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February 2014

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SGS

Data and Evaluation Report for Matrix Spike (Duplicate)

Client Name : USACE FED — **All Dates/Times are Korean Standard Time**

Project Name : DO0005-12

Project No. : 08-014E

Matrix : Liquid

Printed Date/Time : 05-14-2008

Technical Manager [redacted] b6

QC Remarks: **There is no specific qc remarks.**

Analyte		Spiked Amount	Measured Amount		Unit	Percent Recovery(%)	Control Limits	RPD	RPD Limits	Rece. Date / Coll. Date	Prep. Date / Anal. Date
2-Butanone(MEK)	PS	Not Spiked	5.7		mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	8.45		mg/kg	102	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	8.57		mg/kg	105	50~150	3	≤ 20	04-29-2008 04-21-2008	05-01-2008 05-01-2008
2-Hexanoe	PS	Not Spiked	N.D.	U	mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	3.03		mg/kg	113	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	3.06		mg/kg	112	50~150	1	≤ 20	04-29-2008 04-21-2008	05-01-2008 05-01-2008
4-Methyl-2-pentanone	PS	Not Spiked	N.D.	U	mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	2.88		mg/kg	107	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	2.94		mg/kg	107	50~150	0	≤ 20	04-29-2008 04-21-2008	05-01-2008 05-01-2008
p-Xylene	PS	Not Spiked	N.D.	U	mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	3.06		mg/kg	114	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	3.07		mg/kg	112	50~150	2	≤ 20	04-29-2008 04-21-2008	05-01-2008 05-01-2008
Carbon Disulfide	PS	Not Spiked	N.D.	U	mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	1.85		mg/kg	69	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	2.07		mg/kg	75	50~150	8	≤ 20	04-29-2008 04-21-2008	05-01-2008 05-01-2008
Dibromofluoromethane(Surr)	PS	2.7493	2.81		mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	2.79		mg/kg	104	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	2.82		mg/kg	103	50~150	1		04-29-2008 04-21-2008	05-01-2008 05-01-2008

QC Result Summary

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SGS

Data and Evaluation Report for Matrix Spike (Duplicate)

Client Name : USACE FED

All Dates/Times are Korean Standard Time

Project Name : DO0005-12

Project No. : 08-014E

Matrix : Liquid

Printed Date/Time : 05-14-2008

Technical Manager [redacted] b6

QC Remarks: **There is no specific qc remarks.**

Analyte		Spiked Amount	Measured Amount	Unit	Percent Recovery(%)	Control Limits	RPD	RPD Limits	Rece. Date / Coll. Date	Prep. Date / Anal. Date
Toluene-d8(Surr)	PS	2.7493	2.73	mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	2.7	mg/kg	100	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	2.8	mg/kg	102	50~150	2		04-29-2008 04-21-2008	05-01-2008 05-01-2008
4-Bromofluorobenzene(Surr)	PS	2.7493	2.86	mg/kg					04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MS	2.6886	2.38	mg/kg	88	50~150			04-29-2008 04-21-2008	05-01-2008 05-01-2008
	MSD	2.7448	2.49	mg/kg	91	50~150	3		04-29-2008 04-21-2008	05-01-2008 05-01-2008

Lab. Sample ID : 10-02-91-15,10-02-91-14
Parent Sample : G6-63-1A
Site Local : NA
Pretrement Method : EPA5035
Method : EPA8260B

QC Result Summary

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SGS

SAMPLE RECEIPT FORM

WO#: 66-63

Yes	No	NA		
	✓		Are samples RUSH, priority, or *w/n 72 hrs.* of hold time?	
		✓	If yes, have you done *e-mail notification*?	
	✓		Are samples *within 24 hrs.* of hold time or due date?	
		✓	If yes, have you *spoken with* Supervisor?	
✓			Archiving bottles – if required, are they properly marked?	
	✓		Are there any problems? PM Notified?	
✓			Were samples preserved correctly and pH verified?	
✓			Will courier charges apply?	
✓			Method of payment?	
			Data package required? (Level: 1 / 2 / 3 / 4)	
✓			*Notes:*	
			Is this a DoD project? (USACE, Navy, AFCEE)	

Due Date: May. 13. 2006
Received Date: Apr. 28. 2006
Received Time: 11:20
Is date/time conversion necessary? ____
# of hours from Korea Standard Time: ____

Thermometer ID: ____

Cooler ID	Temp Blank	Cooler Temp
#1	3. °C	3.0 °C
	°C	°C
	°C	°C
	°C	°C

*Temperature readings include thermometer correction factor

Delivery method (circle all that apply):
Client / UPS / FedEx / USPS /
SGS Testing Korea / Other: Quickstar

This section must be filled out for DoD projects (USACE, Navy, AFCEE)

Yes	No		
✓		Is received temperature 4 °C ± 2 °C?	
		Exceptions:	Samples/Analyses Affected:
	✓	Was there an airbill?	*(Note # above in the right hand column)*
	✓	Was cooler sealed with custody seals? Faxed to COE?	
		# / where:	
✓		Were seal(s) intact upon arrival?	
✓		Was there a COC with cooler?	
	✓	Was the COC filled out properly?	
✓		Did the COC indicate ACOE / AFCEE project? (If applicable)	
✓		Did the COC and samples correspond?	
✓		Were all sample packed to prevent breakage?	
		Packing material:	
✓		Were all samples unbroken and clearly labeled?	
	✓	Were all samples sealed in separate plastic bags?	
✓		Were all VOCs free of headspace and/or MeOH preserved?	
✓		Were correct container / sample sizes submitted?	
✓		Is sample condition good?	
		Was copy of CoC and Sample Receipt Forms given to PM?	

Airbill # ____

Additional Sample Remarks: *(√ if applicable)*
____ Extra Sample Volume?
____ Limited Sample Volume?
____ Field preserved for volatiles?
____ Field-filtered for dissolved? ____
____ Lab-filtered for dissolved? ____
____ Ref Lab required? ____
____ Foreign Soil?

