the environment of any material not recovered, if any, as a result of this incident (the inadvertent disposal of approximately 0.7 cubic feet of cleanup material, which is RCRA-regulated hazardous waste, mixed with 216 cubic feet volume of uncontaminated soil at the sanitary landfill), is minimal in comparison to the preexisting condition of the sanitary landfill prior to this inadvertent disposal. The amount of RCRA-regulated hazardous waste added due to this incident is incrementally insignificant when compared to the volume of hazardous constituents that have already been placed into the landfill as documented in the Historical Release Report. (See Appendix 1 for a copy of the applicable section from the Historical Release Report.)

Any material not recovered, if any, will be remediated with the landfill as part of operable unit number 7 (OU7) remediation effort. The Interagency Agreement activities will include site investigations, site characterizations and possible site remediation. The Final Phase I RFI/RF Report is to be completed by March 16, 1994. The facts of this occurrence (including the success of recovering the cleanup material) will be forwarded to Environmental Management for inclusion in the updates to the Historical Release Report.

In addition, a surface water diversion ditch and groundwater interceptor system divert uncontaminated upstream water around the landfill to prevent degradation of this water by the landfill. Any leachate from the landfill is collected to prevent any contamination from being released offsite. Groundwater monitoring wells detect and monitor the levels of contamination within, around and beneath the landfill.

The result of this assessment is that if any of the cleanup material was not recovered from the dirt mound, the release would not present a significant increase in the actual or potential threat to human health or the environment.

(8) ESTIMATE QUANTITY AND DISPOSITION OF RECOVERED MATERIAL THAT RESULTED FROM THE INCIDENT:

Approximately 50 pounds of cleanup materials (soil and absorbent) from a diesel fuel spill was disposed of with approximately 16,000 pounds of loose dirt; and subsequently deposited at the landfill. Cleanup materials from diesel fuel spills have been declared RCRA-regulated hazardous waste because the cleanup materials could contain levels of benzene that exceed the TCLP limit. An attempt was made to locate and recover the cleanup material from the eight yards of dirt. Approximately 100 pounds of soil (which released an odor of petroleum product), with small quantities of absorbent, was collected and removed from the landfill. A sample of the recovered material will be collected and analyzed to determine disposal requirements.

FAX 5702

DOCUMENTS

Document Profiles for Administration

10:19:23 03 APR 1998

Document Reference: 1600236
Document Title: INDUSTRIAL HYGIENE LOG 1962 1963 1964 1965 1966

Date Originated: 06/17/63
Ending Log Date:
Date Received:
Custodian: WARDEN J R
Building: BR1
Source Code: FRC
Production Number: 91HRR19

File: B132
Page Ranges: B7798-B7799 -
Type: MISCELLANEOUS HANDWR
Handwritten: Y
Margin Notes:
UCNI: NONE
Item Number:

To: NONE

From: UNKNOWN

Keywords:

Distribution:

CCs/BCCs: NONE

Analyst's Comments

BURIAL OF 4 BOTTLES 55 GAL DRUM NEAR BLDG 71

RELATED DOCUMENTS
Document Prime ABC Sum Key Title

ATTACHMENTS
Document Title

ATTACHED TO
Document Title

PAC REFERENCE NUMBER: 700-1110

IHSS Reference Number: Not Applicable

Unit Name: Nickel Carbonyl Burial West of Building 771

Approximate Location: N751,000; E2,083,500

Date(s) of Operation or Occurrence

September 11, 1957[1] - June 18, 1957[2] 1958

Description of Operation or Occurrence

On September 11, 1957, a fire occurred in Building 771. The fire soon spread to the box exhaust booster filters and the main filter plenum.[1] Canisters were stored in the anteroom outside the exhaust filter plenum of Building 771 at the time of the fire. During the fire seven nickel carbonyl cylinders were moved from the anteroom to a storage position in the Pipe Shop area. Fourteen nickel carbonyl cylinders were found in the exhaust filter plenum about twenty feet from the west end of the plenum. Several of these cylinders were found burning around the top. The burning cylinders were sprayed with water. The cylinders were loaded into waste barrels, four cylinders to each barrel, and the barrels were filled with vermiculite. The barrels were carted to the access shaft and lifted out with a crane. A burial pit was excavated to the north of the access shaft and the barrels were lifted from the access shaft to the burial pit. The drums were filled with water before the lids were replaced.[3]

Physical/Chemical Description of Constituents Released

Nickel carbonyl was the constituent released to the environment.

Responses to Operation or Occurrence

Four 55-gallon drums, one GI can with two cylinders, and six loose cylinders of nickel carbonyl were removed from the burial pit west of Building 771 to a pit east of the Solar Evaporation Ponds (PIC-48). Explosives charges were used to destructively vent the cylinders and ignite any residual gas.[2]

Fate of Constituents Released to Environment

No documentation was found which further details the fate of the constituents released to the environment.

Comments

None.

References	Other References of Interest
[1] 1500772	~~1500914~~ NO
[2] 1600236	1601057
[3] 1501771	1600104
[4] 1500886	

Relevant pages from each attached as requested by the Agencies.

180072

A REVIEW OF THE SEPTEMBER 11, 1957 FIRE AT THE ROCKY FLATS PLANT IN PLANT BUILDING NUMBER 771

by

C. W. Barrick
Environmental Sciences Department

91HRR21 B 00013182

INTRODUCTION AND SUMMARY

Smoke from a burning glove,detected in a building hallway, led two watchmen to discover flames extending 18 inches out of a Plexiglas window on a glovebox. The time was approximately 10:10 p.m., Wednesday, September 11, 1957. The fire had started in a 3 inch high by 5 inch diameter can of plutonium turnings in the "fabrication development line" in Room 180, (first floor) of the plutonium processing and fabrication building (Building 771) of the Rocky Flats Plant near Golden, Colorado. Fires in the box exhaust booster filters and main filter plenum on the second floor may have also been started around this time but were not discovered until 10:28 p.m. An explosion of collected flammable vapors in the main exhaust duct at 10:39 p.m. resulted in spreading plutonium through most of the building and probably contributing to the release of plutonium from the 152 foot tall stack.

The fire in Room 180 was controlled at 10:38 p.m. but rekindled several times. The main filter fire was controlled at 2:00 a.m., September 12 and the fire was officially declared out at 11:30 a.m., Thursday, September 12, 1957.

This incident resulted in an $818,600 AEC property loss and an uncertain environmental release of plutonium and associated radioactivity. Estimates of this release are given as follows:

1. "detectable but insignificant[a]," J. Epp, 771 Building 1957 Fire Report

2. "25,618 Microcuries recorded stack release[b]," M. A. Thompson, 1975 Omnibus and 1977 Draft Rocky Flats Environmental Impact Statement ERDA 1545-D, 1980 Final Rocky Flats Environmental Impact Statement DOE/EIS-0064

3. "1 gram of plutonium offsite[c]," S.E. Hammond, 1971 LASL Meeting Report LA-4756

4. 1.0 $\pm$ 0.3 Ci (14 grams) total plutonium release[d], C. W. Barrick, 1980

The rationale behind these release estimates is explained in the following referenced paragraphs.

a. "Insignificant" compared to the 1957 industry and governmental standards. For instance, the maximum permissible level for workers was 9 dpm total long lived alpha (TLLα) activity per cubic meter of air. For comparison the only offsite air sampler with detectable TLLα activity was located near Wagner School. From September 10-13, it sampled 4320 m^3 of air and gave an activity of 0.05 dpm/m^3. The eight onsite air samplers operating from September 11, 8:15 a.m. to September 12, 3:30 p.m. showed no detectable activity. The detection limit was 0.009 dpm/m^3 for three day air samples. No offsite surface readings of direct count were above background. The average offsite removal TLLα activity was 4.2 dpm/100 cm^2. The highest was 24 dpm/100 cm^2 at Ward Road and the C&S Railroad tracks. The plant accepted offsite removable activity limit was 50 dpm/100 cm^2. The average onsite removable activity was 6.3 dpm/100 cm^2. The highest, 51 dpm/100 cm^2, was from the 991 Building roof.

b. Several assumptions were made concerning the exhaust air flow rates September through October 1957 and concerning the time represented by the recorded average daily releases "before" and "after the incident." Subsequent authors (Hobbs, Hornbacher, Kittinger, Thompson) additionally assumed that the amount recorded at the stack sampler September through December 1957, minus the average (of normal 1957 months) stack sampler readings was the best estimate of the 1957 fire release. This is the basis of the 25,618 μCi release value. There is no way to accurately quantify the release from stack sampler data because the concentration (dpm/m^3) and the flow rate was unknown and fluctuating between 10 and 12 p.m. September 11, 1957.

c. "Offsite" meant outside the cattle fence which in 1957 was the USAEC property line enclosing the approximately four square mile plant site. There are several drafts of this report with more explicit maps and data back to March 1958. The first mention noted of "one gram offsite" was in a 1970 draft of Report LA 4756. Monthly progress reports and personal data files were searched but no statements of basis, assumptions, method or calculation was found to indicate the actual derivation of Hammond's estimate.

d. This estimate was made for this report by the author assuming the southern most branch of the soil activity deposition, best illustrated by Krey (1976 Health Physics 130, pp 209-214), was due to the '57 fire. Wind speed and direction data from atop 123 Building in 15 minute intervals was used to predict the expected path of releases from the 771 stack. The accuracy of these assumptions was checked where possible by vegetation sampled September 12 and 13 (and continued through October 1957) and analyzed for plutonium. This model was used to deconvolute the Krey 1976 estimate of Rocky Flats plutonium in Denver area soils (11.4 Ci) into that small portion due to the 1957 fire and the remaining larger portion from the oil barrel leak (1958-1969). The release track was taken as the axis of symmetry and the portion of the Krey, 1976, contours west of this axis were rotated to provide closed and deconvoluted contours due to the '57 fire. The larger remainder fit a soil deposition model based on vector analysis of the 17 year wind rose. Here it was assumed the deposition pattern axis of symmetry followed the summation of vectors where the wind direction gave the angle and the quantity $(\bar{v} - 5)^3$ = vector magnitude with $\bar{v}$ being the average wind speed in mph (Fuchs "The Mechanics of Aerosols," Chap. VIII, 1960).

Other available information sources such as air sample results, removable activity on surfaces, soil sample activity measurements and isotopic ratio measurements were cross checked to verify deposition of plutonium to the southeast in 1957 rather than during the period 1958-69 assumed by Seed, et al., in RFP INV 10 (1971) and Krey (1970)(1976). Both authors stated the 1957 fire release was not explicitly included in the basis of their estimates, probably due to the obviously larger (approximately 90%) fraction of deposition due to the barrel leak and also the uncertainties in the 1957 plutonium stack release estimates.

1600236·00000510·208

326-79-0007

91HRR19 B 00007798

6-12 M Delnay, Jordan (Eng) Boatman meeting on filters for 41-106G hood. Also will check hood exhausts in 41-119

With safety et al on moving $Ni(CO)_4$ next Monday 6-17.

6-13. Possibility of Be reaching 41 stack from Rm 119 hoods. Duct sample ordered. Duct velocity 1200 fpm in a 12" ID duct - sample tube 3/8" ID - 0.98 cfm for isokinetics

6-13 - Purchasing requested Unico catalog - interested in gasoline powered ~~vacuum~~ pump, personal samples. - Material said generator not perfected - not on market.

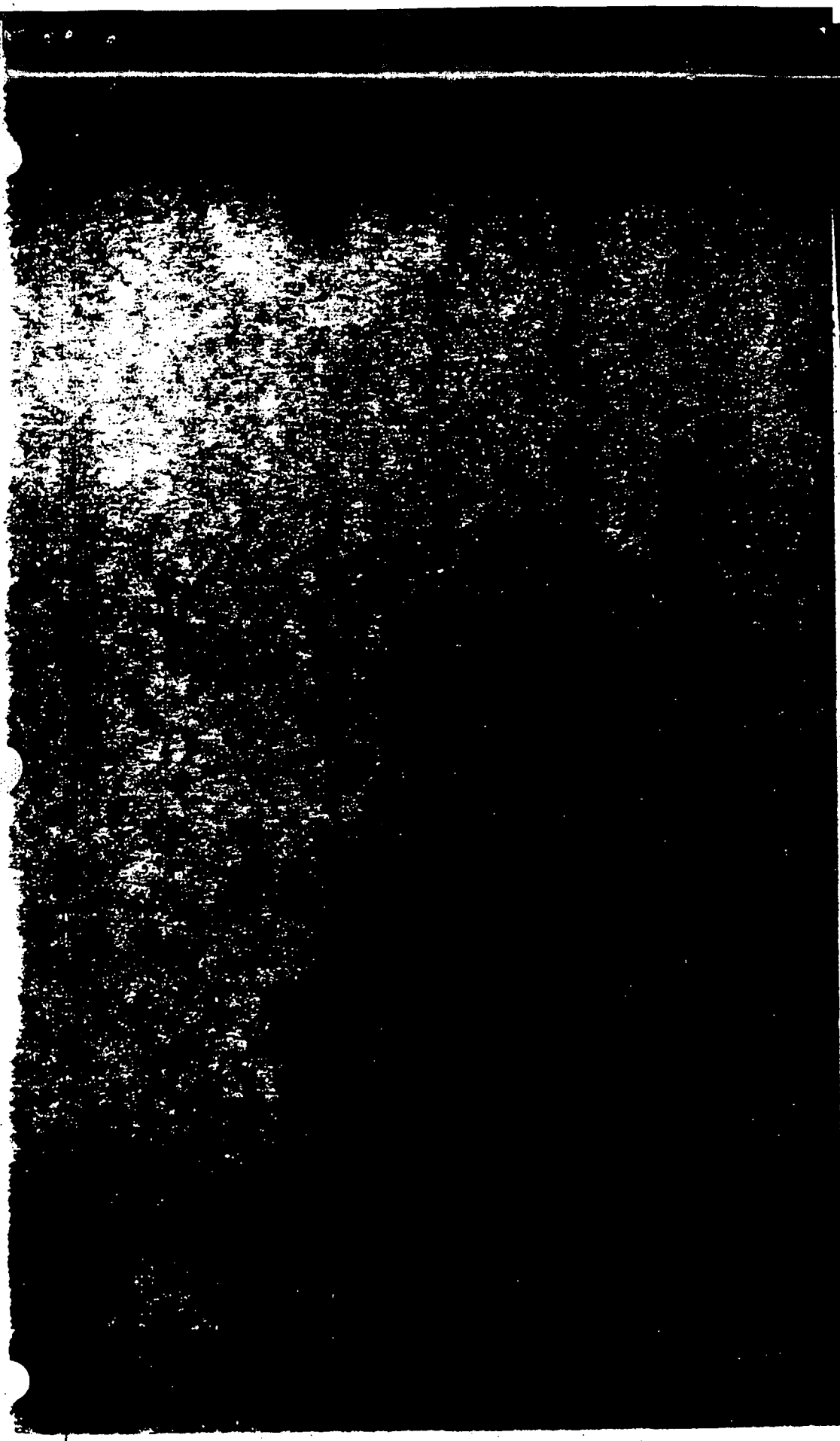
6-17 - Nickel carbonyl removed from burial west of 71. 34-55 gal drums, one G1 Can with 2 bottles and six loose ones to pit east of nitrate ponds - vented with plastic explosives - wind light and very variable. Two samples in impinger with conc H_2SO_4 - one about 30 ft south and one 60 ft south of pit 1 cfm 1256 to 1400, 1420 to 1446 - total 90 min, 90 ft^3.

~~Site~~

6-18 - Continued above $Ni(CO)_4$ - used ~~sample~~ same samples - ran 0832 - 0946 at 1 cfm 78 ft^3 total 168 ft^3. Heavy black smoke and gentle flame following detonation. Two samples 20 & 60 ft NW of pit, wind very gentle from E and SE. Samples showed trace of Ni only (probably ≈ 1 ug)

1501771·00005299·219

1501771



FIRE: WITNESS RFTS.

91HRR32 B 00021968

John Pringle: [illegible]

"On September 11, at approximately 10:30 PM, I was notified by the guard of a fire in Room 180. I proceeded immediately to the Plant and arrived at 10:55 PM where I met Mr. Venable at Gate No. 1. We went immediately to Building 71 and were informed that an explosion had occurred and that all personnel were evacuated from the building, and all were accounted for.

At this time there was a large column of smoke coming from the 71 Bldg. stack. I immediately put on a Chemox mask and took Floyd Parker, also in a Chemox mask, with me into the Building to examine the exhaust filter plenum.

We entered by the front door and proceeded upstairs through the East stairway. As we arrived at the second floor all lights in the building went out. This was approximately 11:10PM as indicated by the time all clocks stopped. The entire second floor was filled with dense smoke. As I arrived at the Est entrance to the filter plenum, Floyd Parker stated that his Chemox mask was not working properly and he was going back out of the building.

I entered the downstream side of the exhaust filter plenum from the East end and observed a large fire in the filters approximately two-thirds the distance from the East entrance to the West entrance. The exhaust filter plenum was not particularly smokey and I could see the entire length of the plenum to the fire clearly.

I returned immediately to the front of Building 71 to direct the Fire Department to get hoses down the access shaft and into the East entrance of the plenum. I was informed by somebody that Mr. Venable had already gone to the access shaft with the fire truck.

I then went immediately to the access shaft and into the second floor area where I encountered firemen stringing hose to the East door of the filter plenum. I led the way to the East door and opened it for the firemen to bring in the hoses. It was my impression that one of the doors was actually open and the other was closed. As we entered the anteroom outside the filter plenum the smoke was so intense that we could not find the doors to the plenum with lamps. We therefore sprayed down the anteroom with a fog nozzel, which also reduced the intensity of the heat to the point where we could get the hoses into the door of the plenum.

As the firemen started down the plenum with the hose I noticed a nickel carbonyl cylinder lying on the floor of the anteroom. By this time my Chemox cannister was out of time and I went back to the access shaft and obtained a new cannister. As I returned through the shaft I met Bob Vandegrift who told me that he had seen Floyd Parker in front of the building. Bob Vandegrift and I went immediately to the anteroom of the filter plenum and we moved seven nickel carbonyl cylinders to a storage position in the old Pipe Shop area. We then went to the East entrance of the filter plenum to try to

determine the extent to which the fire had spread. We could not see beyond the door of the plenum due to the smoke and intense heat. We then went back to the West end of the plenum where firemen were beginning to string new hose to the center hatch of the plenum in order to fight the fire from that point.

We assisted a man I believe to be Al DeWaele, in stringing the hose to the center hatch where he took the hose (Al DeWaele) and started to spray the inside of the plenum. The appearance of the plenum at this point was a mass of glowing embers on the floor and no evidence of filters was still in the flames.

I then left the second floor by the access hatch and went to the front entrance of Building 71 in a respirator. I then made a complete tour of the downstairs area, including the Chem Lines, Recovery, Fabrication, Analytical, and the East access corridor. The smoke had fairly well diminished on the first floor and the emergency battery-powered lights were operating so that in all hallways I could see the complete length of the hall.

As I came by Room 149 I could hear water running. I went in and found a return pump in the gravity circulating water system that was overflowing on the floor. I shut the water supply to the pump off and started back out the front door of 71.

I came back out the East corridor where I changed clothes and obtained a clean respirator. I then went back in the front area of Building 71 with a Pee Wee and did some spot monitoring. I found the general level of contamination to be 100 to 500 counts per minute, except around the air-lock to the exclusion area, where the floor had been tracked up.

I came back out of the building and met Mr. Venable and Mr. Langell. I reported to them the contamination in front of the building and with a monitor Mr. Langell, Mr. Venable and myself rechecked the front area and decided that the people on the PM shift could be permitted to come into the building and obtain their clothes.

Mr. Langell and Mr. Venable said that they were going to Building 34 to talk to the men and I remained in Building 71. By this time the battery-powered emergency lights were about all burned out and I obtained a supply of hand lamps and set them around in front of the building. While doing this I noticed that the smoke seemed more intense at the South end of the main North-South corridor than it had been when I was in the area a short time previously. I walked to the South end of this corridor and noticed that the smoke was very intense around Room 180. I proceeded around 180 to the door of Room 180-B. Looking through this door I could see no flames but observed smoke and intense heat. As I tried to open the door from 180-B to 180 a rush of hot smoke came out which was so intense that I could not enter the room.

I then left by the East corridor and obtained two firemen to go back in in Chemox masks to determine if the fire had rekindled in Room 180. I also had the guard of Building 73 contact Mr. Venable, who at this time was in Building 34, and tell him that I thought 180 was again on fire. As the two firemen and myself proceeded toward Room 180 down the East corridor, my Chemox mask failed and I had to leave the building. While I was obtaining a new mask the firemen came back out and reported that they had gone to 180 and found heat and smoke but no evidence of open flame. I directed the two firemen to stand by and inspect Room 180 every few minutes and also had the pumper truck driven to the East dock and had them reconnect the hose which was already strung down the East corridor.

I then went back to the access hatch where I changed my clothes and talked briefly to Mr. Venable and Mr. Langell. I then went to the Medical Department where I was checked for skin contamination and nose and throat swabs were taken. Mr. Springer and Mr. Stone were with me at this time. The three of us went to the main Cafeteria, Building 12, where we obtained coffee and sandwiches. (To the best of my memory, this was approximately 3:30 AM.)

I then returned to Building 71 and encountered Frank Quinn. He told me that he and the firemen had been in Room 180

and found the fire still burning, mainly on the floor and in what looked like filters off the booster system inlets and exhausts which had dropped off onto the floor. He said that the firemen had these fires under control and were returning periodically to extinguish any blazes which rekindled. He also told me at this time his appraisal of the damage which had been done. This was approximately as follows:

The lathe box and inspection box were completely burned, as well as the centrifuge enclosure.

The mini-mixer settler enclosure, the tensile testing machine enclosure, and the enclosure around a small press.

He also said that the windows were out in a number of the chemical research boxes.

Frank Quinn was extensively contaminated at this time and I told him to get cleaned up in Building 74 and report to Medical.

I then went to Building 74 to check on the progress of decontaminating other personnel who had been involved in the fire area. They reported that all skin contamination had been removed satisfactorily and the people involved either released or sent to Medical for final clean-up.

Following this approximately an hour elapsed in which no one entered the front of Building 71 except the firemen periodically checking Room 180, And C. Kirk + H. Vaughn who Surveyed the process areas to see if any water was leaking into the dry boxes.

At the end of this period I went to Mr. Venable's office in Building 76. Most of the Building 71 supervisors were assembled there. While we were there a fireman called and reported that he had found several small cylinders in the exhaust filter plenum which were burning around the top. We immediately concluded that these were additional nickel carbonyl cylinders which had been discovered previously.

Mr. Venable called Will Wright to determine the number and location of carbonyl cylinders still in storage in Building 71. I went immediately to the exhaust filter plenum in a Chemox mask and found 14 nickel carbonyl cylinders along the South wall of the downstream side of the filters and about twenty feet from the West end of the plenum. Some of these cylinders were still burning.

I contacted Mr. Venable by radio and we decided to spray down the cylinders with water to keep them cool and not try to move them until the fire was completely out. I went back to the filter plenum with Jim Graham, of the Fire Department, and we sprayed the cylinders.

At this time the remaining fire in the plenum was in a few smoldering filters at each end. Jim Graham told me that the filters were burning progressively from one to the next and that in order to completely stop the fire we had to make

a fire break by taking out a section of filters. We did this by using a fireman's hook and pulling the burning filters out of the racks onto the floor, where we extinguished them with a fig nozzel. We continued this up the plenum from East to West until we removed a vertical row of filters which were no longer burning. We then sprayed down the carbonyl cylinders and left the plenum.

Jim Graham said that he was going to the East end of the plenum and do the same thing while I went to Mr. Venable's office to decide what to do about the carbonyl cylinders. By this time the day people were arriving.

We decided to recheck the cylinders to see if they were still burning and leaking and determine if they could be removed from the building. Jesse Cleveland and I then put on Chemox masks and went down to recheck the cylinders. We took a carbon monoxide tester with which we determined that there was no detectable carbon monoxide in the filter plenum, but that we could get a carbon monoxide test from the cap of several cylinders by knocking the deposit of nickel loose. The cylinders were not burning and appeared to not be leaking so we obtained two waste barrels and started to set the cylinders in the barrels. We found that we could load four cylinders in each barrel and managed to fill two barrels before our cannisters expired.

We came back and reported the results to Mr. Venable and he decided that the only safe thing to do was to put all the cylinders in drums and remove the drums from the building into temporary burial outside. While Mr. Venable got a burial pit dug and a crane with a drum lift lined up outside the access shaft, Jesse Cleveland, Vic Ryan, and myself, went back in the plenum and put the remaining cylinders in barrels. We then filled the barrels with vermiculite and carted them to the access shaft. They were then lifted from the access shaft by the crane and placed in the pit which had been dug, and the drums filled with water before the lids were replaced.

At this time the firemen reported that all fire had been extinguished in the East end of the filter plenum by making a fire break in the filters. This was approximately 10:00 AM and I left for home at approximately 10:30 AM.

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PRODUCT AND HEALTH PHYSICS RESEARCH SERVICE REPORT

Report No:	317-72-174
Title:	Nickel Carbonyl Disposal
Work Requested by:	G. J. Werkema
Date Requested:	March 1972
Work Performed by:	S. H. Pitts, F. D. Hobbs
Manhours:	200
Date Work Started:	March 1972
Date Work Completed:	August 1972
Date This Report:	September 1972
Report Written by:	F. D. Hobbs

Distribution:

S. H. Pitts
J. E. Hill
G. J. Werkema
Attn: S. E. Hammond
M. A. Thompson
IRF (Record)

KWIC Index:

Nickel Carbonyl
Chemical, ~~Disposal~~
Disposal
Hazardous materials
Employee safety
report 317-72-174

Introduction

Approximately 185 pounds of nickel carbonyl ($Ni(CO)_4$) contained in seven 25-pound cylinders, two 5-pound cylinders and one lecture bottle had been stored in the toxic gas storage building over the past several years. Because of the inherent hazards associated with nickel carbonyl, it was desired to dispose of the chemical in an expeditious manner. Several disposal methods were considered with primary emphasis on safety and minimum environmental effects. The hazards associated with the chemical and ultimate disposal method are described in this report.

Conclusions

The nickel carbonyl previously stored in the toxic gas storage building has been safely destroyed. The chemical was drained into a deep "dry well" and allowed to decompose. Decomposition occurred with a minimum of hazard to individuals involved in the disposal and the environment.

Properties of Nickel Carbonyl

Nickel carbonyl is a colorless liquid with a boiling point of approximately 43°C. The vapors are extremely toxic with suggested limits of 0.001 parts per million average concentration in processing plants. Concentrations of only a few parts per million in air can be very dangerous and appreciable adsorption through the skin has been claimed.[1] The toxic symptoms created by inhalation are believed to be caused by liberation of both nickel and carbon monoxide in the lungs.[2]

91HRR23 B 00014730

In addition to the toxicity, nickel carbonyl has a fire hazard and moderate explosion hazard. Ignition can be spontaneous.[2]

Disposal Procedure

In light of the extreme hazards associated with nickel carbonyl a great deal of consideration was given to any method for its disposal. First of all, it was obvious that disposal had to be performed as far from the populated areas of the plant site as practicable. Secondly, the safety of individuals involved directly with the disposal was a paramount consideration. Thirdly, the maximum allowable concentration of nickel carbonyl in ambient air is only 0.07 ppb.[3]

After numerous proposed disposal methods were rejected for various reasons a rather simple and effective method was devised. A hole approximately fifteen feet deep and three feet in diameter was drilled in a remote area of the plant site. The cylinders containing the chemical were opened and suspended in this "dry well" until they were drained. The chemical and its much heavier than air vapors collected and decomposed in the bottom of the well.

Of course, the procedure was not quite as simple as it sounds. Individuals involved wore supplied air packs and a member of the

Rocky Flats Fire Department supervised the proceedings. The chemical proved to be completely unpredictable. On occasion it ignited immediately after release into the well. At other times the well would remain mysteriously silent for long periods before a muffled ignition occurred.

A minimum of the chemical was released to the air during the disposal procedure. Samples at the lip of the well indicated nickel carbonyl concentrations of approximately 10 parts per million being released during disposal. Rapid dilution with ambient air and the fact that the chemical decomposes in air[4] both reduced any environmental upset.

(1) F. A. Patty, Industrial Hygiene and Toxicology, Volume II, Toxicology, Interscience Publishers, New York, 1962, Second Edition.

(2) N. I. Sax, Dangerous Properties of Industrial Materials, Reinhold Book Corporation, New York, 1968, Third Edition.

(3) "Global Pollution Control Guidelines, The Dow Chemical Company, Fourth Draft, November 12, 1971.

(4) "Liquid Nickel Carbonyl is Dangerous" Product Bulletin Published by The Matheson Company.

