



GUAM ENVIRONMENTAL PROTECTION AGENCY



AHENSIAN PRUTEKSION LINA'LA GUAHAN

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JUN 26 2003

Mr. Vancil Sanderson
6330 Leon Drive
Sun Valley, NV 89433

Ref: Water Quality Data for Production Wells NCS-1a and 1 (NCS A and B).

Buenas Yan Saluda!

In response to your letter dated May 20, 2003, attached for your information and use are summary reports for NCS wells 1 and 1a, from the US Navy Public Water Supply Systems (PWS ID NO. GU0000010) submitted to this Agency for compliance with Safe Drinking Water Act. Please note that wells NCS-1 and 1a are marked "NCS Well B" and "NCS Well A" or NCTAMS A or B respectively, in some of the reports.

Also, water sources of the two wells are drawn on the same lens and are piped together with one transmission line and pump to NCS Elevated Tank. The water from these wells is being treated with chlorine at the tank prior to delivery at the distribution system. For this reason water samples representing the wellhead for both wells are taken at the NCS elevated tank which are known NCS Elevated Tank or "GU-0000010 (Elevated Tank)".

The attachments are submitted as follows:

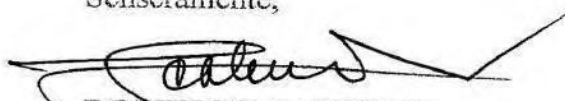
- | | |
|-----------------|---|
| Enclosure No. 1 | - 1983 Organic and Inorganic analyses. |
| 2 | - 1993 Radionuclide analyses. |
| 3 | - 1994-1996 Volatile Organic analyses |
| 4 | - 1 st quarter 1994 Volatile Organic analyses, Cyanide, Nitrate and Asbestos analyses. |
| 5 | - 1994 -1999 Inorganic analyses |
| 6 | - All parameters required for 1 st quarter of 2003. |

Should you have questions or need additional information please contact Mr. Angel B. Marquez, SDW Program Director at (671) 475-1638 or Mr. Chris A. Lund, P.E. Chief Engineer at (671) 475 1621.

Dangkulo na Si Yu'us Ma'ase.

When I became interested in these well water reports it was because of the herbicides in the water, then I realized the kinds and amounts of the other contamination is probably just as big or bigger of a health problem.

Senseramente,


DOMINGO CABUSAO
Acting Administrator

FROM: (Station or unit)

U. S. Navy PWC, Guam

DATE

16 Nov 83

TO: (Name and location of laboratory)

U. S. Navy, PWC, Fena Laboratory, Guam

SAMPLE FROM (Location of sampling point)

Nav Cams, Well A

COLLECTED BY

Joan Ornato

DATE

13 Apr 83

HOUR

1000

SOURCE (Designate ground, surface, raw, treated)

Ground

REASON FOR EXAMINATION

Annual Analysis

EXAMINATION REQUESTED BY

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

I. FIELD ANALYSIS

1. pH	7.40	TEMPERATURE	
		°F 81.5	°C 27.5
2. CARBON DIOXIDE (CO ₂)		ITEM	PPM
3. DISSOLVED OXYGEN (O ₂)			115
4. HYDROGEN SULFIDE (H ₂ S)			
5. CHLORINE DEMAND (Cl ₂)			

FIELD ANALYSIS BY

Joan Ornato

DATE OF ANALYSIS

13 Apr 83

II. SPECIAL LABORATORY ANALYSES

Check (X) individual items to be included in the Special Analyses. Request determination only of those substances suspected of being present in significant amounts.

(X)	ITEM	PPM
X	1. As	< 0.001
X	2. Se	< 0.001
X	3. Pb	0.02
X	4. Ba	< 0.5
X	5. Cu	< 0.01
X	6. Zn	0.05
X	7. Cr (Hexavalent)	< 0.05
	8. PO	
X	9. Cd	< 0.01
	10. CN	
	11. Phenolic Compounds (PPB)	
X	12. Others (Specify) Ag	< 0.01
X	13. Hg	< 0.001
X	14. Endrin (µg/l)	< 0.128
X	15. Lindane (µg/l)	< 0.035
X	16. Methoxychlor (µg/l)	< 0.526

REMARKS (Such as unusual appearance, taste, odor, etc.)

X	17. Toxaphene (µg/l)	< 3.60
X	18. 2, 4-D (µg/l)	< 0.05
X	19. Silvex (µg/l)	< 0.21

Langelier's Index = -.0862

As you can see these herbicides are in the well water. The only logical way they could get there is from there use spraying weeds.

Note: This is an annual test that had to be sent to an off island lab because of special equipment for testing. There was no method at the time to remove these contaminants from the water during processing.

LABORATORY ANALYSIS BY

EB/RT/JO

DD FORM 710

1 APR 83

I am not trying to make the claim that this is how I was exposed, though it is possible. My contention is this is evidence these herbicides were in use for years, until they were banned in 1985. They are on the "approved for use list" from the Armed Forces Pest Control Board. See Attachments.

FROM: (Station or unit)

U. S. Navy, PWC, Guam

DATE

16 Nov 83

TO: (Name and location of laboratory)

U. S. Navy, PWC Fena Laboratory, Guam

SAMPLE FROM (Location of sampling point)

Well B, Nav Cams

COLLECTED BY

Joan Ornato

DATE

13 Apr 83

HOUR

0945

SOURCE (Designate ground, surface, raw, treated)

Ground

REASON FOR EXAMINATION

Annual Analysis

EXAMINATION REQUESTED BY

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

I. FIELD ANALYSIS

ITEM	TEMPERATURE	
	°F	°C
1. pH	7.40	27.5
2. CARBON DIOXIDE (CO ₂)		110
3. DISSOLVED OXYGEN (O ₂)		
4. HYDROGEN SULFIDE (H ₂ S)		
5. CHLORINE DEMAND (Cl ₂)		

FIELD ANALYSIS BY

Joan Ornato

DATE OF ANALYSIS

13 April 83

II. SPECIAL LABORATORY ANALYSES

Check (X) individual items to be included in the Special Analyses. Request determination only of those substances suspected of being present in significant amounts.

(X)	ITEM	PPM
X	1. As	< 0.001
X	2. Se	< 0.001
X	3. Pb	0.02
X	4. Hg	< 0.5
X	5. Cu	0.15
X	6. Zn	< 0.04
X	7. Cr (Hexavalent)	< 0.05
	8. PO	
X	9. Cd	< 0.01
	10. CN	
	11. Phenolic Compounds (PPB)	
X	12. Others (Specify) Ag	< 0.01
X	13. Hg	< 0.001
X	14. Endrin (µg/l)	< 0.128
X	15. Lindane (µg/l)	< 0.035
X	16. Methoxychlor (µg/l)	< 0.526

REMARKS (Such as unusual appearance, taste, odor, etc.)

- X 17. Toxaphene (µg/l) < 3.60
 X 18. 2, 4-D (µg/l) < 0.05
 X 19. Silvex (µg/l) < 0.21

Langelier's Index = -.515

Note: This is an annual test. In the 1970's they had no equipment to remove these poisons from the

As you can see these rainbow herbicides are in the well water. The only logical way to get there would be from using them to kill weeds.

LABORATORY ANALYSIS BY

EB/RT/JO

DATE OF ANALYSIS

DD FORM 710

REPLACES WD AGO FORM 8-125, 1 APR 45, WHICH MAY BE USED.

GPO 83-56027

I am not trying to make the claim that this is how I was exposed, though it is possible. My contention is this is evidence these herbicides were in use for years, until they were banned in 1985. They are on the "approved for use list" from the Armed Forces Pest Control Board. See Attachments.

FENA LABORATORY
U.S. Navy Public Works Center
RESULTS OF ANALYSES

Date: 4 May 93

Sample identification: Water samples taken for radionuclide analyses

Lab Number	Location	Gross Alpha	Gross Beta	Radium 226	Radium 228	Strontium 90
P6208	NCTAMS Well A	<6	<7	1.0±0.1	<0.5	<0.9
P6209	NRMC Well 1	<7	<10	0.23±0.05	<0.6	<0.9
P6210	NAS Well	6±3	3±2	1.6±0.1	<0.8	-
P6211	NavSta 6 Drote Pt.	<2	2±1	NA	NA	NA
P6212	NCTAMS 119 Bingham St.	<6	<7	1.1±0.1	<0.4	<0.7
P6213	Clearwell	<2	2±1	NA	NA	NA

		Tritium
P6214	NCTAMS Well A	<500
P6215	NRMC Well 1	<500
P6216	NAS Well	<500
P6217	NavSta 6 Drote Pt	<500
P6218	NCTAMS 119 Bingham St	<500
P6219	Clearwell	<500

Note: NA means not applicable. Analyses not required.

Comments: The analyses shown above were performed by the US Army Environmental Hygiene Agency, Radio chemistry branch.

Date Samples Taken: 17 Dec 92 Date Analyses completed: 9 Apr 93

Lolinda G. Barlow

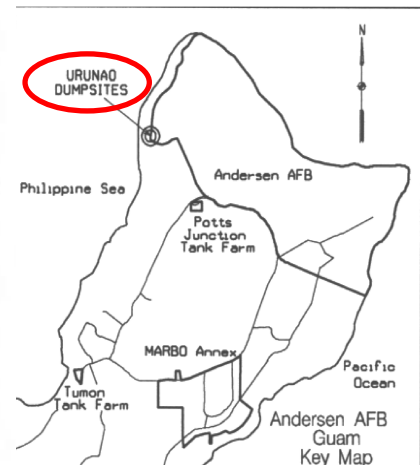
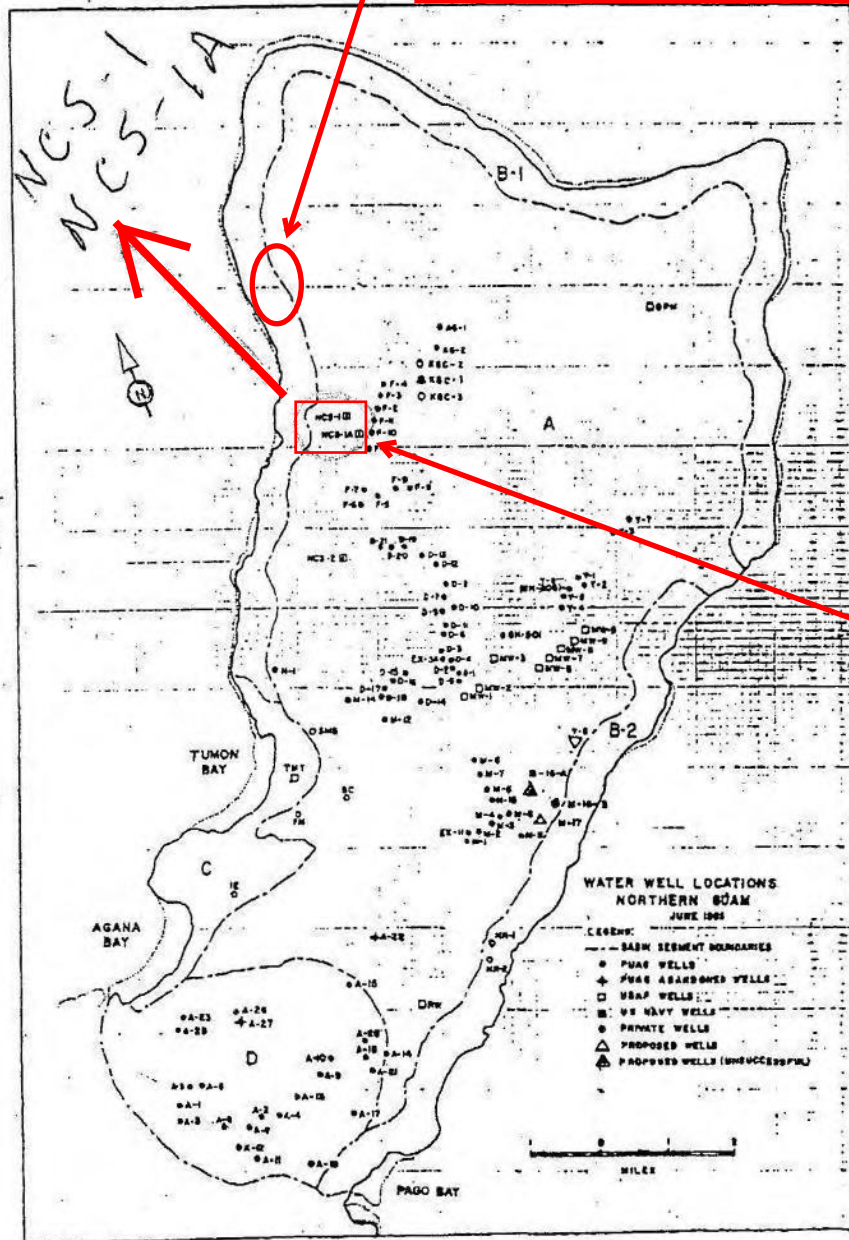
Reported by

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ENCLOSURE
2

This is the location of the two wells in the reports. They supply drinking water to Andersen AFB and to the public. See test results for radiation on the following page.

The Urunao dump site is one of the biggest and most contaminated on Guam. It appears to be about two miles from two main drinking water wells.



This is the location of the two wells on the water quality reports.

There are Pump Houses, Under Ground Fuel Tanks, Refueling Hydrants, Hydrant Control Pits, and Fuel Conditioning Equipment in the Flight Line and Air Plane Parking Area. Herbicides were sprayed around all of these location including the security fencing around these sites. I personally witnessed Sgt. Foster spraying herbicides at all of these POL locations, including the off base locations.

As you can see the cross island pipe line and Potts Junction tank farm where Sgt Foster sprayed heavy and often aren't far from the water wells. Maybe two miles.

Urunao EPA Dump Sites

ANDERSEN AIR FORCE BASE

Filtration Station

NORTHWEST FIELD

Potts Junction Tank Farm

Booster Pumping Station

Cross Island Fuel Pipeline

Tumon Tank farm

Two of the Main Water Supply Wells Used by Civilian and Military

Main POL Tank Farm Site Andy I & Andy II

PHILIPPINE SEA

Naval Fuel Supply Depot

APRA HARBOR

AGATNA

GUAM INTERNATIONAL AIRPORT

MARBO ANNEX

Harmon Hill Bend (Batch "Pig" Escape) & POL Storage ANNEX No 1

BARRIGADA TRANSMITTER SITE

NAS - Air Force Booster Pump Station

ADELUP FAULT

FENA RESERVOIR

MT. LAMLAM
ELEV. 1,332
FEET

MALESSO

Sgt Foster sprayed from here all the way to Andersen AFB and at all the Air Force tank farms and the POL area and the flight line and a lot of the security fencing. Along the pipeline he sprayed a wide enough area you could drive a truck along both sides most of the way and of course under both the above ground pipe lines.

Guam POL & Fuel Systems Layout circa 1968 to 1978

18000' 0 18000'

GRAPHIC SCALE IN FEET

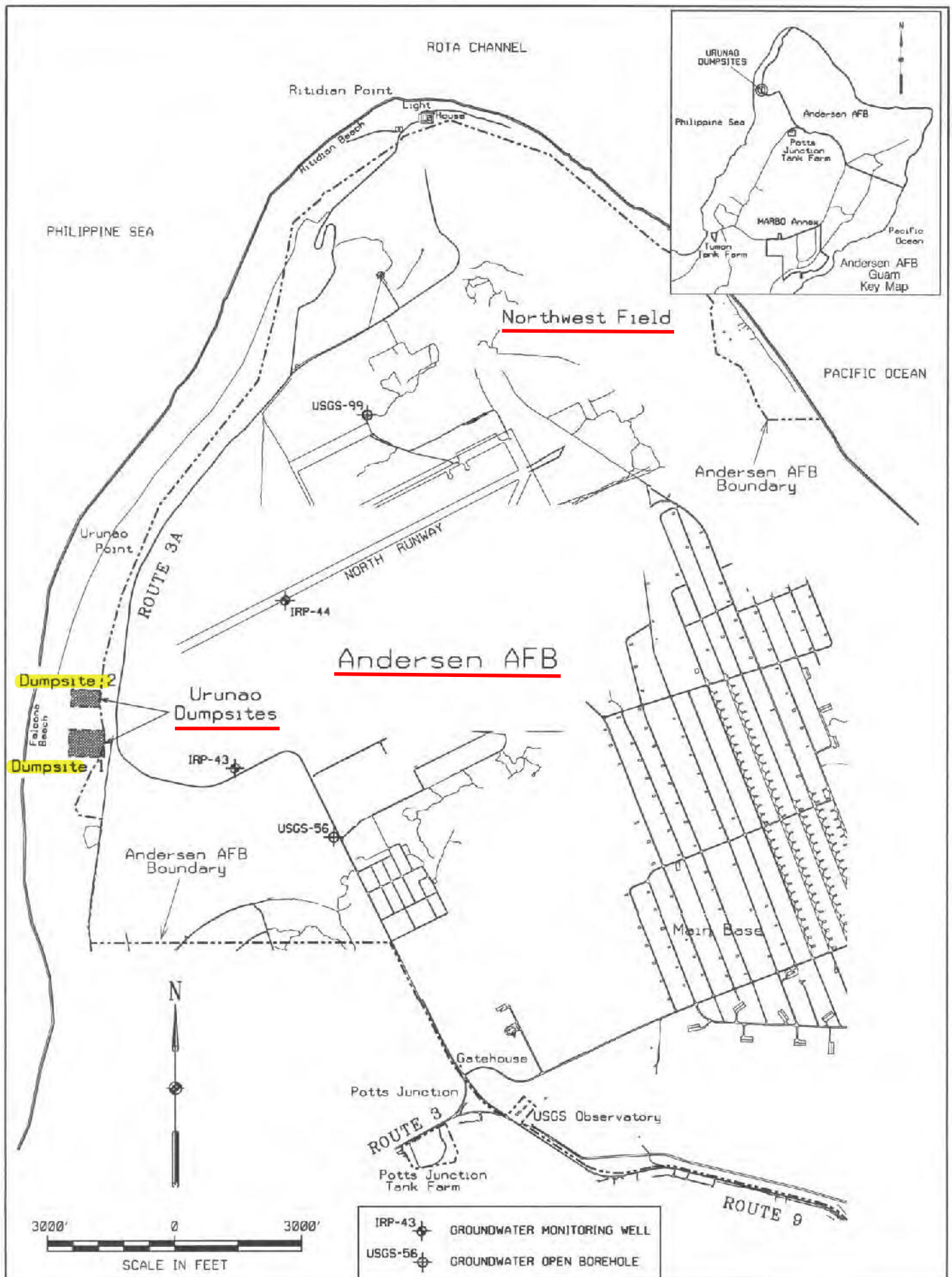


Figure 2-3. Location Map of Urunao Dumpsites 1 and 2 on Northwest Field.