This section must be filled if problems are found.

Yes No
____ ____ Was client notified of problems?

Individual contacted: ____
Date/Time: ____
Phone/Fax: ____
Reason for contact: ____

SGS Testing Korea Contact: ____

Notes: ____

Completed by (sign): [redacted] 66 (print): [redacted] 66

Login proof (check one): waived ____ required ✓ Performed by: [redacted] 66

Form # FORM STKG 012

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SAMPLE RECEIPT FORM (page 2) SGS Testing Korea WO#: [redacted]

#	Container ID	Matrix	Test	QC	TB	Container Volume: 1 L	500 mL	250 mL	125 mL	40 mL	30 mL	8oz (250 mL)	4oz (125 mL)	Other	Container Type: AG	CG	HDPE	Nalgene	Cubie	Septa	Other	Preservative: None	HCl	HNO_3	H_2PO_4	MeOH	NaOH	Other
[redacted]	A	[redacted]	[redacted]																								
[redacted]	B	[redacted]	[redacted]																								
[redacted]	A	[redacted]	[redacted]																								
[redacted]	A	[redacted]	[redacted]																								
[redacted]	A	[redacted]	[redacted]																								

Bottle Totals: 5 | 4 | 8 | | | | | Total: 16

Completed by: [redacted] Date: Apr 24, 2018

SGS

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Eco Services Korea

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #1

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.97	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	6.15	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	0.144	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.392	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	2.51	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.222	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	13.4	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] 66

Manager : [redacted] 66

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Eco Services Korea

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #2

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.98	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	4.59	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	0.04	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.14	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.716	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] bb

Manager : [redacted] bb

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Eco Services Korea

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #3

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	7.01	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	1.29	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	0.012	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.074	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.331	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.055	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager : [redacted] b6

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Eco Services Korea

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #5

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.98	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.729	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.057	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.261	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager : [redacted] b6

Public Release Requires ROK-US Joint Committee Approval

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Eco Services Korea

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21, 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #4

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.99	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	1.45	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.048	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.218	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.078	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] 66

Manager : [redacted] 66

Public Release Requires ROK-US Joint Committee Approval

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Eco Services [illegible]

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #6

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.97	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.841	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.032	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.156	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	10.3	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] 66

Manager : [redacted] 66

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Eco Services Korea

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #7

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.98	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	3.27	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	ND	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	ND	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager : [redacted] b6

Public Release Requires ROK-US Joint Committee Approval

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TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #8

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	7.01	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.224	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.023	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.062	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.081	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] 66

Manager [redacted] 66

Public Release Requires ROK-US Joint Committee Approval

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TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #9

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.99	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.218	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.032	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.144	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.074	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] 66

Manager : [redacted] 66

Public Release Requires ROK-US Joint Committee Approval

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TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #11

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	7.01	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.224	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.012	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.349	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.053	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	19.4	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted]

Manager : [redacted]

Public Release Requires ROK-US Joint Committee Approval

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TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #12

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.99	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.121	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	ND	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.027	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	12.9	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager [redacted] b6

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2618

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #13

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.97	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.126	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	ND	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.043	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.062	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager : [redacted] b6

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2619

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #14

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.98	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.298	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	0.021	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.091	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	0.035	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager : [redacted] b6

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2620

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #15

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	7.01	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	2.29	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	0.016	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	ND	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	ND	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] 10 6

Manager : [redacted] 6 6

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2621

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #16

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	7.01	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	3.08	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	0.055	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	ND	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	ND	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager : [redacted] b6

Public Release Requires ROK-US Joint Committee Approval

2622

TEST REPORT

1. Requested By : Contract no. Sp4430-05D-0004, DO#0340
2. Reporting Date : Oct. 21. 2008
3. Doc No : 8233-4701 (TCLP)
   8233-4702(F/P)
   8233-4703(pH)
4. Client Samle ID : Unknown #17

Analyte	Result	MRL	KEG	Unit	Method
Ignitability(Flash Point)					
Ignitability	ND	NA	NA	F	EPA 1010
pH					
pH	6.99	NA	NA	NA	EPA 150.2
TCLP Metals					
Arsenic, As	ND	0.005	5.0	mg/L	EPA1131/200.8
Barium, Ba	0.142	0.005	100	mg/L	EPA1131/200.8
Cadmium, Cd	ND	0.005	1.0	mg/L	EPA1131/200.8
Chromium, Cr	ND	0.005	5.0	mg/L	EPA1131/200.8
Lead, Pb	0.027	0.005	5.0	mg/L	EPA1131/200.8
Selenium, Se	ND	0.005	1.0	mg/L	EPA1131/200.8
Silver, Ag	ND	0.005	5.0	mg/L	EPA1131/200.8
Mercury, Hg	ND	0.001	0.2	mg/L	EPA1131/200.8

MRL : Minimum Report Level
KEGS : Korea Environmental Governing Standard
ND : Not Detected (Below the MRL value)

We certify the test results to be true and correct.

Eco-Services Korea Laboratory

Chemist : [redacted] b6

Manager : [redacted] b6

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2623

Attachment D

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DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT

DI CODE	RI FROM	M & S	UI	QUANTITY	SUPPLEMENTARY ADDRESS	DISTRIBUTION	PROJECT	PRIORITY	REQUISITION DATE	ADV	RI	OCM/OGPND	UNIT PRICE DOLLARS	UNIT PRICE CTS	1. TOTAL PRICE DOLLARS	1. TOTAL PRICE CTS	2. SHIP FROM	3. SHIP TO
A5J			BX	00003	SH5500		B01		NAN	1H			0000	100	300		W90YG3 UNIT 15494 APO AP 96260-5494	SH5500

24. DOCUMENT NUMBER: W90YG3012047 27

& SUFFIX (30-44)

25. NATIONAL STOCK NO. & ADD (8-22): 915000SOIL

26. RIC(4-6) UI (23-24) QTY (25-29) DIST (55-56) CON CODE(7) UP (74-80)

PACKAGING IS IN NON_LEAKING CONTAINER AND IS SAFE TO HANDLE BUT IS STORED IN A NON-SPECIFICATION CONTAINER.