DRAFT

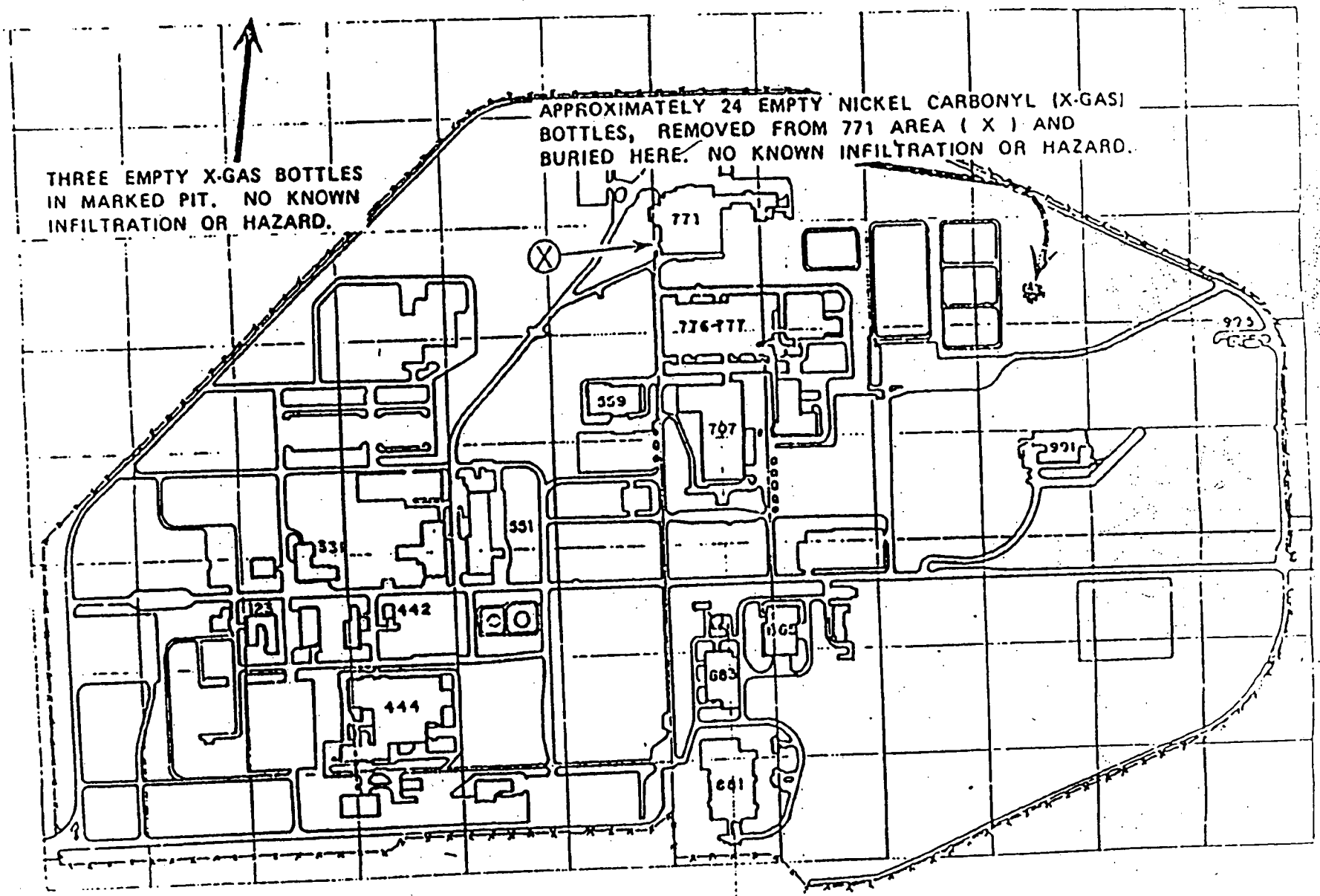
Map 1S (Other Areas)

In addition to the noted areas, some potential for minor chemical infiltration exists in the vicinity of various storage and holding tanks (Map 1S). This potential is, in most cases, extremely slight, particularly in those locations where tanks are diked. In the past, before diking was installed, minor spills have occurred and have been discussed in conjunction with the sectional maps.

Map 1SA shows the approximate location where empty bottles of nickel carbonyl were buried after the nickel carbonyl was destroyed. The gas was destroyed by burning (during the 1957 fire in Building 771 or when ready for discard). Explosive charges were used to destructively vent the cylinders and ignite any residual gas. No known infiltration or affective residues were generated during these operations or as a result of the burials.

89

90

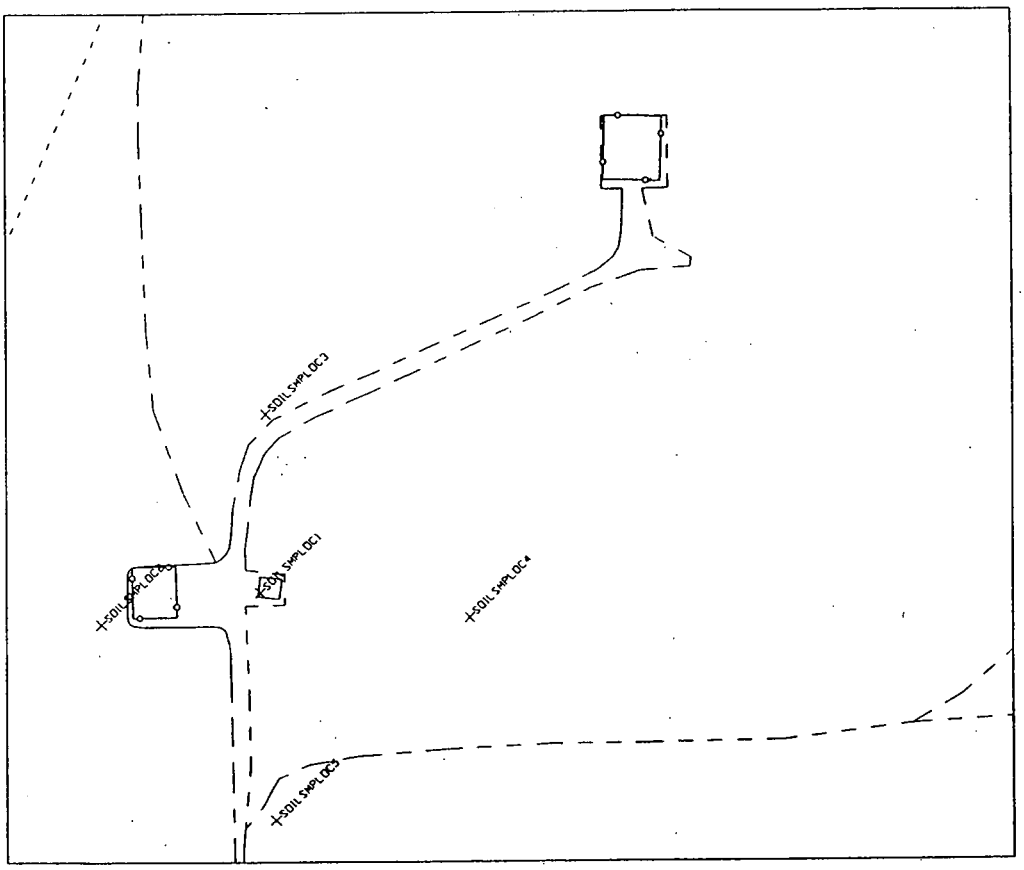


MAP 15A.

91HRR33 ITEM 2 B 00021756

1601057 0003084 217

GWEN Tower Soil Sample State Plane Coordinates Field Survey 08/16/01			
Description	Northing	Easting	Elevation
SOILSMPLOC1	750371.13	2089405.31	5928.01
SOILSMPLOC2	750349.77	2089299.90	5928.08
SOILSMPLOC3	750492.71	2089409.39	5926.43
SOILSMPLOC4	750353.78	2089547.78	5926.17
SOILSMPLOC5	750216.46	2089415.60	5929.40



KAISER•HILL
COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0150110

FROM: SKIP NIELSEN

PHONE: (303) 966-4289

FAX: (303) 966-8345

TO: Nick Demos

FAX: 5180

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ **if the fax is not received in its entirety.**
(phone number)

NOTE:
This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

Project Narrative
RIN 01S0110

The following report contains the analytical results for five samples received at STL Denver on August 14, 2001.

Dilution factors and footnotes have been provided on each data sheet to assist in the interpretation of the results. In some cases, due to interference or analytes present at concentrations above the linear calibration curve, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution performed. Dilutions made for reasons other than the presence of target compound(s) are addressed in the Supplemental Information Section

STL Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. QC data for these analyses is included the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with the exception of those items noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The test results shown in this report meet all requirements of NELAC. Any exceptions are noted in the Supplemental Information Section below.

This report includes reporting limits (RLs) less than STL Denver's standard reporting limit. The reported sample results and associated reporting limits are being used specifically at the client's request. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

Supplemental Information – RIN 01S0110

Sample Arrival and Receipt

The samples presented in this report were received at the laboratory at a temperature of less than 6.0°C. The samples were received in good condition.

No anomalies were observed.

Metals Analysis by ICP Method SW846 6010B/6010B Trace

The method blank contained silica at a concentration of 17.2 mg/kg. The reporting limit for silica is 5.0 mg/kg. Silica was detected in the associated samples at concentrations at least ten times greater than that detected in the method blank. SW-846 6010B does not list silica as an approved analyte.

The method blank demonstrated results for calcium, iron, strontium, tin, and titanium below the reporting limit. The method blank is considered in control and the associated results are valid.

The LCS for silica demonstrated a recovery of 43%. STL Denver does not currently have control limits established for this analyte. Since SW-846 6010B does not list silica as an approved analyte, the LCS is considered in control.

Non Radiological Qualifiers

Organic

B	Analyte found in blank and sample
E	Concentration exceeds calibration range of instrument
J	Estimated value above the MDL, but below the CRDL
U	Analyzed for but undetected

Inorganic

B	Estimated value above the IDL/MDL but below the CRDL
E	Estimated value
M	Replicate instrument readings not within control limits
N	Spike recovery not within control limits
U	Analyzed for but undetected
*	RPD not within control limits

Supplemental Information – RIN 01S0110 (continued)

The MS/MSD performed on sample 01S0110-001.001 demonstrated recoveries outside control limits for aluminum, antimony, barium, calcium, chromium, copper, iron, manganese, molybdenum, titanium, silica, and vanadium. The MSD demonstrated an additional recovery outside control limits for zinc, which caused the precision for zinc to also be outside control limits. These anomalies may indicate negative of positive biases for this sample's data and are likely due to matrix interference. The LCS and method blank were in control; therefore the data is acceptable.

The continuing calibration verifications (CCV) bracketing the interference check samples (ICSA/ICSAB) were outside control limits for molybdenum. All CCV's bracketing client samples were in control.

No other anomalies were observed.

Mercury Analysis by CVAA Method SW-846 7471A

The MS/MSD associated with batch 1229215, but performed on an unrelated sample, demonstrated recoveries and precision outside control limits. The associated LCS and method blank were in control; therefore the data is acceptable.

No other anomalies were observed.

Non Radiological Qualifiers

Organic

B	Analyte found in blank and sample
E	Concentration exceeds calibration range of instrument
J	Estimated value above the MDL, but below the CRDL
U	Analyzed for but undetected

Inorganic

B	Estimated value above the IDL/MDL but below the CRDL
E	Estimated value
M	Replicate instrument readings not within control limits
N	Spike recovery not within control limits
U	Analyzed for but undetected
*	RPD not within control limits

SEP-04-2001 TUE 07:51 AM SOURCE ONE ADD

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RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01S0110#001

Page 1 of 1

Sampler(s) [signature] 5/20/20 M Hershey 5/16/27 (time/date)	Contact/Requester DEMOS, NICK / NIELSEN, SKIP	Telephone No. 4605/4289
RIN 01S0110	Sampling Origin E. BUFFER ZONE GUINN TOWER	Purchase Order/Charge Code EFB70200
Project Title GUINN TOWER (EAST BUFFER ZONE)	Logbook No. 99 StepVan	Ice Chest No. Temp.
To (Lab) Severn-Trent Denver	Method of Shipment	Bill of Lading/Air Bill No.
Protocol CAS-SOP.003 rev. 3	Related COC (if any)	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time
NO PRE REQUIRED PER ARLAN MOORE

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01S0110-001.001	Flag #1	SOLID	8/14/01	0810	EAST BUFFER ZONE GUINN TOWER	125-G / G /1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-002.001	Flag #2	SOLID		0814	EAST BUFFER ZONE GUINN TOWER	125-G / G /1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-003.001	Flag #3	SOLID		0820	EAST BUFFER ZONE GUINN TOWER	125-G / G /1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-004.001	Flag #4	SOLID		0825	EAST BUFFER ZONE GUINN TOWER	125-G / G /1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-005.001	Flag #5	SOLID		0827	EAST BUFFER ZONE GUINN TOWER	125-G / G /1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
					8/14/01 [illegible]			

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
M. Hershey 0854	8/14/01	T130A Bx #2 0854	8/14/01	Ref #2	8/14/01 1500	[signature]	8/14/01 1000
[signature]	8/14/01 1533	[signature]	08/14/01 1530				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

CASI

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01S0110#001

Page 1 of 1

Sampler(s) [illegible] M Hershey 8/14/01 (Time/date)	Contact/Requester DEMOS, NICK / NIELSEN, SKIP	Telephone No. 4605/4789
RIR 01S0110	Sampling Origin E. BUFFER ZONE GUINN TOWER	Purchase Order/Charge Code EF870200
Project Title GUINN TOWER (EAST BUFFER ZONE)	Logbook No. 99 Step Van	Ice Chest No. Temp.
To (Lab) Severn-Trent Denver	Method of Shipment	Bill of Lading/Air Bill No.
Protocol CAS-SOP.003 rev 3	Related COC (If any)	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 49 CFR Part 1363 Table III? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS (Hold Time)
NO PRE REQUIRED PER ARLAN MOORE

Bottle No.	Container Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Parking
01S0110-001.001	Flag #1	SOLID	8/14/01	0810	EAST BUFFER ZONE GUINN TOWER	125-G / G / 1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-002.001	Flag #2	SOLID		0814	EAST BUFFER ZONE GUINN TOWER	125-G / G / 1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-003.001	Flag #3	SOLID		0820	EAST BUFFER ZONE GUINN TOWER	125-G / G / 1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-004.001	Flag #4	SOLID		0825	EAST BUFFER ZONE GUINN TOWER	125-G / G / 1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
01S0110-005.001	Flag #5	SOLID		0827	EAST BUFFER ZONE GUINN TOWER	125-G / G / 1	MET-A-023 (METALS 6010/6010B) [14dF]	None 4 degrees C
					8/14/01 MHA			

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
0854 M Hershey	8/14/01	0854 T130A Bl.42	8/14/01	Rel #2	8/14/01 1500	[illegible]	8/14/01 1600
[illegible]	8/14/01 1533	Chris Rice	08/14/01 1630				

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)	Disposed By	Date/Time

43292 (I)

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STL DENVER

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-001.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-001

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14000			P
7440-36-0	Antimony	0.27	U		P
7440-38-2	Arsenic	2.8			P
7440-39-3	Barium	97.6			P
7440-41-7	Beryllium	0.51			P
7440-42-8	Boron	2.7			P
7440-43-9	Cadmium	0.03	U		P
7440-70-2	Calcium	29700			P
7440-47-3	Chromium	20.1			P
7440-48-4	Cobalt	6.0			P
7440-50-8	Copper	20.0			P
7439-89-6	Iron	15000			P
7439-92-1	Lead	6.9			P
7439-93-2	Lithium	13.2			P
7439-95-4	Magnesium	3060			P
7439-96-5	Manganese	306			P
7439-97-6	Mercury	0.033		N*	CV
7439-98-7	Molybdenum	0.14	U		P
7440-02-0	Nickel	15.4			P
7782-49-2	Selenium	0.46			P
7440-22-4	Silver	0.064	U		P
7440-23-5	Sodium	140	U		P
7440-09-7	Potassium	2420			P
7631-86-9	Silica	564		N	P
7440-24-6	Strontium	36.2			P
7440-28-0	Thallium	2.2			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL DENVER

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-001.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-001

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-31-5	Tin	1.9			P
7440-32-6	Titanium	405			P
7440-61-1	Uranium	7.2	U		P
7440-62-2	Vanadium	31.5			P
7440-66-6	Zinc	54.2		N*	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL DENVER

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-002.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-002

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15000			P
7440-36-0	Antimony	0.27	U		P
7440-38-2	Arsenic	4.1			P
7440-39-3	Barium	115			P
7440-41-7	Beryllium	0.57			P
7440-42-8	Boron	9.2			P
7440-43-9	Cadmium	0.67			P
7440-70-2	Calcium	20700			P
7440-47-3	Chromium	13.6			P
7440-48-4	Cobalt	4.0			P
7440-50-8	Copper	16.1			P
7439-89-6	Iron	12200			P
7439-92-1	Lead	41.3			P
7439-93-2	Lithium	9.7			P
7439-95-4	Magnesium	3100			P
7439-96-5	Manganese	233			P
7439-97-6	Mercury	0.050		N*	CV
7439-98-7	Molybdenum	0.14	U		P
7440-02-0	Nickel	10.3			P
7782-49-2	Selenium	0.69			P
7440-22-4	Silver	0.60			P
7440-23-5	Sodium	140	U		P
7440-09-7	Potassium	3510			P
7631-86-9	Silica	605		N	P
7440-24-6	Strontium	40.0			P
7440-28-0	Thallium	2.0			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-002.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-002

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-31-5	Tin	2.0			P
7440-32-6	Titanium	236			P
7440-61-1	Uranium	7.2	U		P
7440-62-2	Vanadium	25.4			P
7440-66-6	Zinc	57.3		N*	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL DENVER

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-003.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-003

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16300			P
7440-36-0	Antimony	0.27	U		P
7440-38-2	Arsenic	4.0			P
7440-39-3	Barium	112			P
7440-41-7	Beryllium	0.65			P
7440-42-8	Boron	8.2			P
7440-43-9	Cadmium	0.41			P
7440-70-2	Calcium	7050			P
7440-47-3	Chromium	14.3			P
7440-48-4	Cobalt	4.4			P
7440-50-8	Copper	15.8			P
7439-89-6	Iron	12700			P
7439-92-1	Lead	32.3			P
7439-93-2	Lithium	10.2			P
7439-95-4	Magnesium	3130			P
7439-96-5	Manganese	244			P
7439-97-6	Mercury	0.039		N*	CV
7439-98-7	Molybdenum	0.14	U		P
7440-02-0	Nickel	10.4			P
7782-49-2	Selenium	0.80			P
7440-22-4	Silver	0.31			P
7440-23-5	Sodium	140	U		P
7440-09-7	Potassium	3800			P
7631-86-9	Silica	592		N	P
7440-24-6	Strontium	21.0			P
7440-28-0	Thallium	2.2			P

Color Before: Clarity Before: Texture:

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Comments:

STL DENVER

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-003.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-003

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-31-5	Tin	1.8			P
7440-32-6	Titanium	255			P
7440-61-1	Uranium	7.2	U		P
7440-62-2	Vanadium	25.5			P
7440-66-6	Zinc	55.0		N*	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL DENVER

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-004.001

Contract: KAISER HILL- RVETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-004

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14800			P
7440-36-0	Antimony	0.27	U		P
7440-38-2	Arsenic	3.3			P
7440-39-3	Barium	126			P
7440-41-7	Beryllium	0.49			P
7440-42-8	Boron	4.4			P
7440-43-9	Cadmium	0.16			P
7440-70-2	Calcium	107000			P
7440-47-3	Chromium	10.1			P
7440-48-4	Cobalt	3.2			P
7440-50-8	Copper	8.7			P
7439-89-6	Iron	9290			P
7439-92-1	Lead	10.5			P
7439-93-2	Lithium	10.5			P
7439-95-4	Magnesium	3390			P
7439-96-5	Manganese	105			P
7439-97-6	Mercury	0.033		N*	CV
7439-98-7	Molybdenum	0.14	U		P
7440-02-0	Nickel	11.6			P
7782-49-2	Selenium	0.40	U		P
7440-22-4	Silver	0.064	U		P
7440-23-5	Sodium	140	U		P
7440-09-7	Potassium	2140			P
7631-86-9	Silica	520		N	P
7440-24-6	Strontium	109			P
7440-28-0	Thallium	0.96			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-004.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-004

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-31-5	Tin	1.8			P
7440-32-6	Titanium	144			P
7440-61-1	Uranium	7.2	U		P
7440-62-2	Vanadium	21.0			P
7440-66-6	Zinc	24.5		N*	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL DENVER

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0180110-005.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 0180110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-005

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15200			P
7440-36-0	Antimony	0.27	U		P
7440-38-2	Arsenic	5.1			P
7440-39-3	Barium	120			P
7440-41-7	Beryllium	0.56			P
7440-42-8	Boron	10.1			P
7440-43-9	Cadmium	0.52			P
7440-70-2	Calcium	36800			P
7440-47-3	Chromium	14.1			P
7440-48-4	Cobalt	4.3			P
7440-50-8	Copper	15.1			P
7439-89-6	Iron	11600			P
7439-92-1	Lead	28.9			P
7439-93-2	Lithium	10.4			P
7439-95-4	Magnesium	3210			P
7439-96-5	Manganese	221			P
7439-97-6	Mercury	0.026		N*	CV
7439-98-7	Molybdenum	0.14	U		P
7440-02-0	Nickel	11.1			P
7782-49-2	Selenium	0.60			P
7440-22-4	Silver	0.064	U		P
7440-23-5	Sodium	140	U		P
7440-09-7	Potassium	3510			P
7631-86-9	Silica	634		N	P
7440-24-6	Strontium	52.6			P
7440-28-0	Thallium	1.4			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

01S0110-005.001

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H150246-005

Level (low/med): MED Date Received: 8/14/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-31-5	Tin	1.7			P
7440-32-6	Titanium	259			P
7440-61-1	Uranium	7.2	U		P
7440-62-2	Vanadium	26.5			P
7440-66-6	Zinc	49.3		N*	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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STL DENVER

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

INTRA-LAB QC

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Matrix (soil/water): SOIL Lab Sample ID: D1H140108-001

Level (low/med): MED Date Received: 8/13/01

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.0025		N*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL DENVER

TOTAL METALS

-3-

BLANKS

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	-42.81	B	-41.03	B	-41.53	B	-36.52	B	0.24	U	P
Antimony									0.27	U	P
Arsenic									0.28	U	P
Barium									0.059	U	P
Beryllium									0.037	U	P
Boron	4.60	U	4.60	U	4.90	B	7.46	B	0.45	U	P
Cadmium									0.030	U	P
Calcium	11.00	U	11.00	U	30.73	B	16.19	B	17.8	B	P
Chromium									0.056	U	P
Cobalt									0.32	U	P
Copper									0.21	U	P
Iron	8.00	U	8.00	U	8.00	U	8.00	U	1.10	B	P
Lead									0.12	U	P
Lithium	2.64	B	2.10	U	2.10	U	3.09	B	0.21	U	P
Magnesium	24.00	U	24.00	U	24.00	U	24.00	U	2.4	U	P
Manganese									0.047	U	P
Molybdenum									0.14	U	P
Nickel									0.61	U	P
Selenium									0.40	U	P
Silver									0.064	U	P
Sodium	1400.00	U	1400.00	U	1400.00	U	1400.00	U	140	U	P
Potassium	574.30	B	510.00	U	510.00	U	671.23	B	51	U	P
Silica	133.43		67.26		54.27		57.86		17.2		P
Strontium									0.028	B	P
Thallium									0.37	U	P
Tin									1.10	B	P
Titanium									0.150	B	P
Uranium									7.2	U	P
Vanadium									0.30	U	P
Zinc	2.60	U	2.60	U	2.60	U	-4.89	B	0.27	U	P

STL DENVER

TOTAL METALS

-3-

BLANKS

Contract: KAISER HILL- RVETS

Lab Code: STLDEN Case No.: SAS No.: SDG NO.: 01S0110

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony	2.60	U	2.60	U	2.60	U	2.60	U			P
Arsenic	2.80	U	2.80	U	2.80	U	-4.19	B			P
Barium	0.59	U	0.59	U	0.59	U	0.59	U			P
Beryllium	0.37	U	0.37	U	0.69	B	0.37	U			P
Cadmium	0.30	U	0.30	U	0.48	B	0.30	U			P
Chromium	-0.66	B	-0.68	B	-0.80	B	-1.06	B			P
Cobalt	3.20	U	3.20	U	3.20	U	3.20	U			P
Copper	2.10	U	2.10	U	2.10	U	2.10	U			P
Lead	1.20	U	-1.24	B	1.20	U	1.20	U			P
Manganese	0.48	U	0.48	U	0.48	U	0.48	U			P
Molybdenum	1.40	U	1.40	U	1.40	U	1.40	U			P
Nickel	6.10	U	6.10	U	6.10	U	6.10	U			P
Selenium	4.00	U	4.00	U	4.00	U	4.00	U			P
Silver	0.64	U	0.64	U	0.64	U	0.64	U			P
Strontium	0.25	U	0.25	U	0.25	U	0.25	U			P
Thallium	12.60	B	29.57	B	3.70	U	9.17	B			P
Tin	-3.75	B	2.40	U	2.75	B	2.40	U			P
Titanium	0.84	U	0.84	U	0.84	U	0.84	U			P
Uranium	72.20	U	72.20	U	72.20	U	72.20	U			P
Vanadium	3.00	U	3.00	U	3.00	U	3.00	U			P

STL DENVER

TOTAL METALS

-3-

BLANKS

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: _____ SAS No.: _____ SDG NO.: 01S0110

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony			2.60	U	2.60	U	2.60	U			P
Arsenic			2.80	U	2.80	U	2.80	U			P
Barium			0.59	U	0.59	U	0.59	U			P
Beryllium			0.37	U	-0.38	B	0.60	B			P
Cadmium			0.54	B	0.36	B	0.46	B			P
Chromium			-0.66	B	0.56	U	0.56	U			P
Cobalt			3.20	U	3.20	U	3.20	U			P
Copper			2.10	U	2.10	U	-3.11	B			P
Lead			1.20	U	-1.26	B	1.20	U			P
Manganese			0.48	U	0.48	U	0.48	U			P
Molybdenum			1.40	U	1.40	U	1.40	U			P
Nickel			6.10	U	6.10	U	6.10	U			P
Selenium			4.00	U	4.00	U	4.40	B			P
Silver			0.64	U	0.64	U	0.64	U			P
Strontium			0.25	U	0.25	U	0.25	U			P
Thallium			3.70	U	-3.85	B	6.25	B			P
Tin			3.66	B	2.50	B	5.08	B			P
Titanium			0.84	U	0.84	U	0.84	U			P
Uranium			72.20	U	72.20	U	72.20	U			P
Vanadium			3.00	U	3.00	U	3.00	U			P

STL DENVER

TOTAL METALS

-3-

BLANKS

Contract: KAISER HILL- RFETS

Lab Code: STLDEN Case No.: _____ SAS No.: _____ SDG NO.: 0150110

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony			2.60	U							P
Arsenic			-4.04	B							P
Barium			0.59	U							P
Beryllium			0.37	U							P
Cadmium			0.30	U							P
Chromium			0.56	U							P
Cobalt			3.20	U							P
Copper			-3.85	B							P
Lead			1.20	U							P
Manganese			0.48	U							P
Molybdenum			1.40	U							P
Nickel			6.10	U							P
Selenium			4.87	B							P
Silver			0.64	U							P
Strontium			0.25	U							P
Thallium			9.81	B							P
Tin			4.84	B							P
Titanium			0.84	U							P
Uranium			72.20	U							P
Vanadium			3.00	U							P

PAC Number	Located Near or in OU Number	Type of Release	Contaminants	Remedial Actions	Further Investigation Warranted	Rationale
900-1304	8	Chromic acid spilled in cement pit	Several gallons chromic acid laboratory waste	Steps were taken to prevent recurrence.	No	Cement pit and berm functioned properly in containing the spill; therefore no release to the environment.
900-1305	8	Prime coating spilled on roof of Building 991 under intake affected climate inside building.	Approximately 5 gallons primer Tremco Tremprime containing mineral spirits as a solvent	Primer was spread around and dried.	No	Contamination was not severe and has probably degraded.
900-1306	8	Transformer leaks	114 and 60 ppm PCBs in transformers 991-1 and 991-2, respectively	PCBs were cleaned up and the transformers repaired by an outside contractor.	Yes	Need to confirm that all contaminated material was removed from this site.
900-1307	8	Explosive bonding experiment hurled a piece of aluminum 525 feet	Uranium alloy and stainless steel	Measures were to be evaluated to prevent malfunctions during future experiments.	Yes	Explosive bonding experiments used uranium. The pit area should be investigated to determine the extent of radioactivity in the soil.
Under Building Contamination (UBC)	Site wide	Building operations released contaminants into soil or ground water under the buildings.	Radionuclides, nitrate solvents, acids, and bases	Some releases have been remediated, but a majority have never been researched.	Yes	Under building soil and ground-water contamination resulting from building operations has not be previously addressed. Virtually every current or former building used for operation, production, or maintenance could have contaminated the environment beneath the buildings. It is suggested that soil sampling be conducted in hot areas of building basements and that ground water be monitored for all the appropriate contaminants of interest. Some of the identified PACs (100-611 and 400-157.2) pertain to contamination under buildings; these PACs may be investigated concurrently with the UBCs.
PIC #9	13	Leaking drums outside Building 551.	Aqueous ammonia and carbon tetrachloride.	No cleanup mentioned.	Yes	Field sampling activities for IHSS 158 in the OU 13 work plan will sufficiently investigate this location with minor revisions.
PIC #41	8	Transformer leaks	PCBs.	Transformer 777-1 was scheduled for cleanup to occur on August 14, 1989.	Yes	PCBs do not degrade and are not readily transported.
PIC #44	8	Liquid contaminated to 6,700 d/m/s	Unknown distillate.	Soil samples taken for analysis. No cleanup mentioned.	Yes	Contaminated liquid was pumped to the ground south of building 374; no cleanup known.