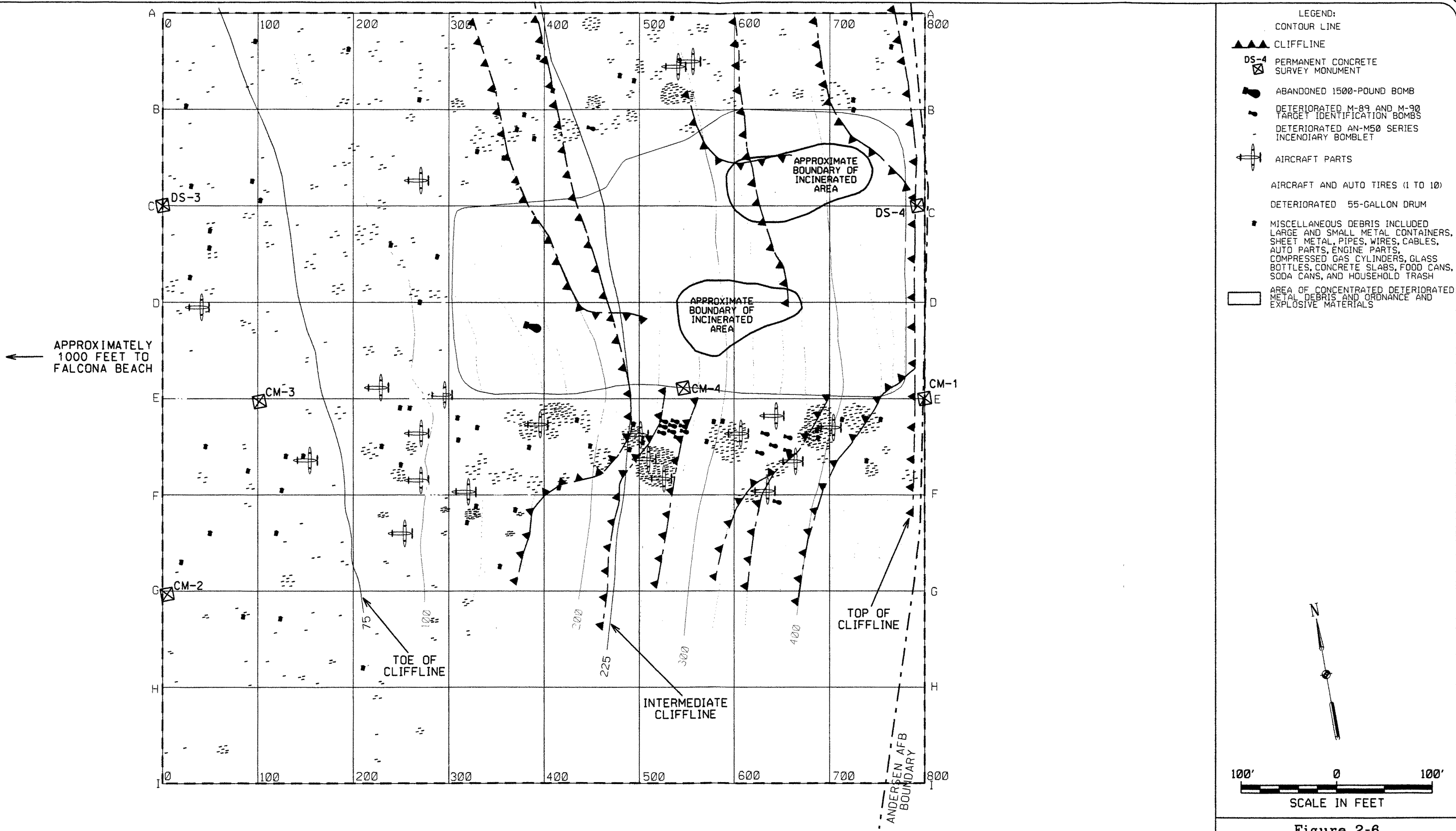
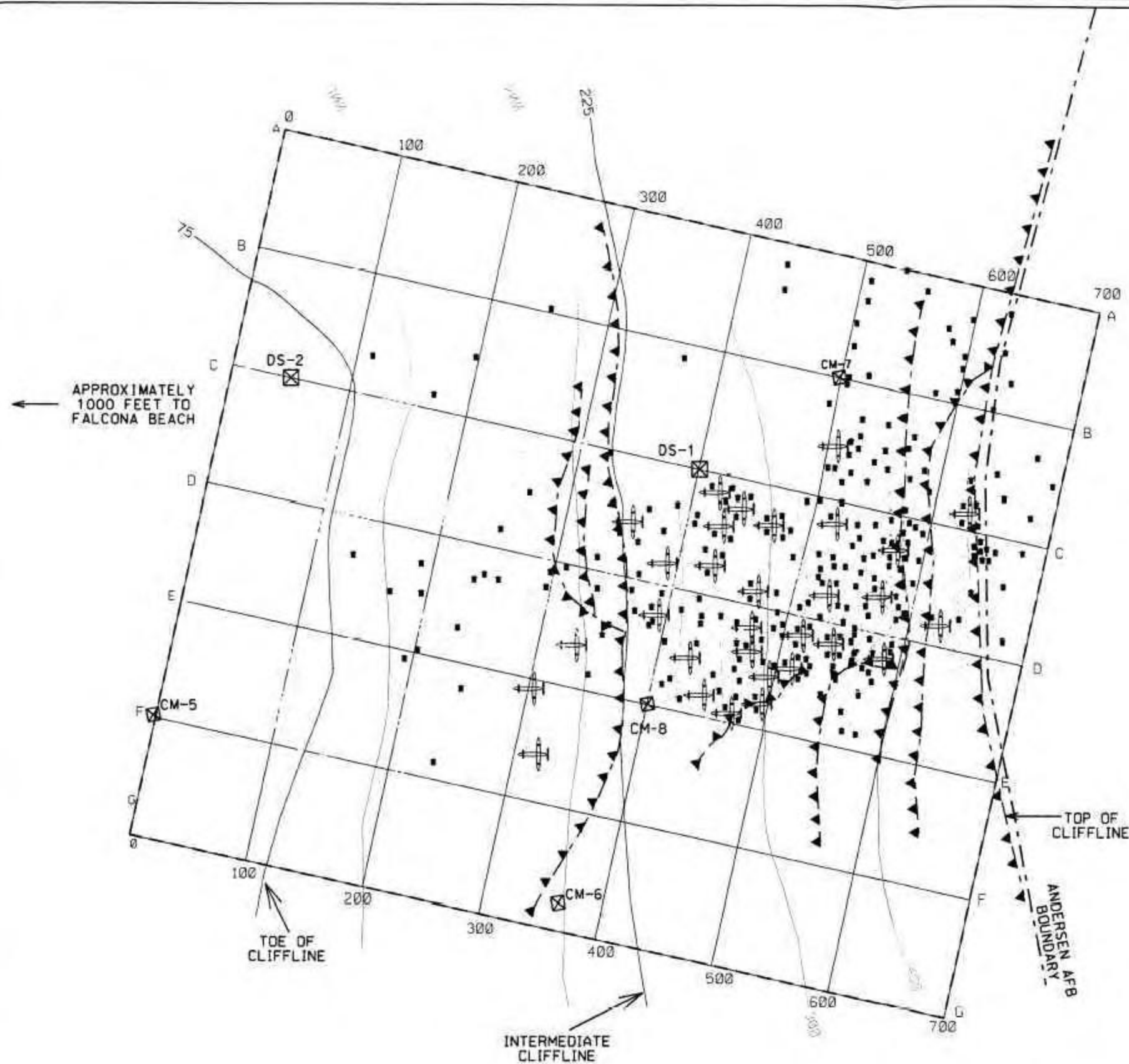


Figure 2-6.
Suspected Sources
of Contamination
at Urunao Dumpsite 1.



- LEGEND:
- CONTOUR LINE
 - CLIFFLINE
 - DS-4 PERMANENT CONCRETE SURVEY MONUMENT
 - DETERIORATED AN-M50 SERIES INCENDIARY BOMBLET
 - AIRCRAFT PARTS
 - AIRCRAFT AND AUTO TIRES (1 TO 10)
 - DETERIORATED 55-GALLON DRUM
 - MISCELLANEOUS DEBRIS INCLUDED LARGE AND SMALL METAL CONTAINERS, SHEET METAL, PIPES, WIRES, CABLES, DETERIORATED AUTOMOBILE, AUTO PARTS, ENGINE PARTS, COMPRESSED GAS CYLINDERS, GLASS BOTTLES, CONCRETE SLABS, FOOD CANS, SODA CANS, AND HOUSEHOLD TRASH
 - SWORD GRASS AREA