STATE WASTE CODES: NONE

DRUM NUMBERS: 01 02 03

EPA CODES: NONE

CLIN: X85000
WPS: ZE0041L003
UNIT PRICE: $110.00

Acc. Start Date: 04/05/10
BUILDING NUMBER: 724
TOTAL DISPOSAL COST: $99,999.99

27. ADDITIONAL DATA

4. MARK FOR	5. DOC DATE	6. NMFC	7. FRT RATE	8. TYPE CARGO	9. PS
ZDA2231 DEMIL A HW	0119				

10. QTY. RECD	11. UP	12. UNIT WEIGHT	13. UNIT CUBE	14. UFC	15. SL
		4328			0

16. FREIGHT CLASSIFICATION NOMENCLATURE
NON-RCRA SOLID WASTE
/ /

17. ITEM NOMENCLATURE
POL CONTAMINATED SOIL

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
	3	12983 P	

22. RECEIVED BY	23. DATE RECEIVED

3 X PALLET BOX

SHIP FROM: W6B1 USA GARRISON DAEGU
DPW
UNIT 15494
APO AP 96260-5494

SHIP TO: DEF REUTILIZATION MKTG OFFICE
DRMO BUPYONG
UNIT 15395
APO AP 96283-0120

SAMPLER#8233-4701 Unknown #4, #5
ERG#N/A

EMERGENCY PHONE NUMBERS: [redacted] b6

Rec. Manifest Number:
Type Operation: SPILL CLEAN UP

Contract No.: SP4530D5D0004
ORG CODE:
BILL To DoDAAC: W90YG3

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Public Release Requires ROK-US Joint Committee Approval

DD FORM 1348-1A, JUL 91 (FG) ISSUE RELEASE/RECEIPT DOCUMENT

1	2	3	4	5	6	7
DI DOCUMENT		RI FROM	M & S			

2 2 2 2 2 2 2 3 4 5 6 7 8 9	U/I NSN	QUANTITY

4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 8	SUPPLEMENTARY ADDRESS
S E R	

5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 8	F U N D	DISTRIBUTION	PROJECT	PRIORITY	REQUISITION DATE	ADV	RI	OCM/OGP/NTD

1. TOTAL PRICE			2. SHIP FROM	3. SHIP TO
UNIT PRICE		DOLLARS	CTS	W90YG3
DOLLARS	CTS			SH5500
				UNIT 15494
				APO AP 96260-5494

4. MARK FOR	
ZDA2231	DEMIL A HW

A5J DR00005 SH5500B01 NAN 1H 00001 00 500

24. DOCUMENT NUMBER & SUFFIX (30-44)

W90YG301204732

25. NATIONAL STOCK NO. & ADD (8-22)

9150000MERCURY

26. REQ(4-6) UI (23-24) QTY (25-29) CON CODE(7) DIST (55-56) UP (74-80)

5. DOC DATE	6. NMFC	7. FRT RATE	8. TYPE CARGO	9. PS
0119				

10. QTY. RECD	11. U/I	12. UNIT WEIGHT	13. UNIT CUBE	14. UFC	15. SL
		282			0

16. FREIGHT CLASSIFICATION NOMENCLATURE
WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS
9 / UN3077 /

17. ITEM NOMENCLATURE
LIQUID CONTAINING MERCURY

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT		21. TOTAL CUBE
	5	1410	P	
22. RECEIVED BY				23. DATE RECEIVED

5 X 85 GL DM

PACKAGING IS IM NON LEAKING CONTAINER AND IS SAFE TO HANDLE BUT IS STORED IN A NON-SPECIFICATION CONTAINER.

SHIP FROM: W6B1 USA GARRISON DAEGU
DPW
UNIT 15494
APO AP 96260-5494

SHIP TO: DEF REUTILIZATION MKTG OFFICE
DRMO BUPYONG
UNIT 15395
APO AP 96283-0120

SAMPLE#88233-4701 Unknown #-, #6, #10, #11, #12
ERG#171

[redacted]

66

EMERGENCY PHONE NUMBERS:

STATE WASTE CODES: NONE

DRUM NUMBERS: 01 02 03
04 05

EPA CODES: D009

27. ADDITIONAL DATA

CLIN: K41010
WPS: ZR0041003
UNIT PRICE: $546.00

Acc. Start Date: 04/05/10
BUILDING NUMBER: 722
TOTAL DISPOSAL COST: $99,999.99

Req. Manifest Number:
Type Operation: DISCARDED

Contract No.: SP453005D0004
ORG CODE:
BILL To DoDAAC: W90YG3

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26 25

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DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT

DOCUMENT	FROM	M&S	UNITS	QUANTITY	SUPPLEMENTARY ADDRESS	SIGNAL	FUND	DISTRIBUTION	PROJECT	PRIORITY	REQUISITION DATE	ADVICE	RI	OCONUS/CONUS PORT
A5J				DR00005	SH5500B01					NAN	1H	000010		

UNIT PRICE DOLLARS	UNIT PRICE CTS	1. TOTAL PRICE DOLLARS	1. TOTAL PRICE CTS	2. SHIP FROM	3. SHIP TO
00	01	500		W90YG3 UNIT 15494 APO AP 96260-5494	SH5500

4. MARK FOR	
ZDA2231	DEMIL A HW

5. DOC DATE	6. NMFC	7. FRT RATE	8. TYPE CARGO	9. PS
0119				

10. QTY. RECD	11. UP	12. UNIT WEIGHT	13. UNIT CUBE	14. UFC	15. SL
		252.4			0

16. FREIGHT CLASSIFICATION NOMENCLATURE
NON-RCRA SOLID WASTE
/ /

17. ITEM NOMENCLATURE
CONTAMINATED SOIL/DEBRIS

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
	5	1262 P	

22. RECEIVED BY	23. DATE RECEIVED

24. DOCUMENT NUMBER
W90YG301204733
& SUFFIX (30-44)

25. NATIONAL STOCK NO. & ADD (8-22)
915000DEBRIS

26. RIC(4-6) UI (23-24) QTY (25-29) DIST (55-56) CON CODE(71) UP (74-80)

3 X 85 GL DM 2 X 55 GL DM

PACKAGING IS IN NON LEAKING CONTAINER AND IS SAFE TO HANDLE BUT IS STORED IN A NON-SPECIFICATION CONTAINER.