REFERENCES

EG&G Rocky Flats, 1991, "Assessment of Known, Suspect, and Potential Environmental Releases of Polychlorinated Biphenyls (PCBs)," October 1991

d/m/L = distintegrations per minute per liter
pCi/L = pico-curie per liter

Marla's List - Pending NFA Count	**117**	
EPA Approved in 1992	-40	(A) Doughas marked as complete/accepted
PAC 700-1117 Not pending on ERATL (accepted on 7/9/99 Letter)	-1	Corrected on M's list!
Pending on ERATL (addressed on 7/9/99 Letter) - 140,142.1, 142.2, 142.3, 142.4, 142.8, 142.9, 142.10, 142.11, 142.12, 156.1, 169	12	
Total	**88**	
ERATL - Pending NFA Count	**88**	

ER Site Act. ucking List

TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bsln Pln Char	KH Pln Comp	Bsln Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
IHSS	207A	000	PZ	101	2002	2002	2004	2004	Solar Ponds	207	Yes	000-1	1.G.A.C.0A.01	C	4	Remedial Action							CAP Final Cover - Some RAD hot spots exist / HHRA 10 -4 6 -6, groundwater from 118.1 not used in ranking
IHSS	774	700	IZ	149.1	2002	2002	2003	2003	Effluent Line	771/774	Yes	000-1	1.G.A.C.0A.01	C	67	No Action	NA						To be removed by D&D - Address in IHSS 121.
IHSS	207A	700	PZ	149.2	2002	2002	2003	2003	Effluent Line	207	Yes	000-1	1.G.A.C.0A.01	C	68	No Action	NA						To be removed by D&D - Address in IHSS 121.
IHSS	N/A	900	PZ	165	2002	2002	2003	2003	Triangle Area	N/A	Yes	000-1	1.G.A.C.0A.01	C	9	No Action	NA						HHRA - less than 10 E-6, metals
IHSS	964	900	PZ	176	2002	2002	2003	2003	S&W Contractor Yard	964	Yes	000-1	1.G.A.C.0A.01	C	41	No Action	NA						Risk assessment groundwater.
PAC	207B	900	IZ	900-1310	2002	2002	2003	2003	ITS Water Spill(*formerly 000-502*)	207	Yes	000-1	1.G.A.C.0A.01	C	NR	No Action	NA						HRR, review data / No source, under Solar Pond cap
IHSS	441	000	IZ	121	2003	2003	2005	2006	OPWL	125/441	Yes	000-2	1.G.A.C.00.02	C	5	Remedial Action							P08; 135ft, B881, rank 77 / P57; 112ft, B122, rank 78 / Tank T-40 foamed and stabilized, IAC complete 1996, rank 10 /Tank T-2 and T-3 foamed and stabilized, IAC complete 1996, rank 12 /Tank T-29 is tanks-of-concern, new 1995 data shows PAHs in acid, rank 20 /Tank T-27 is tanks-of-concern, PAHs in surface soil, rank 35 /Tank T-12 invalid tank location, needs evaluation, rank 79 /Tank T-31 invalid tank location, needs evaluation, rank 80 /Tank T-33 invalid tank location, needs evaluation, rank 81 / Tank T-34 invalid tank location, needs evaluation, rank 82 /Tank T-35 invalid tank location, needs evaluation, rank 83.
IHSS	N/A	700	PZ	123.2	2003	2003	2005	2006	Valve Vault W. of 707	707	Yes	000-2	1.G.A.C.00.02	C	NR	Remedial Action							Need further characterization. Group with IHSS 121
IHSS	774	700	PZ	127	2003	2003	2003	2003	Low Level Rad Waste Leak	771/774	Yes	000-2	1.G.A.C.00.02	C	NR	No Action	NA						D&D will probably take care of required source removal.
IHSS	730	700	PZ	132	2003	2003	2005	2006	Rad Site 700 Area #4	776/777	Yes	000-2	1.G.A.C.00.02	C	NR	Remedial Action							Source Removal - Partial interim action, tank foamed in 9/96.
IHSS	441	700	IZ	147.1	2003	2003	2003	2003	MAAS Area	125/441	Yes	000-2	1.G.A.C.00.02	C	NR	No Action	NA						Samples required (metals, rads, VOC) will be addressed with IHSS 121.
IHSS	711/18	000	PZ	162	2003	2003	2003	2003	Rad Site 700 Area	N/A	Yes	000-2	1.G.A.C.00.02	C	43	No Action	NA						Review existing data.
PAC	123	100	IZ	100-602	2003	2003	2005	2006	Building 123 Process Waste Line Break	125/441	Yes	000-2	1.G.A.C.00.02	C	NR	Remedial Action							Review data - HRR process. Group with IHSS 121
TNK		000		129	2003	2003	2005	2006	Tank 29 - OPWL	125/441	Yes	000-2	1.G.A.C.00.02	C	6	Remedial Action							
TNK		000		131	2003	2003	2005	2006	Tank 31 - OPWL	125/441	Yes	000-2	1.G.A.C.00.02	C	NR	Remedial Action							
IHSS	771	700	PZ	143	2002	2003	2005	2006	Old Outfall -B771	771/774	Yes	000-3	1.G.A.C.00.03	C	21	Remedial Action							
IHSS	T-097	000	IZ	190	2002	2003	2003	2003	Caustic Leak	INFSTM	Yes	000-3	1.G.A.C.00.03	C	62	No Action	NA						Risk assessment, use all data, due to many overlaps
PAC	208	000	IZ	000-500	2002	2003	2003	2003	Sanitary Sewer System	INFSEW	Yes	000-3	1.G.A.C.00.03	C	NR	No Action	NA						
PAC	N/A	IA	IZ	000-505	2002	2003	2005	2006	Storm Drains	N/A	Yes	000-3	1.G.A.C.00.03	C	NR	Remedial Action							
PAC	N/A	000	IZ	000-504	2003	2003	2005	2005	New Process Waste Line	N/A	Yes	000-4	1.G.A.C.00.04	C	NR	Remedial Action							
IHSS	N/A	NW	BZ	114			2005	2005	Present Landfill	INFLPO	No	000-5	1.G.A.B.0A.01	B	20	Remedial Action							CAP Final Cover - Capillary break cap
UBC	122	100	IZ	B122	2004	2004	2005	2005	B122 UBC	INFPCM	Yes	100-1	1.G.A.C.01.01	C	NR	Remedial Action							
TNK		100		T01	2004	2004	2005	2005	Tank 1 - OPWL	INFPCM	Yes	100-1	1.G.A.C.01.01	C	NR	Remedial Action							
UBC	125	100	IZ	B125	2004	2004	2005	2005	B125 UBC	125/441	Yes	100-2	1.G.A.C.01.02	C	NR	Remedial Action							
IHSS	123	100	IZ	148	2003	2003	2005	2005	Waste Leaks	125/441	No	100-4	1.G.A.C.01.04	C	56	Remedial Action							Review data from 123 D&D (geoprobe) and UBC results. Associated with B123.
PAC	123	100	IZ	100-603	2003	2003	2005	2005	Building 123 Bioassay Waste Spill	125/441	No	100-4	1.G.A.C.01.04	C	NR	Remedial Action		2001	P				Reference EPA Letter dated Dec 23, 1992. Group with IHSS 121
PAC	123	100	IZ	100-611	2003	2003	2005	2005	Building 123 Scrubbber Solution Spill	125/441	No	100-4	1.G.A.C.01.04	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992. Group with IHSS 148
UBC	123	100	IZ	B123	2003	2003	2005	2005	B123 UBC	125/441	No	100-4	1.G.A.C.01.04	C	51	Remedial Action							Bldg. Removed to slab in FY98.
PAC	121	100	IZ	100-609	2002	2002	2002	2002	Building 121 Security Incinerator	SECIZ	No	100-5	1.G.A.C.01.05	C	NR	No Action	NA						Reference EPA Letter dated Dec 23, 1992
IHSS	335	300	IZ	128	2003	2003	2005	2005	Oil Burn Pit #1	331	Yes	300-1	1.G.A.C.03.01	C	NR	Remedial Action							Needs further characterization/work in conjunction with IHSS 171& 134N
IHSS	335	300	IZ	134(N)	2003	2003	2005	2005	Lithium Metal Site	331	Yes	300-1	1.G.A.C.03.01	C	NR	Remedial Action							Need additional data - characterize/see also 128. Work in conjunction with 128 & 171
IHSS	335	300	IZ	171	2003	2003	2005	2005	Fire Training	331	Yes	300-1	1.G.A.C.03.01	C	10	Remedial Action							Group w/ IHSSs 128 & 134 (N). Empirical data indicates free product present.
IHSS	331	300	IZ	134(S)	2005	2005	2005	2005	Lithium Metal Destruction Site	331	Yes	300-2	1.G.A.C.03.02	C	NR	No Action	NA						Review data, there were hits & petroleum / do risk assessment to determine. VOC/TPH/BTEX.
UBC	331	300	IZ	B331	2005	2005	2005	2005	B331 UBC	331	Yes	300-2	1.G.A.C.03.02	C	NR	No Action	NA						
UBC	371	300	PZ	B371	2003	2004	2005	2006	B371 UBC	371/374	Yes	300-3	1.G.A.C.03.03	C	NR	Remedial Action							
UBC	374	300	PZ	B374	2003	2004	2005	2005	B374 UBC	371/374	Yes	300-4	1.G.A.C.03.04	C	NR	Remedial Action							

A - Accepted by regulator
D - Data needed by regulators
P - Proposed in HRR
R - Rejected by regulators
S - Rejected / resubmitted

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ER Site Acti :cking List

TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bdn Pln Char	KH Pln Comp	Bdn Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
IHSS	371	300	PZ	206	2002	2002	2002	2003	Inactive D-836 HW TK	371/374	No	300-5	1.G.A.C.03.05	C	NR	No Action	NA	2001	P				NFA - Insufficient data, characterize
PAC	367	300	IZ	300-702	2002	2002	2002	2003	Pesticide Shed	371T	No	300-6	1.G.A.C.03.06	C	NR	No Action	NA						Reference EPA Letter dated Dec 23, 1992 - Characterize to determine remedial action
UBC	439	400	IZ	B439	2004	2004	2005	2005	B439 UBC	440	Yes	400-1	1.G.A.C.04.01	C	NR	Remedial Action							
IHSS	664	600	IZ	120.2	2003	2003	2003	2003	Fiberglass Area W B664	664	No	400-10	1.G.A.C.04.0A	C	35	No Action	NA						Suggest grouping w/157.2 for further characterization.
IHSS	205	600	IZ	161	2003	2003	2003	2003	Rad Site W of B664	INFRDS	No	400-10	1.G.A.C.04.0A	C	17	No Action	NA						Data supports proposing this site as a future NFA.
PAC	N/A	400	IZ	400-807	2003	2003	2005	2005	Sandblasting Area		No	400-10	1.G.A.C.04.0A	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992.
UBC	440	400	IZ	B440	2003	2004	2005	2006	B440 UBC	440	Yes	400-2	1.G.A.C.04.02	C	66	Remedial Action							
IHSS	447	400	IZ	116.1	2003	2003	2005	2006	W. Loading Dock B447	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							Group w/157.2 for characterization-further characterization needed
IHSS	444	400	IZ	116.2	2003	2003	2004	2004	S. Loading Dock B 444	444	Yes	400-3	1.G.A.C.04.03	C	NR	No Action	NA						Group w/157.2 for characterization-further characterization needed
IHSS	457	400	IZ	136.1	2003	2003	2005	2006	Cooling Tower Pond W of B444	444	Yes	400-3	1.G.A.C.04.03	C	54	Remedial Action							Group with 157.2, insufficient data/Characterize, remove source
IHSS	N/A	400	IZ	136.2	2003	2003	2005	2006	Cooling Tower Pond E. B444	444	Yes	400-3	1.G.A.C.04.03	C	55	Remedial Action							Group with 157.2, insufficient data/Characterize, remove source
IHSS	444	400	IZ	182	2003	2003	2005	2006	444/453 Drum Stor.	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							
IHSS	444	400	IZ	207	2003	2003	2005	2006	Inactive B444 Acid Dumpster	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							Needs evaluation. Group with IHSS 157.2
IHSS	444	400	IZ	208	2003	2003	2005	2006	Inactive 444/447 Wst Str	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							Needs evaluation. Group with IHSS 157.2
PAC	447	400	IZ	400-801	2003	2003	2005	2006	Transformer, Roof of Building 447	444	Yes	400-3	1.G.A.C.04.03	C	64	Remedial Action							Reference EPA Letter dated Dec 23, 1992 - tied to 447 D&D.
PAC	444	400	IZ	400-810	2003	2003	2005	2006	Beryllium Fire - Bldg 444	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992.
UBC	444	400	IZ	B444	2003	2003	2005	2006	B444 UBC	444	Yes	400-3	1.G.A.C.04.03	C	29	Remedial Action							Known contaminants plume.
UBC	447	400	IZ	B447	2003	2003	2005	2006	B447 UBC	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							
TNK		400		T04	2003	2003	2005	2006	Tank 4 - OPWL	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							
TNK		400		T05	2003	2003	2005	2006	Tank 5 - OPWL	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							
TNK		400		T06	2003	2003	2005	2006	Tank 6 - OPWL	444	Yes	400-3	1.G.A.C.04.03	C	NR	Remedial Action							
PAC	460	400	IZ	400-803	2003	2003	2005	2005	Misc Dumping, Building 460 Storm Drain	460	Yes	400-4	1.G.A.C.04.04	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992.
PAC	202	400	IZ	400-804	2003	2003	2005	2005	Road North of Building 460	INFRDS	Yes	400-4	1.G.A.C.04.04	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992.
IHSS	460	400	IZ	205	2004	2004	2005	2006	Sump #3 Acid Site (SE of B460)	460	Yes	400-5	1.G.A.C.04.05	C	NR	Remedial Action							Needs evaluation. Group with IHSS 157.2
PAC	460	400	IZ	400-813	2004	2004	2004	2004	RCRA Tank Leak in Bldg 460	460	Yes	400-5	1.G.A.C.04.05	C	NR	No Action	NA						
PAC	460	400	IZ	400-815	2004	2004	2004	2004	RCRA Tank Leak in Bldg 460	460	Yes	400-5	1.G.A.C.04.05	C	NR	No Action	NA						HRR - D&D 460
IHSS	439	400	IZ	157.2	2003	2004	2005	2006	Rad Site S	440	Yes	400-6	1.G.A.C.04.06	C	39	Remedial Action							Futher characterization needed, include IHSS 122 and others.
IHSS	443	400	IZ	129					Oil Leak E of B443	INFSTM	Yes	400-7	1.G.A.C.04.07	C	IAC-96	Remedial Action	1996						Interim Action FY96 - Characterize Tank 1, 2, 3 & Soil to close. Tank 4 done in FY96, outside contamination likely. Tanks and soil to be removed under D&D.
IHSS	442	400	IZ	157.1	2004	2004	2004	2004	Rad Site N	442/452	Yes	400-7	1.G.A.C.04.07	C	38	No Action	NA						Need minimum sampling.
IHSS	452	400	IZ	187	2004	2004	2004	2004	Sulphuric Acid Spill B443	442/452	Yes	400-7	1.G.A.C.04.07	C	61	No Action	NA						Risk assesment. Not linked to acid spill. Needs further evaluation.
UBC	442	400	IZ	B442	2004	2004	2005	2006,	B442 UBC	442/452	Yes	400-7	1.G.A.C.04.07	C	NR	Remedial Action							
IHSS	441	400	IZ	122					Underground Conc. Tks.	125/441	Yes	400-8	1.G.A.C.04.08	C	IAC-96	Remedial Action	1996						Interim action completed in FY96 - Dollars for soils/Soil around tank is contaminated/group w/121.
UBC	441	400	IZ	B441	2004	2004	2005	2006	B441 UBC	125/441	Yes	400-8	1.G.A.C.04.08	C	NR	Remedial Action							
TNK	122	400		T02	2004	2004	2004	2005	Tank 2 - OPWL		Yes	400-8	1.G.A.C.04.08	C	NR	No Action	NA						Foamed-RCRA interim status/Attached to OPWL
TNK	122	400		T03	2004	2004	2004	2005	Tank 3 - OPWL		Yes	400-8	1.G.A.C.04.08	C	NR	No Action	NA						Foamed-RCRA interim status/Attached to OPWL
IHSS	551	500	IZ	117.1	2003	2003	2003	2003	N. Chem. Storage Site	300/500	Yes	500-1	1.G.A.C.05.01	C	31	No Action	NA						May be diffuse source - need more characterization. Work in conjunction with 197. Suspected source is known buried material in PU&D Yard.
IHSS	552	300	IZ	186	2003	2003	2005	2006	Valve Vaults 11.12.13	223	Yes	500-1	1.G.A.C.05.01	C	NR	Remedial Action							Need to research OU-13 RI for existing data. Need characterization
IHSS	559	500	PZ	197	2003	2003	2005	2006	Scrap Metal Stor.	559	Yes	500-1	1.G.A.C.05.01	C	32	Remedial Action							Work in conjunction with 117.1 and 117.2.
IHSS	551	500	IZ	158	2005	2005	2005	2005	Rad Site B551	300/500	Yes	500-2	1.G.A.C.05.02	C	23	No Action	NA						D&D of structure will remove this IHSS.
IHSS	559	500	PZ	159	2003	2003	2005	2005	Rad Site B559	559	Yes	500-3	1.G.A.C.05.03	C	NR	Remedial Action							Perform in conjunction with IHSS 121, IHSS 159 and UBC 559.
UBC	528	500	PZ	B528	2003	2003	2005	2005	B528 UBC	PWTSN	Yes	500-3	1.G.A.C.05.03	C	NR	Remedial Action							
UBC	559	500	PZ	B559	2003	2003	2005	2005	B559 UBC	559	Yes	500-3	1.G.A.C.05.03	C	NR	Remedial Action							
TNK		500		T07	2003	2003	2005	2005	Tank 7 - OPWL	559	Yes	500-3	1.G.A.C.05.03	C	NR	Remedial Action							
TNK		500		T33	2003	2003	2005	2005	Tank 33 - OPWL	559	Yes	500-3	1.G.A.C.05.03	C	NR	Remedial Action							
TNK		500		T34	2003	2003	2005	2005	Tank 34 - OPWL	559	Yes	500-3	1.G.A.C.05.03	C	NR	Remedial Action							
TNK		500		T35	2003	2003	2005	2005	Tank 35 - OPWL	559	Yes	500-3	1.G.A.C.05.03	C	NR	Remedial Action							
IHSS	551	500	IZ	117.2	2002	2002	2004	2004	M. Chem. Storage Site	300/500	No	500-4	1.G.A.C.05.04	C	14	Remedial Action							Source Removal-May be diffuse source - need more characterization
PAC	N/A	500	IZ	500-904	2003	2003	2005	2005	Transformer Leak 223-1/223-2		No	500-5	1.G.A.C.05.05	C	PNFA	Remedial Action							Reference EPA Letter dated Dec 23, 1992
PAC	559	500	PZ	500-906	2002	2002	2002	2003	Asphalt Surface Near Bldg 559	559	No	500-6	1.G.A.C.05.06	C	NR	No Action	NA						
PAC	N/A	500	IZ	500-907	2002	2002	2002	2003	Tanker Truck Release of hazardous Waste From Tank 231B	N/A	No	500-7	1.G.A.C.05.07	C	NR	No Action	NA						
PAC	662	600	IZ	600-1001	2004	2004	2005	2005	Temp. Waste Stor B663	690T	Yes	600-1	1.G.A.C.06.01	C	NR	No Action	NA		D				Reference EPA Letter dated Dec 23, 1992 - Characterize to determine remedial action. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC	334	400	IZ	400-802	2005	2005	2005	2005	Storage Shed B334	300/500	Yes	600-2	1.G.A.C.06.02	C	NR	No Action	NA						Reference EPA Letter dated Dec 23, 1992 - Characterize

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P - Proposed in HRR
R - Rejected by regulators
S - Rejected / resubmitted

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TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bstn Pln Char	KH Pln Comp	Bstn Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
IHSS	668	600	IZ	120.1	2005	2006	2006	2006	Fiberglass Area N B664	664	Yes	600-3	1.G.A.C.06.03	C	53	No Action	NA						Suggest grouping w/160 for further characterization. Contamination probably from 400 complex.
IHSS	205	600	IZ	160	2003	2003	2005	2005	Rad Site B444 Parking Lot	INFRDS	No	600-4	1.G.A.C.06.04	C	16	Remedial Action							
PAC	N/A	600	IZ	600-1004	2002	2002	2002	2003	Central Avenue Ditch *(formerly identified as 400-820)*	N/A	No	600-5	1.G.A.C.06.05	C	NR	No Action	NA						
PAC	205	600	IZ	600-1005	2002	2002	2002	2003	Former Pesticide Storage Area	INFRDS	No	600-6	1.G.A.C.06.06	C	NR	No Action	NA						Need characterization
PAC	708	700	PZ	700-1115	2004	2004	2006	2006	Identification of Diesel Fuel in Subsurface Soil	707	Yes	700-1	1.G.A.C.07.01	C	NR	Remedial Action							Accepted CDPHE/EPA Letter 7/9/99
PAC	765	700	PZ	700-1101	2004	2004	2004	2004	Laundry Tank Overflow - Bldg 732	PWTSN	No	700-10	1.G.A.C.07.0A	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992
IHSS	774	700	PZ	139.1N(a)	1999	1999	2005	2005	Hydroxide Tank, KOHm NaOH condensate	771/774	No	700-11	1.G.A.C.07.0B	C	70	No Action	NA						In Bowman pond overflow, group with bowman's pond (700-1108) / Characterize and remove source w/Bowan's pond, if applicable. Tanks to be removed by D&D. Sample around tanks to be included w/Boman's Pond SAP. PAHs in surface soil.
PAC	771	700	PZ	700-1108	1999	1999	2005	2005	Bowman's Pond	771/774	No	700-11	1.G.A.C.07.0B	C	65	Remedial Action							Reference EPA Letter dated Dec 23, 1992. The pre-remedial investigation work for Bowman's Pond was done in WAD 64 WBS 11053001.
PAC	762	700	PZ	700-1106	2004	2004	2004	2004	Process Waste Spill - Portal 1	SECNPZ	No	700-12	1.G.A.C.07.0C	C	NR	No Action	NA						HRR '98 - Reference EPA Letter dated Dec 23, 1992. Needs characterization.
UBC	707	700	PZ	B707	2004	2004	2006	2006	B707 UBC	707	Yes	700-2	1.G.A.C.07.02	C	30	Remedial Action							Many known spills.
UBC	731	700	PZ	B731	2004	2004	2006	2006	B731 UBC	PWTSN	Yes	700-2	1.G.A.C.07.02	C	NR	Remedial Action							
TNK		700		T11	2004	2004	2006	2006	Tank 11 - OPWL	707	Yes	700-2	1.G.A.C.07.02	C	NR	Remedial Action							
TNK		700		T30	2004	2004	2006	2006	Tank 30 - OPWL	707	Yes	700-2	1.G.A.C.07.02	C	NR	Remedial Action							
IHSS	730	700	PZ	118.1	2003	2003	2006	2006	Solvent Spills W B730	PWTSN	Yes	700-3	1.G.A.C.07.03	C	3	Remedial Action							Proceeded by Natural Attenuation. Well installations for 118.1 was completed in WAD 76 (WBS 11061006), natural attenuation monitoring wi be done in WAD 1.
IHSS	776	700	PZ	118.2	2003	2003	2003	2004	Solvent Spills N B707	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	No Action	NA						Needs data to continue - group with 150.7
IHSS	776	700	PZ	131	2003	2003	2006	2006	Rad Site 700 Area No.1	776/777	Yes	700-3	1.G.A.C.07.03	C	15	Remedial Action							Needs additional characterization '69 fire.
IHSS	701	700	PZ	144 (N)	2003	2003	2003	2004	Sewer Line Overflow	776/777	Yes	700-3	1.G.A.C.07.03	C	37	No Action	NA						Need characterization.
IHSS	777	700	PZ	144 (S)	2003	2003	2003	2004	Sewer Line Overflow	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	No Action	NA						Need characterization.
IHSS	776	700	PZ	150.2	2003	2003	2006	2006	Rad Site W B 771/776	776/777	Yes	700-3	1.G.A.C.07.03	C	22	Remedial Action							Need additional samples. Perform in conjunction with IHSS 143. Paved some old data exists.
IHSS	750	700	PZ	150.4	2003	2003	2003	2004	Rad Site NW B750	750	Yes	700-3	1.G.A.C.07.03	C	NR	No Action	NA						Existing data needs review.
IHSS	776	700	PZ	150.7	2003	2003	2006	2006	Rad Site S B776	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							Source removal. Group with 118.2
PAC	776	700	PZ	700-1100	2003	2003	2006	2006	French Drain North of Bldg 776/777	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992
PAC	776	700	PZ	700-1116	2003	2003			Transformer Leak South of Bldg 776	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action	19XX						PCBs close to cleanup threshold. Further characterization needed to confirm Site is within IHSS 150.7.
UBC	701	700	PZ	B701	2003	2003	2006	2006	B701 UBC	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							
UBC	776	700	PZ	B776	2003	2003	2006	2006	B776 UBC		Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							Tunnels are a responsibility problem
UBC	777	700	PZ	B777	2003	2003	2006	2006	B777 UBC	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							
UBC	778	700	PZ	B778	2003	2003	2006	2006	B778 UBC	778	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							
TNK		700		T09	2003	2003	2006	2006	Tank 9 - OPWL	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							
TNK	730	700		T10	2003	2003	2006	2006	Tank 10 - OPWL	PWTSN	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							RCRA interim status (On NFA map twice)/Attached to OPWL. Group with 118.1
TNK		700		T18	2003	2003	2006	2006	Tank 18 - OPWL	776/777	Yes	700-3	1.G.A.C.07.03	C	NR	Remedial Action							
IHSS	774	700	PZ	124.1					Rad Liq. Waste Tk. 66	771/774	Yes	700-4	1.G.A.C.07.04	C	IAC-96	Remedial Action	1996						Interim action completed FY96 - Potential soil contamination under/around part of 774 UBC
IHSS	774	700	PZ	124.2					Rad Liq. Waste Tk. 67	771/774	Yes	700-4	1.G.A.C.07.04	C	IAC-96	Remedial Action	1996						Interim action completed FY96 - Potential soil contamination under/around part of 774 UBC
IHSS	774	700	PZ	124.3					Rad Liq. Waste Tk. 68	771/774	Yes	700-4	1.G.A.C.07.04	C	IAC-96	Remedial Action	1996						Interim action completed FY96 - Potential soil contamination under/around part of 774 UBC
IHSS	774	700	PZ	125					Holding Tk. 66	771/774	Yes	700-4	1.G.A.C.07.04	C	IAC-96	Remedial Action	1996						Interim action completed FY96 - Potential soil contamination under/around part of 774 UBC
IHSS	728	700	IZ	126.1	2002	2002	2002	2002	Process Waste Tks. - Westermost	PWTSN	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						D&D will probably take care of required source removal.
IHSS	728	700	IZ	126.2	2002	2002	2002	2002	Process Waste Tks. - Eastermost	PWTSN	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						D&D will probably take care of required source removal.
IHSS	774	700	PZ	139.1N(b)	2002	2002	2002	2002	Hydroxide Tank, KOHm NaOH condensate	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						In Bowman pond overflow, group with bowman's pond (700-1108) / Characterize and remove source w/Bowan's pond, if applicable. Tanks to be removed by D&D. Sample around tanks to be included w/Boman's Pond SAP. PAHs in surface soil.
IHSS	714	700	PZ	139.2	2002	2002	2004	2004	HF Acid Tank	771/774	Yes	700-4	1.G.A.C.07.04	C	71	Remedial Action							
IHSS	774	700	PZ	146.1	2002	2002	2002	2002	Concrete Tanks	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						Integral part of B774 to be addressed through D&D, remaining contamination addressed with UBC774.
IHSS	774	700	PZ	146.2	2002	2002	2002	2002	Concrete Tanks	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						Integral part of B774 to be addressed through D&D, remaining contamination addressed with UBC774.
IHSS	774	700	PZ	146.3	2002	2002	2002	2002	Concrete Tanks	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						Integral part of B774 to be addressed through D&D, remaining contamination addressed with UBC774.
IHSS	774	700	PZ	146.4	2002	2002	2002	2002	Concrete Tanks	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						Integral part of B774 to be addressed through D&D, remaining contamination addressed with UBC774.