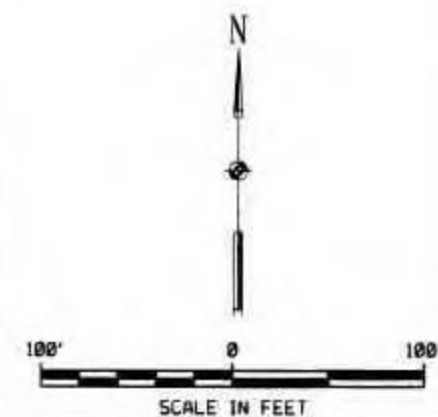
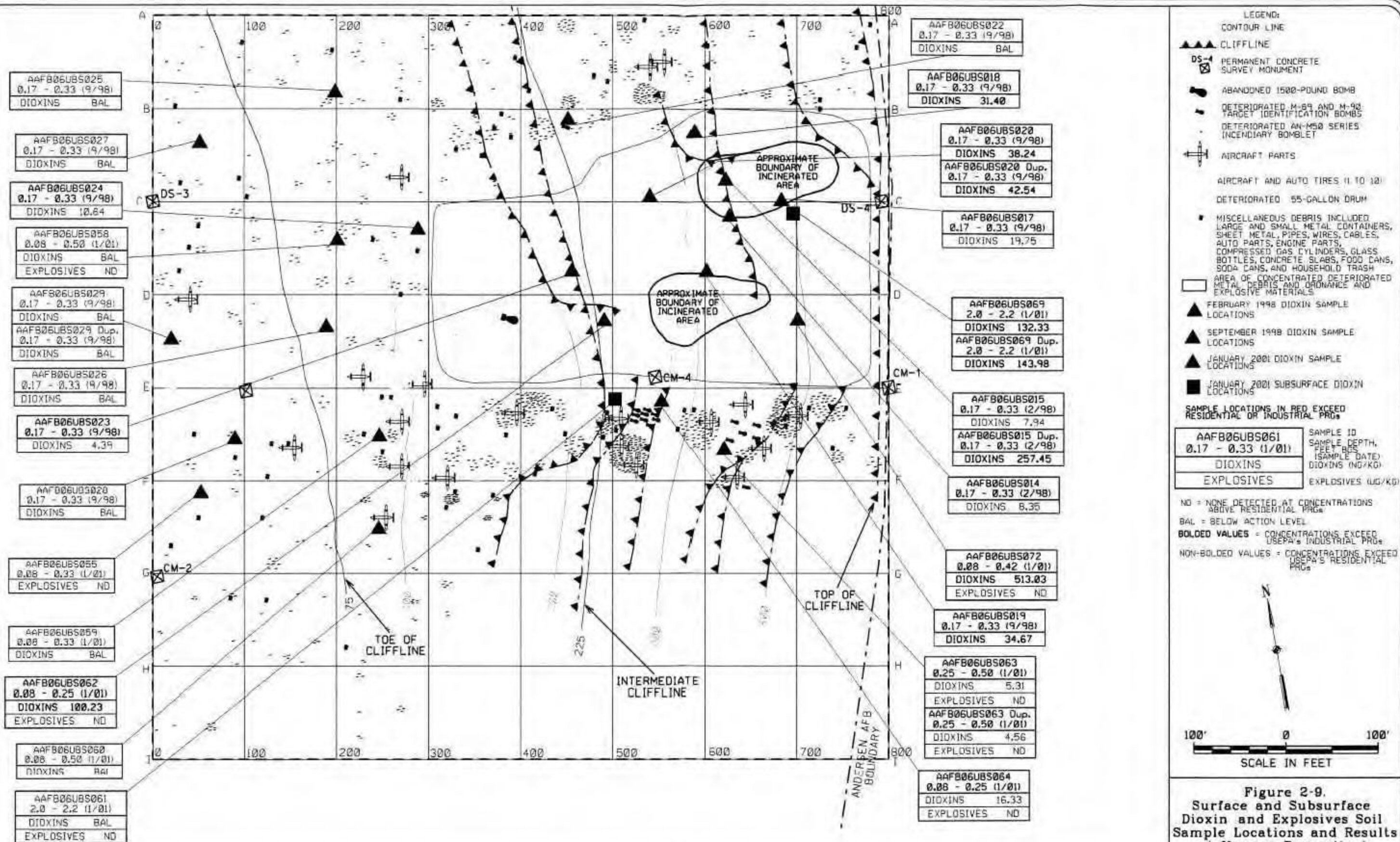
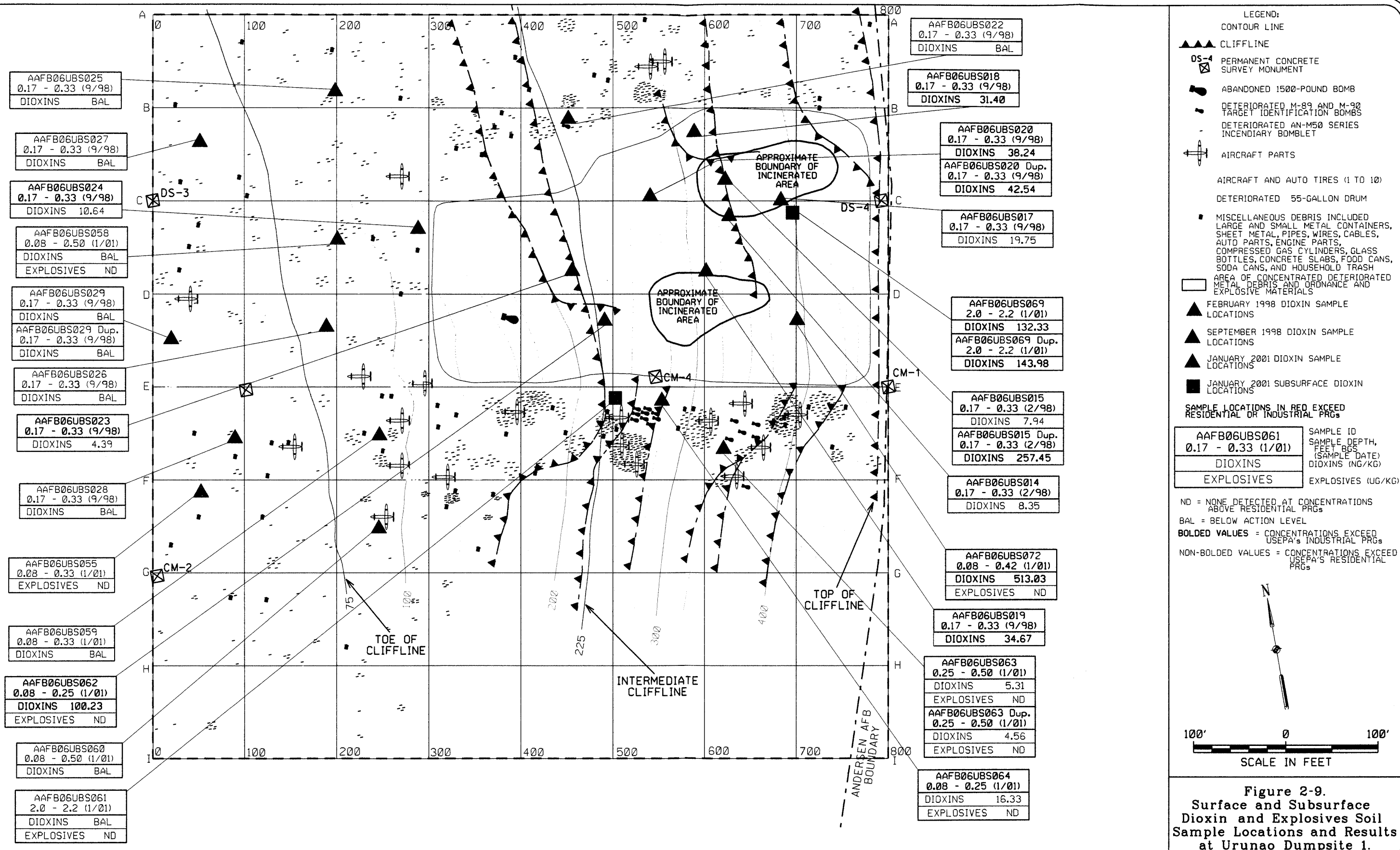
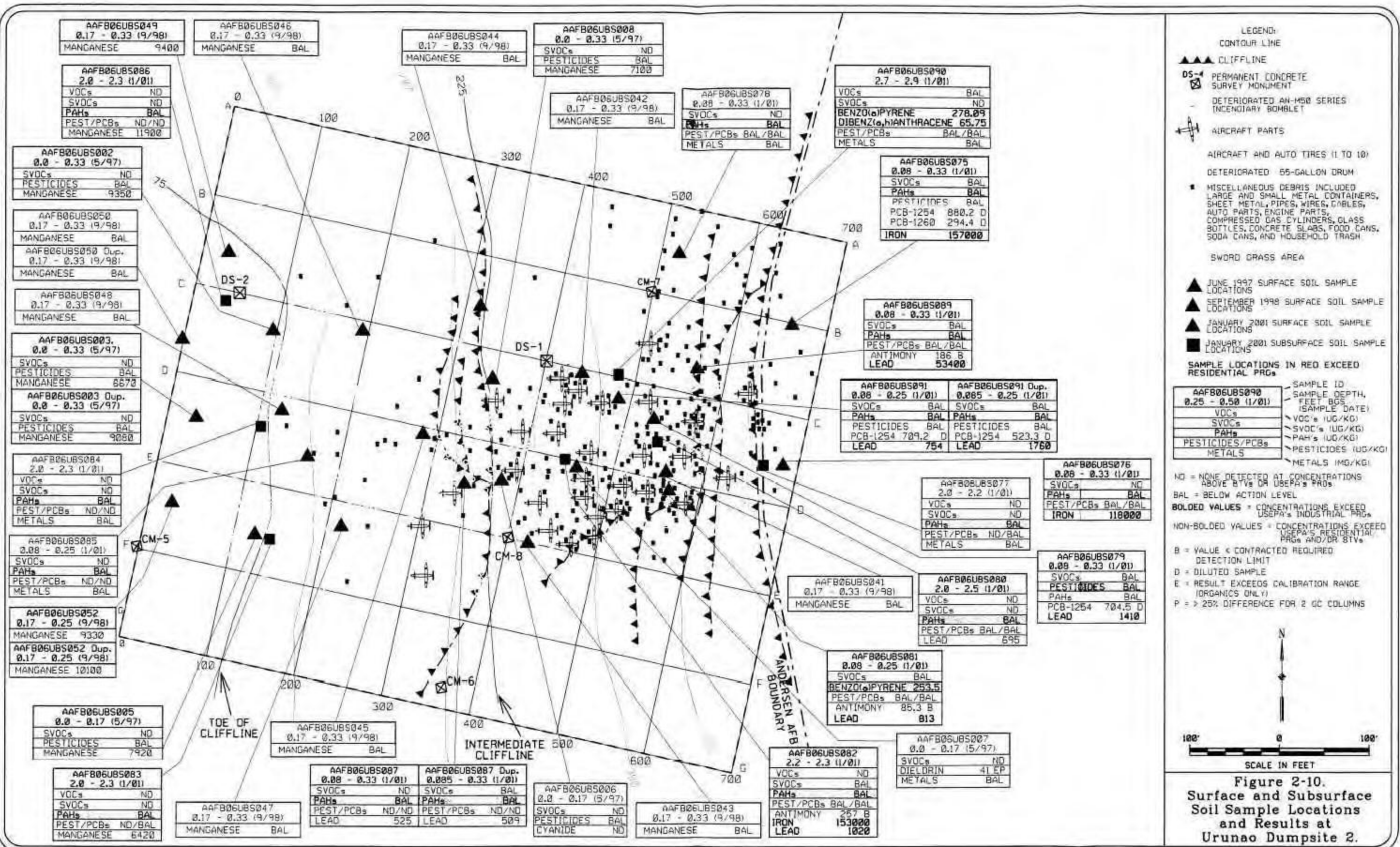
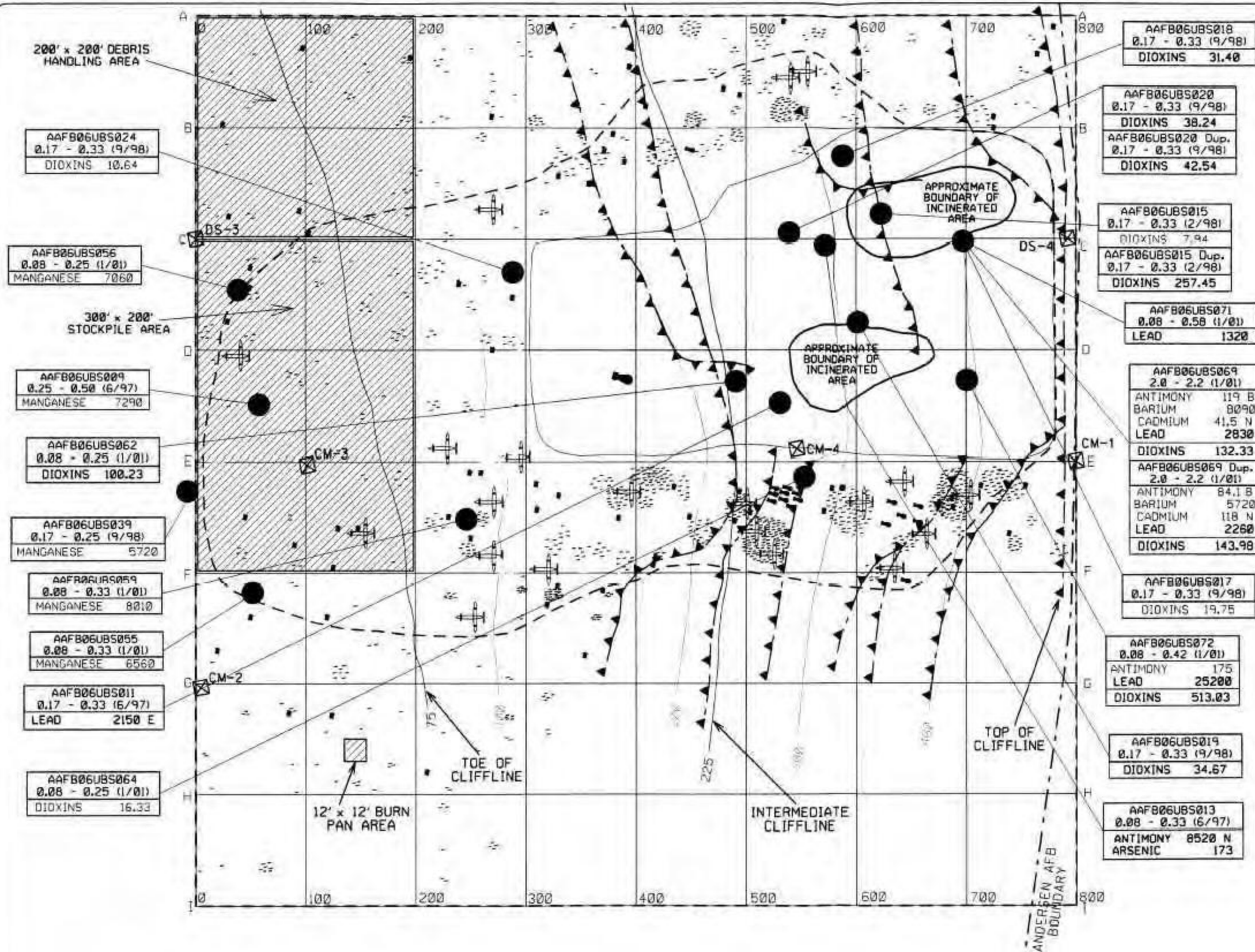


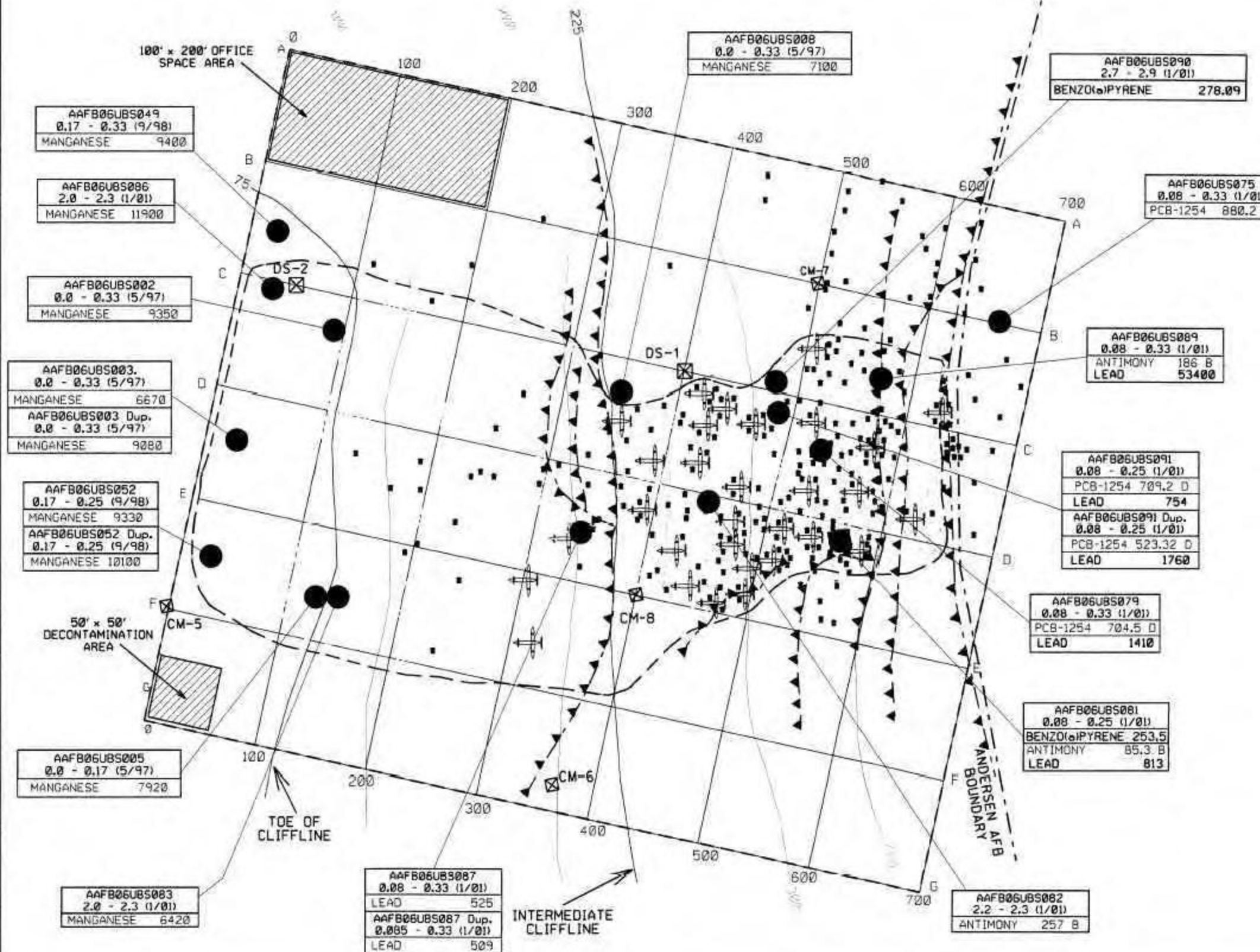
Figure 2-7.
Suspected Sources
of Contamination
at Urunao Dumpsite 2.











- LEGEND:**
- CONTOUR LINE
 - CLIFFLINE
 - DS-4 PERMANENT CONCRETE SURVEY MONUMENT
 - DETERIORATED AN-M50 SERIES INCENDIARY BOMBLET
 - AIRCRAFT PARTS
 - AIRCRAFT AND AUTO TIRES (1 TO 10)
 - DETERIORATED 55-GALLON DRUM
 - MISCELLANEOUS DEBRIS INCLUDED: LARGE AND SMALL METAL CONTAINERS, SHEET METAL, PIPES, WIRES, CABLES, AUTO PARTS, ENGINE PARTS, COMPRESSED GAS CYLINDERS, GLASS BOTTLES, CONCRETE SLABS, FOOD CANS, SODA CANS, AND HOUSEHOLD TRASH
 - SWORD GRASS AREA
 - ESTIMATED 20-FOOT DIAMETER AREA PROPOSED FOR REMEDIATION
 - ESTIMATED BOUNDARY OF SOLID WASTE
 - PROPOSED REMEDIATION STAGING AREA
- SAMPLE LOCATIONS IN RED EXCEED RESIDENTIAL PRGs**
- | SAMPLE ID | SAMPLE DEPTH, FEET BGS | (SAMPLE DATE) | PAHs (UG/KG) | PESTICIDES/PCBs (UG/KG) | METALS (MG/KG) |
|--------------|------------------------|---------------|--------------|-------------------------|----------------|
| AAFB06UBS090 | 0.25 - 0.50 (1/01) | | | | |
- CLEANUP STANDARDS**
- BENZO(a)PYRENE = 150 (ug/kg)
 - PCB-1254 = 530 (ug/kg)
 - ANTIMONY = 63 (mg/kg)
 - LEAD = 400 (mg/kg)
 - MANGANESE = 5,500 (mg/kg)
- BOLDED VALUES = CONCENTRATIONS EXCEED USEPA'S INDUSTRIAL PRGs**
- NON-BOLDED VALUES = CONCENTRATIONS EXCEED USEPA'S RESIDENTIAL PRGs AND/OR BTVs**
- B = BELOW ACTION LEVELS**
- B = VALUE < CONTRACTED REQUIRED DETECTION LIMIT**
- D = DILUTED SAMPLE**

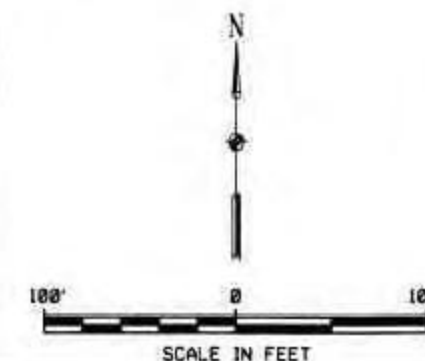


Figure 2-13.
Proposed Remediation Sites
at Urunao Dumpsite 2.



Photo 2-1. **Late 1940s** aerial photograph of Urunao Dumpsites 1 and 2.



Photo 2-3. Location of Seep Samples Downgradient from Urunao Dumpsites 1 and 2 at Falcona Beach.