SHIP FROM: W6B1 USA GARRISON DAEGU
DPW
UNIT 15494
APO AP 96260-5494

SHIP TO: DEF REUTILIZATION MKTG OFFICE
DRMO BUPYONG
UNIT 15395
APO AP 96283-0120

SAMPLE#8233-4731 Unknown #7, #8, #9, #13, #14
ERG#N/A

STATE WASTE CODES: NONE

DRUM NUMBERS: 01 05
04

EPA CODES: NONE

EMERGENCY PHONE NUMBERS: [redacted]

6 6

27. ADDITIONAL DATA

CLIN: K85000
MIPR: ZE0041002
UNIT PRICE: $110.00

Acc. Start Date: 04/05/10
BUILDING NUMBER: 722
TOTAL DISPOSAL COST: $99,999.99

Rec. Manifest Number:
Type Operation:

Contract No.: SP4530650004
ORG CODE:
BILL To DoDAAC: W90YG3

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Attachment E

Certificate of Disposal

29-May-10

Name of Contractor: ECO SERVICES KOREA CO., LTD.
Contract no. SP4530-05-D-0004
D/O no. 0513
Location: BLDG #722, CP CARROLL MSC-K

No	CLIN NO	Description	Q'ty (lbs)
1	K69000	waste batteries	60
2	K63000	waste lithium batteries	100
3	K70040	waste aerosols	122
4	K81000	white asbestos	417
5	K41020	hazardous substances solid	442
6	K41020	mercury metal	113
7	K85000	non rcra solid waste	88
8	K85000	non rcra solid waste	41
9	K50010	hazardous substances solid	116
10	K11010	waste flammable liquid	26
11	K85000	non rcra solid waste	110
12	K11010	waste paint	1040
13	K11010	waste alcohols	149
14	K11010	waste adhesives	806
15	K11010	waste adhesives	558
16	K70010	waste petroleum gases	220
17	K41010	waste dichloromethane	121
18	K42000	hazardous substance liquid	3475
19	K85000	non rcra solid waste	300
20	K82000	non rcra solid waste	4879
21	K82000	non rcra solid waste	3879
22	K41020	hazardous substances solid	7031
23	K85000	non rcra solid waste	3781
24	K82000	non rcra solid waste	14700
25	K82000	non rcra solid waste	1932
26	K85000	non rcra solid waste	12983
27	K22000	waste ammonia solutions	25
28	K21000	waste hydrochloric acid	8
29	K70020	non rcra gas	10
30	K11010	waste acetone	130
31	K41010	hazardous substances liquid	1410
32	K85000	non rcra solid waste	1262
33	K70010	waste compressed gases	285
34	K85000	non rcra solid waste	698

METHOD OF DISPOSAL

Waste mercury was put into concrete cement and landfilled at the country owned reclamation site.

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The waste paint was mixed with organic solvents and plasticizers. The sludge was neutralized by incineration at an elevated temperature exeeding 1,200 degrees in centigrade. The ashes were landfilled.

Asbestos wastes shall be containerized with cement and landfilled at Korean MOE approved reclamation site.

Waste corrosive liquids and acids were analyzed and subsequently neutralized using counteractive chemicals,waste oil/low calory were incinerated at an elevated temperature exceeding 1,200 centigrade. The ashes were landfilled.

Let the gas of gas cylinder out and the cylinder burnt in rotary kiln at an elevated temperature exceeding 1,200 degrees in centigrade and the ashes were landfilled.

Batteries were decomposed by sodium hydroxide soluton then shredded and incinerated at an elevated temperature. The ashes were solidified with cement and mixed with waste oil/low calory fuel and incinerated by high temperature incinerators.

Other items were put into rotary kiln and incinerated at an elevated temperature exceeding 1,200 degrees in centigrade. The ashes were landfilled.

I certify that the above listed wastes have been destroyed in accordance with R.O.K. Environmental Preservation Law.

ECO SERVICES KOREA Co., LTD.
1235-7, JUNGWANG-DONG, SIHEUNG CITY
GYEONGGI-DO, KOREA

b6 [redacted] Contract Manager

2625

ANNEX C
FINAL INV
ENCL 6 1-11

Camp Carroll Site Questions/Rowden Interview Answers 25 May 2011

23 May 2011 (v1)

Present at the interview:

Army Reps:

-COL [redacted] IMCOM Korea
b6

-Mr. [redacted]er, USAEC
b6

-Ms [redacted], IMCOM Public Affairs – Environmental Branch
b6

Veteran Reps:

Mr. Scott Rowden (MAJ, USA, Ret) (currently employed with Bechtel at Bluegrass AD Demil Program)