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TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bsln Pln Char	KH Pln Comp	Bsln Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
IHSS	774	700	PZ	146.5	2002	2002	2002	2002	Concrete Tanks	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						Integral part of B774 to be addressed through D&D, remaining contamination addressed with UBC774.
IHSS	774	700	PZ	146.6	2002	2002	2002	2002	Concrete Tanks	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	No Action	NA						Integral part of B774 to be addressed through D&D, remaining contamination addressed with UBC774.
IHSS	771	700	PZ	150.1	2002	2002	2002	2002	Rad Site N B771	771/774	Yes	700-4	1.G.A.C.07.04	C	42	No Action	NA						Need additional samples taken. Paved, some old data exists.
IHSS	771	700	PZ	150.3	2002	2002	2002	2002	Rad Site B 771/774	771/774	Yes	700-4	1.G.A.C.07.04	C	57	No Action	NA						Overlaps OPWL 774 UBC. This IHSS to be addressed by IHSS 121, D&D and UBC 774.
IHSS	T771G	700	PZ	163.1	2002	2002	2004	2004	Rad Site 700 North B774	771A	Yes	700-4	1.G.A.C.07.04	C	58	Remedial Action							
IHSS	T771A	700	PZ	163.2	2002	2002	2004	2004	Americium Slab	771A	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							Suspect contamination under T771A.
IHSS	771	700	PZ	215	2002	2002	2004	2004	Abandoned Sump near-774Unit 55.13 T-40	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							Group with IHSS 121
UBC	771	700	PZ	B771	2002	2002	2004	2004	B771 UBC	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							Tunnels are a responsibility problem. Group with IHSS 121
UBC	774	700	PZ	B774	2002	2002	2004	2004	B774 UBC	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							Tunnels are a responsibility problem. Tanks removed, 1971 rad data exceeded Tier 1 levels.
TNK		700		T08	2002	2002	2004	2004	Tank 8 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							
TNK		700		T12	2002	2002	2004	2004	Tank 12 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							
TNK		700		T13	2002	2002	2004	2004	Tank 13 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							
TNK	774	700		T14	2002	2002	2004	2004	Tank 14 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							RCRA interim status/Attached to OPWL. Group with IHSS 121
TNK		700		T15	2002	2002	2004	2004	Tank 15 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							
TNK	774	700		T16	2002	2002	2004	2004	Tank 16 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							RCRA interim status/Attached to OPWL. Group with IHSS 121
TNK		700		T17	2002	2002	2004	2004	Tank 17 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							
TNK		700		T36	2002	2002	2004	2004	Tank 36 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							
TNK		700		T37	2002	2002	2004	2004	Tank 37 - OPWL	771/774	Yes	700-4	1.G.A.C.07.04	C	NR	Remedial Action							
UBC	770	700	PZ	B770	2002	2003	2004	2004	B770 UBC	771A	Yes	700-5	1.G.A.C.07.05	C	NR	Remedial Action							
IHSS	712	700	PZ	137	2005	2005	2005	2005	B.712/713 Cooling Tower BD.	776/777	Yes	700-6	1.G.A.C.07.06	C	49	No Action	NA						Need data.
IHSS	774	700	PZ	139.1(S)	2005	2005	2005	2005	Hydroxide Tank	771/774	Yes	700-6	1.G.A.C.07.06	C	NR	No Action	NA						
IHSS	779	700	PZ	138	2002	2002	2004	2005	B779 Cooling Tower BD	779	Yes	700-7	1.G.A.C.07.07	C	36	Remedial Action							Need data.
IHSS	779	700	PZ	150.6	2002	2002	2004	2005	Rad Site S B779	779	Yes	700-7	1.G.A.C.07.07	C	NR	Remedial Action							Combine with 150.8 and PAC 700-1105 (loading dock). Area in general may have been contaminated by 1969 fire (B776).
IHSS	779	700	PZ	150.8	2002	2002	2004	2005	Rad Site S B779	779	Yes	700-7	1.G.A.C.07.07	C	27	Remedial Action							
PAC	779	700	PZ	700-1105	2002	2002	2004	2005	Transformer Leak - 779-1/779-2	779	Yes	700-7	1.G.A.C.07.07	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992. Incorporate into IHSS 150.6 and 150.8.
UBC	779	700	PZ	B779	2002	2002	2004	2005	B779 UBC	779	Yes	700-7	1.G.A.C.07.07	C	33	Remedial Action							Contamination due to B779.
TNK		700		T19	2002	2002	2004	2005	Tank 19 - OPWL	779	Yes	700-7	1.G.A.C.07.07	C	NR	Remedial Action							
TNK		700		T20	2002	2002	2004	2005	Tank 20 - OPWL	779	Yes	700-7	1.G.A.C.07.07	C	NR	Remedial Action							
TNK		700		T38	2002	2002	2004	2005	Tank 38 - OPWL	779	Yes	700-7	1.G.A.C.07.07	C	NR	Remedial Action							
IHSS	750 Pad	700	PZ	214	2005	2005	2005	2005	750 Pad-Pondcrete/Saltcrete Stor.	750 Pad	Yes	700-8	1.G.A.C.07.08	C	63	No Action	NA						Risk assessment required
PAC	866	800	IZ	800-1204	2004	2004	2005	2005	Bldg 866 Spills	PWTSN	Yes	800-1	1.G.A.C.08.01	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992
PAC	866	800	IZ	800-1212	2004	2004	2005	2005	Building 866 Sump Spill	PWTSN	Yes	800-1	1.G.A.C.08.01	C	NR	Remedial Action							Review data, potential source removal
UBC	865	800	PZ	B865	2004	2004	2005	2005	B865 UBC	865/883	Yes	800-1	1.G.A.C.08.01	C	NR	Remedial Action							
TNK		800		T23	2004	2004	2005	2005	Tank 23 - OPWL	865/883	Yes	800-1	1.G.A.C.08.01	C	NR	Remedial Action							
PAC	881	800	IZ	800-1205	2003	2003	2006	2006	Bldg 881, East Dock	881	Yes	800-2	1.G.A.C.08.02	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992
UBC	881	800	IZ	B881	2003	2003	2006	2006	B881 UBC	881	Yes	800-2	1.G.A.C.08.02	C	24	Remedial Action							No pathway known.
TNK		800		T24	2003	2003	2006	2006	Tank 24 - OPWL	881	Yes	800-2	1.G.A.C.08.02	C	NR	Remedial Action							
TNK		800		T32	2003	2003	2006	2006	Tank 32 - OPWL	881	Yes	800-2	1.G.A.C.08.02	C	NR	Remedial Action							
TNK		800		T39	2003	2003	2006	2006	Tank 39 - OPWL	881	Yes	800-2	1.G.A.C.08.02	C	NR	Remedial Action							
PAC		800	IZ	800-1200	2004	2004	2005	2005	Valve Vault 2	PWTSN	Yes	800-3	1.G.A.C.08.03	C	NR	Remedial Action							Reference EPA Letter dated Dec 23, 1992. Group with IHSS 121
PAC	881	800	IZ	800-1201	2004	2004	2004	2004	Radioactive Site south of Bldg 883	881	Yes	800-3	1.G.A.C.08.03	C	NR	No Action	NA						Reference EPA Letter dated Dec 23, 1992. Needs characterization.
UBC	883	800	PZ	B883	2004	2004	2005	2005	B883 UBC	865/883	Yes	800-3	1.G.A.C.08.03	C	NR	Remedial Action							
TNK		800		T25	2004	2004	2005	2005	Tank 25 - OPWL	865/883	Yes	800-3	1.G.A.C.08.03	C	NR	Remedial Action							
TNK		800		T26	2004	2004	2005	2005	Tank 26 - OPWL	865/883	Yes	800-3	1.G.A.C.08.03	C	NR	Remedial Action							
IHSS	886	800	IZ	164.2	2004	2004	2004	2004	Rad Site #2 800 Area, Bldg 886 Spill	886	Yes	800-4	1.G.A.C.08.04	C	40	No Action	NA						Risk evaluation on soils, metals & Rad then NFA
UBC	886	800	PZ	B886	2004	2004	2006	2006	B886 UBC	886	Yes	800-4	1.G.A.C.08.04	C	NR	Remedial Action							
TNK		800		T21	2004	2004	2006	2006	Tank 21 - OPWL	886	Yes	800-4	1.G.A.C.08.04	C	NR	Remedial Action							
TNK		800		T22	2004	2004	2006	2006	Tank 22 - OPWL	886	Yes	800-4	1.G.A.C.08.04	C	NR	Remedial Action							
TNK		800		T27	2004	2004	2006	2006	Tank 27 - OPWL	886	Yes	800-4	1.G.A.C.08.04	C	50	Remedial Action							
IHSS	885	800	IZ	177	2004	2004	2004	2004	B885 Drum Storage	800A	Yes	800-5	1.G.A.C.08.05	C	60	No Action	NA						Requires sampling. Had PCB hit above AL.
UBC	887	800	IZ	B887	2004	2004	2005	2005	B887 UBC	PWTSN	Yes	800-5	1.G.A.C.08.05	C	NR	Remedial Action							
IHSS	884	800	IZ	164.3	2003	2003	2003	2003	Rad Site #2 800 Area, Bldg 887 Pad	800A	No	800-6	1.G.A.C.08.06	C	NR	No Action	NA						Risk assessment
UBC	889	800	IZ	B889	2003	2003	2005	2005	B889 UBC		No	800-6	1.G.A.C.08.06	C	NR	Remedial Action							
TNK	884	800		T40	2003	2003	2005	2005	Tank 40 - OPWL		No	800-6	1.G.A.C.08.06	C	IAC-96	Remedial Action							Foamed-RCRA interim status/Attached to OPWL
IHSS	980	900	PZ	175	2002	2002	2002	2003	S&W B980 Cont. Storage	980	No	900 Area	1.G.A.C.09.00	C	59	No Action	NA						Minimal sampling to NFA, one hit (@ depth).
PAC	980	900	PZ	900-1308	2002	2002	2002	2003	Gasoline Spill Outside of Bldg 980	980	Yes	900 Area	1.G.A.C.09.00	C	NR	No Action	NA	2001	P				HRR, review data

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TYPE	Bldg	Area	Zone	ID	KH Ptn Char	Bstn Ptn Char	KH Ptn Comp	Bstn Ptn Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
IHSS	991	900	PZ	173	2003	2004	2004	2004	Rad Site B991	991	Yes	900-1	1.G.A.C.09.01	C	NR	No Action	NA						Needs characterization, minimal sampling to NFA. Combine with IHSS 184.
IHSS	992	900	PZ	184	2003	2004	2004	2004	Rad Site 991 Steam	SECNPZ	Yes	900-1	1.G.A.C.09.01	C	NR	No Action	NA						Combine with IHSS 173.
PAC	991	900	PZ	900-1301	2003	2004	2004	2004	Bldg 991 Enclosed Area	991	Yes	900-1	1.G.A.C.09.01	C	NR	No Action	NA						Reference EPA Letter dated Dec 23, 1992. Needs characterization.
PAC	993	900	IZ	900-1307	2003	2004	2004	2004	Explosive Bonding Pit	SECIZ	No	900-1	1.G.A.C.09.01		NR	No Action	NA		D				Reference EPA Letter dated Dec 23, 1992 - Need to review data / to be characterized in FY99. CDPHE/EPA Letter 7/9/99 - require additional data for NFA. NICPB - See Rev 10a change log.
UBC	991	900	PZ	B991	2003	2004	2005	2005	B991 UBC	991	Yes	900-1	1.G.A.C.09.01	C	NR	Remedial Action							
IHSS	N/A	900	BZ	112	1999	1999	2005	2005	903 Pad	903/905	No	900-11	1.G.A.B.04.01	B	1	Remedial Action							Characterization in FY98/99, remediation planned for FY03-04
IHSS	952	900	BZ	140					Haz Disposal Area	903/905	No	900-11	1.G.A.B.04.01	B	72	No Action	NA	1998	R				Group with IHSS 155 Lip area. Removal of IHSS 155 will complete any residual contaminants remaining in 140. Actual area of IHSS 140 is less th 10 -6 and below rad threshold. PAHs in surface soil. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	900	BZ	155	1999	1999	2005	2005	903 Lip Area	903/905	No	900-11	1.G.A.B.04.01	B	2	Remedial Action							Characterization FY98/99, remediation planned.
IHSS	952	900	BZ	183					Gas Detox Area	903/905	No	900-11	1.G.A.B.04.01	B	NR	No Action	NA	1997	S				CDPHE/EPA Letter 7/9/99 - do not concur with NFA. Reproposed again in 2000 HRR annual update.
PAC		SE	BZ	SE-1602	2001	2001	2005	2005	East Firing Range	903/905	No	900-11	1.G.A.B.04.01	B	NR	Remedial Action							New HRR Sept 99
IHSS	N/A	NE	BZ	111.2			2001	2001	Trench T-5	N/A	No	900-12	1.G.A.B.02.05	B	69	No Action	NA						Regrade & revegetation
IHSS	N/A	NE	BZ	111.3			2001	2001	Trench T-6	N/A	No	900-12	1.G.A.B.02.05	B	NR	No Action	NA						Regrade & revegetation
IHSS	N/A	NE	BZ	111.5			2001	2001	Trench T-8	N/A	No	900-12	1.G.A.B.02.05	B	NR	No Action	NA						Regrade & revegetation
IHSS	N/A	NE	BZ	111.6			2001	2001	Trench T-9	N/A	No	900-12	1.G.A.B.02.05	B	NR	No Action	NA						Regrade & revegetation
IHSS	N/A	NE	BZ	111.7			2001	2001	Trench T-10	N/A	No	900-12	1.G.A.B.02.05	B	NR	No Action	NA						Regrade & revegetation
IHSS	N/A	NE	BZ	111.8			2001	2001	Trench T-11	N/A	No	900-12	1.G.A.B.02.05	B	34	No Action	NA						Regrade & revegetation - Organics in groundwater
IHSS	N/A	900	BZ	153	2002	2002	2002	2002	Oil Burn Pit No. 2	N/A	Yes	900-2	1.G.A.B.02.04	B	NR	No Action	NA						240 boxes of contaminated soil removed during construction of the PSZ in 1980, need a few samples to close. Geoprobe. IN PA fence, 11 ft of soil removed during fence construction.
IHSS	N/A	900	BZ	154	2002	2002	2002	2002	Pallet Burn Site	N/A	Yes	900-2	1.G.A.B.02.04	B	NR	No Action	NA						PSZ 1980, need a few samples to close. Geoprobe
IHSS	904 Pad	900	IZ	213	2005	2005	2005	2005	904 Pad, Pondcrete Stor.	904/906	Yes	900-3	1.G.A.C.09.02	C	NR	No Action	NA						Risk assessment required. Active storage unit, not sampled.
IHSS	N/A	NW	BZ	174a	2002	2002	2002	2003	PU&D Yard - Drum Storage	H2OOBZ	No	NE/NW	1.G.A.B.02.03	B	74	Remedial Action							Due to recent data, this IHSS will require a remedial action. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	216.1					East Spray Field-North Area	IBZ NFA	No	NE/NW	1.G.A.B.02.03	B	PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	216.2					East Spray Field-Center Area	IBZ NFA	No	NE/NW	1.G.A.B.02.03	B	NR	No Action	NA	1997	D				PPRG ratio less than 1, 2 downgradient wells. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	N/A	NE	BZ	216.3					East Spray Field-South Area	IBZ NFA	No	NE/NW	1.G.A.B.02.03	B	NR	No Action	NA	1997	D				PPRG ratio less than 1, 2 downgradient wells. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC		NE	BZ	NE-1407	2002	2002	2002	2003	OU2 Treatment Facility	H2OGBZ	No	NE/NW	1.G.A.B.02.03	B	NR	No Action	NA						Review data
PAC		NE	BZ	NE-1409					Modular Tanks and 910 Treatment Sys Spill *(formerly 000-503)*	H2OGBZ	No	NE/NW	NA		PNFA	No Action	NA	1999	S				Review data-characterize. Reference June 23, 2000 EPA/CDPHE Letter - require additional data for NFA status. Reproposed again in 2000 HRR annual update.
PAC	202	NE	BZ	NE-1412	2002	2002	2002	2003	Trench T-12 Located @ OU2 East Trenches	INFRDS	No	NE/NW	1.G.A.B.02.03	B	NR	No Action	NA						NFA - subsidence control
PAC	202	NE	BZ	NE-1413	2002	2002	2002	2003	Trench T-13 Located @ OU2 East Trenches	INFRDS	No	NE/NW	1.G.A.B.02.03	B	NR	No Action	NA						NFA - subsidence control
PAC		NW	BZ	NW-1505	XX??	XX??	XX??	XX??	Existing Firing Range		No	NE/NW	1.G.A.B.02.03		NR	Remedial Action							
IHSS	N/A	NE	BZ	142.1					Pond A-1	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA, 10 E-4 to -6 with pond data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	SE	BZ	142.11					Pond C-2	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA less than 10 E-6, includes pond and sediments. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.2					Pond A-2	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA, 10 E-4 to -6 with pond data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.3					Pond A-3	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA, 10 E-4 to -6 with pond data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.4					Pond A-4	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				Passed CDPHE screen with pond and sediment data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.

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IHSS	N/A	NE	BZ	142.5			2005	2006	Pond B-1	N/A	No	NE-1	1.G.A.B.02.01	B	NR	Remedial Action							Originally proposed NFA in 1997 HRR. CDPHE/EPA Letter 7/9/99 - do no concur with NFA. Sediments will have to be remediated. HHRA less than 10 E-6, with pond and sediment data.
IHSS	N/A	NE	BZ	142.6			2005	2006	Pond B-2	N/A	No	NE-1	1.G.A.B.02.01	B	NR	Remedial Action							Originally proposed NFA in 1997 HRR. CDPHE/EPA Letter 7/9/99 - do no concur with NFA. Sediments will have to be remediated. B-1 Dam Hot Spot remove source. HHRA less than 10 E-6, with pond and sediment data
IHSS	N/A	NE	BZ	142.7			2005	2006	Pond B-3	N/A	No	NE-1	1.G.A.B.02.01	B	NR	Remedial Action							Originally proposed NFA in 1997 HRR. CDPHE/EPA Letter 7/9/99 - do no concur with NFA. Sediments will have to be remediated. HHRA less than 10 E-6, with pond and sediment data.
IHSS	N/A	NE	BZ	142.8					Pond B-4	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA less than 10 E-6, with pond and sediment data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.9					Pond B-5	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				Passed CDPHE screen with pond and sediment data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	SE	BZ	142.10					Pond C-1	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA less than 10 E-6, includes pond and sediments. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	111.4			2004	2004	Trench T-7	N/A	No	NE-2	1.O.A.B.02.02	B	12	Remedial Action							> Tier I rads in Subsurface
IHSS	N/A	SW	BZ	133.1			2004	2004	Ash Pit 1	N/A	No	SW-1	1.G.A.B.03.01	B	45	Remedial Action		2001	P				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
IHSS	N/A	SW	BZ	133.2			2004	2004	Ash Pit 2	N/A	No	SW-1	1.G.A.B.03.01	B	46	Remedial Action		2001	p				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
IHSS	N/A	SW	BZ	133.3			2004	2004	Ash Pit 3	N/A	No	SW-1	1.G.A.B.03.01	B	47	Remedial Action		2001	p				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
IHSS	N/A	SW	BZ	133.4			2004	2004	Ash Pit 4	N/A	No	SW-1	1.O.A.B.03.01	B	48	Remedial Action		2001	p				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
PAC		SW	BZ	SW-1701					Recently Identified Ash Pit (also referred to as TDEM-1)		No	SW-1	NA		NR	No Action	NA	1997	D				CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC		SW	BZ	SW-1702			2004	2004	Recently Identified Ash Pit (also referred to as TDEM-2)		No	SW-1	1.O.A.B.03.01	B	NR	Remedial Action		2001	p				Further chacterize / maybe source removal
IHSS	N/A	SW	IZ	115			2005	2006	Original Landfill	INFLPC	No	SW-2	1.O.A.C.0A.02	C	19	Remedial Action							CAP Final Cover - HHRA, 10 -4 to 10 -6. Hot Spot Removal with capillary break cap.
IHSS	N/A	100	IZ	196			2005	2006	Backwash Pond (Listed as OU-5 on Map)	N/A	No	SW-2	1.O.A.C.0A.02	C	28	Remedial Action							Combine with IHSS 115 Old Landfill which will be capped. HHRA, 10 E-4 to -6. No separate action required.

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IHSS	N/A	800	BZ	102					Oil Sludge Pit	N/A	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	800	BZ	103					Chemical Burial	N/A	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	800	BZ	104					Liquid Dumping	N/A	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	881	800	BZ	105.1					West Out-of-Service Tank	881	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	881	800	BZ	105.2					East Out-of-Service Tank	881	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	887	800	BZ	106					106 Outfall	PWTSN	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	885	800	BZ	107					107 Hillside Oil Leak	800A	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	900	BZ	108					Trench T-1	N/A	No		NA		C-99	Remedial Action	1998	1999	S				FY98 - source removed, treatment and trench fill in FY99. Reproposed again in 2000 HRR annual update.
IHSS	N/A	900	BZ	109					Ryan's Pit (Trench 2)	N/A	No		NA		C-96	Remedial Action	1996	1997	R				CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	110					Trench T-3	N/A	No		NA		C-96	Remedial Action	1996	1997	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed again in 2000 HRR annual update.
IHSS	N/A	NE	BZ	111.1					Trench T-4	N/A	No		NA		C-96	Remedial Action	1996	1997	A	1999			Accepted CDPHE/EPA Letter 7/9/99. Between Tier I & Tier II Rad wells, returned to T-4 in geotextile liner / 200 yards.
IHSS	901	900	BZ	113					Mound Area	207	No		NA		C-97	Remedial Action	1997	1997	A	1999			Regrade & revegetation as part of T-1. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	221	600	IZ	117.3					S. Chem. Storage Site	221/224	No		NA		NFA	No Action	NA	1997	A	1999			Tanks removed in 1997 (D&D). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	900	BZ	119.1					Solvent Spill Site OU1	N/A	No		NA		52	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD modification for removal of french drain (see French Drain removal project). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	900	BZ	119.2					E. Scrap Metal Storage	N/A	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	VV007	700	PZ	123.1					Valve Vault 7	PWTSN	No		NA		PNFA	No Action	NA	1997	S				IHSS issue gone. CDPHE/EPA Letter 7/9/99 - require additional data for NFA. D&D of vault required. Reproposed again in 2000 HRR annual update.
IHSS	N/A	900	BZ	130					Rad Site - 800 Area	N/A	NA		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	SW	BZ	133.5					Incinerator	N/A	No		NA		NR	No Action	NA	1997	D				HHRA, 10 E-4 to 10 -6. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	N/A	SW	BZ	133.6					Concrete Wash Pad	N/A	No		NA		NR	No Action	NA	1997	D				HHRA, 10 E-4 to 10 -6. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	374	300	PZ	135					B373 CT Blowdown	371/374	No		NA		NFA	No Action	NA	1997	A	1999			NFA-300 area cap. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	971-4	900	BZ	141					Sludge Disposal Area	INFSEW	No		NA		NFA	No Action	NA	1997	A	1999			Needs to be looked at admin. BZ issues of NFA process versus risk method determination data may change w/ future events. HHRA, less than 10 E-6. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	NE	BZ	142.12					Pond A-5	N/A	No		NA		NR	No Action	NA	1997	P				Passed CDPHE screen.
IHSS	N/A	800	BZ	145					Sanitary Waste Leak	IBZ NFA	No		NA		C-97	No Action	NA	1997	A	1997	1997	1997	OU1 CAD/ROD (3/12/97). Accepted CDPHE/EPA Letter 7/9/99.
IHSS	881	800	IZ	147.2					B881 Conversion Act.	881	No		NA		NFA	No Action	NA	1997	A	1999			Accepted CDPHE/EPA Letter 7/9/99.
IHSS	707	700	PZ	150.5					Rad Site W B707 - (DUPLICATE OF 123.2)	707	No		NA		NR	No Action	NA	1998	A	1999			Proposed in 98 HRR for NFA to clear it from the books. IHSS 123.2 is actual contamination site. Removed from maps. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	262	300	PZ	151					Fuel Oil Leak Tk. 262	IA NFA	No		NA		NFA	No Action	NA	1997	A	1999			<5000 ppm TPH per RFCA / 300 area Cap. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	221	600	IZ	152					Fuel Oil Tank B452	221/224	No		NA		NFA	No Action	NA	1997	A	1999			See further investigation of underlying PAC (400-802). Tanks D&D on 1997. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	372A	300	IZ	156.1					Rad Site	SECNPZ	No		NA		PNFA	No Action	NA	1997	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed again in 2000 HRR annual update.
IHSS	N/A	NE	BZ	156.2					Soil Disposal Area	N/A	No		NA		NFA	No Action	NA	1997	A	1999			HHRA less than 10 E-6. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	205	600	IZ	164.1					Rad Site #2 800 Area	INFRDS	No		NA		PNFA	No Action	NA	1997	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed again in 2000 HRR annual update.
IHSS	N/A	NE	BZ	166.1					Landfill Trench A	N/A	No		NA		PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	166.2					Landfill Trench B	N/A	No		NA		PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	166.3					Landfill Trench C	N/A	No		NA		PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	167.1					Landfill Pond Spray Area	N/A	No		NA		NFA	No Action	NA	1997	A	1999			HHRA less than 10 E-6. Accepted CDPHE/EPA Letter 7/9/99.

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IHSS	N/A	NE	BZ	167.2					Landfill Pond Spray Area	N/A	No		NA		PNFA	No Action	NA	1996	P				HHRA, 10 E-4 to -6.
IHSS	N/A	NE	BZ	167.3					Landfill Pond Spray Area	N/A	No		NA		PNFA	No Action	NA	1996	P				Focused HHRA, 10 E-4 to -6
IHSS	N/A	SW	BZ	168					West Spray Field	N/A	No		NA		C-95	No Action	NA	NA	A	1995	1995	1995	OU 11 CAD/ROD (9/1/95) - ROD for OU 11 closed
IHSS	N/A	500	IZ	169					Hydrogen Peroxide Drum Burial Waste	442/452	No		NA		NR	No Action	NA	1998	D				No documentation to substantiate a drum was buried. Hydrogen peroxide release no threat regardless per '98 HRR. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	N/A	NW	BZ	170					PU&D Storage Yard	H2OGBZ	No		NA		73	No Action	NA	1998	D				Risk assessment data / PU&D yard IHSS 170, 174a and 174b NFA proposed in '98. CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Proposed again in FY99 HRR update without IHSS 174a. Reference June 23, 2000 EPA/CDPHE Letter require additional data for NFA
IHSS	N/A	000	IZ	172					Central Ave. Spill	N/A	No		NA		NFA	No Action	NA	1998	A	1999			Contaminants below Tier II action levels. No source found. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	N/A	NW	BZ	174b					PU&D Yard - Dumpster Storage	H2OGBZ	No		NA		NFA	No Action	NA	1998	A	1999			Risk assessment data / PU&D yard IHSS 170 and 174b NFA proposed in '98. Proposed again in FY99 HRR update. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	881	800	IZ	178					B 881 Drum Storage	881	NA		NA		C-95	No Action	NA	NA	A	1995	1995	1995	OU 15 CAD/ROD (10/1/95) - OU 15 IHSS closed by ROD
IHSS	865	800	IZ	179					B865 Drum Storage	865/883	NA		NA		C-95	No Action	NA	1996	D				OU 15 CAD/ROD (10/1/95) - OU 15 IHSS closed by ROD deferred to bldg Closure. Will need to include in IA ROD.
IHSS	883	800	IZ	180					B883 Drum Storage	865/993	NA		NA		C-95	No Action	NA	1996	D				OU 15 CAD/ROD (10/1/95) - OU 15 IHSS closed by ROD deferred to bldg Closure. Will need to include in IA ROD.
IHSS	334	300	IZ	181					B334 Cargo Container Area	300/500	No		NA		NFA	No Action	NA	1997	A	1999			Accepted CDPHE/EPA Letter 7/9/99.
IHSS	707	700	PZ	185					Solvent Spill	707.	NA		NA		C-94	No Action	NA	NA	A	1994	1994	1994	OU16 CAD/ROD (10/1/94) - OU16 closed NFA
IHSS	371	300	PZ	188					Acid Leak (SE of B374)	371/374	No		NA		NFA	No Action	NA	1997	A	1999			Accepted CDPHE/EPA Letter 7/9/99.
IHSS	218	600	IZ	189					Nitric Acid Tanks	442/452	No		NA		NR	No Action	NA	1997	D				CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	209	400	IZ	191					Hydrogen Perox. Leak	INFSEW	No		NA		NFA	No Action	NA	1997	A	1999			Accepted CDPHE/EPA Letter 7/9/99.
IHSS	708	000	PZ	192					Antifreeze Discharge	707	NA		NA		C-94	No Action	NA	NA	A	1994	1994	1994	OU16 CAD/ROD (10/1/94)
IHSS	443	400	IZ	193					Steam Condensate Leak	INFSTM	NA		NA		C-94	No Action	NA	NA	A	1994	1994	1994	OU16 CAD/ROD (10/1/94)
IHSS	240	700	PZ	194					Steam Condensate Leak	INFSTM	NA		NA		C-94	No Action	NA	NA	A	1994	1994	1994	OU16 CAD/ROD (10/1/94)
IHSS	N/A	NW	BZ	195					Nickel Carbonyl Disposal	N/A	NA		NA		C-94	No Action	NA	NA	A	1994	1994	1994	OU16 CAD/ROD (10/1/94)
IHSS	N/A		OS	199					Offsite Land Surface	N/A	NA		NA		C-97	No Action	NA	NA	A	1997	1997	1997	OU3 CAD/ROD (6/1/97)
IHSS	N/A		OS	200					Great Western Res.	N/A	NA		NA		C-97	No Action	NA	NA	A	1997	1997	1997	OU3 CAD/ROD (6/1/97)
IHSS	N/A		OS	201					Standley Lake	N/A	NA		NA		C-97	No Action	NA	NA	A	1997	1997	1997	OU3 CAD/ROD (6/1/97)
IHSS	N/A		OS	202					Mower Reservoir	N/A	NA		NA		C-97	No Action	NA	NA	A	1997	1997	1997	OU3 CAD/ROD (6/1/97)
IHSS		NW	BZ	203					Inactive HW Stor.	INFLPO	No		NA		NFA	No Action	NA	1998	A	1999			Landfill CAP addressed in 96 HRR. Accepted CDPHE/EPA Letter 7/9/99.
IHSS	447	400	IZ	204					Uranium Chip Roaster	444	NA		NA		C-95	No Action	NA	1996	D				OU 15 CAD/ROD (10/1/95). Deferred to bldg closure. Still need to close in IA ROD.
IHSS		SE	BZ	209					Surface Disturbance	OBZ NFA	No		NA		NFA	No Action	NA	1997	A	1999			Passed CDPHE screen. Accepted CDPHE/EPA Letter 7/9/99
IHSS	980	900	PZ	210					B980 Cargo Cont.	980	No		NA		NFA	No Action	NA	1997	A	1999			Accepted CDPHE/EPA Letter 7/9/99.
IHSS		800	IZ	211					B881 Drum Storage	IA NFA	NA		NA		C-95	No Action	NA	NA	A	1995	1995	1995	OU 15 CAD/ROD (10/1/95)
IHSS	371	300	PZ	212					B371 Drum Storage	371/374	Yes		NA		NR	No Action	NA	1997	P				Deferred - To be handled w/ 371 D&D
IHSS	881	800	IZ	217					B881 Cyanide Trt.	881	NA		NA		C-95	No Action	NA	NA	A	1995	1995	1995	OU 15 CAD/ROD (10/1/95)
PAC	202	000	BZ	000-501					Roadway Spraying	INFRDS	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	762	000	IZ	000-503					Solar Pond Water Spill Along Central Ave	INFRDS	No		NA		NR	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC	222	100	IZ	100-600					Mercury Spill - Valve Vault 124-B B124	INFPCM	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	123	100	IZ	100-601					Building 123 Phosphoric Acid Spill	125/441	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	T130	100	BZ	100-604					T-130 Complex Sewer Line Leaks	130	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		100	IZ	100-605					Building 115 Hydraulic Oil Spill		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	125	100	IZ	100-606					Building 125 TCE Spill	125/441	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	131	100	BZ	100-608					Building 131 Transformer Leak	130	No		NA		NFA	No Action	NA	1998	A	1999			Reference EPA Letter dated Dec 23, 1992 - PCBs below cleanup level. Accepted CDPHE/EPA Letter 7/9/99.
PAC	123	100	IZ	100-610					Asbestos Release - Building 123		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	119	100	IZ	100-612					Battery Solution Spill - Building 119	SECIZ	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	C130	100	BZ	100-613					Asphalt Surface in Lay Down N Bldg 130 *(formerly 000-501)*	130	NA		NA		NR	No Action	NA	1994					Accepted by EPA as 000-501.
PAC	N/A	300	IZ	300-700					Scrap Roofing Disposal		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	371	300	IZ	300-701					Sulfuric Acid Spill, Bldg 371	371/374	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	331	300	IZ	300-703					Building 331 North Area		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	381	300	IZ	300-704					Roof Fire, Bldg 381	371/374	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	374	300	IZ	300-705					Potassium Hydroxide Spill N. of Bldg 374	371/374	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	374	300	IZ	300-706					Evaporator Tanks N. of Bldg 374	371/374	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		300	IZ	300-707					Sanitizer Spill		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	371	300	PZ	300-708					Transformer N of B371	371/374	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992