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			28 May 1997 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS002	06UBS003	06UBS003DUP	06UBS005
						Sample Depth (feet)			
						0.00-0.33	0.00-0.33	0.00-0.33	0.00-0.17
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	<490	<510	<490	<380
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	<490	<510	<490	<380
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	<490	<510	<490	<380
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	<490	<510	<510	<380
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	<90	<92	<92	<70
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	<490	<510	<490	<380
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	---	---	---	---
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	<2.2	<2.3	<2.2	<1.7
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	<2.2	2.9 P	2.3 P	<1.7
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	<2.2	5.9 PJ	<2.2 J	<1.7
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	<4.5	<4.6	<4.5	<3.5
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	<2.2	3.8 P	4 P	3.2 P
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	<4.5	<4.6	<4.5	<3.5
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	5.1	<4.6	<4.5	<3.5
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	<4.5	<4.6	<4.5	<3.5
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	<2.2	3.9	4.1	<1.7
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	<2.2	<2.3	<2.2	<1.7
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	<2.2	<2.3	<2.2	<1.7
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	<2.2	<2.3	<2.2	<1.7
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	<22	<23	<23	<17
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	<4.5	<4.6	<4.5	<3.5
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	<4.5	<4.6	<4.5	<3.5
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	<4.5	<4.6	<4.5	<3.5
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	106,000	30,600	43,300	85,500
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	5.1 BN	2.3 BN	2.1 BN	3.3 BN
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	11.9	3.8	5.3	9.9
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	111	53.6	74.8	121
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	2.6	0.71	1	1.9
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	17.5	11.8	15.8	29.8
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	73,000	298,000 J	175,000 J	161,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	192	57.1	83.8	135
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	27.2	10.1	14.3	24.1
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	24.8	15.2	20.1	26.4
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	82,100	23,500	33,900	63,800
SW6010	LEAD	mg/kg	166	400 nc	750 nc	52.7 E	16.5 E	23.5 E	36.9 E
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	1,970	3,290 J	1,840 J	1,080
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	9,350	6,670	9,080	7,920
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.36 B	1	0.82	0.36 B
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	90.7	37	52.6	78.2
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	336	239	377	256
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	2.8	2.5	3.3	1.8
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	<0.58	6.7 B	3.8 B	1.9 B
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	221	408	446	368
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	2.5 NS	2.6 NS	2.7 NS	2.4 NS
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	21	5.2 BJ	8.8 BJ	19.2
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	175 E	357 E	452 E	402 E
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	<0.33	<0.33	<0.32	<0.25
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			28 May 1997 Sample Identification				15 Sep 1998
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS006	06UBS007	06UBS008	06UBS041	
						Sample Depth (feet)				
						0.00-0.17	0.00-0.17	0.00-0.33	0.17-0.33	
VOLATILE ORGANIC COMPOUNDS										
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---	
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---	
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---	
SEMIVOLATILE ORGANIC COMPOUNDS										
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	<410	130	<450	---	
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	<410	<350	<450	---	
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	<410	<350	<450	---	
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	<410	<350	<450	---	
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	<74	<65	<82	---	
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	<410	<350	<450	---	
POLYCYCLIC AROMATIC HYDROCARBONS										
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	---	---	---	---	
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---	
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---	
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---	
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---	
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---	
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---	
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---	
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---	
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---	
PESTICIDES/PCBs										
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	<1.9	<1.6	<2.1	---	
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	6.1 P	<1.6	<2.1	---	
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	<1.9	<1.6	<2.1	---	
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	5.7	70 DP	<4.1	---	
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	<1.9	2.3 P	<2.1	---	
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	<3.7	41 EP	<4.1	---	
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	6 P	<3.2	6.1 P	---	
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	<3.7	<3.2	<4.1	---	
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	<1.9	<1.6	<2.1	---	
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	<1.9	17 EP	<2.1	---	
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	<1.9	<1.6	<2.1	---	
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	5.1	22 EP	<2.1	---	
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	<19	<16	<21	---	
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	<3.7	140 DP	<4.1	---	
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	5.9 P	1,100 D	6.2 P	---	
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	<3.7	800 DP	<4.1	---	
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---	
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---	
INORGANICS										
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	---	73,200	129,000	---	
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	---	24.8 N	3 BN	---	
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	---	17	6.8	---	
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	---	90.9	44.9	---	
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	---	1.6	0.69	---	
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	---	5.6	5.5	---	
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	151,000	326,000	---	
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	---	472	86.2	---	
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	---	13.9	5.5 B	---	
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	---	194	15.5	---	
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	---	71,100	110,000	---	
SW6010	LEAD	mg/kg	166	400 nc	750 nc	---	257 E	77.4 E	---	
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	2,140	2,390	---	
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	---	1,950	7,100	1,990	
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	---	2.2	0.61 B	---	
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	---	93.8	24.6	---	
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	180	784	---	
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	---	<0.40	1.1	---	
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	---	1.8 B	<0.54	---	
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	171	341	---	
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	---	0.16 NW	0.34 NW	---	
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	---	61.7	8.6 B	---	
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	---	892 E	109 E	---	
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	<0.27	<0.24	0.76	---	
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.				

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			15 Sep 1998 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS042	06UBS043	06UBS044	06UBS045
						Sample Depth (feet)			
						0.17-0.33	0.17-0.33	0.17-0.33	0.17-0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	---	---	---	---
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	---	---	---	---
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	---	---	---	---
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	---	---	---	---
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	---	---	---	---
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	---	---	---	---
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	---
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	---
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	---	---	---	---
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	---	---	---	---
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	---	---	---	---
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	---	---	---	---
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	---	---	---	---
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	---	---	---	---
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	---	---	---	---
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	---	---	---	---
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	---	---	---	---
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	---	---	---	---
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	---	---	---	---
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	---	---	---	---
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	---	---	---	---
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	---	---	---	---
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	---	---	---	---
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	---	---	---	---
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	---	---	---	---
SW6010	LEAD	mg/kg	166	400 nc	750 nc	---	---	---	---
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	1,550	1,950	1,110	1,120
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	---	---	---	---
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	---	---	---	---
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	---	---	---	---
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	---	---	---	---
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	---	---	---	---
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	---	---	---	---
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	---	---	---	---
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			15 Sep 1998 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS046	06UBS047	06UBS048	06UBS049
						Sample Depth (feet)			
						0.17-0.33	0.17-0.33	0.17-0.33	0.17-0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	---	---	---	---
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	---	---	---	---
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	---	---	---	---
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	---	---	---	---
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	---	---	---	---
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	---	---	---	---
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	---
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	---
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	---	---	---	---
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	---	---	---	---
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	---	---	---	---
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	---	---	---	---
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	---	---	---	---
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	---	---	---	---
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	---	---	---	---
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	---	---	---	---
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	---	---	---	---
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	---	---	---	---
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	---	---	---	---
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	---	---	---	---
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	---	---	---	---
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	---	---	---	---
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	---	---	---	---
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	---	---	---	---
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	---	---	---	---
SW6010	LEAD	mg/kg	166	400 nc	750 nc	---	---	---	---
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	4,480	5,470	4,260	9,400
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	---	---	---	---
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	---	---	---	---
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	---	---	---	---
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	---	---	---	---
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	---	---	---	---
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	---	---	---	---
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	---	---	---	---
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			15 Sep 1998 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS050	06UBS050DUP	06UBS052	06UBS052DUP
						Sample Depth (feet)			
						0.17-0.33	0.17-0.33	0.17-0.33	0.17-0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	---	---	---	---
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	---	---	---	---
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	---	---	---	---
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	---	---	---	---
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	---	---	---	---
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	---	---	---	---
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	---
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	---
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	---	---	---	---
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	---	---	---	---
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	---	---	---	---
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	---	---	---	---
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	---	---	---	---
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	---	---	---	---
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	---	---	---	---
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	---	---	---	---
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	---	---	---	---
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	---	---	---	---
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	---	---	---	---
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	---	---	---	---
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	---	---	---	---
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	---	---	---	---
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	---	---	---	---
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	---	---	---	---
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	---	---	---	---
SW6010	LEAD	mg/kg	166	400 nc	750 nc	---	---	---	---
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	3,760	3,800	9,330	10,100
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	---	---	---	---
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	---	---	---	---
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	---	---	---	---
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	---	---	---	---
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	---	---	---	---
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	---	---	---	---
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	---	---	---	---
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			22 Jan 2001 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS075	06UBS076	06UBS078	06UBS079
						Sample Depth (feet)			
						0.08 - 0.33	0.08 - 0.33	0.08 - 0.33	0.08 - 0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	< 650	< 650	< 660	47 J
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	< 650	< 650	< 660	< 660
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 650	< 650	< 660	< 660
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	184 J	< 650	< 660	< 660
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 120	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 650	< 650	< 660	< 660
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	< 10	< 5.0	< 5.0	1.72 J
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	2.93 J	0.73 J	1.89 J	6.38
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	1.14 J	1.41 J	0.64 J	15.32
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	6.56 P	1.93 J	< 2.0	30.45
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	2.35 J	0.95 J	0.52 J	9.42
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	7.2 J	1.75 J	1.77 J	17.31 P
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	< 4.0	1.58 J	< 2.0	5.63 P
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	4.2 J	1.33 J	1.03 J	14.51
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	< 4.0	< 2.0	< 2.0	64.76
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	2.8 J	0.76 J	0.45 J	12.19
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	3.47	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	29.62	< 3.0	< 3.0	25.36
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	3.07	< 3.0	< 3.0	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	2.84	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 15	< 15	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	3.11	66.03 D	< 3.0	501.7 D
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	30.67	< 3.0	136.2 D
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	880.2 D	< 30	11.9 J	704.5 D
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	294.4 D	35.6	< 30	< 30
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	66,800	105,000	88,400	72,500
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	6.6 B	3.9 B	1.6 B	29.7 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	19.9	26.7	15.9	17.1
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	288	84.5 B	36.2 B	333
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	2.1	3.4	3	1.8
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	10.6	7.3	12.1	24.4
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	29,300	52,200	46,200	190,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	575	733	521	413
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	9.3 B	11.9 B	24.4 B	13
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	334	455	27.9 B	299
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	157,000	118,000	90,600	47,700
SW6010	LEAD	mg/kg	166	400 nc	750 nc	265	194	52.3	1,410
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	1,400	1,540	3,460	2,350
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	784	1,530	4,970	1,800
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.56	0.73	1.5	1.3
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	73.8 BN	74.9 BN	115 BN	92.8 N
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	838 BN	< 1000	1,270 N	139 N
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	< 2.5	0.6 BN	< 2.5	0.4 BN
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	< 50	< 50	< 50	2.6 BN
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1000	< 1000	< 1000	112
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	1.5	1.6	2	0.81
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	83.1 B	92.3 B	78.8 B	52.9
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	912	161	49.8	1,110
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			23 Jan 2001 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS081	06UBS085	06UBS087	06UBS087DUP
						Sample Depth (feet)			
						0.08 - 0.25	0.08 - 0.25	0.08 - 0.33	0.08 - 0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUNDS									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	560 J	< 660	< 660	< 660
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	258	< 660	< 660	55.2 J
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	2,450	< 660	< 660	< 660
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	387 J	< 660	< 660	< 660
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 120	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 660
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	10.7 J	< 5.0	< 10	< 10
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	168.7	0.77 J	1.34 J	1.27 J
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	253.5	0.83 J	1.36 J	0.83 J
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	344.4	1.53 J	2.22 J	2.22 J
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	142.5	0.47 J	< 4.1	< 4.1
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	188.6	1.8 J	< 10	< 10
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	48 P	1.6 J	< 4.1	< 4.1
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	193.3	1.27 J	< 14	< 14
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	554.6 P	3.88 P	< 4.1	< 4.1
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	119.8 P	0.67 J	1 J	1 J
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	6.48	< 3.0	< 3.0	< 3.1
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.0	< 3.0	< 3.1
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0	< 3.0	< 3.1
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 3.0	< 3.0	< 3.1
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	8 J	< 15	< 15	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	2.33 J	< 3.0	< 3.0	< 3.1
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	480.9 D	< 3.0	< 3.0	< 3.1
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	122.6 D	< 3.0	< 3.0	< 3.1
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	160.4	< 30	< 30	< 30
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	53	< 30	< 30	< 30
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	90,400	64,200	91,400	102,000
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	85.3 B	0.5 B	0.8 B	1.2 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	10.6	5.2	19.3	29.5
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	218	85.8	124	125
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	2.5	1.8	3	3.2
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	18.2	28	16.7	17.4
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	104,000	162,000	57,000	42,200
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	645	153	327	394
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	16.8 B	16.1	28.2 B	26.5 B
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	604	24.6	22.4 B	25.3 B
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	97,900	38,700	77,800	91,200
SW6010	LEAD	mg/kg	166	400 nc	750 nc	813	33.9	525	509
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	1,630	2,280	2,840	2,950
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	2,270	4,520	4,590	4,700
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.29	0.64	0.59	0.6
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	154 N	65.7 N	109 BN	119 BN
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	1,070 N	366 N	870 BN	945 BN
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	< 2.5	0.87 BN	0.36 BN	0.69 BN
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	< 50	< 5	< 50	< 50
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1,000	389	< 1,000	< 1,000
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	1.1	1.8	2.2	2.6
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	81.8 B	17.1	32.3 B	43.1 B
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	2,040	561	76.4	79
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			31 Jan 2001 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS089	06UBS091	06UBS091DUP	06UBS077
						Sample Depth (feet)			
						0.08 - 0.33	0.08 - 0.25	0.08 - 0.25	2.0 - 2.2
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	< 16
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	< 9.7
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	< 4.9
SEMIVOLATILE ORGANIC COMPOUNDS									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	< 660	92.4 J	246 J	< 650
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	272	< 660	90.1 J	< 650
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	180 J	< 660	< 650
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 660	< 660	< 650
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 120	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	61.2 J	< 650
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	< 25	1.7 J	3 J	< 5.0
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	11	50.66	30.22	< 2.0
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	28.5 P	59.51	45.6	< 2.0
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	29.1	68.7	48.91	< 2.0
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	9 J	30.28	21.63	< 2.0
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	26.6 P	60.9	38.2	< 5.0
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	48.2 P	16.12	17.62	< 2.0
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	11.7 J	75.4	42.9	1.01 J
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	275.5 P	151.71 P	139.58 P	1.2 J
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	17.5 J	68.3	40.8	0.44 J
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 7.5	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 7.5	< 1.5	< 1.5
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 1.5	< 7.6	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	4.88	32.5	18.81	< 3.0
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 7.5	1.51	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 15	< 3.0	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 15	< 3.0	< 3.0
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 15	< 3.0	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 7.5	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 7.5	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 7.5	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 7.6	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 75	< 15	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	12.8 J	< 3.0	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	327 D	749.9 D	235.6 D	7.64
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	99.4 D	423.7 D	123.4 D	4.05
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	156	709.2 D	523.3 D	< 30
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	95.7	97	94	< 30
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	68,500	51,900	62,400	127,000
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	186 B	20.4 B	28.3 B	1.7 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	8.7	13.1	6.4	25.9
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	131	206	223	33 B
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	2.1	1.4	1.7	4.7
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	27.4	19	22.2	10.2
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	134,000	126,000	162,000	9,400
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	394	324	454	809
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	20.1 B	16.8 B	16.3 B	22 B
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	2460	296	319	34.2 B
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	106,000	96,900	113,000	116,000
SW6010	LEAD	mg/kg	166	400 nc	750 nc	53,400	754	1,760	86.2
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	2,540	1,490	2,020	1,050
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	2,510	1,530	1,790	3,520
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.22	1.1	1.2	1.8
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	89 B	111 B	130 B	144 BN
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1,000	< 1,000	< 1,000	< 1,000
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	0.72 B	0.47 B	< 2.5	< 2.5
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	6.6 B	4.6 B	9.6 B	< 50
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1,000	< 1,000	< 1,000	< 1,000
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	0.51	0.5	0.43	1.6
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	50.3 B	42.8 B	60.6 B	90.5 B
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	1,140	805	1270	150
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			22 Jan 2001	23 Jan 2001 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS080	06UBS082	06UBS083	06UBS084	
						Sample Depth (feet)				
						2.0 - 2.5	2.2 - 2.3	2.0 - 2.3	2.0 - 2.3	
VOLATILE ORGANIC COMPOUNDS										
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	< 17	< 17	< 17	< 17	
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	< 10	< 10	< 10	< 10	
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	< 5.0	< 5.0	< 5.0	< 5.0	
SEMIVOLATILE ORGANIC COMPOUNDS										
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	< 660	< 660	< 660	< 650	
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	65.6 J	< 660	< 650	
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	61.7 J	< 660	< 650	
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 660	< 660	< 650	
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 120	< 120	< 120	
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 650	
POLYCYCLIC AROMATIC HYDROCARBONS										
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	< 5.0	< 50	< 5.0	< 5.0	
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	< 2.0	6.6 J	< 2.0	< 2.0	
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	< 2.0	12 J	< 2.0	< 2.0	
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 2.0	23.1 P	< 2.0	< 2.0	
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	< 2.0	10.1 J	< 2.0	< 2.0	
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	1.02 J	46.7 J	0.91 J	0.82 J	
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	< 2.0	< 20	< 2.0	< 2.0	
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	< 7.0	14.7 J	< 7.0	< 7.0	
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	1.94 J	< 20	< 2.0	< 2.0	
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	0.49 J	9.2 J	0.44 J	0.39 J	
PESTICIDES/PCBs										
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	3.29	6.85	< 3.0	< 3.0	
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.0	< 3.0	< 3.0	
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0	< 3.0	< 3.0	
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	8.1 DJ	< 3.0	< 3.0	
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5	< 1.5	< 1.5	
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 15	< 15	< 15	
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	4.18	< 3.0	< 3.0	
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	15.36	198.5 D	0.4 J	< 3.0	
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	1.98 J	212.4 D	0.79 J	< 3.0	
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	79	191.2	< 30	< 30	
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	< 30	64.3	< 30	< 30	
INORGANICS										
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	83,300	67,800	113,000	6,140	
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	40.6 B	257 B	0.7 B	< 15	
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	7.5	20.1	11.9	0.69 B	
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	135	154	142	8 B	
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	2.4	2	3.3	0.19	
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	7.4	14.1	33.9	1.7	
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	201,000	116,000	114,000	366,000	
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	497	445	184	12.5	
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	15.1	23.1 B	32.7 B	1.6 B	
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	493	1260	42 B	2.8 B	
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	69,200	153,000	75,400	3,690	
SW6010	LEAD	mg/kg	166	400 nc	750 nc	695	1,020	53.3	2.9 B	
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	2,850	2,060	1,210	3,700	
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	2,240	1,990	6,420	296	
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.19	0.2	0.66	0.08	
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	116 N	152 N	124 BN	5.3 BN	
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	81.5 BN	< 1,000	889 BN	81.8 BN	
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	< 2.5	< 2.5	0.37 BN	< 2.5	
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	< 5	< 50	< 50	< 5	
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	116	< 1,000	< 1,000	80 B	
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	0.84	0.84	1.9	0.17 B	
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	89.3	58.2 B	29.8 B	2 B	
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	247	2,200	297	11.3	
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---	
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.				