1. When did you arrive at Camp Carroll, when did you leave?
    a. Arrived October/December 1978
    b. Departed October/November 1980
2. What was your unit, rank, duty position?
    a. LB Detachment (Preventative Medicine)
    b. 1LT and CPT
    c. Officer In Charge of LB Detachment, Daegu, Korea
    d. Rowden was from Preventative Medicine – he was stationed in Camp Walker, Daegu, but travelled all over Korea.
3. Do you remember your chain of command? (Platoon ldr, company commander....up to highest rank) – N/A
4. Please describe what was disposed of at Camp Carroll? and when? (Mr. Rowden headed the effort to remove buried drums, etc.)
    a. Not sure when disposed (not involved with disposal).
    b. The outgoing officer in charge told Mr. Rowden (incoming officer in charge) chemicals were buried at Camp Carroll.
    c. A couple of months after arriving, Mr. Rowden asked the engineer in the area about the burial of any chemicals. There was a pregnant pause then the engineer said 'let me get back to you'.

d. Mr. Rowden then met with the deputy commander. Inquiry stopped there.

e. After a week, Mr. Rowden said things started happening

- List of drum chemicals provided
- Destruction certificate produced
- Location was found
- BG Pendleton asked what needed to be done
- Rowden said they needed removed
- Pendleton said OK
- A DAC from Pine Bluff (couldn't remember name) and Rowden put together a plan, included protective gear and heavy equipment

1. 10-12 GI's started hand excavation
2. Trench was several hundred feet long
3. Pallets neatly stacked 3-4 pallets wide and 2 high
4. Set up temporary containment area
    a. Sandbags and rubberized protection
    b. Pulled drums out and put them in the containment area
    c. Wore respirators, eye protection, rubber gloves, coveralls, and tox boots

5. Please describe what it looked like, where it was located, what the area looked like.

a. Dirt area – not much vegetation in the area. Small, sloped hill. Trench was cut into hillside. Excavation/recovery of drums was at one end using front end loader and hand tools.

b. Couldn't describe soil type...just regular soil.

c. Rowden not 100% sure of location, but believes it was near fence line (within a couple hundred feet)(Area D did not come to mind)

6. Can you point out where it was disposed? Did it have a special name? Are you aware of the reason why it was disposed?

a. Mr. Rowden wasn't 100% sure of the area, but did point to an area at the current Land Farm as the likely area. No recall of any special name. No recall on why disposed.

7. How long did the transportation and disposal take?

    a. Does not know.

8. How much was disposed? In same location?

    a. Does not know.

9. Where did the containers originally come from?

    a. Mr. Rowden thought that some of the containers came from a pesticide shop (Site 41 did not ring any bells). Many not known

10. Where were they stored prior to disposal? Did it have a special name? Any other locations where they were stored?

    a. See above.

11. What was the condition in storage?

    a. Does not know.

12. How were they moved?

    a. Does not know.

13. Who was involved with the transportation and disposal?

    a. Does not know.

14. Describe the containers (all the same, any markings)?

    a. What where they made of?

        - Removed from excavation - steel drums painted OD Green – did not see Herbicide Orange (or any other herbicide type) markings on any of the drums – his point of reference is drums of Herbicide Orange he saw while working at Eglin AFB, Florida

        - Pails and other small containers were metal – small containers contained: Lindane; malathion; technical grade DDT; diazanon; paint; greases; oils; POL; and adhesives

        - Possibly some off-color drums

    b. If leaking, what did the substance(s) look like/ smell like?

- Chemical smells

c. If leaking, what percentage of the containers do you think were leaking? Where was it leaking? How much was leaking from the containers?

- Some crushing had occurred, but many were in tact
- Some leaking and degradation of containers, as well

d. If leaking, what did you do with the material that leaked both during transportation and disposal?

- Excavated impacted soil placed in drums.

15. Describe where you found the containers?

a. Length of trench, width, and depth of burial.

- Length - About 300 feet long
- Width – About 15 feet wide
- Height – 15-25 feet

b. How where the containers arranged in the trench?

- Drums were on pallets and neatly stacked 2 pallets high

c. What did you do with the excavated soil?

- Excavated impacted soil drummed and stored onsite in contained area.

d. How did you cover?

- Trench was filled in after drums/etc. were removed because of safety reasons – too deep. Confirmation soil samples collected/analyzed from bottom of excavation.

e. Were you there long enough to notice if any vegetation grew back?

- Not applicable.

16. Are you aware if the containers were removed after they were buried?

a. Not applicable

17. Other notes from the interview:

a. Took about 6 months to get it all containers removed from disposal area.

b. Excavation was started with front end loader.

c. Equipment operators were from Camp Carroll.

d. After drums were reached, excavation continued with hand tools

e. Pallets, once exposed, were moved with rough terrain fork lifts

f. Close to 300 items (319 sticks in his mind as the number of containers)

- 55 gallon drums (est. (300) 55-gal drums)
- Other items - 5, 10, 15 gallon pails
- Condition of containers - some leakage, but many of the drums were in good condition.
- Did not encounter any fuel pods or semi-trailer in trench.
- Started sampling liquids from containers in the Fall of 1979:

    1. Used pipettes and disposable paddles
    2. Sent for environmental testing in Japan – COL Ron Bishop was commander of lab in Japan – he may still be consultant with Health Sciences Academy (AMEDD C&S?) b6
    3. Difficult unknowns liquids were sent to Edgewood Arsenal for further testing.
    4. Trench was left open while testing was being done.

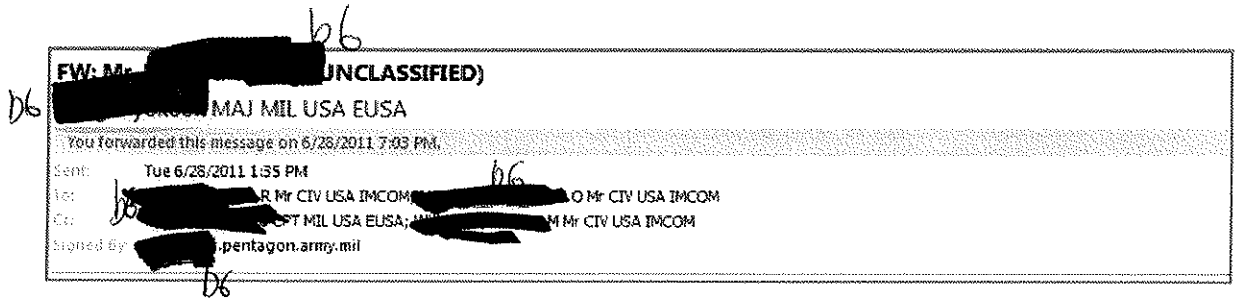
g. Expanded search to confirm nothing further buried.

h. When Rowden PCS's in Fall 1980, the drums which were stored onsite in an contained area were still there.

i. Delay in excavated containers disposal to allow time to identify contents and arrange transportation

j. Excavated soil (drums) and excavated drums possibly went to Utah or Nevada (Mr Rowden thinks Utah makes the most sense)

k. Mr. Rowden wasn't 100% sure of the location of the trench but did point to an area at the current Land farm as the likely area.