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TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bsln Pln Char	KH Pln Comp	Bsln Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
PAC	334	300	IZ	300-709					Transformer Leak 334-1	300/500	No		NA		PNFA	No Action	NA	1996	P				Characterization data below action levels. Reference EPA Letter dated Dec 23, 1992
PAC	331	300	IZ	300-710					Gasoline Spill North of Building 331		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	373	300	IZ	300-711					Ni-Cad Battery Spil Outside Bldg 373	371/374	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC	373	300	IZ	300-712					1/2 g Antifreeze Spill Outside Bldg 373	371/374	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC	331	300	IZ	300-713					Caustic Spill N of Bldg 331		No		NA		PNFA	No Action	NA	1994	P				HRR Update #8 - Jun 94
PAC	374	300	IZ	300-714					Laundry Waste Water Spill N of Bldg 374	371/374	No		NA		PNFA	No Action	NA	1995	P				HRR Update #10 - Dec 94
PAC		300	IZ	300-715					Battery Acid Spill		No		NA		NFA	No Action	NA	1997	A	1999			Accepted CDPHE/EPA Letter 7/9/99.
PAC	443	400	IZ	400-800					Transformer 443-1	INFSTM	No		NA		PNFA	No Action	NA	1998	A	1999			Reference EPA Letter dated Dec 23, 1992 - PCBs in soil below cleanup action level. Accepted CDPHE/EPA Letter 7/9/99.
PAC	443	400	IZ	400-805					Building 43 Tank #9 Leak	INFSTM	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	440	400	IZ	400-806					Catalyst Spill, Building 440	440	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	442	400	IZ	400-808					Vacuum Pump Leak, Building 442	442/452	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	205	400	IZ	400-809					Oil Leak - 446 Guard Post	INFRDS	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	443	400	IZ	400-811					Transformer 443-2, Bldg 443	INFSTM	No		NA		NFA	Remedial Action	1993	1998	A	1999			Document in '98 HRR. Accepted CDPHE/EPA Letter 7/9/99.
PAC	460	400	IZ	400-812					Tank T-2 Spill I Building 460	460	No		NA		PNFA	No Action	NA	1994	P				HRR Update #6
PAC	444	400	IZ	400-814					A/C Compressor Release, Bldg 444 Roof	444	No		NA		PNFA	No Action	NA	1994	P				HRR Update #8 - Jun 94
PAC	515	500	IZ	500-900					Transformer Leak 515/516	INFELN	No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC		500	IZ	500-901					Transformer Leak 555/558		No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC	559	500	IZ	500-902					Transformer Leak 559	559	No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC	750HAZ	500	IZ	500-903					RCRA Storage Unit #1	750HAZ	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		500	IZ	500-905					Transformer Leak 558-1		No		NA		PNFA	Remedial Action	1996	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	223	500	IZ	500-908					IHSS 156.1, 186	223	No		NA		NFA	No Action	NA	1995					HRR Update #12 - Jun 95 / See IHSS 186
PAC		500	IZ	500-909					Spent Photo Fixer Solution Release (IHSS 158)		No		NA		PNFA	No Action	NA	1996	P				HRR Annual 1996
PAC	662	600	IZ	600-1000					Transformer Storage B662	690T	No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC	662	600	IZ	600-1001(s)					Spills of Unknown Oil in PAC 600-1001 (SIR #318)	690T	No		NA		NFA	No Action	NA	1997	A	1999			PAC description added in 2000 HRR. Identified in the 2000 reconciliation.
PAC	666	600	IZ	600-1002					Transformer Storage W B666	664	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	661	600	IZ	600-1003					Transformers N & S 661/675	INFELI	No		NA		PNFA	Remedial Action	1996	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	776	700	IZ	700-1102					Transformer Leak - 776-4	776/777	No		NA		75	Remedial Action	1996	1997	D				Most of the source removed. Could not get clean. PCBs remain to depth - Reference EPA Letter dated Dec 23, 1992. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC	707	700	IZ	700-1103					Transformer Leak B707	707	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	708	700	IZ	700-1104					Transformer Leak B708	707	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	776	700	PZ	700-1107					Compressor Waste Oil Spill - Building 776	776/777	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	778	700	PZ	700-1109					Uranium Incident - Bldg 778	778	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	771	700	PZ	700-1110					Nickel Carbonyl Burial West of Bldg 771	771/774	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	750	700	IZ	700-1111					Transformer Leak B750	750	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	776	700	IZ	700-1112					Transformer Leak B776-5	776/777	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC		700	PZ	700-1113					IHSS 101		No		NA		PNFA	No Action	NA	1995	P				HRR Update #11 - Mar 95
PAC		700	PZ	700-1114a					Release During Liquid Transfer Oper Bldg 774		No		NA		PNFA	No Action	NA	1997	P				
PAC		700	PZ	700-1114b					Release During Liquid Transfer Oper Bldg 774		No		NA		PNFA	No Action	NA	1997	P				
PAC	701	700	PZ	700-1117					Bldg. 701 Water Line Soil Put-back	776/777	No		NA		NFA	No Action	NA	1998	A	1999			Soil excavated for line repair contains carbon tet, Pu and Am, all meeting permissable put-back threshold. Reference 1999 HRR update for Accepted date. Accepted CDPHE/EPA Letter 7/9/99.
PAC	883	800	IZ	800-1202					Sulfuric Acid Spill, Bldg 883	865/883	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	865	800	IZ	800-1203					Sanitary Sewer Line Brk Btwn Bldg 865/866	865/883	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	883	800	IZ	800-1206					Fire, Bldg 883	865/883	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	883	800	IZ	800-1207					Transformer Leak 883-4	865/883	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	881	800	IZ	800-1208					Transformer Leak 881-4	881	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC		800	IZ	800-1209					Transformer Leak 800 area		No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	865	800	IZ	800-1210					Transformers 865-1 & 865-2	865/883	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	883	800	IZ	800-1211					Capacitor Leak, Bldg 883	865/883	No		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		900	IZ	900-1300					RO Plant Sludge Drying beds	910	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		900	IZ	900-1302					Gasoline Spill		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	991	900	IZ	900-1303					Natural Gas Leak	991	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	991	900	PZ	900-1304					Chromic Acid Spill - Bldg 991	991	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	991	900	PZ	900-1305					Building 991 Roof	991	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	991	900	IZ	900-1306					Transformers 991-1 & 991-2	991	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992

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ER Site Acti. .cking List

TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bsin Pln Char	KH Pln Comp	Bsin Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
PAC	T900A	900	BZ	900-1309	FY99		FY99		OU 2 Field Treatability Unit Spill	H2OGIZ	No		NA		NFA	No Action	NA	1999	A	2000			HRR, review data/Risk assessment needed / to be characterized in FY99/Reference June 23, 2000 EPA/CDPHE Letter.
PAC		900	PZ	900-1311					Septic Tanks East of Building 991		No		NA		PNFA	No Action	NA	1999	S				Review data / Characterize / to be characterized in FY99. Reference June 23 2000 EPA/CDPHE Letter - require additional data for NFA status. Reproposed again in 2000 HRR annual update.
PAC	T900A	900	IZ	900-1312					OU 2 Water Spill	H2OGIZ	No		NA		NFA	No Action	NA	1999	A	2000			Review data / Characterize / to be characterized in FY99/Reference June 23, 2000 EPA/CDPHE Letter.
PAC		900	IZ	900-1313					Seep Area Near OU2 Influent	H2OGIZ	No		NA		NFA	No Action	NA	1999	A	2000			Review data / Characterize / to be characterized in FY99/Reference June 23, 2000 EPA/CDPHE Letter.
PAC	T900A	900	PZ	900-1314					Solar Evaporation Pond 207B Sludge Release	H2OGIZ	No		NA		PNFA	No Action	NA	1994	P				HRR Update #9 - Sep 94
PAC	202	900	IZ	900-1315					Tanker Trk Release on E Patrol Rd. N of Space	INFRDS	No		NA		PNFA	No Action	NA	1995	P				HRR Update #11 - Mar 95
PAC	905	900	BZ	900-1316					Elevated Chromium Identified During Geotechnical Drilling	903/905	No		NA		PNFA	No Action	NA	1995	P				HRR Update #10 - Dec 94
PAC	964	900	IZ	900-1317					Soil from crate in 964 Laydown Yard	964	No		NA		PNFA	No Action	NA	1995	P				HRR Update #11 - Mar 95
PAC	993	900	IZ	900-1318					Release of F001 Listed Waste to Soil	SECIZ	No		NA		PNFA	No Action	NA	1998	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed again in 2000 HRR annual update.
PAC	202	NE	BZ	NE-1400					Tear gas Powder Release	INFRDS	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC	210	NE	BZ	NE-1401					NE Buffer Zone Gas Line Break	INFGAS	NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		NE	BZ	NE-1402					East Inner Gate PCB Spill		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		NE	BZ	NE-1403					Gasoline Spill - Building 920 Guard Post		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		NE	BZ	NE-1404					Diesel Spill at Pond B-2 Spillway		No		NA		NR	No Action	NA	1998	D				HRR '98, review data. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC		NE	BZ	NE-1405					Diesel Spill at Field Treatability Unit		No		NA		NFA	No Action	NA	1998	A	1999			HRR '98, review data. Accepted CDPHE/EPA Letter 7/9/99.
PAC		NE	BZ	NE-1406					771 Hillside Sludge Release		No		NA		NFA	No Action	NA	1998	A	1999			HRR '98, review data. Accepted CDPHE/EPA Letter 7/9/99.
PAC		NE	BZ	NE-1410					Diesel fuel Spill at field Treatability Unit		No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		NE	BZ	NE-1411					Diesel Fuel Overflowed from Tanker @ OU2		No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		NW	BZ	NW-1500					Diesel Spill @ PU&D Yard*(formerly NW-175)*		No		NA		NFA	No Action	NA	1998	A	1999			NFA - cleaned up '98 HRR. Accepted CDPHE/EPA Letter 7/9/99.
PAC		NW	BZ	NW-1502					Improper Disposal of Diesel Contaminated Material at Landfill*(formerly NW-177)*		No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		NW	BZ	NW-1503					Improper Disposal of Fuel Contaminated Material at Landfill	INFLPO	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94 / Appears to be duplicated by NW-1502 in '98 HRR.
PAC		NW	BZ	NW-1504					Improper Disposal of Thorosilane Contaminated Material at Landfill	INFLPO	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		SE	BZ	SE-1600					Pond 7 - Steam Condensate Releases		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		SE	BZ	SE-1601.1					Pond 8 - North [Original Pond 8] (Cooling Tower Discharge Releases)		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		SE	BZ	SE-1601.2					Pond 8 - South (Cooling Tower Discharge Releases)		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PAC		SW	BZ	SW-1700					Fuel Spill into Woman Creek Drainage		NA		NA		NFA	No Action	NA	NA	A	1992			Reference EPA Letter dated Dec 23, 1992
PLM	N/A		BZ	881APLM	XX??	XX??	XX??	XX??	B881 Area Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	25	No Action							NFA - Source may be due to UBC at B881.Work being performed under the IMP.
PLM	N/A		BZ	881PLM	XX??	XX??	XX??	XX??	881 Hillside Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	11	No Action							No impact on surface water in Woman Creek drainage. Work being performed under the IMP.
PLM	N/A		BZ	CTPLM	XX??	XX??	XX??	XX??	Carbon Tet Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	7	No Action							IHSS 118.1 is suspected source, DNAPL present.Work being performed under the IMP.
PLM	N/A		BZ	ETPLM			FY99	FY99	East Trenches Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	IAC-99	Remedial Action	1999						Reactive Barrier - FY99 - Currently impacting surface water in the S. Walnut Creek drainage.
PLM	N/A		BZ	IAPLM			2005	2005	Industrial Area Plume	GW Mgt. Const.	No		1.G.A.B.0B.01	B	13	Remedial Action							Reactive Barrier - No known impact on surface water.
PLM	N/A		BZ	MNDPLM					Mound Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	IAC-98	Remedial Action	1998						Reactive Barrier complete. Groundwater collection and treatment system i place.
PLM	N/A		BZ	OLPLM	XX??	XX??	XX??	XX??	Old Landfill Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	44	No Action							NFA - HRA 10 E-4 to -6. Action required due to physical hazard.Work being performed under the IMP.
PLM	N/A		BZ	PLFPLM	XX??	XX??	XX??	XX??	Present Landfill Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	26	No Action							
PLM	N/A		BZ	PUDPLM	XX??	XX??	XX??	XX??	PU&D Yard Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	18	No Action							Source not present. No known impacts on surface water.

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ER Site Acti .cking List

TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bsln Pln Char	KH Pln Comp	Bsln Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
PLM	N/A		BZ	RPPLM	XX??	XX??	XX??	XX??	903 Pad/Ryan's Pit Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	8	No Action							FY99 - No impact in the Woman Creek drainage. Work being performed under the IMP.
PLM	N/A		BZ	SPPLM			FY99	FY99	Nitrate (Solar Pond) Plume	GW Mgt. Const.	No		1.G.A.B.0B.03	B	IAC-99	Remedial Action	1999						Reactive Barrier - FY99 - Plume due to NO3, impacts surface water in N. Walnut Creek.
PRJ	N/A		BZ	FDPRJ			2001	2001	OU 1 French Drain Removal	N/A	No		1.G.A.B.0B.04	B			2001						Remedial Action Termination - Dependent upon completion of the OU1 CAD/ROD (3/12/97). (see IHSS 119.1)
PRJ	N/A	N/A	IZ	IAREV			2006	2006	Site-wide Regrade and Revegetation	N/A	Yes		1.G.A.C.0B.05	C									
PRJ	N/A	N/A	IZ	ASPHREM			2006	2006	Site-wide Road and Asphalt Removal	N/A	Yes		1.G.A.C.0B.03	C									
PRJ	N/A	N/A	IZ	FNDREM			2005	2005	Removal of Major Building Foundations	N/A	Yes		1.G.A.C.0B.04	C									
PRJ	N/A		BZ	PNDREM					Pond Removal	N/A	No		1.G.A.B.02.01	B									
PRJ	N/A		IZ	EM50HDD			2000	2000	Horizontal Drilling	N/A	No		1.G.A.C.0B.02	C									
PRJ	N/A		BZ	EM50PLM					EM 50 Plume Maintenance & Monitoring	N/A	No		1.G.A.B.0B.06	B									
DOC			BZ	RFIBZ					Site RFI/RI	N/A	No		1.G.A.B.0C.01	B									Will be completed prior to issuance of Proposed Plan for OU-BZ CAD/ROD
DOC			BZ	RFIOU6					RFI/RI OU-6	N/A	No		NA				1995						Has not been approved by agencies. They might reject the NFA recommendation for Ponds B-1 and B-2.
ANL			BZ	CMPRA					Comprehensive Risk Assessment	N/A	No		1.G.A.B.0C.03	B									Will be the main focus of the RFI/RI for the IA and BZ.
ANL	N/A	N/A	BZ	SWWB			2002	2002	Site-wide Water Balance	N/A	No		1.G.A.C.0B.06	C									Needs to focus on post-closure surface water contamination issues.
PRJ	N/A	NE	BZ	WCMM			2004	2004	Walnut Creek Mitigating Measures	N/A	No		1.G.A.B.0B.05	B									Will likely be refined to address contaminant migration issues.
ANL	N/A	N/A	IZ	GEOMAN			2002	2002	Land Configuration Design Basis	N/A	No		1.G.A.C.0B.07	C									Neaceeary to support final site grading plan.
DOC	N/A		BZ	OU1ROD			2001	2001	OU-1 Final CAD/ROD	N/A	No		1.G.A.B.0C.02	B									Might not require further contractor support.
DOC	N/A		BZ	INFROD			2003	2004	Interim CAD/ROD	N/A	No		1.G.A.B.0C.02	B									
PRJ	N/A	N/A	IZ	IACHAR					IA Characterization				1.G.A.C.0B.01	C									
PRJ	N/A	SW	BZ	ORGLNF					Original Landfill Monitoring & Maintenance	N/A	No		1.G.A.C.0A.02	C									
PRJ	N/A	NE	BZ	PRSLNF					Present Landfill Monitoring & Maintenance	N/A	No		1.G.A.B.0A.01	B									
NICPB - Not planned in Closure Project Baseline.																							
Trenches T-3 through T-11 are also referred to as the East Trenches																		188		99	24	24	
Assumes that Ponds B1, B2 & B3 will require source removal. All were originally proposed NFA in 1997.																							

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127 PING NFA's

ER Site Acti[illegible]cking List

TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bsln Pln Char	KH Pln Comp	Bsln Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
IHSS	N/A	900	BZ	108					Trench T-1	N/A	No		NA		C-99	Remedial Action	1998	1999	S				FY98 - source removed, treatment and trench fill in FY99. Reproposed again in 2000 HRR annual update.
IHSS	N/A	900	BZ	109					Ryan's Pit (Trench 2)	N/A	No		NA		C-96	Remedial Action	1996	1997	R				CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	110					Trench T-3	N/A	No		NA		C-96	Remedial Action	1996	1997	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed again in 2000 HRR annual update.
IHSS	VV007	700	PZ	123.1					Valve Vault 7	PWTSN	No		NA		PNFA	No Action	NA	1997	S				IHSS issue gone. CDPHE/EPA Letter 7/9/99 - require additional data for NFA. D&D of vault required. Reproposed again in 2000 HRR annual update.
IHSS	N/A	SW	BZ	133.1			2004	2004	Ash Pit 1	N/A	No	SW-1	1.G.A.B.03.01	B	45	Remedial Action		2001	P				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
IHSS	N/A	SW	BZ	133.2			2004	2004	Ash Pit 2	N/A	No	SW-1	1.G.A.B.03.01	B	46	Remedial Action		2001	p				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
IHSS	N/A	SW	BZ	133.3			2004	2004	Ash Pit 3	N/A	No	SW-1	1.G.A.B.03.01	B	47	Remedial Action		2001	p				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
IHSS	N/A	SW	BZ	133.4			2004	2004	Ash Pit 4	N/A	No	SW-1	1.G.A.B.03.01	B	48	Remedial Action		2001	p				Source removal if > Tier I - Characterize. HHRA, 10 E-4 to 10 -6.
IHSS	N/A	SW	BZ	133.5					Incinerator	N/A	No		NA		NR	No Action	NA	1997	D				HHRA, 10 E-4 to 10 -6. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	N/A	SW	BZ	133.6					Concrete Wash Pad	N/A	No		NA		NR	No Action	NA	1997	D				HHRA, 10 E-4 to 10 -6. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	952	900	BZ	140					Haz Disposal Area	903/905	No	900-11	1.G.A.B.04.01	B	72	No Action	NA	1998	R				Group with IHSS 155 Lip area. Removal of IHSS 155 will complete any residual contaminants remaining in 140. Actual area of IHSS 140 is less tha 10 -6 and below rad threshold. PAHs in surface soil. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.1					Pond A-1	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA, 10 E-4 to -6 with pond data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	SE	BZ	142.11					Pond C-2	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA less than 10 E-6, includes pond and sediments. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.12					Pond A-5	N/A	No		NA		NR	No Action	NA	1997	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	142.2					Pond A-2	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA, 10 E-4 to -6 with pond data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.3					Pond A-3	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA, 10 E-4 to -6 with pond data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.4					Pond A-4	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				Passed CDPHE screen with pond and sediment data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.8					Pond B-4	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA less than 10 E-6, with pond and sediment data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	NE	BZ	142.9					Pond B-5	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				Passed CDPHE screen with pond and sediment data. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	N/A	SE	BZ	142.10					Pond C-1	N/A	No	NE-1	1.G.A.B.02.01		NR	No Action	NA	1997	R				HHRA less than 10 E-6, includes pond and sediments. CDPHE/EPA Letter 7/9/99 - do not concur with NFA.
IHSS	372A	300	IZ	156.1					Rad Site	SECNPZ	No		NA		PNFA	No Action	NA	1997	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed a
IHSS	205	600	IZ	164.1					Rad Site #2 800 Area	INFRDS	No		NA		PNFA	No Action	NA	1997	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed again in 2000 HRR annual update.
IHSS	N/A	NE	BZ	166.1					Landfill Trench A	N/A	No		NA		PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	166.2					Landfill Trench B	N/A	No		NA		PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	166.3					Landfill Trench C	N/A	No		NA		PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	167.2					Landfill Pond Spray Area	N/A	No		NA		PNFA	No Action	NA	1996	P				HHRA, 10 E-4 to -6.
IHSS	N/A	NE	BZ	167.3					Landfill Pond Spray Area	N/A	No		NA		PNFA	No Action	NA	1996	P				Focused HHRA, 10 E-4 to -6
IHSS	N/A	500	IZ	169					Hydrogen Peroxide Drum Burial Waste	442/452	No		NA		NR	No Action	NA	1998	D				No documentation to substantiate a drum was buried. Hydrogen peroxide release no threat regardless per '98 HRR. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	N/A	NW	BZ	170					PU&D Storage Yard	H2OGBZ	No		NA		73	No Action	NA	1998	D				Risk assessment data / PU&D yard IHSS 170, 174a and 174b NFA proposed in '98. CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Proposed again in FY99 HRR update without IHSS 174a. Reference June 23, 2000 EPA/CDPHE Letter require additional data for NFA
IHSS	865	800	IZ	179					B865 Drum Storage	865/883	NA		NA		C-95	No Action	NA	1996	D				OU 15 CAD/ROD (10/1/95) - OU 15 IHSS closed by ROD deferred to bldg Closure. Will need to include in IA ROD.
IHSS	883	800	IZ	180					B883 Drum Storage	865/993	NA		NA		C-95	No Action	NA	1996	D				OU 15 CAD/ROD (10/1/95) - OU 15 IHSS closed by ROD deferred to bldg Closure. Will need to include in IA ROD.
IHSS	952	900	BZ	183					Gas Detox Area	903/905	No	900-11	1.G.A.B.04.01	B	NR	No Action	NA	1997	S				CDPHE/EPA Letter 7/9/99 - do not concur with NFA. Reproposed again in 2000 HRR annual update.

Rejected

deferred

Corrective action, need more info

Corrective action, need more info

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IHSS	218	600	IZ	189					Nitric Acid Tanks	442/452	No		NA		NR	No Action	NA	1997	D				CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	447	400	IZ	204					Uranium Chip Roaster	444	NA		NA		C-95	No Action	NA	1996	D				OU 15 CAD/ROD (10/1/95). Deferred to bldg closure. Still need to close in IA ROD.
IHSS	371	300	PZ	206	2002	2002	2002	2003	Inactive D-836 HW TK	371/374	No	300-5	1.G.A.C.03.05	C	NR	No Action	NA	2001	P				NFA - Insufficient data, characterize
IHSS	371	300	PZ	212					B371 Drum Storage	371/374	Yes		NA		NR	No Action	NA	1997	P				Deferred - To be handled w/ 371 D&D
IHSS	N/A	NE	BZ	216.1					East Spray Field-North Area	IBZ NFA	No	NE/NW	1.G.A.B.02.03	B	PNFA	No Action	NA	1996	P				Passed CDPHE screen.
IHSS	N/A	NE	BZ	216.2					East Spray Field-Center Area	IBZ NFA	No	NE/NW	1.G.A.B.02.03	B	NR	No Action	NA	1997	D				PPRG ratio less than 1, 2 downgradient wells. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
IHSS	N/A	NE	BZ	216.3					East Spray Field-South Area	IBZ NFA	No	NE/NW	1.G.A.B.02.03	B	NR	No Action	NA	1997	D				PPRG ratio less than 1, 2 downgradient wells. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC	762	000	IZ	000-503					Solar Pond Water Spill Along Central Ave	INFRDS	No		NA		NR	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC	123	100	IZ	100-603	2003	2003	2005	2005	Building 123 Bioassay Waste Spill	125/441	No	100-4	1.G.A.C.01.04	C	NR	Remedial Action		2001	P				Reference EPA Letter dated Dec 23, 1992. Group with IHSS 121
PAC	C130	100	BZ	100-613					Asphalt Surface in Lay Down N Bldg 130 *(formerly 000-501)*	130	NA		NA		NR	No Action	NA	1994					Accepted by EPA as 000-501.
PAC	371	300	PZ	300-708					Transformer N of B371	371/374	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	334	300	IZ	300-709					Transformer Leak 334-1	300/500	No		NA		PNFA	No Action	NA	1996	P				Characterization data below action levels. Reference EPA Letter dated Dec 23, 1992
PAC	373	300	IZ	300-711					Ni-Cad Battery Spil Outside Bldg 373	371/374	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC	373	300	IZ	300-712					1/2 g Antifreeze Spill Outside Bldg 373	371/374	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC	331	300	IZ	300-713					Caustic Spill N of Bldg 331		No		NA		PNFA	No Action	NA	1994	P				HRR Update #8 - Jun 94
PAC	374	300	IZ	300-714					Laundry Waste Water Spill N of Bldg 374	371/374	No		NA		PNFA	No Action	NA	1995	P				HRR Update #10 - Dec 94
PAC	460	400	IZ	400-812					Tank T-2 Spill I Building 460	460	No		NA		PNFA	No Action	NA	1994	P				HRR Update #6
PAC	444	400	IZ	400-814					A/C Compressor Release, Bldg 444 Roof	444	No		NA		PNFA	No Action	NA	1994	P				HRR Update #8 - Jun 94
PAC	515	500	IZ	500-900					Transformer Leak 515/516	INFELN	No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC		500	IZ	500-901					Transformer Leak 555/558		No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC	559	500	IZ	500-902					Transformer Leak 559	559	No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC		500	IZ	500-905					Transformer Leak 558-1		No		NA		PNFA	Remedial Action	1996	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	223	500	IZ	500-908					IHSS 156.1, 186	223	No		NA		NFA	No Action	NA	1995					HRR Update #12 - Jun 95 / See IHSS 186
PAC		500	IZ	500-909					Spent Photo Fixer Solution Release (IHSS 158)		No		NA		PNFA	No Action	NA	1996	P				HRR Annual 1996
PAC	662	600	IZ	600-1000					Transformer Storage B662	690T	No		NA		PNFA	Remedial Action	1996	1996	P				Source Removed. Reference EPA Letter dated Dec 23, 1992
PAC	666	600	IZ	600-1002					Transformer Storage W B666	664	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	661	600	IZ	600-1003					Transformers N & S 661/675	INFELJ	No		NA		PNFA	Remedial Action	1996	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	776	700	IZ	700-1102					Transformer Leak - 776-4	776/777	No		NA		75	Remedial Action	1996	1997	D				Most of the source removed. Could not get clean, PCBs remain to depth - Reference EPA Letter dated Dec 23, 1992. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC	707	700	IZ	700-1103					Transformer Leak B707	707	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	708	700	IZ	700-1104					Transformer Leak B708	707	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	750	700	IZ	700-1111					Transformer Leak B750	750	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	776	700	IZ	700-1112					Transformer Leak B776-5	776/777	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC		700	PZ	700-1113					IHSS 101		No		NA		PNFA	No Action	NA	1995	P				HRR Update #11 - Mar 95
PAC		700	PZ	700-1114a					Release During Liquid Transfer Oper Bldg 774		No		NA		PNFA	No Action	NA	1997	P				
PAC		700	PZ	700-1114b					Release During Liquid Transfer Oper Bldg 774		No		NA		PNFA	No Action	NA	1997	P				
PAC	883	800	IZ	800-1207					Transformer Leak 883-4	865/883	No		NA		PNFA	Remedial Action	1996	1996	P				Source removed. Reference EPA Letter dated Dec 23, 1992
PAC	881	800	IZ	800-1208					Transformer Leak 881-4	881	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC		800	IZ	800-1209					Transformer Leak 800 area		No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	865	800	IZ	800-1210					Transformers 865-1 & 865-2	865/883	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	991	900	IZ	900-1306					Transformers 991-1 & 991-2	991	No		NA		PNFA	No Action	NA	1996	P				Reference EPA Letter dated Dec 23, 1992
PAC	980	900	PZ	900-1308	2002	2002	2002	2003	Gasoline Spill Outside of Bldg 980	980	Yes	900 Area	1.G.A.C.09.00	C	NR	No Action	NA	2001	P				HRR, review data
PAC		900	PZ	900-1311					Septic Tanks East of Building 991		No		NA		PNFA	No Action	NA	1999	S				Review data / Characterize / to be characterized in FY99. Reference June 23 2000 EPA/CDPHE Letter - require additional data for NFA status. Reproposed again in 2000 HRR annual update.
PAC	T900A	900	PZ	900-1314					Solar Evaporation Pond 207B Sludge Release	H2OGIZ	No		NA		PNFA	No Action	NA	1994	P				HRR Update #9 - Sep 94
PAC	202	900	IZ	900-1315					Tanker Trk Release on E Patrol Rd, N of Spuce	INFRDS	No		NA		PNFA	No Action	NA	1995	P				HRR Update #11 - Mar 95
PAC	905	900	BZ	900-1316					Elevated Chromium Identified During Geotechnical Drilling	903/905	No		NA		PNFA	No Action	NA	1995	P				HRR Update #10 - Dec 94

A - Accepted by regulator
D - Data needed by regulators
P - Proposed in HRR
R - Rejected by regulators
S - Rejected / resubmitted

ER Site Actu[illegible]cking List

TYPE	Bldg	Area	Zone	ID	KH Pln Char	Bstn Pln Char	KH Pln Comp	Bstn Pln Comp	Description	Cluster Location	Cluster Depend.	IHSS Group	WBS	CA	2000 Rank	Proposed Action	RA Comp. Date	NFA FY Proposed Date	NFA Status	Reg. Accept. Date	Public Accept. Date	ROD Date	Comment
PAC	964	900	IZ	900-1317					Soil from crate in 964 Laydown Yard	964	No		NA		PNFA	No Action	NA	1995	P				HRR Update #11 - Mar 95
PAC	993	900	IZ	900-1318					Release of F001 Listed Waste to Soil	SECIZ	No		NA		PNFA	No Action	NA	1998	S				CDPHE/EPA Letter 7/9/99 - require additional data for NFA. Reproposed again in 2000 HRR annual update.
PAC		NE	BZ	NE-1404					Diesel Spill at Pond B-2 Spillway		No		NA		NR	No Action	NA	1998	D				HRR '98, review data. CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC		NE	BZ	NE-1409					Modular Tanks and 910 Treatment Sys Spill *(formerly 000-503)*	H2OGBZ	No	NE/NW	NA		PNFA	No Action	NA	1999	S				Review data-characterize. Reference June 23, 2000 EPA/CDPHE Letter - require additional data for NFA status. Reproposed again in 2000 HRR annual update.
PAC		NE	BZ	NE-1410					Diesel fuel Spill at field Treatability Unit		No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		NE	BZ	NE-1411					Diesel Fuel Overflowed from Tanker @ OU2		No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		NW	BZ	NW-1502					Improper Disposal of Diesel Contaminated Material at Landfill*(formerly NW-177)*		No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		NW	BZ	NW-1503					Improper Disposal of Fuel Contaminated Material at Landfill	INFLFO	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94 / Appears to be duplicated by NW-1502 in '98 HRR.
PAC		NW	BZ	NW-1504					Improper Disposal of Thorosilane Contaminated Material at Landfill	INFLFO	No		NA		PNFA	No Action	NA	1994	P				HRR Update #7 - Apr 94
PAC		SW	BZ	SW-1701					Recently Identified Ash Pit (also referred to as TDEM-1)		No	SW-1	NA		NR	No Action	NA	1997	D				CDPHE/EPA Letter 7/9/99 - require additional data for NFA.
PAC		SW	BZ	SW-1702			2004	2004	Recently Identified Ash Pit (also referred to as TDEM-2)		No	SW-1	1.0.A.B.03.01	B	NR	Remedial Action		2001	p				Further chacterize / maybe source removal
DOC			BZ	~~RFI/OU6~~					RFI/RI OU-6	N/A	No		NA				1995						Has not been approved by agencies. They might reject the NFA recommendation for Ponds B-1 and B-2.