**TABLE 2-4. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 2, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			23 Jan 2001	31 Jan 2001
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS086	06UBS090
						Sample Depth (feet)	
						2.0 - 2.3	2.7 - 2.9
VOLATILE ORGANIC COMPOUNDS							
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	< 17	102
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	< 10	57.5
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	< 5.0	1.2 J
SEMIVOLATILE ORGANIC COMPOUNDS							
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2900 ca	< 660	< 660
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	< 660
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 660
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660
POLYCYCLIC AROMATIC HYDROCARBONS							
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	##### max	< 5.0	14.6 J
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	0.5 J	234.82
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	0.34 J	278.09
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 2.0	261.84
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	0.45 J	141.57
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	0.97 J	235.7
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	< 2.0	65.75
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	1.15 J	251.7
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	1.29 J	432.58
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	0.56 J	219.5
PESTICIDES/PCBs							
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5
SW8081	ALPHA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 3.0	< 3.0
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	1.3 J
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	4.33
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	2.34 J
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	< 30	8.4 J
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	< 30	7.4 J
INORGANICS							
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	71,700	32,500
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	0.4 B	13.4 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	6.5	7.9
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	141	224
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	2	0.98
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	34.5	11.3
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	177,000	201,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	86.1	189
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	24.5	11
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	37.3	109
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	42,700	45,100
SW6010	LEAD	mg/kg	166	400 nc	750 nc	38.9	345
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	914	1,850
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	11,900	3,670
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	1.3	0.61
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	86.1 N	78.7
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	351 N	193
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	0.42 BN	0.35 B
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	< 5	1.1 B
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	347	354
SW7841	THALLIUM	mg/kg	1.42	5.2 nc	130 nc	2.1	1.1
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	18.3	21.9
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	935	325
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions.ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002)	
						Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.	

**TABLE 2-3. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR DIOXINS AND EXPLOSIVES
AT URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method						11 February 1998 Sample Identification								13 September 1998 Sample Identification											
						06UBS014				06UBS015				06UBS015DUP				06UBS017			06UBS018				
						Screening Basis					Sample Depth (feet)														
						WHO TEFs	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	0.17-0.33		0.17-0.33		0.17-0.33		0.17-0.33		0.17-0.33								
	Conc	TEQ	Conc	TEQ	Conc				TEQ	Conc	TEQ	Conc	TEQ												
SW8290	2,3,7,8-TCDD	ng/kg	1	3.90 ca	27.33 ca	0.33	J	0.33	0.35	J	0.35	0.72	J	0.72	<0.6	0.30	0.66	J	0.66						
SW8290	1,2,3,7,8-PeCDD	ng/kg	1			1.2	J	1.2	1.1	J	1.1	9.8		9.8	3.3		3.3	3.6	J	3.6					
SW8290	1,2,3,4,7,8-HxCDD	ng/kg	0.1			2.2	J	0.22	2.1	J	0.21	44.9		4.49	4.1	J	0.41	6.4		0.64					
SW8290	1,2,3,6,7,8-HxCDD	ng/kg	0.1			8.5		0.85	8.3		0.83	367		36.7	12.3		1.23	33.5		3.35					
SW8290	1,2,3,7,8,9-HxCDD	ng/kg	0.1			7.4		0.74	7.3		0.73	148		14.8	10.3		1.03	24.2		2.42					
SW8290	1,2,3,4,6,7,8-HpCDD	ng/kg	0.01			251		2.51	238		2.38	15,420	E	154.2	255		2.55	1,450		14.5					
SW8290	1,2,3,4,6,7,8,9-OCDD	ng/kg	0.0001			2,190		0.219	1,820		0.182	65,920	E	6.592	1,280		0.128	14,710	J	1.471					
TOTAL PCDD (TEQ)				N/A	N/A	6.07		5.78		227.30		8.95		26.64											
SW8290	2,3,7,8-TCDF	ng/kg	0.1			1.2		0.12	1.5		0.15	5.6		0.56	3.8		0.38	0.7		0.07					
SW8290	1,2,3,7,8-PeCDF	ng/kg	0.05			0.64	J	0.032	0.61	J	0.0305	3	J	0.15	2.5	J	0.125	0.42	J	0.021					
SW8290	2,3,4,7,8-PeCDF	ng/kg	0.5			0.72	J	0.36	0.52	J	0.26	5.1		2.55	3.3	J	1.65	0.54	J	0.27					
SW8290	1,2,3,4,7,8-HxCDF	ng/kg	0.1			2.8	J	0.28	2.4	J	0.24	27.6		2.76	8		0.8	2.8	J	0.28					
SW8290	1,2,3,6,7,8-HxCDF	ng/kg	0.1			1.1	J	0.11	0.98	J	0.098	17.7		1.77	5.1		0.51	2	J	0.2					
SW8290	2,3,4,6,7,8-HxCDF	ng/kg	0.1			3	J	0.3	2.8	J	0.28	52.5		5.25	12.2		1.22	5.5		0.55					
SW8290	1,2,3,7,8,9-HxCDF	ng/kg	0.1			1.3	XJ	0.13	0.95	J	0.095	5.3	X	0.53	<1.9		0.095	<0.1		0.005					
SW8290	1,2,3,4,6,7,8-HpCDF	ng/kg	0.01			91.4		0.914	97.4		0.974	1,550		15.5	597		5.97	317		3.17					
SW8290	1,2,3,4,7,8,9-HpCDF	ng/kg	0.01			1.8	J	0.018	1.6	J	0.016	54.4		0.544	3.2	J	0.032	10		0.1					
SW8290	1,2,3,4,6,7,8,9-OCDF	ng/kg	0.0001			215		0.0215	190		0.019	5,320		0.532	177		0.0177	953		0.0953					
TOTAL PCDF (TEQ)				N/A	N/A	2.29		2.16		30.15		10.80		4.76											
TOTAL TEQs (WHO)		ng/kg	38	3.90 ca	27.33 ca	8.35		7.94		257.45		19.75		31.40											
SW8290	TOTAL TCDD	ng/kg	N/A			1.9		2.5		16.6		6.9		2.4											
SW8290	TOTAL PeCDD	ng/kg	N/A			5.8		3.3		288		16.7		18.4											
SW8290	TOTAL HxCDD	ng/kg	N/A			65.5		70.3		4,140		130		269											
SW8290	TOTAL HpCDD	ng/kg	N/A			407		394		26,740		510		2620											
SW8290	TOTAL TCDF	ng/kg	N/A			4.9		4.8		66.7		35.9		4.5											
SW8290	TOTAL PeCDF	ng/kg	N/A			14.7		13.6		180		86.6		9.7											
SW8290	TOTAL HxCDF	ng/kg	N/A			84.9		97		1,690		431		228											
SW8290	TOTAL HpCDF	ng/kg	N/A			210		217		4,820		890		1140											
SW8330	EXPLOSIVES	mg/kg	N/A			--		--		--		--		--											
Note: WHO = World Health Organization, 1998 Symposium in Stockholm; TEQ = Toxicity Equivalence Quotient; PRG = Preliminary Remediation Goal; TEF = Toxicity Equivalence Factor; N/A = Not Applicable; -- = Not analyzed for; ng/kg = nanograms per kilogram; mg/kg = milligrams per kilogram. USEPA IX = U.S. Environment Protection Agency, Region IX; ca = carcinogen																Qualifiers: J = Estimated Value; E = Estimated value based on matrix interferences; X = Total diphenylether includes > 10% of the total polychlorodibenzofuran. Bold = Concentrations equal or exceed the Residential PRGs. Bold and Shaded = Concentrations equal or exceed the industrial PRGs.									

**TABLE 2-3. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR DIOXINS AND EXPLOSIVES
AT URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analytes	Units	Screening Basis			13 September 1998 Sample Identification									
			WHO TEFs	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS019		06UBS020		06UBS020DUP		06UBS022		06UBS023	
						Sample Depth (feet)									
						0.17-0.33		0.17-0.33		0.17-0.33		0.17-0.33		0.17-0.33	
Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ				
SW8290	2,3,7,8-TCDD	ng/kg	1	3.90 ca	27.33 ca	0.77	J 0.77	2.6	2.6	2.5	J 2.5	<0.6	0.3	<1	0.5
SW8290	1,2,3,7,8-PeCDD	ng/kg	1			5.3	5.3	10.5	10.5	11.1	11.1	<0.5	0.25	<0.9	0.45
SW8290	1,2,3,4,7,8-HxCDD	ng/kg	0.1			8.4	0.84	12.4	1.24	12.5	1.25	<0.8	0.04	0.8	J 0.08
SW8290	1,2,3,6,7,8-HxCDD	ng/kg	0.1			26.1	2.61	37.4	3.74	40.1	4.01	0.88	J 0.088	4.5	J 0.45
SW8290	1,2,3,7,8,9-HxCDD	ng/kg	0.1			21.6	2.16	31.1	3.11	39.6	3.96	1.3	J 0.13	2.5	J 0.25
SW8290	1,2,3,4,6,7,8-HpCDD	ng/kg	0.01			1030	10.3	776	7.76	856	8.56	18.1	0.181	112	1.12
SW8290	1,2,3,4,6,7,8,9-OCDD	ng/kg	0.0001			13870	E 1.387	5,200	E 0.52	6030	E 0.603	87.2	0.00872	1010	0.101
TOTAL PCDD (TEQ)				N/A	N/A	23.37		29.47		31.98		1.00		2.95	
SW8290	2,3,7,8-TCDF	ng/kg	0.1			14.7	1.47	10.2	1.02	9.9	0.99	<0.4	0.02	<0.7	0.035
SW8290	1,2,3,7,8-PeCDF	ng/kg	0.05			8.7	0.435	2.6	J 0.13	1.9	J 0.095	<0.5	0.0125	<0.8	0.02
SW8290	2,3,4,7,8-PeCDF	ng/kg	0.5			8.7	4.35	3.7	J 1.85	3.9	J 1.95	<0.5	0.125	0.68	J 0.34
SW8290	1,2,3,4,7,8-HxCDF	ng/kg	0.1			11.9	1.19	8.1	0.81	8.2	J 0.82	<0.5	0.025	1.3	J 0.13
SW8290	1,2,3,6,7,8-HxCDF	ng/kg	0.1			5.8	0.58	6.3	0.63	10.5	1.05	<0.5	0.025	0.92	J 0.092
SW8290	2,3,4,6,7,8-HxCDF	ng/kg	0.1			8.6	0.86	11	1.1	17.3	J 1.73	<0.6	0.03	2.1	J 0.21
SW8290	1,2,3,7,8,9-HxCDF	ng/kg	0.1			0.47	J 0.047	<0.2	0.01	<2.6	0.13	<0.6	0.03	<0.9	0.045
SW8290	1,2,3,4,6,7,8-HpCDF	ng/kg	0.01			227	2.27	312	3.12	373	3.73	5.6	0.056	54.1	0.541
SW8290	1,2,3,4,7,8,9-HpCDF	ng/kg	0.01			4.8	J 0.048	6.6	0.066	<3.8	0.019	<0.9	0.0045	1.3	J 0.013
SW8290	1,2,3,4,6,7,8,9-OCDF	ng/kg	0.0001			483	0.0483	350	0.035	449	0.0449	8.2	J 0.00082	90.5	0.00905
TOTAL PCDF (TEQ)				N/A	N/A	11.30		8.77		10.56		0.33		1.44	
TOTAL TEQs (WHO)		ng/kg	38	3.90 ca	27.33 ca	34.67		38.24		42.54		1.33		4.39	
SW8290	TOTAL TCDD	ng/kg	N/A			19.7		16.7		9.6		<0.6		<1	
SW8290	TOTAL PeCDD	ng/kg	N/A			55.3		57.2		67.7		<0.5		1.4	
SW8290	TOTAL HxCDD	ng/kg	N/A			286		445		396		<0.7		27.2	
SW8290	TOTAL HpCDD	ng/kg	N/A			2210		1670		1780		<0.8		194	
SW8290	TOTAL TCDF	ng/kg	N/A			129		70		35.8		0.59		<0.7	
SW8290	TOTAL PeCDF	ng/kg	N/A			93		67.4		59.3		<0.5		1.8	
SW8290	TOTAL HxCDF	ng/kg	N/A			208		319		323		2.2		42.8	
SW8290	TOTAL HpCDF	ng/kg	N/A			661		635		730		11.5		127	
SW8330	EXPLOSIVES	mg/kq	N/A			--		--		--		--		--	
Note: WHO = World Health Organization, 1998 Symposium in Stockholm; TEQ = Toxicity Equivalence Quotient; PRG = Preliminary Remediation Goal; TEF = Toxicity Equivalence Factor; N/A = Not Applicable; -- = Not analyzed for; ng/kg = nanograms per kilogram; mg/kg = milligrams per kilogram. USEPA IX = U.S. Environment Protection Agency, Region IX; ca = carcinogen						Qualifiers: J = Estimated Value; E = Estimated value based on matrix interferences; X = Total diphenylether includes > 10% of the total polychlorodibenzofuran. Bold = Concentrations equal or exceed the Residential PRGs. Bold and Shaded = Concentrations equal or exceed the industrial PRGs.									

**TABLE 2-3. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR DIOXINS AND EXPLOSIVES
AT URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analytes	Units	Screening Basis			13 September 1998 Sample Identification														
			WHO TEFs	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS024		06UBS025		06UBS026		06UBS027		06UBS028						
						Sample Depth (feet)														
						0.17-0.33		0.17-0.33		0.17-0.33		0.17-0.33		0.17-0.33						
Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ							
SW8290	2,3,7,8-TCDD	ng/kg	1	3.90 ca	27.33 ca	<0.4	0.2	<0.6	0.3	0.16	J	0.16	<0.4	0.2	<0.2	0.1				
SW8290	1,2,3,7,8-PeCDD	ng/kg	1			0.83	0.83	<0.5	0.25	0.36	J	0.36	<0.4	0.2	<0.2	0.1				
SW8290	1,2,3,4,7,8-HxCDD	ng/kg	0.1			1.9	J	0.19	<0.8	0.04	0.49	J	0.049	<0.3	0.015	<0.5	0.025			
SW8290	1,2,3,6,7,8-HxCDD	ng/kg	0.1			8.9	J	0.89	<0.8	0.04	1.2	J	0.12	1.7	J	0.17	<0.5	0.025		
SW8290	1,2,3,7,8,9-HxCDD	ng/kg	0.1			6		0.6	3.1	J	0.31	2.7	J	0.27	5.9		0.59	<0.5	0.025	
SW8290	1,2,3,4,6,7,8-HpCDD	ng/kg	0.01			261		2.61	51.5		0.515	21.1		0.211	23.8		0.238	8.5	0.085	
SW8290	1,2,3,4,6,7,8,9-OCDD	ng/kg	0.0001			1550		0.155	275		0.0275	90		0.009	82.3		0.00823	30.6	0.00306	
TOTAL PCDD (TEQ)				N/A	N/A	5.48		1.48		1.18		1.42		0.36						
SW8290	2,3,7,8-TCDF	ng/kg	0.1			2.5	0.25	<0.4	0.02	0.48	J	0.048	<0.2	0.01	0.18	J	0.018			
SW8290	1,2,3,7,8-PeCDF	ng/kg	0.05			0.88	0.044	<0.5	0.0125	0.3	J	0.015	0.5	J	0.025	<0.2	0.005			
SW8290	2,3,4,7,8-PeCDF	ng/kg	0.5			0.99	0.495	<0.5	0.125	0.25	J	0.125	0.4	J	0.2	<0.2	0.05			
SW8290	1,2,3,4,7,8-HxCDF	ng/kg	0.1			3.4	J	0.34	<0.5	0.025	0.94	J	0.094	1.8	J	0.18	<0.3	0.015		
SW8290	1,2,3,6,7,8-HxCDF	ng/kg	0.1			1.7		0.17	<0.5	0.025	0.43	J	0.043	0.98	J	0.098	<0.3	0.015		
SW8290	2,3,4,6,7,8-HxCDF	ng/kg	0.1			5		0.5	<0.6	0.03	0.82	J	0.082	0.93	J	0.093	<0.3	0.015		
SW8290	1,2,3,7,8,9-HxCDF	ng/kg	0.1			<0.7		0.035	<0.7	0.035	<0.1		0.005	<0.2		0.01	<0.4	0.02		
SW8290	1,2,3,4,6,7,8-HpCDF	ng/kg	0.01			330		3.3	9.5		0.095	12.9		0.129	11.9		0.119	4.4	J	0.044
SW8290	1,2,3,4,7,8,9-HpCDF	ng/kg	0.01			1.6	J	0.016	<0.9	0.0045	0.28	J	0.0028	0.38	J	0.0038	<0.3	0.0015		
SW8290	1,2,3,4,6,7,8,9-OCDF	ng/kg	0.0001			167		0.0167	13		0.0013	4.9	J	0.00049	6.8	J	0.00068	4.2	J	0.00042
TOTAL PCDF (TEQ)				N/A	N/A	5.17		0.37		0.54		0.74		0.18						
TOTAL TEQs (WHO)		ng/kg	38	3.90 ca	27.33 ca	10.64		1.86		1.72		2.16		0.55						
SW8290	TOTAL TCDD	ng/kg	N/A			1.7		<0.6		0.38		0.88		<0.2						
SW8290	TOTAL PeCDD	ng/kg	N/A			4.1		<0.5		0.31		4.5		<0.2						
SW8290	TOTAL HxCDD	ng/kg	N/A			58.8		5.9		16.4		32.1		6						
SW8290	TOTAL HpCDD	ng/kg	N/A			434		88.1		43.9		61.7		16.4						
SW8290	TOTAL TCDF	ng/kg	N/A			8.8		<0.4		1.6		0.38		0.52						
SW8290	TOTAL PeCDF	ng/kg	N/A			24.3		1.9		1.7		0.5		<0.2						
SW8290	TOTAL HxCDF	ng/kg	N/A			241		6		12.3		8.4		3.6						
SW8290	TOTAL HpCDF	ng/kg	N/A			508		19.4		19.1		12.3		4.4						
SW8330	EXPLOSIVES	mg/kg	N/A			--		--		--		--		--		--		--		
Note: WHO = World Health Organization, 1998 Symposium in Stockholm; TEQ = Toxicity Equivalence Quotient; PRG = Preliminary Remediation Goal; TEF = Toxicity Equivalence Factor; N/A = Not Applicable; -- = Not analyzed for; ng/kg = nanograms per kilogram; mg/kg = milligrams per kilogram. USEPA IX = U.S. Environment Protection Agency, Region IX; ca = carcinogen Qualifiers: J = Estimated Value; E = Estimated value based on matrix interferences; X = Total diphenylether includes > 10% of the total polychlorodibenzofuran. Bold = Concentrations equal or exceed the Residential PRGs. Bold and Shaded = Concentrations equal or exceed the industrial PRGs.																				