Classification: UNCLASSIFIED
Caveats: FOUO

FYI and SA...

Please read Mr. [redacted] comment below. He mentions about Agent Orange being buried...

-----Original Message-----
From: [redacted]aol.com [mailto:[redacted]@aol.com]
Sent: Tuesday, June 28, 2011 [redacted] PM
To: [redacted] MAJ MIL USA EUSA
Subject: Mr. [redacted] (UNCLASSIFIED)

Major [redacted]

Unfortunately I don't think I can be of much help to you and any information I might have has probably already been documented by you.

When I arrived at Camp Carroll in January 1985 to assume the duties as Director of Industrial Engineering and Master Planner I was familiarizing myself with the position and reviewing documentation. One of the first items I encountered were some reports from an Hawaii based environmental team, with a lot of pictures of people in environmental (moon) suits complete with air packs and heavy equipment and they were excavating 55 gallon drums from what is known as Area D. I believe this actually took place in the late 1970's

Upon questioning some of my staff members, one in particular who was there when the operation took place, told me he thought and had been told that it was Agent Orange. He also stated that some of the drums were deteriorating and further excavation was too dangerous and some of the materiel was re-buried.

His name was [redacted] and he had been at Camp Carroll since the Korean War but unfortunately be passed away in 1992. I was familiar with the dangers of Agent Orange from my time in Vietnam.

As you well know, the environment was not a high priority in Korea or for that matter in the US until the early 1990's. As the Master Planner at Camp Carroll from 1985-95 and for EUSA MWR 1998-99 as Chief of MWR Construction and Master Planner I was involved with literally billions of dollars of construction, most of which had some type of environmental concerns requiring remediation. Most of these were caused by petroleum and lubricant based saturation and were remediated by either burning the soil or land farming in the sun.

Colonel Bruce Block was the first MSCK Commander that I served under who made the environment a high priority. During this period 1991-93 we had an environmental assessment which I believe found traces of dioxin.

Unfortunately due to the passing years there is probably no one I could recommend you contacting that you haven't already. Mr. [redacted] b6 was a DPW from 1984 until 2004 and is now the MI Construction rep and located in Seoul. You no doubt have contacted the Corps Of Engineers and their well drilling team personnel. I don't know how many of the MSC-K KN and KSC personnel you have interviewed, but I always found them to be a good source of inforrmation. If Mr. b6 [redacted] Safety and Environment) is still at the Camp Carroll DPW he would be a good source but there again you probably have already talked with him.

Unfortunately there are probably no US personnel still active in the work force that were there in the late 70's or even the 80's

Major [redacted] b6 I will close for now and hope that you find that there was no Agent Orange at Camp Carroll.

Sincerely and God Bless

[redacted] b6

In a message dated 6/24/2011 3:17:27 A.M. Eastern Daylight Time,
b6 [redacted] korea.army.mil writes:

Classification: UNCLASSIFIED
Caveats: FOUO

Mr. [redacted] b6
Thank you so much for your response! We are investigating claims by 3 former Soldiers that they buried AO at Camp Carroll. Our first priority is to ensure the health and safety of our Soldiers, Civilians, Families, and our Korean neighbors, so we have taken these allegations seriously. Our research thus far has not proven this to be true, but we know that during the 1970's, units did bury other chemicals (herbicides, pesticides, solvents.).

In one specific case, we know drums were moved from Area 41 to Area D and buried. In 1979 and 1980, these same drums and a large quantity of soil were excavated and packaged for shipment. We have been unable to track the final disposition of that material, and we are asking your help to do so.

We simply want to determine conclusively what happened to the drums and oil we know we excavated so that we may allay the concerns of residents and work force on and off the installation. So, three simple questions are...

1. Do you know of any burial of chemicals while you served in Korea?
2. Do you know of any shipment of excavated chemicals from Camp Carroll?
3. Do you know anyone who might know this information?

Thank you very much for your assistance!

v/r, [redacted]

V/R,
MAJ [redacted]
NIPR) [redacted]g@korea.army.mil
SIPR) [redacted]ong@us.army.smil.mil
☎ IMCOM-K Office-- DSN) [redacted] COM) [redacted]
☎ Cell-- [redacted]

-----Original Message-----
From: [redacted]@aol.com [mailto:[redacted]aol.com]
Sent: Thursday, June 23, 2011 9:06 PM
To: [redacted]MAJ MIL USA EUSA
Subject: Re: FW: Mr. [redacted](UNCLASSIFIED)

Major [redacted]

Good to hear from you. Yes, I was at Camp Carroll on two different tours, 1984 to 1996 and again in 2003 to 2004. I was the MSC-K Director for Industrial Engineering from 1984 to 1989 and the MSC-K Deputy Commander from 1990 to 1996. In 2003 I returned to Camp Carroll as the Installation Manager, under the 20th ASG and departed in 2004.

I don't know what assistance I might be but am willing to help in anyway I can.