A - Accepted by regulator
D - Data needed by regulators
P - Proposed in HRR
R - Rejected by regulators
S - Rejected / resubmitted

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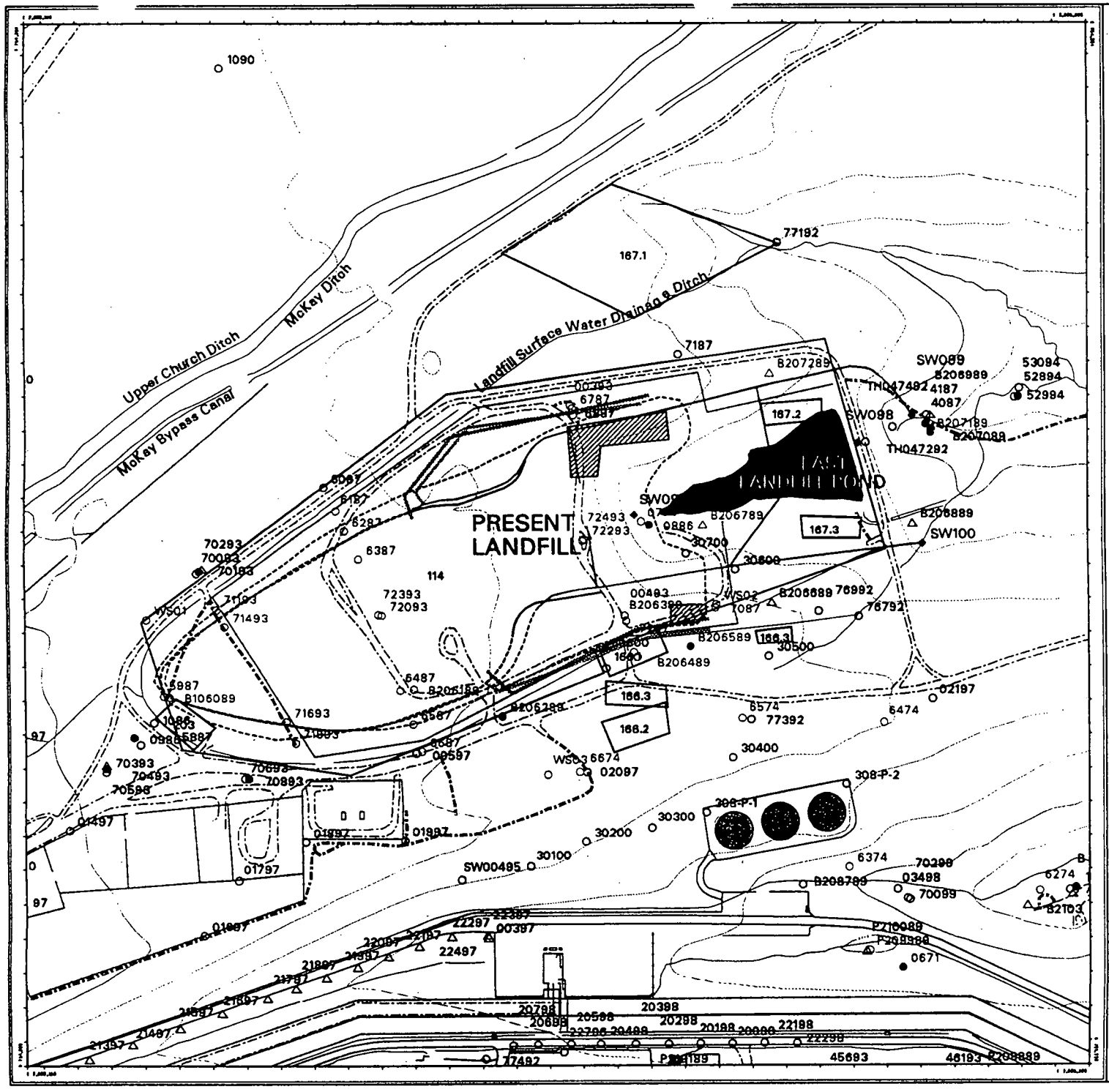

Present Landfill

EXPLANATION

- Groundwater Monitor Well UHSU Surficial Material
- Groundwater Monitor Well UHSU Bedrock
- Groundwater Monitor Well LHSU Bedrock
- Abandoned Wells
- Surface Water Monitoring Locations
- As-built / Planned: Slurry Wall
- GW Intercept System - Perforated
- GW Intercept System - Non-Perforated
- Extent of Waste
- Asbestos Disposal Area
- IHSS (IHSS number inside polygon)
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Topographic Contour (20-Foot)
- Paved roads
- Dirt roads

Scale = 1 : 4980
1 inch represents 415 feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept. 303-966-7707

Prepared by: DynCorp — THE ART OF TECHNOLOGY

Prepared for: KAISER-HILL

MAP ID: 01-0120

October 02, 2001

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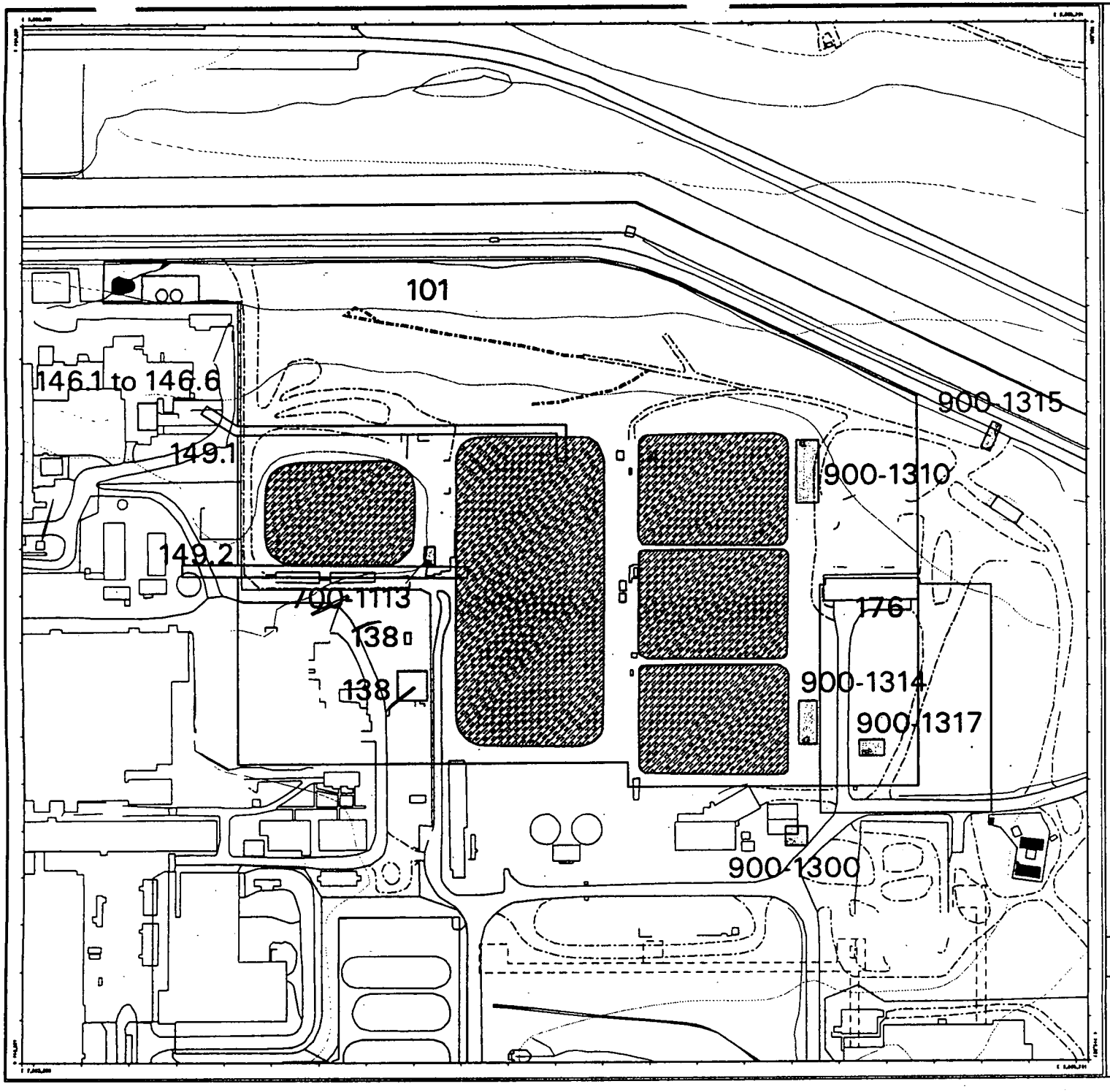


Solar Ponds

EXPLANATION

- Individual Hazardous Substance Site (IHSS)
- Potential Area of Concern (PAC)

Standard Map Features

- Buildings and other structures
- Solar Evaporation Ponds (SEPs)
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Topographic Contour (20-Foot)
- Paved roads
- Dirt roads

N

Scale = 1 : 2840
1 inch represents approximately 237 feet

50 0 100 200 ft

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept. 303-966-7707

Prepared by:
DynCorp
THE ART OF TECHNOLOGY

Prepared for:
KAISER-HILL

MAP ID: 01-0120

October 02, 2001

NT_Svr w:/projects/fy2001/01-0999/solar_pond_ihss_pacs.aml

IHSS Number NA

Unit Name: Caustic Spill North of Building 331

CPIR No.: 94-006

Approx. Location: N749,545; E2,081,891

Date(s) of Operation or Occurrence:

May 17, 1994

Description of Operation or Occurrence

At approximately 3:45 p.m. on May 17, 1994, one to two cups of a liquid characterized as a hazardous waste due to corrosivity leaked from a trash compactor truck onto pavement north of Building 331. The spill was identified when a green liquid was observed to be leaking from a parked truck onto the asphalt outside of the Garage.[1] The location of this spill is shown on Figure 1 following this narrative as well as on the PAC map in Section 4.0.

Physical/Chemical Description of Constituents Released

The green liquid was identified by its color and smell as Mariko®, a caustic detergent. Measurements determined the pH to be 13.28, which classified the material as being a hazardous waste due to corrosivity (D002 waste). The quantity of material spilled was one to two cups. An additional three to four cups of material were collected from the truck but were not released to the asphalt.[1]

Responses to Operation or Occurrence

After the leak was identified, a bucket was placed under the truck to capture the remaining liquid that was leaking out of the truck. Because it was first reported that a quart had been released, the RCRA Contingency Plan was implemented due the release reported being greater than one pint/one pound of Mariko®. The route taken by the truck from the dumpster which contained the Mariko® to the parking place was inspected, but no area other than the Garage parking area was observed to have been affected by the release. Oil-Dri® was used to absorb the Mariko® from the pavement. The used Oil-Dri® was placed into a drum pending disposal as non-hazardous waste because the Mariko® no longer exhibited the characteristic of corrosivity when absorbed by the Oil-Dri®. The remaining Mariko® collected in the bucket is being used as product and is not considered to be a waste.[1]

On Wednesday, May 18, 1994, the trash compactor truck was taken to the landfill and the trash was emptied onto plastic sheeting while waste technicians searched for the leaking container. The

empty container was recovered and identified as a five-gallon bucket of Mariko®. It was later determined that this five gallon bucket had been used at Tent 1 for cleaning several months earlier. The bucket had approximately four to six cups of solution remaining in it when it had been transferred to a storage cargo near Building 554. The bucket was stored in a plastic bag inside the storage cargo. During the winter, the Mariko® had built up residue on the bag and had been set outside the cargo on a pallet so that the bag and container could be cleaned up. The Mariko® was still considered to be product rather than waste at that time. It has not been determined how the container was placed in the trash. The dumpster in the area of Building 554 will be replaced with a locking dumpster and the key will be controlled by the responsible shift foreman.[1]

Fate of Constituents Released to Environment

One to two cups of Mariko® was released to the pavement. Typically asphalt and road surfaces are not free of cracks or gaps and are not considered to be adequate secondary containment due to the possibility of a migration path to the environment. However, in this case, the small amount of RCRA-regulated hazardous waste material that was released to the asphalt surface was adequately absorbed by Oil-Dri® and therefore no longer presents a significant actual or potential hazard to human health or the environment.[1]

Action/No-Action Recommendation

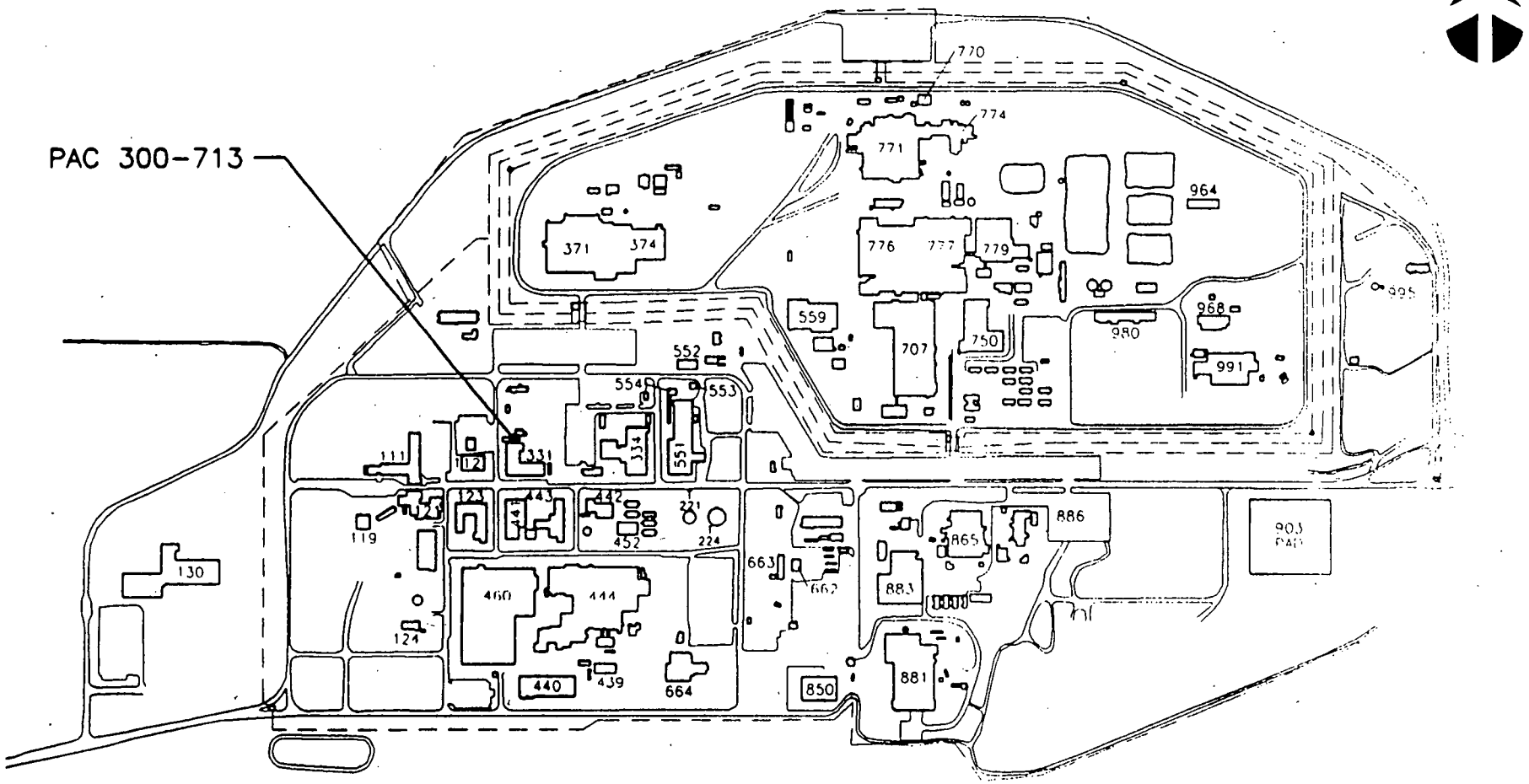
No further action is recommended for this incident based on the small quantity of Mariko® released and its recovery by absorption with Oil-Dri®.[1]

Comments

None.

References

[1]RCRA Contingency Plan Implementation Report No. 94-006. May 27, 1994.



PROJ. NO.	931-082.000	DWG. NO.	-
DESIGN BY	JKC	CHECKED	JKC
DRAWN BY	KAL	APPROVED	-
DATE	JULY 27, 1994	SCALE	1" = 800'

PREPARED FOR
U.S. DEPARTMENT OF ENERGY
ROCKY FLATS PLANT
GOLDEN, COLORADO
BY
WRIGHT WATER ENGINEERS, INC.
2490 W. 26TH AVE. SUITE 100A
DENVER, CO 80211 (303)480-1700

FIGURE 1
PAC 300-713

PAC REFERENCE NUMBER: 400-814

IHSS Number NA

Unit Name: Air Conditioner Compressor Release, Building 444 Roof

CPIR: 94-007

Approx. Location: N748,867; E2,082,124

Date(s) of Operation or Occurrence:

May 17, 1994

Description of Operation or Occurrence

At approximately 12:00 p.m. on May 17, 1994, a Stationary Operating Engineer (SOE) noticed the presence of oil under an air conditioning unit on the roof of Building 444. Upon further investigation of the compressor cabinet unit, the SOE found additional oil. The total volume detected totalled approximately two gallons. This oil was suspected to be contaminated with levels of cadmium and lead above Toxicity Characteristic Leaching Procedure (TCLP) regulatory limits based on results from laboratory samples previously taken from other air conditioning equipment. The source of the leak was determined to be a hole in a copper line to a pressure control device. The hole was at a point where another copper line crossed at a 90 degree angle directly on top of the lower line. The hole apparently was due to abrasion from vibration between the two lines. An undetermined amount of Freon 22, a non-hazardous waste, was also released.[1] The location of this spill is shown on Figure 2 following this narrative as well as on the PAC map in Section 4.0.

Physical/Chemical Description of Constituents Released

Approximately two gallons of compressor oil and an undetermined amount of Freon 22 were released to the roof of Building 444. Validated analytical results from a sample of the refrigerant compressor oil released to the roof indicate that the released material is not a hazardous waste. These data are contained in Table 1 on the following page.

TABLE 1
BUILDING 444 AIR CONDITIONER RELEASE SAMPLE RESULTS[2]

Analyte	Concentration (mg/L)	Regulatory Limit (mg/L)
Arsenic	3.20	5.0
Barium	0.28	100.0
Cadmium	0.10	1.0
Chromium	0.20	5.0
Lead	1.6	5.0
Silver	0.15	5.0

Responses to Operation or Occurrence

Waste Regulatory Programs and the Air Quality Division were notified of the release of oil and Freon 22 and the RCRA Contingency Plan was implemented as a precaution. The released oil was cleaned up by removing loose gravel, applying 200 pounds of Oil-Dri® absorbent material to the area of release (twice) and sweeping up the absorbent material. The cleanup material was placed in 55 gallon black and white drums and then placed in RCRA 90-day Accumulation Area #442414. The drums were managed as hazardous waste with Environmental Protection Agency (EPA) waste codes for cadmium (D006) and lead (D008) until the waste determination proved that the waste was non-hazardous.[1,2]

Fate of Constituents Released to Environment

Cleanup of the spill from the roof and the non-hazardous characterization of the spill eliminates the threat of an actual or potential hazard to the environment. The roof was periodically inspected after the cleanup to verify the adequacy of the cleanup.[1]

Action/No-Action Recommendation

No further action is recommended at this site based on the non-hazardous characterization of the spill material and prompt cleanup.

Comments

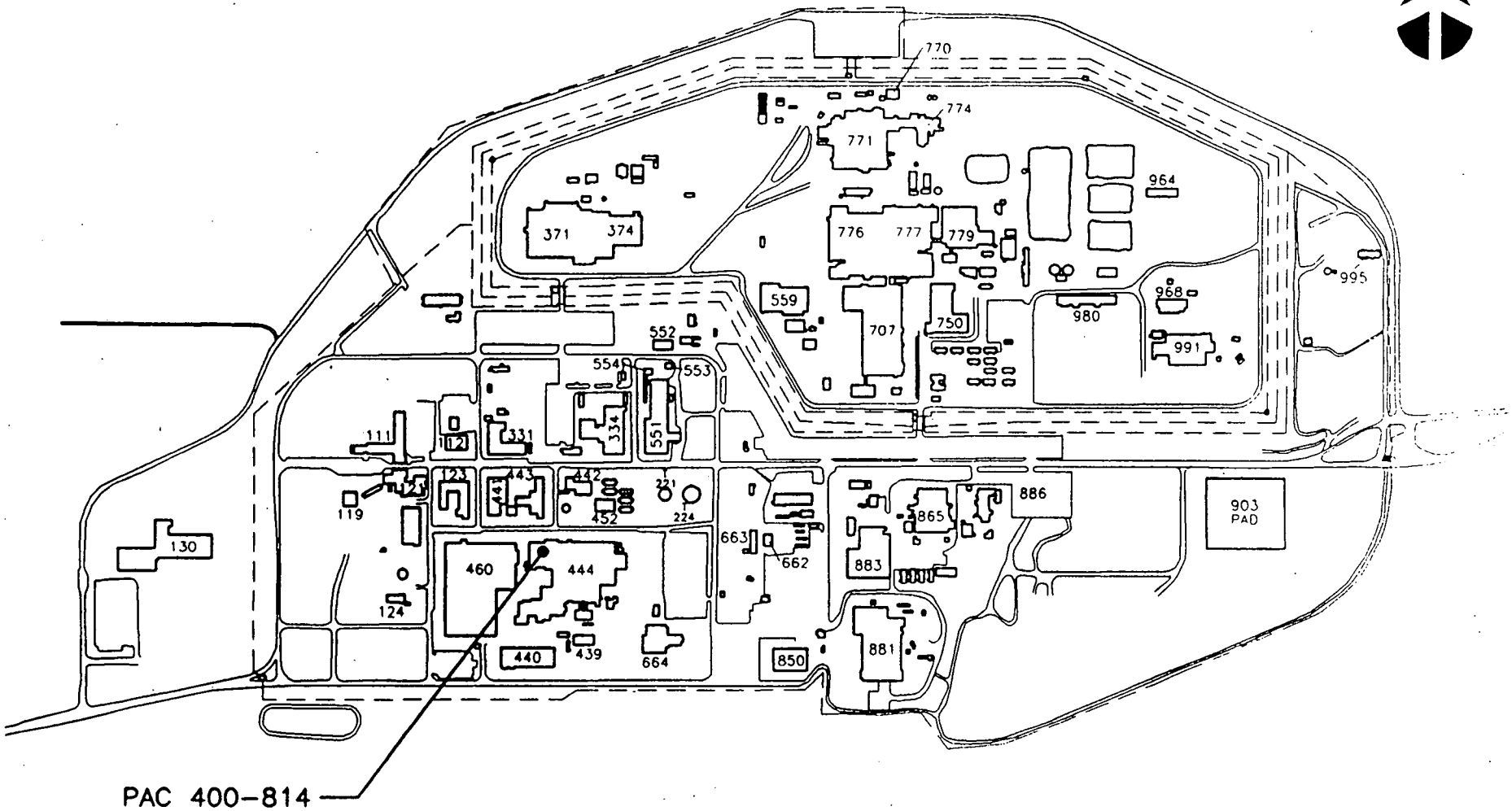
None.

References

[1]RCRA Contingency Plan Implementation Report No. 94-007. May 27, 1994.

[2]Analytical Results of Samples for Resource Conservation and Recovery Act (RCRA) Contingency Plan Implementation Report No. 94-007. June 29, 1994.

[3] PERSONAL COMMUNICATION WITH D.M. FOSTER, EG&G. AUGUST 10, 1994



PROJ. NO.	931-082.000	DWG. NO.	-
DESIGN BY	JKC	CHECKED	JKC
DRAWN BY	KAL	APPROVED	-
DATE	JULY 27, 1994	SCALE	1" = 800'

PREPARED FOR
U.S. DEPARTMENT OF ENERGY
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2490 W. 26TH AVE. SUITE 100A
DENVER, CO 80211 (303)480-1700

FIGURE 2
PAC 400-814

PAC REFERENCE NUMBER: 500-908

IHSS Number: 186 & 156.1

Unit Name: Oil Released from Air Compressor

CPIR No.: 95-003

Approx. Location: N750,000; E2,083,000

Date(s) of Operation or Occurrence

May 15, 1995

Description of Operation or Occurrence

At approximately 6:00 p.m. on May 15, 1995, a subcontract employee discovered that the air ejector vent associated with an air compressor inside the Nitrogen Plant (Bldg. 223) was plugged resulting in a release of 15 gallons of used air compressor oil. Approximately 14 gallons of the used oil was released within the building and one gallon may have flowed into the building floor drain before the release was identified. In addition, an estimated 1 gallon of oil was sprayed onto a rocked area outside of the building near the northwest corner staining approximately a six foot by thirty foot area.

Physical/Chemical Description of Constituents Released

The used oil released from the air compressor was originally handled as a hazardous waste constituent based upon process knowledge and analytical data gathered from other similar releases of air compressor equipment. However, the analytical screening data from samples collected on May 16, 1995, for select metals and volatile organics indicate the levels of toxic constituents for the material released are well below Toxicity Characteristic Leaching Procedure (TCLP) regulatory limits and therefore, the used oil and affected soil is not a hazardous waste.

Response to Operation or Occurrence

Immediately after discovering that the air ejector vent was plugged on May 15, 1995 at 6:00 p.m., the subcontract employee unplugged the external vent which stopped the release of used oil. On the following day at 12:00 p.m., the oil released within building 223 was cleaned up using absorbent materials and placed into a single drum. The visibly stained rock and soil released to the environment outside of the building was removed and containerized by 3:45 p.m. that afternoon. Approximately 2,800 pounds of rock and 10 pounds of soil/mud were removed from the site northwest of the building. Four drums were filled for the cleanup outside of the building and managed as non hazardous waste.

Fate of Constituents Released to Environment

Analytical screening results for the soil and rock in the area of the release show that the levels of detected toxic metals and volatile organic compounds are well below the Toxicity Characteristic Leaching Procedure (TCLP) limits. Any used oil that may have entered the Building 223 floor drain was not recoverable and therefore was treated in the Waste Water Treatment Plant process.

Action/No-Action Recommendation

This PAC does not warrant further investigation due to the small amount of material released to the environment, the immediate cleanup response, and the analytical screening data showing that the spilled material is non hazardous. There was no evidence of historical contamination found as a result of the release occurring in Individual Hazardous Substance Sites 186 and 156.1.

Comments

None

PAC REFERENCE NUMBER: 700-1113

IHSS Number: 101

Unit Name: Water Released from the 207C Solar Evaporation Pond

CPIR No.: 95-002

Approx. Location: N750,529; E2,085,230

Date(s) of Operation or Occurrence:

February 2, 1995

Description of Operation or Occurrence

On February 2, 1995, plant personnel proceeded to pump snowmelt and rinse water that had accumulated in Solar Evaporation Pond 207C to Building 374 for treatment after the pond had been emptied of contaminated sludge and water. The surface of the pond was being prepared for a pine tar coating process scheduled to begin later that day and the process required a dry surface for application. Between 9:30 am and 10:00 am immediately after starting the small pump, a pinhole sized leak was noticed in the pressurized hose. By the time the worker could turn off the pump (approximately six seconds later) the pinhole had expanded to approximately two centimeters. The release occurred at the southeast corner of the pond within IHSS 700-101 and in a Radiologically Controlled Area (RCA). An estimated five gallons of low level hazardous waste water was released back into the pond from where it was being pumped and on to soil across a bermed area outside of the pond (due to strong winds). Several workers were sprayed during the release from the pressurized hose.

Physical/Chemical Description of Constituents Released

The water released from this occurrence consisted of snowmelt and rinse water which had accumulated in the pond. The rinse water was used during the phase 1 environmental remediation plan to empty the solar evaporation ponds and prepare the pond liner for a coating process. The solar evaporation pond was previously used to hold RCRA regulated hazardous waste that included listed hazardous wastes from non-specific sources, such as spent halogenated solvents and electroplating waste. The 207C pond also received radioactive waste from process waste lines. Samples of the liquid remaining in the pond were collected on February 2 and 3, 1995, to determine the level of hazardous waste constituents present. Due to the historical nature of how the pond was used, the following EPA waste codes have been assigned to the water: F001, F002, F003, F005, F006, F007, F009, and F039.

Response to Operation or Occurrence

The liquid released to the pond and the liquid remaining in the hose were drained back into the sump area located in the northeast corner of the pond. The water was later pumped to Building 374 for treatment on February 6, 1995. Several employees impacted by the sprayed liquid immediately removed their protective clothing and showered for several minutes to remove any possible contamination. No radioactive contamination was detected on the workers when they were monitored. The wetted soil on the southeast berm was visually inspected and estimated to be 1.5 X 4 feet in size. Approximately 15 pounds of soil was removed from the wetted area on February 2, 1995 and is currently being managed as low level mixed hazardous waste. Samples of the liquid remaining in the pond were collected that afternoon and again on February 3, 1995, to determine the level of hazardous waste constituents present. Operations personnel removed the hose from service and replaced it with a new hose on February 3, 1995.