**TABLE 2-3. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR DIOXINS AND EXPLOSIVES
AT URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analytes	Units				13 September 1998 Sample Identification				15 Jan 2001 Sample Identification					
						06UBS029		06UBS029DUP		06UBS058		06UBS059		06UBS060	
			Screening Basis			Sample Depth (feet)									
			WHO TEFs	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	0.17-0.33		0.17-0.33		0.08 - 0.50		0.08 - 0.33		0.08 - 0.50	
						Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ
SW8290	2,3,7,8-TCDD	ng/kg	1	3.90 ca	27.33 ca	<0.2	0.1	<0.1	0.05	< 0.24	0.12	< 0.22	0.11	< 0.25	0.125
SW8290	1,2,3,7,8-PeCDD	ng/kg	1			<0.2	0.1	<0.2	0.1	< 0.3	0.15	< 0.39	0.195	< 0.44	0.22
SW8290	1,2,3,4,7,8-HxCDD	ng/kg	0.1			<0.2	0.01	<0.3	0.015	< 0.2	0.01	< 0.24	0.012	< 0.25	0.0125
SW8290	1,2,3,6,7,8-HxCDD	ng/kg	0.1			<0.2	0.01	<0.3	0.015	< 0.2	0.01	< 0.44	0.022	< 0.78	0.039
SW8290	1,2,3,7,8,9-HxCDD	ng/kg	0.1			<0.2	0.01	1.3	J 0.13	< 0.46	0.023	< 1.8	0.09	< 2.4	0.12
SW8290	1,2,3,4,6,7,8-HpCDD	ng/kg	0.01			12.8	0.128	11.8	0.118	< 2.6	0.013	9.7	0.097	13	0.13
SW8290	1,2,3,4,6,7,8,9-OCDD	ng/kg	0.0001			68.3	0.00683	67.1	0.00671	45	0.0045	110	0.011	72	0.0072
TOTAL PCDD (TEQ)				N/A	N/A	0.36		0.43		0.33		0.54		0.65	
SW8290	2,3,7,8-TCDF	ng/kg	0.1			<0.2	0.01	0.26	J 0.026	< 0.36	0.018	< 0.26	0.013	< 0.25	0.0125
SW8290	1,2,3,7,8-PeCDF	ng/kg	0.05			<0.2	0.005	<0.1	0.0025	< 0.24	0.006	< 0.26	0.0065	< 0.29	0.00725
SW8290	2,3,4,7,8-PeCDF	ng/kg	0.5			<0.2	0.05	<0.1	0.025	< 0.24	0.06	< 0.24	0.06	< 0.27	0.0675
SW8290	1,2,3,4,7,8-HxCDF	ng/kg	0.1			<0.1	0.01	0.55	J 0.055	< 0.32	0.016	< 0.22	0.011	< 0.71	0.0355
SW8290	1,2,3,6,7,8-HxCDF	ng/kg	0.1			<0.1	0.01	0.29	J 0.029	< 0.14	0.007	< 0.17	0.0085	< 0.32	0.016
SW8290	2,3,4,6,7,8-HxCDF	ng/kg	0.1			<0.2	0.01	0.48	J 0.048	< 0.15	0.0075	< 0.28	0.014	< 0.38	0.019
SW8290	1,2,3,7,8,9-HxCDF	ng/kg	0.1			<0.2	0.01	<0.2	0.01	< 0.17	0.0085	< 0.22	0.011	< 0.23	0.0115
SW8290	1,2,3,4,6,7,8-HpCDF	ng/kg	0.01			12.2	0.122	10.8	0.108	< 0.8	0.004	< 4.5	0.0225	5.6	J 0.056
SW8290	1,2,3,4,7,8,9-HpCDF	ng/kg	0.01			<0.3	0.0015	<0.3	0.0015	< 0.13	0.00065	< 0.16	0.0008	< 0.17	0.00085
SW8290	1,2,3,4,6,7,8,9-OCDF	ng/kg	0.0001			9.3	J 0.00093	19	0.0019	< 1	0.00005	< 6.2	0.00031	< 3.1	0.000155
TOTAL PCDF (TEQ)				N/A	N/A	0.23		0.31		0.13		0.15		0.23	
TOTAL TEQs (WHO)		ng/kg	38	3.90 ca	27.33 ca	0.59		0.74		0.46		0.68		0.88	
SW8290	TOTAL TCDD	ng/kg	N/A			0.56		0.48		2.9		4.2		5.8	
SW8290	TOTAL PeCDD	ng/kg	N/A			<0.2		<0.2		< 0.3		< 0.39		< 0.44	
SW8290	TOTAL HxCDD	ng/kg	N/A			6.2		6.2		< 1.6		< 2.2		< 4	
SW8290	TOTAL HpCDD	ng/kg	N/A			27.4		24		5.7		22		27	
SW8290	TOTAL TCDF	ng/kg	N/A			<0.1		0.16		< 0.36		< 0.26		< 0.36	
SW8290	TOTAL PeCDF	ng/kg	N/A			<0.2		0.81 J		< 0.39		< 0.26		< 0.59	
SW8290	TOTAL HxCDF	ng/kg	N/A			8.1		7.1		< 0.49		< 1.3		< 1.6	
SW8290	TOTAL HpCDF	ng/kg	N/A			20.2		18.5		< 0.8		< 4.5		5.6	
SW8330	EXPLOSIVES	mg/kg	N/A			--		--		ND		--		--	
Note: WHO = World Health Organization, 1998 Symposium in Stockholm; TEQ = Toxicity Equivalence Quotient; PRG = Preliminary Remediation Goal; TEF = Toxicity Equivalence Factor; N/A = Not Applicable; -- = Not analyzed for; ng/kg = nanograms per kilogram; mg/kg = milligrams per kilogram. USEPA IX = U.S. Environment Protection Agency, Region IX; ca = carcinogen Qualifiers: J = Estimated Value; E = Estimated value based on matrix interferences; X = Total diphenylether includes > 10% of the total polychlorodibenzofuran. Bold = Concentrations equal or exceed the Residential PRGs. Bold and Shaded = Concentrations equal or exceed the industrial PRGs.															

**TABLE 2-3. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR DIOXINS AND EXPLOSIVES
AT URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analytes	Units	Screening Basis			16 Jan 2001 Sample Identification							
			WHO TEFs	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS064		06UBS062		06UBS063		06UBS063 DUP	
						Sample Depth (feet)							
						0.08 - 0.25		0.08 - 0.25		0.25 - 0.50		0.25 - 0.50	
Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ						
SW8290	2,3,7,8-TCDD	ng/kg	1	3.90 ca	27.33 ca	1.1 J	1.1	4.9	4.9	< 0.17	0.085	< 0.24	0.12
SW8290	1,2,3,7,8-PeCDD	ng/kg	1			3.9 J	3.9	18	18	< 0.39	0.195	< 0.61	0.305
SW8290	1,2,3,4,7,8-HxCDD	ng/kg	0.1			3.7 J	0.37	16	1.6	< 0.92	0.046	< 0.71	0.0355
SW8290	1,2,3,6,7,8-HxCDD	ng/kg	0.1			17	1.7	50	5	4.5 J	0.45	4.7 J	0.47
SW8290	1,2,3,7,8,9-HxCDD	ng/kg	0.1			15	1.5	37	3.7	9.7	0.97	9.6	0.96
SW8290	1,2,3,4,6,7,8-HpCDD	ng/kg	0.01			400	4	700	7	180	1.8	170	1.7
SW8290	1,2,3,4,6,7,8,9-OCDD	ng/kg	0.0001			3100	0.31	4600 E	0.46	2000	0.2	1900	0.19
TOTAL PCDD (TEQ)				N/A	N/A	12.88		40.66		3.75		3.78	
SW8290	2,3,7,8-TCDF	ng/kg	0.1			2.3	0.23	67	6.7	< 0.64	0.032	< 0.55	0.0275
SW8290	1,2,3,7,8-PeCDF	ng/kg	0.05					50	2.5	< 0.74	0.0185	< 0.3	0.0075
SW8290	2,3,4,7,8-PeCDF	ng/kg	0.5					58	29	< 1	0.25	< 0.32	0.08
SW8290	1,2,3,4,7,8-HxCDF	ng/kg	0.1			4.6 J	0.46	46	4.6	4 J	0.4	< 1.2	0.06
SW8290	1,2,3,6,7,8-HxCDF	ng/kg	0.1			5.2 J	0.52	47	4.7	< 1.6	0.08	< 1.1	0.055
SW8290	2,3,4,6,7,8-HxCDF	ng/kg	0.1			4.7 J	0.47	60	6	< 3	0.15	< 1.4	0.07
SW8290	1,2,3,7,8,9-HxCDF	ng/kg	0.1					3.2 J	0.32	< 0.76	0.038	< 0.25	0.0125
SW8290	1,2,3,4,6,7,8-HpCDF	ng/kg	0.01			170	1.7	550	5.5	57	0.57	45	0.45
SW8290	1,2,3,4,7,8,9-HpCDF	ng/kg	0.01			4.5 J	0.045	22	0.22	< 2.1	0.0105	< 1.4	0.007
SW8290	1,2,3,4,6,7,8,9-OCDF	ng/kg	0.0001			280	0.028	320	0.032	110	0.011	86	0.0086
TOTAL PCDF (TEQ)				N/A	N/A	3.45		59.57		1.56		0.78	
TOTAL TEQs (WHO)		ng/kg	38	3.90 ca	27.33 ca	16.33		100.23		5.31		4.56	
SW8290	TOTAL TCDD	ng/kg	N/A			8.6		95		3.3		2.5	
SW8290	TOTAL PeCDD	ng/kg	N/A			7		120		< 1.3		< 0.86	
SW8290	TOTAL HxCDD	ng/kg	N/A			110		410		36		34	
SW8290	TOTAL HpCDD	ng/kg	N/A			730		1300		320		310	
SW8290	TOTAL TCDF	ng/kg	N/A			20		910		1.7		0.88	
SW8290	TOTAL PeCDF	ng/kg	N/A			12		660		< 2.6		< 1.1	
SW8290	TOTAL HxCDF	ng/kg	N/A			100		640		39		26	
SW8290	TOTAL HpCDF	ng/kg	N/A			390		940		130		110	
SW8330	EXPLOSIVES	mq/kg	N/A			ND --		ND --		ND --		ND --	
Note: WHO = World Health Organization, 1998 Symposium in Stockholm; TEQ = Toxicity Equivalence Quotient; PRG = Preliminary Remediation Goal; TEF = Toxicity Equivalence Factor; N/A = Not Applicable; -- = Not analyzed for; ng/kg = nanograms per kilogram; mg/kg = milligrams per kilogram. USEPA IX = U.S. Environment Protection Agency, Region IX; ca = carcinogen Qualifiers: J = Estimated Value; E = Estimated value based on matrix interferences; X = Total diphenylether includes > 10% of the total polychlorodibenzofuran. Bold = Concentrations equal or exceed the Residential PRGs. Bold and Shaded = Concentrations equal or exceed the industrial PRGs.													

**TABLE 2-3. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR DIOXINS AND EXPLOSIVES
AT URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analytes	Units				16 Jan 2001 Sample Identification		18 Jan 2001 Sample Identification						
						06UBS061		06UBS069		06UBS069 DUP		06UBS072		06UBS055
			Screening Basis			Sample Depth (feet)								
			WHO TEFs	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	2.00 - 2.20		2.00 - 2.20		2.00 - 2.20		0.08 - 0.42		0.08 - 0.42
						Conc	TEQ	Conc	TEQ	Conc	TEQ	Conc	TEQ	
SW8290	2,3,7,8-TCDD	ng/kg	1	3.90 ca	27.33 ca	< 0.17	0.085	4.1	4.1	5.2	5.2	17	17	--
SW8290	1,2,3,7,8-PeCDD	ng/kg	1			< 0.32	0.16	24	24	28	28	89	89	--
SW8290	1,2,3,4,7,8-HxCDD	ng/kg	0.1			< 0.53	0.0265	38	3.8	38	3.8	89	8.9	--
SW8290	1,2,3,6,7,8-HxCDD	ng/kg	0.1			< 0.93	0.0465	190	19	200	20	200	20	--
SW8290	1,2,3,7,8,9-HxCDD	ng/kg	0.1			< 1.9	0.095	120	12	120	12	150	15	--
SW8290	1,2,3,4,6,7,8-HpCDD	ng/kg	0.01			17	0.17	4700 E	47	5000 E	50	2100	21	--
SW8290	1,2,3,4,6,7,8,9-OCDD	ng/kg	0.0001			82	0.0082	23000 E	2.3	24000 E	2.4	11000 E	1.1	--
TOTAL PCDD (TEQ)				N/A	N/A	0.59		112.20		121.40		172.00		
SW8290	2,3,7,8-TCDF	ng/kg	0.1	N/A	N/A	< 0.53	0.0265	19	1.9	24	2.4	410	41	--
SW8290	1,2,3,7,8-PeCDF	ng/kg	0.05			< 0.63	0.01575	6.8	0.34	8.5	0.425	210	10.5	--
SW8290	2,3,4,7,8-PeCDF	ng/kg	0.5			< 0.71	0.1775	9.7	4.85	11	5.5	330	165	--
SW8290	1,2,3,4,7,8-HxCDF	ng/kg	0.1			< 1.9	0.095	17	1.7	18	1.8	290	29	--
SW8290	1,2,3,6,7,8-HxCDF	ng/kg	0.1			< 1.1	0.055	14	1.4	15	1.5	280	28	--
SW8290	2,3,4,6,7,8-HxCDF	ng/kg	0.1			< 1.1	0.055	23	2.3	24	2.4	390	39	--
SW8290	1,2,3,7,8,9-HxCDF	ng/kg	0.1			< 0.25	0.0125	< 0.53	0.0265	< 0.74	0.037	13	1.3	--
SW8290	1,2,3,4,6,7,8-HpCDF	ng/kg	0.01			21	0.21	710	7.1	800	8	2600 E	26	--
SW8290	1,2,3,4,7,8,9-HpCDF	ng/kg	0.01			< 1	0.005	35	0.35	36	0.36	110	1.1	--
SW8290	1,2,3,4,6,7,8,9-OCDF	ng/kg	0.0001			13	0.0013	1600	0.16	1600	0.16	1300	0.13	--
TOTAL PCDF (TEQ)				N/A	N/A	0.65		20.13		22.58		341.03		
TOTAL TEQs (WHO)		ng/kg	38	3.90 ca	27.33 ca	1.24		132.33		143.98		513.03		
SW8290	TOTAL TCDD	ng/kg	N/A	N/A	N/A	2.7		40		35		1100		--
SW8290	TOTAL PeCDD	ng/kg	N/A			< 0.32		130		130		2200		--
SW8290	TOTAL HxCDD	ng/kg	N/A			3.1		1100		1100		3500		--
SW8290	TOTAL HpCDD	ng/kg	N/A			30		7400		8000		4100		--
SW8290	TOTAL TCDF	ng/kg	N/A			2.9		87		110		4000		--
SW8290	TOTAL PeCDF	ng/kg	N/A			< 1.6		92		110		3800		--
SW8290	TOTAL HxCDF	ng/kg	N/A			7.2		540		640		3500		--
SW8290	TOTAL HpCDF	ng/kg	N/A			33		2200		2500		4400		--
SW8330	EXPLOSIVES	mq/kg	N/A			ND	--	ND	--	ND	--	ND	--	ND
Note: WHO = World Health Organization, 1998 Symposium in Stockholm; TEQ = Toxicity Equivalence Quotient; PRG = Preliminary Remediation Goal; TEF = Toxicity Equivalence Factor; N/A = Not Applicable; -- = Not analyzed for; ng/kg = nanograms per kilogram; mg/kg = milligrams per kilogram. Qualifiers: J = Estimated Value; E = Estimated value based on matrix interferences; X = Total diphenylether includes > 10% of the total polychlorodibenzofuran. Bold = Concentrations equal or exceed the Residential PRGs. Bold and Shaded = Concentrations equal or exceed the industrial PRGs. USEPA IX = U.S. Environment Protection Agency, Region IX; ca = carcinogen														