Sincerely and God Bless,

[redacted]

In a message dated 6/23/2011 3:25:23 A.M. Eastern Daylight Time,
[redacted]g@korea.army.mil writes:

Classification: UNCLASSIFIED
Caveats: FOUO

Mr. [redacted]

Hello! How do you do?
My name is MAJ [redacted]rom Camp Henry, Korea.

I am working for USAG Daegu Commander, COL Gavle, on issues related to the allegation of Agent Orange being buried in Camp Carroll. Your name was brought up as someone who might have been here in Camp Carroll during that time (1975-1985). Is that correct? If so, would you please let me know?

Your expertise and background knowledge will be a great help for our investigation. Thank you!

v/r, [redacted]

V/R,
MAJ [redacted]

NIPR) [redacted]korea.army.mil
SIPR) [redacted]@us.army.smil.mil
IMCOM-K Office-- DSN) [redacted] COM) [redacted]
Cell-- [redacted]

-----Original Message-----
From: [redacted] Mr CTR KR USA IMCOM
Sent: Thursday, June 23, 2011 7:48 AM
To: [redacted] MAJ MIL USA EUSA
Subject: RE: Mr. [redacted] (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Maj. [redacted]
Below is Mr. [redacted] contact info:

[redacted].com. In addition to my email address, my home address is. [redacted] Marietta, Ohio, 45750. Telephone numbers - Home - [redacted] or cell [redacted]

v/r,
[redacted]

-----Original Message-----
From: [redacted] MAJ MIL USA EUSA
Sent: Wednesday, June 22, 2011 3:59 PM
To: [redacted] Mr CTR KR USA IMCOM
Subject: Mr. [redacted] UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Mr. [redacted]
Would you please send me a POC for Mr. [redacted] Thank you!
V/R,
MAJ [redacted]
NIPR) [redacted]korea.army.mil
SIPR) [redacted]s.army.smil.mil
IMCOM-K Office-- DSN) [redacted] COM) [redacted]
Cell-- [redacted]

Classification: UNCLASSIFIED
Caveats: FOUO

CPT Pelton/meb/228-4112/4114

HHEA-ES

24 November 1982

SUBJECT: Review of the Camp Carroll Chemical Disposal Problem

Commander
USAMSC-K & CC
ATTN: COL J. E. Jones
APO 96460

1. REFERENCE.

a. Report, this Agency, 8-24 October 1974, subject: Comprehensive Environmental Engineering Survey, Volume I, Project No. K4-0405-1024, Camp Carroll Army Depot, Wae Gwan, South Korea.

b. Report, this Agency, 25 July-5 August 1977, subject: Comprehensive Environmental Engineering Review, Project No. 92-021-77, US Army Materiel Support Command-Korea, Camp Carroll, Korea.

c. Memorandum for Record, Commander, 5th Preventive Medicine Unit, LB Detachment, subject: Chemicals Buried at Camp Carroll, dated 23 February 1979.

d. Memorandum for Record, Commander 5th Preventive Medicine Unit, LB Detachment, subject: Buried Chemicals at Camp Carroll, dated 24 October 1979.

e. Letter, Commander, 5th Preventive Medicine Unit, LB Detachment, to Deputy Commander, USA Materiel and Support Center, Korea, subject: Estimation of Volume and Weight of Chemicals and Containers from Burial Site at Camp Carroll, dated 17 March 1980.

f. Message, CDRUSAEIGHT, DJ-VE-R, 190430Z May 80, subject: Disposal of Hazardous Materials.

g. Letter, Commander, 5th Preventive Medicine Unit, LB Detachment, to Commander, USA Environmental Hygiene Agency (USAEHA), Aberdeen Proving Ground, Maryland, subject: Environmental Samples - Camp Carroll, Korea, dated 7 August 1980.

2638

h. Letter, Commander, USAEHA to Commander, 5th Preventive Medicine Unit, subject: Results from Analyses of Camp Carroll, Korea, Samples, dated 19 March 1981.

2. BACKGROUND. Hazardous materials were improperly disposed of in a burial site in "Area D," at Camp Carroll, Korea, in 1978. These were, reportedly, the chemical containers that were initially stored in Area 41, whose condition had deteriorated to the point that considerable leakage had occurred. This report lists, chronologically, occurrences that are documented in the files of this organization.

3. CHRONOLOGICAL RECORD OF THE HAZARDOUS MATERIAL PROBLEM AT CAMP CARROLL, KOREA.

a. Reference 1a indicated that large quantities of spent industrial chemicals and code H chemicals were accumulating at Camp Carroll in 1974 due to a lack of proper disposal procedures and political, economical and topographical restraints.

b. The following extracts from the review conducted in 1977 (reference 1b) provided instructions to protect the environment from the impact of the deteriorating chemical containers.

"4. FINDINGS AND DISCUSSION. . . .

"b(7)(a) Area 41 contained a multitude of contaminated and unusable chemical products. These chemicals had been accepted by DPDC-Pusan for disposal by contract to a Korean firm. The bid date for the contract was 14 July 1977 with an expiration date of 18 August 1977. A portion of the products had already been picked up by the contractor. However, there were still quantities awaiting pickup which the contractor, reportedly, could not accept because ROK customs officials would not allow them to be transported. Information was not available as to the reason for this disallowance. DPDC-Pusan would not accept these chemicals for storage at Pusan because of limited storage capacity. The condition of the products remaining in Area 41 was poor. The soil in the area was obviously contaminated with numerous chemicals from leaking containers and from products which had been stored in this area in the past. There was evidence that a portion of these leaking chemicals was washed into the storm drainage ditch, adjacent to the southeast corner of Area 41, by surface water runoff during rains. Most of the products needed to be repackaged to prevent further contamination of the soil. The responsibility for ensuring the proper packaging and storage of these products belonged to the Directorate of Supply and Transportation. Care

and Preservation Division, USAMSC-K, based on the memorandum of understanding between DPDO-Pusan and USAMSC-K. The disposal of these products by contract should be made after repackaging is accomplished.