Fate of Constituents Released to Environment

Preliminary analytical results for select metals and volatile organic compounds indicate that levels of toxic constituents are either well below the Toxicity Characteristic Leaching Procedure (TCLP) regulatory limits or not detectable. Soil in this area has already been determined to be radiologically contaminated. The pH of the liquid remaining in the pond was 9.96. Preliminary analytical results did indicate that the water contained cyanide in the medium part per billion (ppb) range and acetone in the low ppb range. Further sampling of the remaining soil has not been initiated due to the known nature and extent of contamination in this area as documented in the Operable Unit (OU) 4 Remedial Investigation/RCRA Facility Investigation. The area impacted by the release is within the area to be remediated as identified in the May 27, 1994, draft OU4 Solar Evaporation Ponds Interim Measure Interim Remedial Action Environmental Assessment Decision Document. Based upon the quantity of the material released, the quantity of soil removed, and the proposed plan to remediate the affected area, there are no immediate plans to further sample the soil.

Validated analytical data will be documented in the OU-4 Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) Report and transmitted to the Environmental Protection Agency (EPA) and the Colorado Department of Public Health & Environment (CDPH&E) under the normal Operable Unit 4 milestone schedule.

Action/No-Action Recommendation

This area is actively being addressed within the Operable Unit 4 characterization/remediation schedule. Further action is not required.

Comments

None.

IHSS Number: 101

Unit Name: Solar Evaporation Pond 207B Sludge Release

CPIR No.: 94-010

Approx. Location: N750,529; E2,085,230

Date(s) of Operation or Occurrence:

August 8, 1994

Description of Operation or Occurrence

During sludge vacuuming operations at Solar Pond 207B South, approximately one quart of hazardous waste was released to the soil along the east berm of the pond. The release occurred when a damaged latching mechanism on the side door of the vacuum truck did not properly seal. Operations were immediately suspended, a catch pan was placed under the leaking door and the collected liquid was vacuumed up and transferred to RCRA permitted storage tanks. The effected soil was removed and placed into a 55 gallon drum and is being managed as RCRA regulated hazardous waste.

Physical/Chemical Description of Constituents Released

The material released from the vacuum tanker was solar evaporation pond water and sludge. The Waste Stream and Residue Identification and Characterization (WSRIC) book EPA waste codes to the solar evaporation pond sludge and water include F001, F002, F003, F005, F006, F006, F007, F009, and D006.

Response to Operation or Occurrence

Operations utilizing vacuum tanker #V8 were immediately suspended. A catch pan was immediately placed under the leaking door, and collected liquid was transferred to RCRA storage tanks on the 750 pad. Repairs were made to the leaking door to prevent further releases, and materials remaining in the other stages of the vacuum truck were removed. The effected soil was containerized in a 55 gallon drum. Samples of the remaining soil were collected to ensure that all contaminated soils were adequately cleaned up.

Fate of Constituents Released to Environment

No hazards to workers or the environment have been identified.

Action/No-Action Recommendation

This PAC does not warrant further investigation due to adequate documentation of the cleanup procedures and monitoring results.

Comments

None.

PAC REFERENCE NUMBER: 300-714

IHSS Number: NA

Unit Name: Laundry Waste Water Spill From Tank T-803, North of Building 374

CPIR No.: 94-012

Approx. Location: N750,500; E2,082,500

Date(s) of Operation or Occurrence

November 17, 1994

Description of Operation or Occurrence

On November 17, 1994 while performing restart operations of the 374 evaporator system a release of a hazardous waste was reported from Tank T-803 when the level indicating controller failed allowing liquids to accumulate until the pressure disk ruptured (as designed). The evaporator system had been shut down to perform maintenance on another tank connected in-series (acid tank D-845). The release occurred from the second effect vapor body (Tank-T-803) of the quadruple effect steam heated evaporator system located north of Building 374. Approximately 50 gallons of evaporator process aqueous waste (i.e. laundry waste water) was released to the secondary containment berm and approximately 5 gallons was sprayed to the dirt road immediately north of the bermed area. The wetted area on the road was estimated to be approximately ten feet by twelve feet; however, the majority of the liquid was observed within a four square foot area.

Physical/Chemical Description of Constituents Released

The material released was a mixture of the current evaporator process aqueous waste feed and previous waste feeds which have been determined to be an F-listed hazardous waste. The EPA waste codes assigned to the waste treated in the evaporator system include: D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005, F006, F007, F009, and F039. This characterization is based on the constituents that can be present in the waste streams to the evaporator system as well as characterization of the remaining brine solutions when the process is complete.

Validated analytical results from soil sampling conducted on November 18, 1994 are presented in Tables 1 and 2 of the following page.

TABLE 1
SAMPLE RESULTS - METALS BY ICPES

Analyte	Total Metals In Released Liquid	*	TCLP Leachate from Soil Remaining	*	TCLP Leachate from Soil Adjacent	*	Toxicity Characteristic Regulatory Level
Arsenic	0.081	U	0.081	U	0.081	U	5.0
Barium	0.023	B	0.450	U	0.426	U	100.0
Cadmium	0.030		0.006		0.006		1.0
Chromium	0.031		0.005	U	0.005	U	5.0
Lead	0.038	U	0.039	B	0.045	B	5.0
Selenium	0.040	U	0.040	U	0.040	U	1.0
Silver	0.011		0.003	U	0.003	U	5.0

Results are in mg/L.

U = The analyze concentration (before dilution factors were applied) was below the Instrument Detection Limit (IDL). The number in the table preceding "U" is the IDL for this sample aliquot.

B = The absolute value of the analyzed result (before dilution factors were applied) is above the IDL but is less than the Contract Required Detection Limit (CRDL).

TABLE 2
SAMPLE RESULTS - TAL VOLATILE ORGANICS BY GC/MS

Analyte	Released Liquid		Soil Remaining		Soil Adjacent		Toxicity Characteristic Regulatory Level
Chloromethane	0.010	U	0.010	U	0.010	U	N/A
Bromomethane	0.010	U	0.010	U	0.010	U	N/A
Vinyl Chloride	0.010	U	0.010	U	0.010	U	0.2
Chloroethane	0.010	U	0.010	U	0.010	U	N/A
Methylene Chloride	0.005	U	0.005	U	0.005	U	N/A
Acetone	0.110	B	0.010	U	0.010	U	N/A
Carbon Disulfide	0.005	U	0.005	U	0.005	U	N/A
1,1-Dichloroethylene	0.005	U	0.005	U	0.005	U	0.7
1,1-Dichloroethane	0.005	U	0.005	U	0.005	U	N/A
1,2-Dichloroethane (total)	0.005	U	0.005	U	0.005	U	N/A
Chloroform	0.005	U	0.005	U	0.005	U	6.0
1,2-Dichloroethane	0.005	U	0.005	U	0.005	U	0.5
Methyl Ethyl Ketone	0.048	U	0.010	U	0.010	U	200.0
1,1,1-Trichloroethane	0.005	U	0.005	U	0.005	U	N/A
Carbon Tetrachloride	0.005	U	0.005	U	0.005	U	0.5
Bromodichloromethane	0.005	U	0.005	U	0.005	U	N/A
1,2-Dichloropropane	0.005	U	0.005	U	0.005	U	N/A
cis-1,3-Dichloropropene	0.005	U	0.005	U	0.005	U	N/A
Trichloroethylene	0.005	U	0.005	U	0.005	U	0.5
Dibromochloromethane	0.005	U	0.005	U	0.005	U	N/A
1,1,2-Trichloroethane	0.005	U	0.005	U	0.005	U	N/A
Benzene	0.003	J	0.005	U	0.005	U	0.5
trans-1,3-Dichloropropene	0.005	U	0.005	U	0.005	U	N/A
Bromoform	0.005	U	0.005	U	0.005	U	N/A
Methyl Isobutyl Ketone	0.010	U	0.010	U	0.005	U	N/A
2-Hexanone	0.010	U	0.010	U	0.010	U	N/A
Tetrachloroethylene	0.005	U	0.005	U	0.005	U	0.7
1,1,2,2-Tetrachloroethane	0.005	U	0.005	U	0.005	U	N/A
Toluene	0.005	U	0.005	U	0.002	J	N/A
Chlorobenzene	0.005	U	0.005	U	0.005	U	100.0
Ethylbenzene	0.005	U	0.005	U	0.005	U	N/A
Styrene	0.005	U	0.005	U	0.005	U	N/A
Xylene (Total)	0.005	U	0.005	U	0.005	U	N/A

Results are in mg/L.

U = Compound not found. The number in the table preceding the "U" is the Practical Quantitation Limit (PQL) for this sample aliquot.

B = Compound found, but is also present in the daily method blank.

J = Compound found, but quantity is below PQL. Quantitation is estimated.

Response to Operation or Occurrence

The evaporator system was immediately shut down and actions were taken on November 17, 1994 to remove the liquid and contaminated soil. Approximately 80 to 90 pounds of soil was removed and managed as low level mixed hazardous waste in RCRA Unit No. 374-380 in Building 374. On November 18, 1994, two sets of composite soil samples were collected in accordance with the RCRA Permit, Section VI(D)(4)(b)-Sampling. One set of samples were collected from the soil remaining after the wetted soil area had been removed. Another set of samples were collected adjacent to the wetted area, along the west side, to determine if pre-existing contamination was present from past releases in this area. This area has been previously identified as a Potential Area of Concern (PAC 300-706) in the June 1992 Historical Release Report (HRR) for the Rocky Flats Environmental Technology Site (RFETS). The evaporator system was repaired and placed back into service on November 19, 1994.

Fate of Constituents Released to Environment

Due to the weather conditions at the time of the incident, the surface of the soil was frozen and the likelihood of vertical or lateral contaminant migration was minimal. A significant attempt was noted to remove the wetted soil using shovels and a rock bar to loosen the frozen soil. Analytical results from samples collected on November 18, 1994 (Table 1 and 2) show that both remaining soils from the cleanup area and adjacent area are below or equal to the analytical detection limits.

Action/No-Action Recommendation

For the above mentioned reasons, no further investigation is warranted for this release.

Comments

None.

PAC REFERENCE NUMBER: 900-1315

This writeup is an amendment and supersedes all previously reported information.

IHSS Number: NA

Unit Name: Tanker Truck Release on East Patrol Road, North of Spruce Ave.

CPIR No.: 94-013

Approx. Location: N750,500; E2,082,500

Date(s) of Operation or Occurrence

December 13, 1994

Description of Operation or Occurrence

At Approximately 11:40 a.m., December 13, 1994 during transport operations of Solar Evaporation Pond decant waste water, approximately 10 gallons of hazardous waste was released to the environment. A tanker truck was transporting the decant water from the 750 Storage Pad (RCRA Unit 25) where Solar Evaporation Pond sludges are separated through a settling process to Building 374 feed storage tanks (Tank 231 A and B) for subsequent treatment at Building 374. The truck driver immediately stopped when he noticed that liquid was splashing from the vent/blowdown valve which was inadvertently left open during the filling process. It was estimated that approximately 10 gallons of hazardous waste was released to the asphalt and soil. The released liquid contacted two sections of asphalt road surface and one section of soil (approximately 1 ft. by 100 ft. in dimension). The release to asphalt was north of Spruce Avenue on the East Patrol Road. Soil samples were collected from an area northeast of building 964 on December 13, 1994 (See Tables 1 and 2).

Physical/Chemical Description of Constituents Released

The material released from the tanker was Solar Evaporation Pond decant water which originated from the 207-A and 207-B Ponds. The most common characteristic of the waste released to the solar ponds is high concentrations of nitrate. Historical records document that the ponds frequently received untreated process waste as well as treated process waste and contaminated scrap metals. EPA waste codes assigned to the sludge and decant water are determined from backlog recharacterization records and include F001, F002, F003, F005, F006, F007, F009 and F039.

Response to Operation or Occurrence

Upon discovery of the release, Radiological Protection immediately responded and performed surveys in accordance with plant procedures concerning response to a release of mixed waste. The vent/blow down valve was closed to prevent further release of the decant water and decontamination procedures began immediately to remediate the spilled liquid both on the tanker and asphalt surfaces. A triple rinse was performed on the asphalt surfaces using a detergent solution followed by Wet-Vac vacuum procedures. The decant liquid spilled on the soil was excavated to a depth of 2 inches (until no evidence of wetted soil could be seen) and containerized in wooden crates. Approximately 4560 pounds of soil were removed and managed as RCRA regulated hazardous waste at RCRA Unit 25 (750 Pad). Two surficial soil samples were collected from the area on December 13, 1994. One composite sample was collected after the wetted soil was containerized to verify that adequate cleanup was performed and another was collected adjacent to the spill area to determine if any pre-existing contamination was present due to the close proximity of IHSS 900-165. In addition, samples of decant water were collected from the tanker. The preliminary sweep analysis for select metals and volatile organics indicate that levels of toxic constituents are well below Toxicity Characteristic Leaching Procedure (TCLP) regulatory limits. The validated analytical results are presented in Tables 1 and 2.

Fate of Constituents Released to Environment

Due to the condition of the soil (i.e. hard packed) and the prompt removal of liquid and wetted soil, hazards to human health or the environment were mitigated. The pH of the liquid released was 9.14. Based on the results of the samples taken of the soil remaining in the wetted area after the contaminated soil was removed, the levels of contaminants in the remaining soil are either below the analytical detection limits or equal to the level in the adjacent soil; therefore, no further remedial actions are planned.

Action/No-Action Recommendation

Based upon cleanup documentation, validated analytical data and radiological surveys of the area, this site does not require further action.

Comments

This PAC writeup includes validated analytical data unavailable when first reported in the 10th Quarterly Update.

TABLE 1
SAMPLE RESULTS - METALS BY ICPES

Analyte	Total Metals In Released Liquid		TCLP Leachate from Soil Remaining		TCLP Leachate from Soil Adjacent		Toxicity Characteristic Regulatory Level
Arsenic	0.088	U	0.088	U	0.088	U	5.0
Barium	0.116	B A	0.511	U A	0.534	U A	100.0
Cadmium	0.004	B	0.014		0.047		1.0
Chromium	0.009	B	0.005	B	0.008	B	5.0
Lead	0.041	U A	0.041	U	0.041	U	5.0
Selenium	0.057	B	0.044	U	0.044	U	1.0
Silver	0.003	U	0.003	U	0.003	U	5.0

Results are in mg/L.

U = The analyze concentration (before dilution factors were applied) was below the Instrument Detection Limit (IDL). The number in the table preceding "U" is the IDL for this sample aliquot.

B = The absolute value of the analyzed result (before dilution factors were applied) is above the IDL but is less than the Contract Required Detection Limit (CRDL).

A = The data for the liquid sample is validated except that the barium and lead data is only acceptable. The barium and lead results are estimated because the matrix spike recovery was between 30% and 74%.

The data for the soil samples are validated except for the barium data is only acceptable. The barium results are estimated and non-detected because the sample results were less than 5 times the blank contaminant level.

TABLE 3
SAMPLE RESULTS - TAL VOLATILE ORGANICS BY GC/MS

Analyte	Released Liquid		Soil Remaining		Soil Adjacent		Toxicity Characteristic Regulatory Level
Chloromethane	0.100	U	0.100	U	0.100	U	N/A
Bromomethane	0.100	U	0.100	U	0.100	U	N/A
Vinyl Chloride	0.100	U	0.100	U	0.100	U	0.2
Chloroethane	0.100	U	0.100	U	0.100	U	N/A
Methylene Chloride	0.050	U	0.050	U	0.050	U	N/A
Acetone	0.100	U A	0.100	U A	0.100	U A	N/A
Carbon Disulfide	0.050	U	0.050	U	0.050	U	N/A
1,1-Dichloroethylene	0.050	U	0.050	U	0.050	U	0.7
1,1-Dichloroethane	0.050	U	0.050	U	0.050	U	N/A
1,2-Dichloroethane (total)	0.050	U	0.050	U	0.050	U	N/A
Chloroform	0.050	U	0.050	U	0.050	U	6.0
1,2-Dichloroethane	0.050	U	0.050	U	0.050	U	0.5
2-Butanone (MEK)	0.100	U A	0.100	U A	0.100	U A	200.0
1,1,1-Trichloroethane	0.050	U	0.050	U	0.050	U	N/A
Carbon Tetrachloride	0.050	U	0.050	U	0.050	U	0.5
Bromodichloromethane	0.050	U	0.050	U	0.050	U	N/A
1,2-Dichloropropane	0.050	U	0.050	U	0.050	U	N/A
cis-1,3-Dichloropropene	0.050	U	0.050	U	0.050	U	N/A
Trichloroethylene (TCE)	0.050	U	0.050	U	0.050	U	0.5
Dibromochloromethane	0.050	U	0.050	U	0.050	U	N/A
1,1,2-Trichloroethane	0.050	U	0.050	U	0.050	U	N/A
Benzene	0.050	U	0.050	U	0.050	U	0.5
trans-1,3-Dichloropropene	0.050	U	0.050	U	0.050	U	N/A
Bromoform	0.050	U	0.050	U	0.050	U	N/A
4-Methyl-2-Pentanone (MIK)	0.100	U	0.100	U	0.100	U	N/A
2-Hexanone	0.100	U	0.100	U	0.100	U	N/A
Tetrachloroethylene (PCE)	0.050	U	0.050	U	0.050	U	0.7
1,1,2,2-Tetrachloroethane	0.050	U	0.050	U	0.050	U	N/A
Toluene	0.050	U	0.050	U	0.050	U	N/A
Chlorobenzene	0.050	U	0.050	U	0.050	U	100.0
Ethylbenzene	0.005	U	0.050	U	0.050	U	N/A
Styrene	0.050	U	0.050	U	0.050	U	N/A
Xylene (Total)	0.050	U	0.050	U	0.050	U	N/A

Results are in mg/L

U = Compound not found. The number in the table preceding the "U" is the Practical Quantitation Limit (PQL) for this sample aliquot.
B = Compound found, but is also present in the daily method blank.
J = Compound found, but quantity is below PQL. Quantitation is estimated.
A = Data is acceptable. As a result of blank contamination, the positive results for acetone and 2-butanone in the liquid and soil samples are reported as undetected and estimated. All other data was validated.

PAC REFERENCE NUMBER: 900-1316

IHSS Number: NA

Unit Name: Elevated Chromium (total) Identified During Geotechnical Drilling

CPIR No.: NA

Approx. Location: N750,000; E2,086,000

Date(s) of Operation or Occurrence

August 24, 1994

Description of Operation or Occurrence

On August 24, 1994 while conducting geotechnical drilling prior to construction for a storage facility (Investigative Derived Material Storage Facility) at the Field Operations Yard located south and west of the 904 Pad, chromium (total) was detected in the drummed cuttings at levels above allowable RCRA limits (106 ppm and 120 ppm). Additional sampling was conducted on September 28, 1994 from 6 study pits excavated to a depth of 6 feet along the eastern perimeter of the proposed building foundation to provide additional information. Analytical data received October 5, 1994 show chromium levels below or at background. On October 19, 1994 one additional borehole was drilled approximately 18 feet northwest of the southwest corner of the proposed building. Analytical data received October 26, 1994 conclude that chromium (total) was detected at 138 ppm and 347 ppm from two depth integrated composite sample intervals taken between 6 and 8 feet and 10½ and 14 feet respectively. Volatile organics were not detected in any of the sampling events.

The initial construction phase which included excavation to a depth of 6 feet for the building foundation wall was put on hold pending a Risk Assessment Screen (RAS) using all available data. The risk assessment was completed on January 17, 1995. Analytical data is included in Tables 1, 2, and 3 of the RAS (supplementary attachment for this PAC write-up).

Interviews with plant employees familiar with past uses of the Field Operations Yard were conducted on January 18, and January 27, 1995.

Physical/Chemical Description of Constituents Released

Historically, the Field Operations Yard (formerly called the contractors yard) was used to store miscellaneous equipment, discard scrap metal, stockpile gravel for construction use, and deposit spoils from excavation projects. One employee stated that from approximately 1971 to 1980, chromium shavings from a chrome plating lab located in Building 444 and a plating/testing lab in Building 779 were frequently swept using an industrial sweeper truck. The sweepings were

emptied from the sweeper in the contractors yard. The employees recollection of this practice was ~~collaborated~~ corroborated with two other employees.

Response to Operation or Occurrence

Upon receipt of the original data set on August 24, 1994 further investigation was initiated to identify the potential source of the chromium anomaly. Six test pits were excavated on September 28, 1994, three additional boreholes have been drilled, plant employees have been interviewed to gather historical knowledge of past uses for the area, and samples have been collected to provide supporting background information. Analytical results from sampling events were used to develop a Risk Assessment Screen completed on January 17, 1995.

The scheduled construction phase which involves excavation to a depth of approximately 6 feet remains on hold at the time of this write-up.

Fate of Constituents Released to Environment

Toxicity Characteristic Leaching Process (TCLP) analysis for metals collected from the area of the highest chromium concentration (347 ppm at 10½ - 14 ft) show that soils from the chromium anomaly do not readily leach and the anomaly does not pose an unreasonable risk to groundwater (estimated to be at 26 feet), human health, or the environment (see attached Risk Assessment Screen).

Action/No-Action Recommendation

Based upon calculated risk results from the comprehensive Risk Assessment Screen (RAS) completed January 17, 1995 and TCLP analytical data showing the chromium does not readily leach, this finding does not warrant further action.

Comments

None

RISK ASSESSMENT SCREEN (RAS) FOR INVESTIGATIVELY-DERIVED MATERIAL (IDM) STORAGE BUILDING CONSTRUCTION SITE

A risk assessment screen (RAS), including the Colorado Department of Public Health and Environment (CDPHE) conservative screen and a more comprehensive RAS, have been performed on data collected from soils located at the proposed construction site of the IDM Storage Building. A conservative approach was used to ensure that any actual health hazards would fall well within the bounds of the calculated risks (carcinogenic) and hazard quotients (noncarcinogenic). The screening methodology used for this RAS are appropriate for a screening level analysis only and are not those applied to baseline risk assessments in the environmental restoration program due to the fact that subsurface soils are not assessed for residential use. Exposure factors may also be more conservative.

DATA

The data that is usable for quantitative risk assessment purposes are presented in Tables 1 and 2. These represent the results of the Inductively Coupled Plasma Emission Spectrometry (ICP) analysis for total metals. The first three samples are from geotechnical borings taken at corners of the proposed building. Screening level analysis had indicated that chromium-total (Cr-tot) was present at levels that might be above background in the subsurface soil. ICP analysis confirmed the presence of Cr-tot above the background UTL of 89.2 mg/kg (1993 Background Geochemistry Characterization Report, DOE, Sept 30, 1993) in two of the samples. No other analytes were above background UTLs.

As a result, a second boring was made, within the perimeter, near the SE corner of the proposed building. Samples were retrieved by depth. In general, the concentrations were low. The samples taken from 6-8 feet and 10.5-14 feet were above the Cr-tot background UTL, with a maximum of 347 mg/kg in the sample from 10.5-14 feet. All other samples were well below the UTL (Table 1). No other analytes were above the UTLs.

A series of six surface pits, six feet deep, were dug and sampled with depth. Results are shown in Table 2. No analytes, were above background UTLs. Cr-tot levels were all low.

CDPHE CONSERVATIVE SCREEN

The only chemical identified as above the background UTL was chromium. This was the only chemical included in the screen. The CDPHE screen specifies that the ratio of the maximum detected concentration of a chemical in a medium to the risk-based concentration (PPRG) be calculated and then the ratios summed for all chemicals of concern in a media. In this case there is only one chemical, Cr-tot. Chromium was determined as total chromium in the

samples, therefore, we can not be sure whether the CR is present as CR-III, a benign form, or as CR-VI, a carcinogenic form. Other sampling events at RFETS have found only CR-III. However, to be conservative the screen will be performed using both forms of CR.

Cr-III

$$\frac{347 \text{ mg/kg}}{274000 \text{ mg/kg}} = 0.001$$

Cr-VI

$$\frac{347 \text{ mg/kg}}{939 \text{ mg/kg}} = 0.37$$

The trivalent form, CR-III, has a very low screen result of 0.001, the hexavalent form, Cr-VI, has a ratio to the risk-based PPRG of 0.37 still well below 1.0. Sources with a ratio of less than one are considered candidates for no further action by the CDPHE conservative screen methodology, pending evaluation of possible dermal effects. Chromium in combination with soil as present at the site is not considered a potential dermal hazard.

In summary, the CDPHE screen ratio falls between 0.001 and 0.37, depending on the Cr form present. Based on other RFETS data, it is likely that the Cr-III form predominates and it is likely that the ratio is closer to 0.001 than to 0.37. The site is a good candidate for no further action.

RISK ASSESSMENT METHODS

A very conservative approach was used for this RAS. The exposure concentration chosen for Cr-tot is the maximum detected concentration (347 mg/kg). This represents a worst-case, maximum exposure. Actual exposures would be much less due to the large volume of soil known to have lower concentrations of Cr-tot. The analysis did not specify whether the chromium detected was Cr-VI or Cr-III.

Toxicologically there is a significant difference between the two. Cr-VI is a known human carcinogen, whereas, Cr-III is not thought to be carcinogenic. Other investigations at the Rocky Flats Environmental Technology Site (RFETS) done in support of Remedial Investigations (RI) have not found CR-VI to be present. It is unlikely that it is present at this building site.
The RAS was performed for both species of Cr. Thus, the RAS presents the full range of risk and health hazard that may be associated with the site under the chosen exposure scenarios, although those resulting from Cr-VI are unlikely.

[illegible] exposure scenarios were chosen for the RAS. A hypothetical resident, with child and [illegible] construction worker. The former represents a potential upper bound risk. The latter represents a realistic exposure, based on the proposed land use.

Hypothetical Resident

Standard EPA default assumptions were used for the scenario.
The intake or dose was calculated by the following equation:

$$\text{Intake} = \frac{\text{Cr concentration} * \text{intake rate} * \text{exposure frequency} * \text{exposure duration}}{\text{body weight} * \text{averaging time}}$$

Where :

Cr concentration	=	347 mg/kg
intake rate-ingestion	=	100 mg/day-adult, 200 mg/day-child
intake rate-inhalation	=	20 m^3/day
exposure frequency	=	350 days/year
exposure duration	=	30 years-adult, 6 years-child
body weight	=	70 kg-adult, 15 kg-child
averaging time	=	70 years-carcinogenic, equal to exposure duration-noncarcinogenic

Although the Cr-tot detections were between 6 and 14 feet below present ground level, it is assumed that this soil could be distributed on the surface during home construction. It is also assumed that the adult resident lives on the land in question for 30 years. The childhood period is set at six years. For calculating the hypothetical carcinogenic effects of exposure to CrVI due to inhalation of fugitive dust an EPA default particle emissions factor (PEF) of 8.63×10^9 was used in the numerator of the equation. For carcinogens the averaging time is equal to a lifetime, estimated at 70 years. The averaging time for noncarcinogens is equal to the exposure duration in order to compare an estimate of actual daily intake to a reference dose (RfD) considered safe for a life time exposure.

Construction Worker

The equation for calculating intakes for this scenario is equivalent to that for the hypothetical resident, including the PEF. The values of some of the parameters a different. Only those that differ are given below:

intake rate-ingestion	=	[illegible] day
intake rate-inhalation	=	[illegible] day
exposure frequency	=	30 days/year
exposure duration	=	1 year
body weight	=	70 kg
averaging time	=	70 years-carcinogenic, equal to exposure duration-noncarcinogenic

This is a realistic scenario. It assumes the worker to be exposed to the soil for a period of 30 days during the construction process.

Risk and Hazard Quantification

To calculate carcinogenic risk the intake is then multiplied by a chemical specific slope factor (SF). Carcinogenic risk is calculated as the incremental probability of an individual developing cancer over a lifetime, due to a given exposure scenario. This is also referred to as the excess lifetime cancer risk and represents the increased risk of developing cancer above the background rate (about 25 to 30%).

The potential for noncarcinogenic health effects is not expressed as a probability, but as a ratio or quotient. The hazard quotient (HQ) is the ratio of the daily intake over a specified period (exposure duration) to the chemical specific RfD. If the HQ exceeds 1.0 there is concern that the exposed population may experience adverse health effects due to the specified exposure scenario.

Results and Discussion

The carcinogenic risk for a hypothetical resident from inhalation of dust, assuming that all of the Cr-tot detected is Cr-VI, and that the individual is exposed to the maximum detected concentration (347 mg/kg soil) for 350 days a year for 30 years, is 4×10^{-7} (Table 3). This is below the reasonable level of concern, usually stated as 1×10^{-6}. As stated previously, there is no known carcinogenic hazard due to exposure to Cr-III.

The hypothetical residential exposure levels should not be expected to produce negative health effects in either adults or children, whether the Cr-tot is assumed to be present as CrVI, which is improbable and not supported by other data collected at RFETS, or as Cr-III . All HQ are below 1.0.

Risks and HQ for the construction worker scenario are even lower due to the shorter exposure period. Individuals working on building construction should experience no adverse health effects, even if the Cr-tot detected is CrVI and they are exposed to the maximum detected concentration (347 mg/kg soil) for 30 days during the construction process.

Summary

Based on the results of the RAS, there is no reason to believe that even maximally exposed individuals would suffer negative health effects due to exposure to subsurface soil at the proposed IDM Storage Building site. This is supported by the very low risk-based ratios calculated in the CDPHE conservative screen. Proposed excavations at the site for foundation work are planned not to exceed a depth of five to six feet. All elevated Cr-tot detections were below this depth (Tables 1 and 2). Therefore, it may be expected that workers will be exposed to much lower levels of Cr-tot than used for the calculations in the RAS.