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			26 Jun 1997 Sample Identification			
			BTv	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS009	06UBS010	06UBS011	06UBS012
						Sample Depth (feet)			
						0.25 - .05	0.08 - 0.33	0.17 - 0.33	0.17 - 0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	<500	<490	<400	<470
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	<500	<490	<400	<470
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	<500	<490	<400	250 J
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	<500	<490	<400	<470
SW8270	HEXACHLORO BENZENE	µg/kg	N/A	300 ca	1,500 ca	<91	<88	<72	<86
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	<500	<490	<400	<470
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	---	---	---	---
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	<2.3	<2.2	<1.8	<2.1
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	<18	<17	<14	<17
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	<4.5	<4.4	<3.6	<4.3
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	<2.3	<2.2	<1.8	<2.1
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	<4.5	<4.4	<3.6	<4.3
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	<4.5	<4.4	<3.6	5.4 P
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	<2.3	<2.2	<1.8	<2.1
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	<2.3	<2.2	<1.8	<2.1
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	<2.3	<2.2	<1.8	<2.1
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	<2.3	<2.2	<1.8	<2.1
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	<2.3	<2.2	4.6 P	<2.1
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	<4.5	<4.4	<3.6	<4.3
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	<4.5	<4.4	<3.6	<4.3
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	<4.5	<4.4	<3.6	<4.3
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	<4.5	<4.4	<3.6	<4.3
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	139,000	59,100	15,200	9,260
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	4.6 BN	6.1 BN	37.4 N	<2.4 N
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	16.8	7.8	26.7	2 B
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	113	475	7,750	110
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	3.5	1.4	<0.02	0.16
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	13.7	16.2	11.4	2.6
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	53,200	164,000	129,000	237,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	315	203	302	38.8
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	37	19.9	32.8	2.7
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	29.9	73.5	786	19
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	106,000	62,700	244,000	8,370
SW6010	LEAD	mg/kg	166	400 nc	750 nc	57.5 E	70.9 E	2,150 E	20.1 E
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	1,260	2,290	26,500	2,920
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	7,290	5,360	1,140	1,430
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.2 B	0.68 B	6.6	0.36 B
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	117	76.8	227	8.6
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	103	215	69.5	488
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	1.7 N*	3.2 N*	16.6 N*	1.1 N*
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	<0.58	3.2	9.8	5.1
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	316	390	241	536
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	1.2	0.86 W	<0.12	0.29 W
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	31.1	8.4	<0.35	2
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	194	1330	8630	65.8
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	<0.34	<0.33	0.29	<0.32
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTv = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTv (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			26-Jun-97	14 Sep 1998 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS013	06UBS031	06UBS032	06UBS033	
						Sample Depth (feet)				
						0.08 - 0.33	0.17 - 0.33	0.17 - 0.33	0.17 - 0.33	
VOLATILE ORGANIC COMPOUNDS										
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---	
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---	
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---	
SEMIVOLATILE ORGANIC COMPOUND										
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	<460	---	---	---	
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	<460	---	---	---	
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	<460	---	---	---	
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	<460	---	---	---	
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	<85	---	---	---	
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	<460	---	---	---	
POLYCYCLIC AROMATIC HYDROCARBONS										
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	---	---	---	---	
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---	
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---	
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---	
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---	
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---	
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---	
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---	
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---	
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---	
PESTICIDES/PCBs										
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	<2.1	---	---	---	
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	<16	<2.0	<1.7	<1.7	
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	<4.2	<3.9	<3.3	<3.3	
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	<2.1	<2.0	<1.7	<1.7	
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	<4.2	<3.9	<3.3	<3.3	
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	<4.2	<3.9	<3.3	<3.3	
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	<2.1	<3.9	<3.3	<3.3	
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	<2.1	<2.0	<1.7	<1.7	
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	<2.1	<2.0	<1.7	<1.7	
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	<2.1	---	---	---	
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	<2.1	<2.0	<1.7	<1.7	
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	<4.2	<20	<17	<17	
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	380 E	<3.9	<3.3	<3.3	
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	1,300 D	<3.9	<3.3	<3.3	
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	3,600 D	<3.9	<3.3	<3.3	
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---	
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---	
INORGANICS										
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	11,000	---	---	---	
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	8,520 N	---	---	---	
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	173	---	---	---	
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	475	---	---	2,410	
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	0.08 B	---	---	---	
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	9.5	---	---	---	
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	6,970	---	---	---	
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	88	---	---	---	
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	22.1	---	---	---	
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	2,620	---	---	---	
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	195,000	163,000	467,000	390,000	
SW6010	LEAD	mg/kg	166	400 nc	750 nc	315 E	---	---	---	
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	4,620	---	---	---	
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	977	---	---	---	
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.33 B	---	---	---	
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	101	---	---	---	
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	212	---	---	---	
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	3.3 N*	---	---	---	
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	<0.55	---	---	---	
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	182	---	---	---	
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	<0.14	---	---	---	
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	<0.41	---	---	---	
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	5100	---	---	---	
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	<0.31	---	---	---	
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.				

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			14 Sep 1998 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS034	06UBS035	06UBS036	06UBS037
						Sample Depth (feet)			
						0.17 - 0.33	0.17 - 0.25	0.00 - 0.17	0.17 - 0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	---	---	---	---
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	---	---	---	---
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	---	---	---	---
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	---	---	---	---
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	---
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	---
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	---
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	---
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	---
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	---
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	---	---	---	---
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	---
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	---	---	---	---
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	---	---	---	---
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	---	---	---	---
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	---	---	---	---
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	---	---	---	---
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	---	---	---	---
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	---	---	---	---
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	---
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	---
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	---	---	---	---
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	---	---	---	---
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	---	---	---	---
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	4,030	732	---	---
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	---	---	---	---
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	---	---	---	---
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	---	---	---	---
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	---	---	---	---
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	---	---	---	---
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	333,000	71,000	---	---
SW6010	LEAD	mg/kg	166	400 nc	750 nc	---	---	---	---
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	---	---	1,640	4,040
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	---	---	---	---
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	---	---	---	---
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	---	---	---	---
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	---	---	---	---
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	---
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	---	---	---	---
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	---	---	---	---
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	---	---	---	---
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			14 Sep 1998 Sample Identification			15 Jan 2001
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS038	06UBS039	06UBS039DUP	06UBS054
						Sample Depth (feet)			
						0.00 - 0.25	0.17 - 0.25	0.17 - 0.25	0.08 - 0.33
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	< 660
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	431
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	---	---	---	< 660
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	---	---	---	< 660
SW8270	HEXACHLORO BENZENE	µg/kg	N/A	300 ca	1,500 ca	---	---	---	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	< 660
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	---	---	---	< 5.0
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	0.6 J
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	---	---	---	0.52 J
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	< 2.0
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	---	---	---	0.52 J
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	---	---	---	< 5.0
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	---	---	---	< 2.0
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	---	---	---	1.2 J
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	---	---	---	1.24 J
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	---	---	---	0.66 J
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	---	---	---	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	---	---	---	< 3.0
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	---	---	---	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	---	---	---	< 3.0
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	---	---	---	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	---	---	---	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	---	---	---	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	---	---	---	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	---	---	---	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	---	---	---	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	< 3.0
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	---	---	---	< 3.0
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	< 30
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	---	---	---	12.8 J
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	---	---	---	71,100
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	---	---	---	1.2 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	---	---	---	18.6
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	---	---	---	210
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	---	---	---	2
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	---	---	---	16.8
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	126,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	---	---	---	202
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	---	---	---	17.3
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	---	---	---	56.3
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	---	---	---	58,500
SW6010	LEAD	mg/kg	166	400 nc	750 nc	---	---	---	60.5
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	2,460
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	5,310	5,720	3,570	5,020
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	---	---	---	0.2 B
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	---	---	---	68.1
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	396
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	---	---	---	1.5 B
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	---	---	---	< 5
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	---	---	---	243
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	---	---	---	1.5
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	---	---	---	25.2
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	---	---	---	403
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			15 Jan 2001 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS055	06UBS056	06UBS057	06UBS058
						Sample Depth (feet)			
						0.08 - 0.33	0.08 - 0.25	0.08 - 0.33	0.08 - 0.50
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 660	< 660	< 660	< 660
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 660
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	< 660	< 660	< 660
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 660	< 660	< 660
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 120	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 660
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	< 5.0	< 5.0	< 5.0	< 5.0
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	0.69 J	0.71 J	0.53 J	0.45 J
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	0.48 J	0.44 J	0.4 J	0.33 J
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 2.0	< 2.0	< 2.0	< 2.0
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	0.45 J	0.47 J	0.51 J	0.41 J
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	1.48 J	1.23 J	0.8 J	< 5.0
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	< 2.0	< 2.0	< 2.0	1.15 J
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	1.18 J	< 7.0	< 7.0	< 7.0
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	1.36 J	1.03 J	1.15 J	1.37 J
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	0.57 J	0.66 J	0.44 J	8.48 J
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 15	1.8 J	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	< 3.0	< 3.0	< 3.0
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	< 30	< 30	< 30	< 30
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	< 30	< 30	< 30	< 30
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	114,000	110,000	73,900	134,000
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	0.9 B	1 B	0.9 B	1.2 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	48.9	47.1	15.7	15.5
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	170	111	68.7	88 B
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	3.4	3.2	2	4
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	16.6	17.4	15.5	12.6
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	56,300	61,200	165,000	62,600
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	249	256	165	444
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	31 B	33.8 B	16.3	22.7 B
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	35.1 B	31.5 B	19.8	30.3 B
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	84,900	81,500	43,800	96,100
SW6010	LEAD	mg/kg	166	400 nc	750 nc	90.8	81.4	71.7	100
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	2,740	2,850	2,300	1,750
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	6,560	7,060	3,600	1,170
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.12	0.16	0.26	0.52
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	106 B	120 B	70.1	120 B
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1000	< 1000	234	< 1000
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	1.3 B	1.1 B	1.1 B	1.1 B
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	< 50	< 50	< 5	< 50
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1000	< 1000	156	< 1000
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	2.3	1.4	1.3	0.98
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	33 B	32.2 B	15.5	41.9 B
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	187	167	60.8	80.8
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			15 Jan 2001		16 Jan 2001	
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS059	06UBS060	06UBS062	06UBS063
						Sample Depth (feet)			
						0.08 - 0.33	0.08 - 0.50	0.08 - 0.25	0.25 - 0.50
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 660	< 690	< 660	< 660
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 690	< 660	< 660
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	< 690	< 660	< 660
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 690	< 660	< 660
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 130	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 690	< 660	< 660
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	< 5.0	< 5.2	4.86 J	< 5.0
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	0.45 J	0.96 J	11.39	0.82 J
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	0.33 J	0.53 J	23.21 P	0.72 J
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 2.0	< 2.1	28.88	1.47 J
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	< 2.0	0.56 J	6.85	0.59 J
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	< 5.0	1.43 J	21.88	1.1 J
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	< 2.0	< 2.1	7.68 P	< 2.0
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	< 7.0	1.22 J	21.79 P	1.24 J
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	< 2.0	1.42 J	57.01	1.86 J
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	0.47 J	0.63 J	26.87	0.77 J
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.6	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.6	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 3.0	< 3.1	3.33	< 3.0
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.6	< 1.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.1	< 3.0	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.1	< 3.0	< 3.0
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 3.1	1.22 J	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.6	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.6	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.6	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.6	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 16	6.4 J	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	< 3.1	< 3.0	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	< 3.1	1.91 J	< 3.0
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	< 3.1	1.19 J	< 3.0
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	< 30	< 31	98.5	< 30
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	< 30	< 31	58	< 30
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	88,900	50,500	9,400	19,400
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	1.3 B	0.9 B	22.4 B	1.2 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	24.3	3.9	15.5	6.1
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	279	280	3,820	190
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	2.5	1.4	< 1.0	0.65
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	27.8	17.8	13	10.2
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	96,800	---	61,000	243,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	209	123	214	104
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	26.7	12.9	33.1 B	6.5
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	78.6	56.8	913	49.5
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	65,500	37,300	384,000	24,000
SW6010	LEAD	mg/kg	166	400 nc	750 nc	81	45	51.3 B	80.2
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	1,960	2,070	6,280	2,150
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	8,010	2,370	2,020	1,050
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.25	0.38	0.31	0.45
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	99.4	55.4	325	29.3
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	245	337	< 1000	301
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	1.6 B	0.93 B	< 2.5	< 2.5
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	< 5	< 5	262	4.2 B
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	145	245	< 1000	194
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	1.8	0.93	< 0.2	0.37
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	19.6	11.5	< 100	13.6
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	366	312	5470	64.6
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			16 Jan 2001		18 Jan 2001	
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS064	06UBS063DUP	06UBS066	06UBS067
						Sample Depth (feet)			
						0.08 - 0.25	0.25 - 0.50	0.08 - 0.33	0.08 - 0.25
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 660	< 660	< 660	< 670
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	340	< 660	< 660	< 670
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	< 660	< 660	< 670
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 660	< 660	< 670
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	713	< 120	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 670
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	< 50	< 5.0	< 5.0	< 5.1
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	4.1 J	0.75 J	< 2.0	4.81
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	21.7 P	0.49 J	0.43 J	0.62 J
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	20.5	< 2.0	< 2.0	< 2.0
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	8.2 J	0.52 J	0.46 J	0.52 J
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	21.7 J	1.16 J	< 5.0	2.05 J
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	167.2	< 2.0	< 2.0	< 2.0
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	< 70	< 7.0	1.05 J	1.8 J
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	314.3	1.37 J	1.25 J	1.55 J
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	5.2 J	0.58 J	0.48 J	< 9.2
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	2.48 J	< 3.0	< 3.0	< 3.1
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.0	< 3.0	< 3.1
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0	< 3.0	< 3.1
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	3.26	< 3.0	< 3.0	< 3.1
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 15	< 15	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	< 3.0	< 3.0	< 3.1
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	1.69 J	< 3.0	< 3.0	< 3.1
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	2.5 J	< 3.0	< 3.0	< 3.1
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	< 30	< 30	5.5 J	< 31
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	71.6	< 30	< 30	< 31
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	21,100	22,200	28,300	38,600
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	9.2 B	0.9 B	1.1 B	0.9 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	8.3	4.7	2.4	3.7
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	1,810	195	744	880
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	< 1.0	0.67	0.81	1
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	13.1	9.9	11.4 N	13.9 N
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	136,000	263,000	232,000	188,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	178	117	70.4	164
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	27.2 B	6.7	8.4 N	10.4 N
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	411	108	95.7	137
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	194,000	22,400	24,600	41,000
SW6010	LEAD	mg/kg	166	400 nc	750 nc	245	37.2	34.1	30.9
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	4,980	2,430	2,150	3,230
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	4,410	1,060	2,900	3,140
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.23	0.43	0.37	0.41
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	144 B	36.9	34.3 E	45.3 E
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1000	293	153 N	454 N
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	< 2.5	< 2.5	0.64 BN	0.99 BN
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	3.7 B	3.9 B	0.3 BN	0.4 BN
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1000	208	254	249
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	0.54	< 0.2	0.72	1
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	4.8 B	13.8	5.2 BN	11 N
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	733	73.5	73.9	117
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002). Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			18 Jan 2001 Sample Identification			
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS068	06UBS071	06UBS072	06UBS073
						Sample Depth (feet)			
						0.08 - 0.33	0.08 - 0.58	0.08 - 0.42	0.08 - 0.25
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	---	---	---
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	---	---	---
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	---	---	---
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 660	< 660	76 J	< 660
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 660
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	< 660	< 660	< 660
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 660	64.6 J	< 660
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	< 120	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 660
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	< 5.0	0.7 J	4.61 J	< 5.0
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	18.48	3.54	35.31	4.01 P
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	1.18 J	7.36 P	38.01	5.74 P
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	1.92 J	15.47 P	50.34	7.54
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	0.69 J	4.65	21.97	3.74
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	3.79 J	13.06 P	42.94	7.13
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	< 2.0	3.69 P	10.45 P	3.4 P
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	1.5 J	6.59 J	92.67	6.92 J
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	< 2.0	< 2.0	97.45	12.82
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	1.05 J	6.08 J	66.37	7.56 J
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.5	< 7.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	9.3	< 7.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 3.0	< 3.0	29.7	< 3.0
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 7.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.0	< 15	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0	< 15	1.18 J
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 3.0	8.8 J	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	0.3 J	< 1.5	< 7.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	2.66	< 1.5	< 7.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5	< 7.5	0.48 J
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5	< 7.6	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 15	< 75	1.2 J
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	< 3.0	< 15	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	0.62 J	65.93 D	343 D	4.04
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	35.58 D	1307 D	9.97
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	13.2 J	< 30	972.8	< 30
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	5.9 J	177.5	382.8	< 30
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	7,200	23,400	30,400	115,000
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	4.6 B	49.4 B	175 B	11.7 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	6.6	21.6	17.7	24.7
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	865	3,390	2,150	323
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	< 1.0	< 1.0	< 1.0	3.4
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	4.9 BN	10.1 N	29.3 N	11.1 N
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	124,000	196,000	143,000	70,200
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	122	217	348	695
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	8.5 BN	14.2 BN	13.4 BN	19.1 BN
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	983	1,910	5,120	102
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	130,000	105,000	79,200	94,300
SW6010	LEAD	mg/kg	166	400 nc	750 nc	109	1,320	25,200	308
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	3,200	13,800	8,460	2,210
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	1,370	1,520	1,550	3,290
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.1	0.07	0.3	0.77
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	59.3 BE	256 E	101 BE	109 BE
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	< 1000	< 1000	< 1000	< 1000
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	0.77 BN	< 2.5	0.35 BN	< 2.5
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	3.3 BN	8.3 BN	19.4 BN	< 50
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	343 B	< 1000	< 1000	< 1000
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	0.16 B	0.11 B	0.2	0.82
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	< 100	24 BN	22.4 BN	109 N
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	108	2000	2960	165
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal or exceed either the BTVs or the Industrial PRGs, whichever is higher.			