Table 1 : Subsurface Samples

Analyte	Sample NE Corner	Sample SW Corner	Sample SE Corner	Borehole 6-8 ft	Borehole 10-10.5 ft	Borehole 10.5-14 ft	Borehole 14-15 ft	Borehole 16-17 ft	Borehole 18-18.4 ft	Borehole 20-22 ft
	94E1220-3	94E1220-11	94E1220-15	95E0072-3	95E0072-5	95E0072-7	95E0072-9	95E0072-11	95E0072-13	95E0072-15
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	15300	1400	12600	8510	7690	8460	9700	11200	8210	3[illegible]
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	96.3	62.3	164	108	107	131	168	109	77	51.4
Beryllium	0.71	0.66	0.70	0.62	0.62	0.53	0.75	0.67	0.55	0.45
Cadmium	0.75	0.60	0.57	ND	0.40	0.36	0.43	0.44	0.44	0.54
Calcium	11200	17500	7640	15700	8520	7470	3940	5630	2920	2540
Chromium	106	73.6	120	138	38.4	347	15.4	16.1	39.3	4.8
Cobalt	6.9	4.7	9.1	7.7	5.7	14.0	15.3	9.9	8.9	3.7
Copper	12.6	11.2	17.3	12.8	11.1	17.7	19.8	16.8	17.3	11.6
Iron	13200	13000	14700	11600	9380	16300	15300	15200	10500	9710
Lead	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	2400.0	2530	1880	1800	1660	1610	2280	2350	1690	927
Manganese	375	182	868	623	539	736	992	565	400	13[illegible]
Nickle	25.8	16.2	27.3	26.5	19.9	21.1	24.3	18	13.5	7.1
Potassium	2180	2060	2000	1150	1020	1070	1260	1260	1190	610
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	1840	145	148	90.6	79.7	92.7	69.5	178	73	51.5
Thalium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	27.8	26.4	30.8	24.2	21.6	24.1	42.5	41.5	21.7	28.9
Zinc	21.6	19.8	18.9	15.1	15.5	15.9	21.3	22	19.3	35.3

Table 2: Surface Samples

Analyte	Sample	Sample	Sample	Sample	Sample	Sample
	NE Pit--2 ft	NE Pit--4 ft	NE Pit--6 ft	SE Pit--2 ft	SE Pit--4 ft	SE Pit--6 ft
	94E1420-0004	94E1420-0005	94E1420-0006	94E1420-0013	94E1420-0014	94E1420-0015
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	19000	20500	19800	23200	21600	17200
Antimony	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND
Barium	81.8	92.1	68.1	79.9	81.8	56.6
Beryllium	0.84	1.0	0.89	1.1	1.4	1.0
Cadmium	ND	ND	0.35	ND	ND	ND
Calcium	1500	44800	45100	2390	4630	20100
Chromium	17.6	14.0	14.0	19.9	15.9	14.8
Cobalt	6.5	8.0	5.2	5.4	5.8	5.4
Copper	8.6	6.3	7.6	6.8	7.0	9.3
Iron	14900	11900	12700	14100	15700	14200
Lead	8.9	ND	ND	8.7	4.1	6.1
Magnesium	2110	2940	3450	2100	2620	2610
Manganese	129	117	127	257	265	192
Nickle	10.5	13.8	15.7	19.8	22.6	21.9
Potassium	2410	1740	1930	2000	1330	1400
Selenium	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND
Sodium	8120	6800	7410	1020	583	194
Thalium	ND	ND	ND	ND	ND	ND
Vanadium	37.1	26.1	25.5	37.4	34.0	32.2
Zinc	35.4	25.4	25.8	28.4	24.0	22.2

Table 3: Risks and Hazard Quotients

HYPOTHETICAL RESIDENTIAL EXPOSURE TO SOIL							
		Soil					
CARCINOGENIC		Concen	SFi	EF	IR	ED	BW
SOIL INHALATION		mg/kg					
	Risk						
CrVI	3.70e-07	3.47e+02	4.20e+01	350	20	30	70
		Soil					
NONCARCINOGENIC		Concen	RfDo	EF	IR	ED	BW
SOIL INGESTION		mg/kg					
ADULT	HQ						
CrVI	9.51e-02	3.47e+02	5.00e-03	350	100	30	70
CRIII	4.75e-04	3.47e+02	1.00e+00	350	100	30	70
CHILD	HQ						
CrVI	8.87e-01	3.47e+02	5.00e-03	350	200	6	15
CRIII	4.44e-03	3.47e+02	1.00e+00	350	200	6	15
CONSTRUCTION WORKER EXPOSURE TO SOIL							
		Soil					
CARCINOGENIC		Concen	SFi	EF	IR	ED	BW
SOIL INHALATION		mg/kg					
	Risk						
CrVI	5.28e-10	3.47e+02	4.20e+01	30	10	1	70
		Soil					
NONCARCINOGENIC		Concen	RfDo	EF	IR	ED	BW
SOIL INGESTION		mg/kg					
	HQ						
CrVI	3.91e-02	3.47e+02	5.00e-03	30	480	1	70
CRIII	1.96e-04	3.47e+02	1.00e+00	30	480	1	70

KAISER-HILL COMPANY, LLC

Environmental Restoration
Rocky Flats Environmental Technology Site
10808 Hwy. 93, Unit B, Golden, CO 80403-8200

Fax

To:	CARL SPRENG AND Elizabeth Pottorff	From:	Nick Demos
Fax:	303/759-5355	Pages:	11
Phone:	303/966-4605	Date:	2/25/02
Re:		CC:	

☐ Urgent ☑ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

• Comments:

PAC REFERENCE NUMBER: 900-1317

IHSS Number: 176

Unit Name: Soil Release from Wooden Crate in 964 Laydown Yard

CPIR No.: 95-001

Approx. Location: N750,500; E2,085,500

Date(s) of Operation or Occurrence

January 18, 1995

Description of Operation or Occurrence

At approximately 6:00 p.m. on January 18, 1995, carpenters were attempting to reattach a lid from a wooden half crate located south of Building 964 and within IHSS 900-176. The lid was believed to have blown off the previous day during a period of high winds. While working on the crate, one of the structural sides fell apart inadvertently exposing the plastic liner and releasing approximately 1 pound of coarse gravel and residual soil material to the ground. The only information available regarding the origin of the contents were the words "oil and soil" handwritten on the plastic liner. The half crate associated with this release and another staged adjacent to it were apparently placed within a Radiologically Controlled Area (RCA) due to half crate the unknown nature of the contents as part of an Accelerated Cleanup Project. There were no identifying markings on either crate except for the dates of manufacture of 1989 and 1990.

Physical/Chemical Description of Constituents Released

The material released from the wooden half crate was of unknown origin and may have been associated with a past spill cleanup response due to the markings "oil and soil" handwritten on the plastic liner of one of the crates. Approximately one pound of coarse gravel (< 1/2 inch diameter) and residual soil was released to the ground.

At present, IHSS 900-176 (the 964 Laydown Yard) is being investigated as part of Operable Unit 10 due to the area receiving windblown radioactive nitrate spray from the solar evaporation ponds located immediately upwind. Historically, the primary use of the 964 yard (also referred to as the "Bone Yard") has been for storage of contractor materials and on one occasion in 1985, temporary storage of waste oils contaminated with volatile organic compounds and metals. Visual evidence of old spills and leakage have been documented since 1985.

Response to Operation or Occurrence

Once the release was identified, a tarp was placed over the open crate and weighted down with rocks until the soil and gravel could be repackaged. On January 19, 1995, the spilled material was cleaned up and samples were collected from the area of the release to complete a waste determination and provide cleanup verification. Additional collection of samples were required from the crate on January 24, 1995 due to the insufficient amount of actual soil collected from the first sampling event (mostly gravel was released) for analysis. The plastic liner was repaired with tape and the tarps again secured over the crate. A RCRA 90 day storage area was immediately established at the release site until a waste determination could be made. Using all available preliminary TCLP data, a waste determination concluded that the released material was non hazardous on March 1, 1995. The crates temporarily remain in the RCA due to elevated radiological contamination (9.1 pCi/gram Pu 238/240) and are scheduled to be repackaged as non hazardous low level waste. The crates will be transferred to building 664 for storage.

Fate of Constituents Released to Environment

Preliminary analytical results for the soil and gravel in the area of the release indicate that the level of detected toxic metals are well below the Toxicity Characteristic Leaching Procedure (TCLP) limits. Volatile organic compounds such as acetone and methyl ethyl ketone (MEK) were detected in the low part per billion (ppb) ranges for samples collected in the spill area but not detected in samples collected from within the crates. These organic compounds were detected well below the Practical Quantitation Limits (PQLs) of the laboratory equipment and are commonly seen as laboratory contaminants. Preliminary radiological (isotope specific) analysis indicate elevated radiological contamination. The final analytical results for all samples taken and waste characterization will be included in Section 3.0 - Revised PAC Narratives upon validation of the data.

Action/No-Action Recommendation

This PAC does not warrant further investigation due to the small amount of material (one pound or less) released to the environment, the immediate cleanup response, and the preliminary analytical data strongly suggesting that the spilled material is non hazardous. IHSS 900-176 is currently under investigation for volatile organic, inorganic, and radiological contamination.

Comments

If the validated analytical data does not confirm that the release was adequately cleaned up, a soil response plan will be submitted to the Colorado Department of Public Health & the Environment.

(Q 4)

PAC REFERENCE NUMBER: 000-501 → 100-613

↑ #Sd in Q7 but write-up not provided as stated.

IHSS Number: Not Applicable

Unit Name: Asphalt Surface in Lay Down Yard North of Building 130

Approx. Location: N749,000; E2,080,500

Date(s) of Operation or Occurrence

The spill occurred on Thursday, March 18, 1993, at 11:41 a.m.

Description of Operation or Occurrence

A total of three used, lead-acid batteries fell from a pallet while being transported from a weigh scale on the north side of Building 130 to a multi-purpose receiving and storage yard on the south side of Building 130. The batteries were being stored for recycling. The first battery fell when the forklift hit a bump. The forklift driver could not see the fallen battery and drove over it, resulting in another jolt from which two more batteries fell off the pallet. The first battery was crushed and the other two were overturned, resulting in a 2'x15' spill of sulfuric acid on the asphalt and sulfuric acid on the forklift's front wheels and forks.

Physical/Chemical Description of Constituents Released

The spill was characterized as approximately 2 to 4 quarts of sulfuric acid and lead based on previous analysis of the same type of batteries. These analyses identified lead concentrations in the acid at up to 20 ppm.

Responses to Operation or Occurrence

The Building 130 warehouse manager, the Shift Superintendent and the Fire Department were notified immediately. The forklift operators (who were wearing personal protective equipment) restored the fallen batteries to an upright position. The Fire Department Hazardous Materials (Hazmat) team arrived at the scene by 11:47 a.m. The area was roped off and all personnel near the incident and within 300 feet upwind were evacuated. Readings of the spill were done for pH which was found to be at a level of zero. Approximately five gallons of sodium bicarbonate was placed on the spill as well as on the forklift's front wheels and forks. The waste materials from the crushed battery were picked up, double-bagged and placed into a five-gallon Department of Transportation-approved drum which was stored in a RCRA 90-day accumulation area. The two damaged batteries were placed into a 20-gallon "lab pack" and returned to the pallet. The Hazmat equipment was decontaminated to a pH of 7 with water. This water was pumped to drums to await treatment in Building 374.

Fate of Constituents Released to Environment

Sodium bicarbonate was used to neutralize the acid and pick up the spilled solution. The resulting spoils were handled as a hazardous waste and placed in a 90-day accumulation area.

Comments

The Property Utilization and Disposal department, which was involved in the incident, will review the wrapping and packaging of batteries to see if a more secure method is available. The department is also writing a desk reference procedure to outline precautions for transporting batteries. The description of this release is submitted in accordance with the IAG, Sections I.B.3 Notification and I.B.5 Historical Release Report for final notification.

References

As enclosed: RCRA Contingency Plan Implementation Report No. 93-003.

RES CONTROL
GOING LTR. NO
RF 3873

DIST.	LTR	ENC
S.		
B.		
IVAL, G.J.		
CH, A.A.	X	X
H.D.		
J.G.		
P.W.	X	X
ERA, D.W.		
ST, L.A.	X	X
B.J.		
AN, L.K.		
Y, T.J.		
HL, T.G.	X	X
G, J.G.		
H, E.H.		
W.A.	X	X
ER, A.W.		
H.P.		
NEZ, A.	X	X
K, G.E.		
NALD, M.M.		
NA, F.G.		
TROSE, J.K.		
SAN, R.V.	X	X
JTO, V.M.		
ER, G.L.	X	X
Y, J.H.		
G, T.L.	X	X
LIN, N.R.		
BERT, A.L.	X	X
OCK, G.H.	X	X
ER, R.L.		
ART, D.L.		
M.T.		
E.R.		
N, R.B.		
M.		
ET, J.	X	X
B.G.	X	X
	X	X
K.A.	X	X
J.M.	X	X
T.R.	X	X
RES CTRL	X	X

ASSIFICATION:

LASSIFIED	X	X
IDENTIAL		
RET		

HORIZED CLASSIFIER
SIGNATURE
/30/93

EPLY TO RFP CC NO:
None

ION ITEM STATUS
X LOSED
ARTIAL

APPROVALS:
2/30

G & TYPIST INITIALS
KAM

16469 (Rev. 12/92)

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.
ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 · (303) 966-7000

March 31, 1993

93-RF-3873

A. H. Pauole
Acting Manager
DOE, RFO

Attn: D. Grosek

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CONTINGENCY PLAN IMPLEMENTATION REPORT (CPIR) NO. 93-003 - TGH-246-93

Enclosed is a draft letter to the Colorado Department of Health (CDH) which transmits RCRA CPIR No. 93-003, also enclosed. The report outlines the events associated with a release greater than one pint/one pound of sulfuric acid containing lead from a storage battery.

This report should be delivered to CDH no later than April 2, 1993, as required by 6 CCR 1007-3 Section 265.56(j)(1-7). A review of the wrapping and packaging procedure is currently underway to find a more secure method of packaging these batteries to reduce the risk of this incident being repeated. Additionally, a desk reference procedure is being written for Property Utilization and Disposal (PU&D) personnel to outline precautions in transporting these batteries.

If you have any questions regarding this matter, please call K. A. Holstein at extension 2435 or J. M. Mynard at 6087.

T. G. Hedahl, Associate General Manager
Environmental and Waste Management

BBH:kam

Orig. and 1 cc - A. H. Pauole

Enclosures:
As Stated (2)

RCRA CONTINGENCY PLAN
Implementation Report No. 93-003

RCRA CONTINGENCY PLAN
IMPLEMENTATION REPORT
ROCKY FLATS PLANT
EPA ID NUMBER CO7890010526

This report is made in compliance with the requirements of 6 CCR 1007-3, Parts 264.56 (j) and 265.56 (j) for a written report within 15 days of the implementation of the RCRA Contingency Plan. The requirements for this are given below and will be addressed in the order listed, excerpted from 6 CCR 1007-3, Parts 264.56 and 265.56:

"(j)...Within 15 days after the incident, he must submit a written report on the incident to the department. The report must include:

(1) Name, address, and telephone number of the owner or operator
(2) Name, address, and telephone number of the facility
(3) Date, time, and type of incident (fire, explosion)
(4) Name and quantity of material(s) involved
(5) The extent of injuries, if any
(6) An assessment of actual or potential hazards to human health and the environment, where this is applicable; and
(7) Estimated quantity and disposition of recovered material resulted from the incident."

---

(1) Name, address and telephone number of the owner of the facility:

United States Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

Facility Contact:
A. H. Pauole, Acting Manager

(2) Name, address and telephone number of the facility:

U.S. Department of Energy
Rock Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

(3) DATE, TIME AND TYPE OF INCIDENT

A. SUMMARY

The RCRA Contingency Plan was implemented on March 18, 1993, due to a release of greater than one pint/one pound of sulfuric acid to an asphalt surface in a lay down yard located north of Building 130 at the Rocky Flats Plant. The release occurred at approximately 11:41 a.m. when three used lead-acid batteries fell from a pallet while being transported by a Logistics Property Utilization and Disposal (PU&D) forklift operator. The batteries, which were shrink-wrapped per industry standard, were being moved back and forth from a weigh scale on the south side of Building 130 to a cargo container located in a multi-purpose receiving and storage yard on the north side of the building where they were being stored for recycling. During transit, the load of batteries shifted when the forklift operator apparently hit a bump in the asphalt as he was turning into the storage yard, resulting in one of the batteries falling off the pallet into the path of the forklift wheels. The operator was unable to see the fallen battery and ran over and crushed it with the forklift wheels. When the forklift struck the battery, it resulted in a jolt causing two additional batteries to fall from the pallet. The crushed battery and one of the additional two batteries released a combined total quantity of approximately 2 to 4 quarts of sulfuric acid covering about a 2' X 15' area on the asphalt surface and the forklifts front wheels and forks.

When the forklift operator became aware of the problem, he immediately stopped the forklift and attempted to stabilized the situation. Wearing appropriate Personal Protective Equipment (PPE), operators restored the two fallen batteries to an upright position on the pallet. The Fire Department Hazardous Materials (HazMat) Team responded to the scene at approximately 11:47 a.m. The area was roped off and all personnel near the incident and within 300 feet upwind from the spill were evacuated. Readings with a pH meter were taken at three different locations of the spill, and it was determined that the acid had a pH of zero. These readings where used to make the determination that the material was a RCRA-regulated hazardous waste for the characteristic of corrosivity (D002). Process knowledge of previous characterizations of lead-acid batteries was used to make the determination that the material was also a RCRA-regulated hazardous waste for the characteristic of toxicity for lead (D008). Sodium bicarbonate was placed on the spill, around the pallet where the damaged batteries were originally and on the forklift's front wheels and forks to neutralize the acid. The waste materials were picked up, double bagged and placed into a five-gallon black Department of Transportation (DOT) approved drum and placed in a 90-day accumulation area. The two damaged batteries were placed into a 20-gallon "lab pack" and were placed with the remaining batteries on the pallet awaiting vendor pickup. Water was used to decontaminate the HazMat equipment to a pH of 7. The water was transferred via pump to drums to await final treatment in the process waste system in Building 374.

The RCRA Contingency Plan was implemented at 12:10 p.m. on March 18, 1993, by the Shift Superintendent upon notification of the incident.

B. DESCRIPTION OF INCIDENT

At approximately 11:41 a.m. on March 18, 1993, three used lead-acid batteries fell from a pallet while being transported by a Logistics PU&D forklift operator from a weigh scale on the south side of Building 130 to a multi-purpose receiving and storage yard on the north side of Building 130. The batteries were being moved back and forth from the weigh scale to a cargo container where they were being stored for recycling. During transit, the load of batteries shifted when the forklift operator apparently hit a bump in the asphalt as he was turning into the storage yard, resulting in one of the batteries falling off the pallet. The operator was unable to see the fallen battery and ran over and crushed the battery with the forklift wheels. The resulting jolt caused two additional batteries to fall from the pallet. At approximately 11:42 a.m. the Building 130 Warehouse manager was notified and at the same time the Shift Superintendent and the Fire Department were notified. The Fire Department HazMat team arrived at the scene at approximately 11:47 a.m. It was estimated that the crushed battery and one of the additional two batteries released approximately 2 to 4 quarts of sulfuric acid covering about a 2' X 15' area on the asphalt surface. The forklift's front wheels and forks were also contaminated with acid. At approximately 11:58 a.m., pH readings were taken of the spilled acid and the pH was found to be zero. At approximately 12:37 p.m., the acid was neutralized with sodium bicarbonate. At approximately 2:30 p.m., a decision was made on the disposition of the spill and equipment by Industrial Hygiene and Hazardous Waste personnel. At approximately 3:45 p.m., the HazMat team was released and the material was placed into a 90-day accumulation area.

C. CORRECTIVE ACTION

The PU&D department will review the wrapping and packaging procedure to see if a more secure method of packaging these batteries can be found to reduce the risk of this incident being repeated.

A desk reference procedure is in the process of being written for PU&D personnel to outline precautions in transporting these batteries.

(4) NAME AND QUANTITY OF MATERIAL INVOLVED

Approximately 2 to 4 quarts of sulfuric acid (D002) and lead (D008) were released onto an asphalt surface. Process knowledge was used to characterize the material released based on previous analysis of similar lead-acid batteries showing lead levels as high as 20 parts per million (ppm). Approximately 5 gallons of sodium bicarbonate was used to neutralize the acid and pick up the spilled solution. The resulting spoils are being handled as hazardous waste and were placed in a 90-day accumulation area.

(5) EXTENT OF INJURIES

There were no injuries to personnel.

(6) AN ASSESSMENT OF ACTUAL OR POTENTIAL THREAT TO HUMAN HEALTH AND ENVIRONMENT

The amount of RCRA-regulated hazardous waste material that was released to the asphalt surface in this incident (approximately 2 to 4 quarts of neutralized sulfuric acid contaminated with lead) was neutralized with sodium bicarbonate and does not present a significant actual or potential threat to human health or the environment.

(7) **ESTIMATED QUANTITY AND DISPOSITION OF RECOVERED MATERIAL THAT RESULTED FROM THE INCIDENT**

The neutralized sulfuric acid containing lead (D008, based on process knowledge from analysis of similar lead-acid batteries showing lead levels as high as 20 ppm) was picked up, double bagged and placed in a five-gallon black DOT approved drum and, due to the lead contamination, it was placed in a 90-day accumulation area. The two damaged batteries were placed into a 20-gallon "lab pack" and placed with the remaining batteries on the pallet awaiting vendor pick up. Water was used to decontaminate the HazMat equipment, a pH of 7 was confirmed and approximately 30 gallons of water was transferred via pump to drums to await final treatment in the process waste system in Building 374.

DRAFT DRAFT DRAFT

Colorado Department of Health
Hazardous Materials and Waste Management Division
HMWMD-HWC-B2/Frederick R. Dowsett, PhD.
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CONTINGENCY PLAN IMPLEMENTATION REPORT (CPIR) NO. 93-003

Enclosed is RCRA CPIR No. 93-003 which documents the status and information concerning a release of greater than one pint/one pound of sulfuric acid containing lead from a storage battery.

Your office was notified on March 19, 1993, that the RCRA Contingency Plan had been implemented as a precautionary measure. The Environmental Protection Agency (EPA), Region VIII was notified by facsimile on March 19, 1993. If you have any questions regarding this subject, please contact K. A Holstein at 966-2435 or J. M. Mynard at 966-6087.

cc:

D. M. Maxwell	-	EPA, Region VIII
B. Brainard	-	DOE, RFO
D. Grosek	-	" "
T. E. Lukow	-	" "
W. E. Seyfert	-	" "
J. R. Cable	-	EG&G Rocky Flats, Inc.
B. B. Haynes	-	" " " "
T. G. Hedahl	-	" " " "
M. L. Johnson	-	" " " "
A. L. Schubert	-	" " " "

Reading Rooms:

DOE Rocky Flats Public Reading Room, Front Range Community College, College Hill Library 3705 W. 112th Avenue Westminster, Colorado 80030. 303-469-4435. Gary Morell.

Colorado Department of Public Health & Environment Information Center 4300 Cherry Creek Drive South Denver, Colorado 80246-1530. 303-692-2037. Kay Juricek.

U.S. Environmental Protection Agency Region VIII, Superfund Records Center 999 18th Street, 5th Floor Denver, Colorado 80202-2466. 303-312-6473. Jim Foster.

Rocky Flats Citizens Advisory Board 9035 Wadsworth Parkway, Suite 2250 Westminster, Colorado 80021. 303-420-7855.

FINAL

PHASE I RFI/RI WORK PLAN

ROCKY FLATS PLANT
OTHER OUTSIDE CLOSURES
(OPERABLE UNIT NO. 10)

U.S. DEPARTMENT OF ENERGY
Rocky Flats Plant
Golden, Colorado

ENVIRONMENTAL RESTORATION PROGRAM

MAY, 1992

Volume I - Text

7.3.10 Inactive D-836 Hazardous Waste Tank (IHSS 206)

IHSS 206 has historical information indicating the potential presence of metals and radionuclides. However, the radioactive contaminant was tritium in condensate that could be expected to have evaporated or migrated to the water table. For this reason and as tritium is not a gamma emitter, no HPGe survey is proposed. This site has guy wires and overhead structures restricting access for soil boring sampling. No soil gas sampling will be conducted at IHSS 206 during Stage 1 RFI/RI. Ten surficial soil samples are proposed at this location for Stage 1 (Figure 7.3-16). Eight samples will be located where the tank was formerly located, one sample will be located where the piping exited the building, and one sample will be located on the north side of the former location of the tank. The soil samples will be analyzed for metals and tritium. Surficial soil analytical results will be evaluated in Technical Memorandum 1.

7.3.11 Inactive Building 444 Acid Dumpsters (IHSS 207)

IHSS 207 has historical information indicating the potential presence of acids, anions, metals, and radionuclides. This site is covered by concrete and has no known restrictions limiting sampling. No soil gas or surficial soil sampling is planned for IHSS 207. If visual inspection reveals indication of leakage, such as deteriorated or stained concrete, a surficial soil sample will be collected if exposed soil is present. The HPGe survey will be conducted at one location in the center of the IHSS (Figure 7.3-17). A survey with a NaI probe will also be conducted on a 25 ft grid to supplement the HPGe survey.

7.3.12 Inactive 444/447 Hazardous Waste Storage Area (IHSS 208)

IHSS 208 has historical information indicating the potential presence of acids, anions, and metals. This IHSS, except for a narrow strip in its center, is covered by asphalt and has no known restrictions limiting sampling. Three surficial samples are proposed for IHSS 208 during Stage 1

IHSS	Type of Contamination: Acids	Solvents	Fuels/ Oils	Anions	Metals	Radionuclides	HPGe and Vertical Profile Samples[1]	NaI Probe Survey	Soil Gas Analyses[2]	Surface Soil Analyses: TCL BNAs	TCL PCBs[3]	TAL Metals	TAL CN	TAL Tritium	pH[4]	Physical Parameters	Tank Liquid and Residue Analyses: VOC	TCL BNAs	TAL Metals	pH	Tank Test Pits and Samples: VOC	TCL BNAs	TAL Metals
129		H, S	H, R, S		S				•	•		•				•	•	•	•	•	•	•	•
170	H, R	H, R	H, R	H	H	H, R	•35		•	•	•	•	•		•	•							
174		H, S	H, R, S	S	H, R, S	S	• 3	•34	•	•	•	•	•			•							
175		H, S	H	S	H, S	S	• 1	•7	•	•	•	•				•							
176		H, S	H, S	S	H, S	S	•22		•	•	•	•				•							
177		H, S	H, S	S	H, S	H, S	• 2	•18	•	•	•	•				•							
181		H	H		H	H	• 1	• 7	•														
182		H, S	H, R, S		H, R, S	H, S	• 1	•9	•														
205	H	H	H		H												•	•	•	•			
206				H	H	H, R, S[5]						•		•		•							
207	H			H	H	H, R, S	• 1	•5															
208	H			H	H							•	•		•	•							
210		H	H		H				•	•	•	•				•							
213				H, R		H, R, S	•24			•		•				•							
214				H, R		H, R, S	•12			•		•				•							

Table 7-3 • Phase I, Stage 1, Analytical Program

Key

BNAs - Base/neutral and acid extractable organics
CN - Cyanide
H - Historical storage information
HPGe - Radiation field screening using high-purity germanium detector
NaI - Radiation field screening using sodium iodide scintillation detector
PCBs - Polychlorinated biphenyls
R - Documented release information
S - Sample analysis information
VO - Volatile organics
▓ - Paved site - surface soil below pavement will be sampled in Stage 2

Notes

1 If HPGe and/or NaI surveys do not detect activity, vertical profile samples will not be collected.
2 All soil gas samples will be analyzed in the field for the constituents listed in Table 7-5.
3 Oil contamination assessment will include analysis for PCBs.
4 Acid contamination assessment will include analysis for metals and pH.
5 Tritium is the only radionuclide at this IHSS.
Refer to Tables 7-4 and 7-5 for the specific analyte lists.

Daytimer Notes from Jan 29, Feb, 4, 7, 10, & 11th, 1994, are my personal project notes that I used to record daily operations of the OU-2 Field Treatability Unit while I was managing the Unit.

M. Tyler, PE#36144

DIARY AND WORK RECORD

4th Week
29th Day

SATURDAY
JANUARY, 1994

29

EF.	NAME OR PROJECT	DETAILS OF MEETINGS - AGREEMENTS - DECISIONS	TIME HRS. 1/10
1		John W. (RTG) called - Garage spilled ~20gal	
2		diesel fuel onto ground.	
3			
4		Haz Mat run to 042 @ 07:04 hrs	
5		MTV notified Maila @ 07:15	
6		MTV Notified ONC @ 07:20	
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			

DIARY AND WORK RECORD

5th Week
35th Day

FRIDAY 4
FEBRUARY, 1994

REF | NAME OR PROJECT | DETAILS OF MEETINGS - [illegible] | TIME HRS. 1/10

- Gravel in old berm Cancel
- Review Sampling Plan Drums Today
- Forklift heater broke - Rich Nelson Garage

Move Marla-Kieth Meeting [illegible]

250 KW S&S Generator due back Today (again)
= Vendor will provide a Load bank Monday To Load Test the unit

- Jeff C. - Industrial Power Systems To be onsite today To repair Load Bank (rental)
- will disconnect Load bank from service to work on

- Check on Liner Status
PR# 177160 Mary Montano - Buyer - X 2659
PO# 353126 Delivered To RFP 1-24
check recieving X4023

- Containerize Gravel under old Generator?

- Contaminated with Oil & Diesel -
- Waste Reg Programs - Ed Pasic Waste Form Code 1374

Oil Contaminated Soil
Traveler Grey w/1 plastic Liner
Non-Routine

Reg Waste Operations Shirly Garcia or Joe Moulter
(disposal

12:30 - EC Meeting - Interlocken
- FTU Oil Contam Soil drums - 40 drums so far!!
IHSS - 110 - PCE Free Product, several Thousand pci/gr
Pu Contaminated Sludge etc. Emerg. Plan
- Old GAC
- Garage fuel spills
- Mike R To get rid of

DIARY AND WORK RECORD

11th Week
75th Day

WEDNESDAY
MARCH, 1994

16

REF | NAME OR PROJECT | DETAILS OF MEETINGS - AGREEMENTS - DECISIONS | TIME HRS. 1/10

- Get RPT's & waste Inspectors to sign off drums today.

- Push Phone repairs thru the system
  - OBIE Lindsey - Bldg. 112

Pumped out containment under generator set into incidental tank

~9:00 Bldg. 115 Final BCP for process Improvement on Friday for Process Imp!

10:00 Drums

Drum #	Extended #	Tamper #	Locn
0-83880	95-00329	0028659	CC03
0-83881	95-00330		CC03

Call NMC

- get garage to move/remove 2 bags of diesel contaminated soil that was left from spill

who made decision to clean up spill
- CDH Tour
- Jeff Swanson - CDH
- Kathy Alstet - CDH
- Dave Norbery - CDH

} copies of Logboog & Flowsheets.

- Britt McKarthy - DOE
- Scott Grace - DOE
- Ed Keil
- MCBurm.
- MTV

Schedule Dock inspection with Waste Inspection

- Talk to Pete Laurin about mtg. w/ Harry Tommorrow

- Conduct of Ops. Tour - Gary Francis