**TABLE 2-2. SURFACE AND SUBSURFACE SOIL DETECTED ANALYTICAL RESULTS FOR
URUNAO DUMPSITE 1, ANDERSEN AFB, GUAM**

Analytical Method	Analyte	Units	Screening Basis			18 Jan 2001	16 Jan 2001	18 Jan 2001 Sample Identification	
			BTV	2000 USEPA IX Residential PRG	2000 USEPA IX Industrial PRG	06UBS074	06UBS061	06UBS069	06UBS069DUP
						Sample Depth (feet)			
						0.08 - 0.25	2.0 - 2.2	2.0 - 2.2	2.0 - 2.2
VOLATILE ORGANIC COMPOUNDS									
SW8260	ACETONE	µg/kg	N/A	1,600,000 nc	6,200,000 nc	---	< 20	< 21	< 21
SW8260	METHYL ETHYL KETONE (2-BUTANONE)	µg/kg	N/A	7,300,000 nc	28,000,000 nc	---	< 12	< 13	< 13
SW8260	METHYLENE CHLORIDE	µg/kg	N/A	8,900 ca	21,000 ca	---	< 6.1	< 6.4	< 6.3
SEMIVOLATILE ORGANIC COMPOUND									
SW8270	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	< 660	< 660	< 660	< 670
SW8270	BENZO(G,H,I)PERYLENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	50.2 J	< 670
SW8270	BIS(2-ETHYLHEXYL) PHTHALATE	µg/kg	N/A	35,000 ca	180,000 ca	< 660	< 660	< 660	< 670
SW8270	DI-N-BUTYL PHTHALATE	µg/kg	N/A	6,100,000 nc	88,000,000 nc	< 660	< 660	< 660	< 670
SW8270	HEXACHLOROBENZENE	µg/kg	N/A	300 ca	1,500 ca	< 120	87.2 J	< 120	< 120
SW8270	PHENANTHRENE	µg/kg	N/A	N/A N/A	N/A N/A	< 660	< 660	< 660	< 670
POLYCYCLIC AROMATIC HYDROCARBONS									
SW8310	ANTHRACENE	µg/kg	N/A	22,000,000 nc	100,000,000 max	< 5.0	< 5.0	< 5.0	< 5.0
SW8310	BENZO(A)ANTHRACENE	µg/kg	N/A	620 ca	2,900 ca	5.19	< 2.0	2.16	2.43
SW8310	BENZO(A)PYRENE	µg/kg	N/A	62 ca	290 ca	8.34 P	0.36 J	11.11 P	6.5 P
SW8310	BENZO(B)FLUORANTHENE	µg/kg	N/A	620 ca	2,900 ca	9.93	< 2.0	14.38	9.54
SW8310	BENZO(K)FLUORANTHENE	µg/kg	N/A	6,200 ca	29,000 ca	4.38	0.46 J	5.39	3.79
SW8310	CHRYSENE	µg/kg	N/A	62,000 ca	290,000 ca	5.96	0.93 J	8.13 P	5.67
SW8310	DIBENZ(A,H)ANTHRACENE	µg/kg	N/A	62 ca	290 ca	3.92 P	< 2.0	12.45 P	9.75 P
SW8310	FLUORANTHENE	µg/kg	N/A	2,300,000 nc	30,000,000 nc	5.7 J	1.14 J	3.75 J	3.61 J
SW8310	INDENO(1,2,3-C,D)PYRENE	µg/kg	N/A	620 ca	2,900 ca	20.79 P	1.36 J	110.12	85.87
SW8310	PYRENE	µg/kg	N/A	2,300,000 nc	54,000,000 nc	6.33 J	0.55 J	3.51 J	3.3 J
PESTICIDES/PCBs									
SW8081	ALPHA BHC	µg/kg	N/A	90 ca	590 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	ALPHA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	BETA ENDOSULFAN	µg/kg	N/A	370,000 nc	5,300,000 nc	< 3.0	< 3.0	0.65 J	1.01 J
SW8081	DELTA BHC	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	DIELDRIN	µg/kg	N/A	30 ca	150 ca	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	ENDRIN	µg/kg	N/A	18,000 nc	260,000 nc	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	ENDRIN ALDEHYDE	µg/kg	N/A	N/A N/A	N/A N/A	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	GAMMA BHC (LINDANE)	µg/kg	N/A	440 ca	2,900 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	GAMMA-CHLORDANE	µg/kg	N/A	N/A N/A	N/A N/A	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR	µg/kg	N/A	110 ca	550 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	HEPTACHLOR EPOXIDE	µg/kg	N/A	53 ca	270 ca	< 1.5	< 1.5	< 1.5	< 1.5
SW8081	METHOXYCHLOR	µg/kg	N/A	310,000 nc	4,400,000 nc	< 15	< 15	< 15	< 15
SW8081	4,4'-DDD	µg/kg	N/A	2,400 ca	17,000 ca	< 3.0	< 3.0	< 3.0	< 3.0
SW8081	4,4'-DDE	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	< 3.0	8.59	9.32
SW8081	4,4'-DDT	µg/kg	N/A	1,700 ca	12,000 ca	< 3.0	< 3.0	2.29 J	3.19
SW8082	PCB-1254 (AROCHLOR 1254)	µg/kg	N/A	220 ca	1,000 ca	< 30	< 30	< 30	18 J
SW8082	PCB-1260 (AROCHLOR 1260)	µg/kg	N/A	220 ca	1,000 ca	261.2	< 30	23.5 J	13.8 J
INORGANICS									
SW6010	ALUMINUM	mg/kg	173,500	76,000 nc	100,000 max	44,100	8,140	42,500	50,400
SW6010	ANTIMONY	mg/kg	63	31 nc	820 nc	6.4 B	5.3 B	119 B	84.1 B
SW6010	ARSENIC	mg/kg	62	0.39 ca	2.7 ca	11.7	1.3 B	12.5	22.7
SW6010	BARIUM	mg/kg	335	5,400 nc	100,000 max	88.6	1,350	8,090	5,720
SW6010	BERYLLIUM	mg/kg	3.34	150 nc	2,200 ca	1.2	0.24	< 1.0	< 1.0
SW6010	CADMIUM	mg/kg	6.5	37 nc	810 nc	2.9 N	7.7	41.5 N	118 N
SW6010	CALCIUM	mg/kg	N/A	N/A N/A	N/A N/A	218,000	313,000	53,400	64,000
SW6010	CHROMIUM, TOTAL	mg/kg	1,080	210 ca	450 ca	190	26.6	387	405
SW6010	COBALT	mg/kg	29	4,700 nc	100,000 max	5.6 N	4.5 B	19.5 BN	20.4 BN
SW6010	COPPER	mg/kg	72.2	2,900 nc	76,000 nc	37.7	1,130	2,540	2,320
SW6010	IRON	mg/kg	116,495	23,000 nc	100,000 max	27,000	5,760	200,000	174,000
SW6010	LEAD	mg/kg	166	400 nc	750 nc	399	20.8	2,830	2,260
SW6010	MAGNESIUM	mg/kg	N/A	N/A N/A	N/A N/A	2,050	2,840	31,600	30,300
SW6010	MANGANESE **	mg/kg	5,500	1,800 nc	32,000 nc	1,270	2,090	2,320	2,380
SW7471	MERCURY	mg/kg	0.28	23 nc	610 nc	0.13	0.13	0.03 B	0.02 B
SW6010	NICKEL	mg/kg	242.4	1,600 nc	41,000 nc	25 E	15.2	203 E	221 E
SW6010	POTASSIUM	mg/kg	N/A	N/A N/A	N/A N/A	126 N	107	< 1000	< 1000
SW7740	SELENIUM	mg/kg	N/A	390 nc	10,000 nc	0.39 BN	0.5 B	< 2.5	0.45 BN
SW6010	SILVER	mg/kg	14.9	390 nc	10,000 nc	< 5	0.4 B	7.4 BN	6.5 BN
SW6010	SODIUM	mg/kg	N/A	N/A N/A	N/A N/A	118	331	< 1000	< 1000
SW7841	THALLIUM	mg/kg	1.42	5 nc	130 nc	0.46	0.45	0.29	0.18 B
SW6010	VANADIUM	mg/kg	206	550 nc	14,000 nc	28.9 N	3.4 B	22.9 BN	27.9 BN
SW6010	ZINC	mg/kg	111	23,000 nc	100,000 max	61.6	57.6	2520	4240
SW9012	CYANIDE	mg/kg	N/A	11 nc	35 nc	---	---	---	---
NOTES: USEPA IX = U.S. Environmental Protection Agency, Region IX; BTV = Background Threshold Value; PRG = Preliminary Remediation Goal; E = Reported value estimated due to interference (Inorganics), Result exceeds calibration range (Organics); P = >25% difference for both GC columns; N = Spiked sample recovery outside control limits; * = Duplicate analysis outside control limit; B = Value < Contract-Required Detection Limit, but > the Instrument Detection Limit; W = Post-digestion spiked sample recovery outside control limits; J = Reported value estimated due to concentration < sample quantitation limit; D = Reported value from analysis involving dilution; S = Reported value determined by Method of Standard Additions; ca = cancer PRG; nc = non-carcinogen; N/A = Not Applicable; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.						Bold = Concentrations equal or exceed either the BTVs or the Residential PRGs, whichever is higher. ** = Recalculated BTV (EA, 2002) Bold & Shaded = Concentrations equal to or exceed either the BTVs or the Industrial PRGs, whichever is higher.			



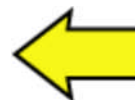
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Contaminants of Concern at ANDERSEN AIR FORCE BASE

(EPA ID: GU6571999519)

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The data and content on this page were last updated on Friday,
May 20, 2011.

Cleanup Activities		Operable Units (OUs)		Site Contacts	
Additional Site Documents	Other Names for this Site (Aliases)	Contaminants of Concern		GPRA Measures	
The chemical substances (i.e., hazardous substances, pollutants, or contaminants) listed below were identified as contaminants of concern (COC) for the site. COCs are the chemical substances found at the site that the EPA has determined pose an unacceptable risk to human health or the environment. These are the substances that are addressed by cleanup actions at the site. Identifying COCs is a process where the EPA identifies people and ecological resources that could be exposed to contamination found at the site, determines the amount and type of contaminants present, and identifies the possible negative human health or ecological effects that could result from contact with the contaminants. The contaminants of concern at this site are sorted below by contaminant name. You may also sort this list by the area of the site on which it is found, called operable units (OUs), or sort this list according to the media in which they were found (e.g. soil or ground water). see the glossary for definitions of contaminated media and operable units (OUs) >>					
CAS #	Contaminant Name	Contaminated Media	Area of Site Found (OU)	More Information	
72-55-9	4,4-DDE	Soil	MARBO SOILS (03)	ATSDR Profile	
50-29-3	4,4-DDT	Soil	MARBO SOILS (03)	ATSDR Profile	
57-74-9	ALPHA-CHLORDANE	Soil	MARBO SOILS (03)	ATSDR Profile	
7429-90-5	ALUMINUM	Soil	SITES 6, 9, 12 (08)		
7440-36-0	ANTIMONY	Soil	MARBO SOILS (03)	ATSDR Profile	
7440-36-0	ANTIMONY	Soil	URUNAO (07)	ATSDR Profile	
7440-36-0	ANTIMONY	Soil	SITES 6, 9, 12 (08)	ATSDR Profile	
7440-36-0	ANTIMONY	Subsurface Soil	MAIN BASE (01)	ATSDR Profile	
11097-69-1	AROCLO-1254	Soil	MARBO SOILS (03)		

**Arsenic, inorganic;
CASRN 7440-38-2.
This is one of the
components in the
herbicide Agent Blue**

11097-69-1	AROCOLOR-1254	Soil	URUNAO (07)	
11096-82-5	AROCOLOR-1260	Soil	MARBO SOILS (03)	
7440-38-2	ARSENIC	Soil	MARBO SOILS (03)	ATSDR Profile
7440-38-2	ARSENIC	Soil	URUNAO (07)	ATSDR Profile
7440-38-2	ARSENIC	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
7440-39-3	BARIUM	Soil	URUNAO (07)	ATSDR Profile
205-99-2	BENZO(B)FLUORANTHENE	Soil	MARBO SOILS (03)	
205-99-2	BENZO(B)FLUORANTHENE	Soil	SITES 6, 9, 12 (08)	
207-08-9	BENZO(K)FLUORANTHENE	Soil	SITES 6, 9, 12 (08)	
56-55-3	BENZO[A]ANTHRACENE	Soil	MARBO SOILS (03)	
56-55-3	BENZO[A]ANTHRACENE	Soil	SITES 6, 9, 12 (08)	
50-32-8	BENZO[A]PYRENE	Soil	MARBO SOILS (03)	
50-32-8	BENZO[A]PYRENE	Soil	URUNAO (07)	
50-32-8	BENZO[A]PYRENE	Soil	SITES 6, 9, 12 (08)	
7440-41-7	BERYLLIUM	Soil	URUNAO (07)	ATSDR Profile
39638-32-9	CADMIUM	Soil	URUNAO (07)	
7440-43-9	CADMIUM	Soil	MARBO SOILS (03)	ATSDR Profile
7440-43-9	CADMIUM	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
7440-47-3	CHROMIUM	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
7440-47-3	CHROMIUM, TOTAL	Soil	SITES 6, 9, 12 (08)	
7440-50-8	COPPER	Soil	URUNAO (07)	ATSDR Profile
7440-50-8	COPPER	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
7440-50-8	COPPER	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
72-55-9	DDE	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
50-29-3	DDT	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
53-70-3	DIBENZO(A,H)ANTHRACENE	Soil	SITES 6, 9, 12 (08)	
60-57-1	DIELDRIN	Soil	MARBO SOILS (03)	ATSDR Profile
60-57-1	DIELDRIN	Soil	SITES 6, 9, 12 (08)	ATSDR Profile

60-57-1	DIELDRIN	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
60-57-1	DIELDRIN	Surface Soil	MAIN BASE (01)	ATSDR Profile
TBD-00000004	DIOXINS (CHLORINATED DIBENZODIOXINS)	Soil	URUNAO (07)	
57-74-9	GAMMA-CHLORDANE	Soil	MARBO SOILS (03)	ATSDR Profile
193-39-5	INDENO(1,2,3-CD)PYRENE	Soil	MARBO SOILS (03)	
193-39-5	INDENO(1,2,3-CD)PYRENE	Soil	SITES 6, 9, 12 (08)	
7439-92-1	LEAD	Soil	MARBO SOILS (03)	ATSDR Profile
7439-92-1	LEAD	Soil	URUNAO (07)	ATSDR Profile
7439-92-1	LEAD	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
7439-92-1	LEAD	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
7439-92-1	LEAD	Surface Soil	MAIN BASE (01)	ATSDR Profile
7439-96-5	MANGANESE	Soil	URUNAO (07)	ATSDR Profile
7439-96-5	MANGANESE	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
7439-96-5	MANGANESE	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
7439-97-6	MERCURY	Soil	URUNAO (07)	ATSDR Profile
7440-02-0	NICKEL	Soil	URUNAO (07)	ATSDR Profile
7440-02-0	NICKEL	Soil	SITES 6, 9, 12 (08)	ATSDR Profile
7782-49-2	SELENIUM	Soil	URUNAO (07)	ATSDR Profile
7440-22-4	SILVER	Soil	URUNAO (07)	ATSDR Profile
79-01-6	TCE	Ground Water	MARBO SOILS (03)	ATSDR Profile
41903-57-5	TETRACHLORODIBENZO-p-DIOXINS (TCDD)	Soil	URUNAO (07)	
7440-28-0	THALLIUM	Soil	URUNAO (07)	ATSDR Profile
7440-66-6	ZINC	Soil	URUNAO (07)	ATSDR Profile

This is the poison from washing down the B-52s and degrease parts. It has caused the closing of some drinking water wells.

This is the main deadly poison in the herbicides.

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About CAS

Chemical Abstracts Service (CAS) is a division of the American Chemical Society. CAS builds and maintains the largest and most current database of chemical substance information in the world. These chemical substances are labeled with CAS Registry Numbers® (CASRNs or CAS Numbers) and are used internationally as unique numeric identifiers for a single substance. They have no chemical significance and, because they are widely used, are a link to a wealth of information about a specific chemical substance. They are provided here for reference purposes to hopefully aide you in researching the respective chemical. For more information, [visit the CAS Web site.](#) [EXIT disclaimer](#)

About ATSDR

The Agency for Toxic Substances and Disease Registry (ATSDR) is an agency of the U.S. Department of Health and Human Services. ATSDR is charged under the Superfund law (CERCLA) to assess the presence and nature of health hazards at specific Superfund sites, to help prevent or reduce further exposure and the illnesses that result from such exposures, and to expand the knowledge base about health effects from exposure to hazardous substances. ATSDR maintains a series of fact sheets and profiles about contaminants of concern commonly found at Superfund sites. Links to these resources are provided above when available. For more information, [visit the ATSDR Web site](#). [EXIT disclaimer >](#)

About EPA's IRIS

The Integrated Risk Information System (IRIS), prepared and maintained by the U.S. Environmental Protection Agency (U.S. EPA), is an electronic database containing information on human health effects that may result from exposure to various chemicals in the environment. IRIS was initially developed for EPA staff in response to a growing demand for consistent information on chemical substances for use in risk assessments, decision-making and regulatory activities. The information in IRIS is intended for those without extensive training in toxicology, but with some knowledge of health sciences. For more information, [visit the EPA IRIS Web site](#).

About EPA's SRS

The Substance Registry System (SRS) is the Environmental Protection Agency's (EPA) central system for information about regulated and monitored substances. The system provides a common basis for identification of chemicals, biological organisms, and other substances listed in EPA regulations and data systems, as well as substances of interest from other sources, such as publications. The system does not provide health hazard information at this time. For more information, [visit the EPA SRS Web site](#).

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