"(b) Once the chemical products are removed, this area must be decontaminated. Decontamination consists of excavation of at least the upper three feet of soil from this area which was a triangular shape sixty yards wide by forty yards long. The ground sloped from east to west with a drop in elevation of approximately six feet. Therefore, to level the area approximately nine feet of soil would have to be excavated from the eastern portion, sloping to the three feet of required excavation from western portion. A suitable burial site for this contaminated soil was located in Area D (Figure 1, Appendix H). This area is situated approximately five miles from the nearest stream (located to the southwest). Surface drainage was diverted naturally away from the proposed site. The elevation of the area was approximately one hundred feet above the estimated groundwater table for the area (based on surface water streams). The possibility of future construction on the burial site was remote because of the location of the heliport. The burial should be accomplished by the excavation of a trench eight feet deep by ten feet wide by fifty feet long. The soil excavated from Area 41 should be placed in the trench, compacted and covered with at least two feet of uncontaminated soil. Uncontaminated soil from Area D should be transported to Area 41 and compacted to provide at least two feet of cover for the excavated area. . . .

"5. RECOMMENDATIONS. . . .

"h. Chemical Storage and Disposal.

"(1) Recontainerize or package all chemical products located in Area 41 in suitable storage containers as specified in applicable sections of TM 3-250. Ensure that personnel performing the transfer operations are provided with adequate protective clothing and equipment as specified in Chapter 2, Section VII of TM 3-250. Coordinate all transfer operations with the Safety Director.

"(2) Decontaminate Area 41 by excavation of at least the top three feet of soil and burying this soil in the selected site in Area D. Compact at least two feet of uncontaminated soil on the excavated area. Specific instructions are contained in para 4h(2)(b) above."

c. Chemical products from "Area 41" were buried in "Area D" at Camp Carroll during March 1978 (references 1f and 1g). There is no record in

the files of this office that any agency or office authorized burial of any hazardous materials other than the soil already contaminated (reference 1b).

d. Confirmation that hazardous material had been buried without authorization at Camp Carroll occurred on 16 February 1979 after unverified reports were initially received by the 5th Preventive Medicine Unit, LB Detachment (5PMU LB DET) around 9 January 1979. The decision was made by COL Elam, Commander, USA Material Support Command (USAMSC), on 16 February 1979, to remove, recontainerize, and properly dispose of the buried material (reference 1c & 1g). This decision was supported by BG Pendleton, Commander, 19th Support Command, during a meeting on 16 October 1979 (reference 1d).

e. Approximately 6,100 cubic feet of 188 types of various materials weighing between 40 and 100 tons were removed from the "Area B" burial site during the period November 1979-January 1980 (reference 1e and 1f). The materials removed included numerous containers of pesticides (malathion, chlordane, DDT, Lindane, Diazinon), acids, bases, various petroleum products, paints, cleaning solvents, detergents, varnishes, and other assorted chemicals (reference 1h). Some cross contamination of products had occurred due to the deteriorated condition of chemical containers (reference 1f).

f. The extracted chemicals were stored in a diked storage area until containers for repackaging of the materials were received and recontainerization started in May 1980. Recontainerization was halted in June 1980 because containers being used did not meet United States Department of Transportation (DOT) requirements. Completion of repackaging was awaiting receipt of approved (DOT) containers in August 1980 (reference 1g).

g. Reference 1g is the most recent correspondence on this subject in our files. This office has no documentation on ultimate disposal site location and dates of final disposal of the material. USAPPACENEA records also do not indicate if the contaminated soil from "Area A" was ever removed and properly buried.

EHEA-ES
SUBJECT: Review of the Camp Carroll Chemical Disposal Problem 24 November 1982

4. [redacted] contact for this review is CPT [redacted] AUTOVON
b6 b6

[redacted]
LTC, MS
Commanding
b6

2642

Mr. James Brown Interview re: Camp Carroll

25 July 2011

Present:

Mr. James Brown

Mrs. Brown b6

[redacted] **USAEC**

b6

[redacted] **USAEC**

b6

Below is from notes taken by [redacted] **during the interview:**

- Mr. Brown arrived at Camp Carroll, Korea in August 1979
- He was the transportation officer (civilian) at Camp Carroll
- He departed Camp Carroll for Germany in 1981
- [redacted] b6 was Deputy Director Supply & Transportation
- Mr. [redacted] was Mr. Brown's boss
- Both Mr. [redacted] b6 and Mr. Brown arrived at Camp Carroll on the same date
- Mr. [redacted] b6 as from Pine Bluff, AR – he was a chemical expert and retired from Blue Grass Depot
- Material from open trench was already dug up when Mr. Brown arrived at Camp Carroll
- Mr. Brown ordered 800 55-gallon chemical drums to take the material out of old drums and put into new chemical drums
- All drum in the ground were leaking and rusty
- Soil around old drums was dug up and put in new chemical drums along with chemicals
- Mr. Brown doesn't know how many drums were originally buried
- Mr. Brown said mixing the chemicals with dirt created another hazard
- The chemicals were: flammable and corrosive
- Flammable and corrosive chemicals can't be mixed as they can explode
- Mixing with dirt does not mitigate the hazard
- Mr. Brown refused to ship drums back to the states because they were dangerous
- Repackaging the chemicals and dirt into chemical drums took about 18 months
- The repackaged chemicals/dirt was to go to Dugway Proving Ground
    - When drums got into US waters, Coast Guard was notified Coast Guard stopped shipment
    - Coast Guard filmed the ship
    - Coast Guard investigated the non-compatible cargo
    - Coast guard has a case study of this shipment and presented to 1983 Transportation Seminar – 600-700 attended
    - Coast Guard mentioned above was out of San Francisco, CA

- Every chemical used on a depot was in the drums
- Agent Orange, per Mr. Brown, was stored on Camp Carroll and was probably in the chemicals he oversaw being repackaged
- No chemical corps personnel were involved in the repackaging
- Agent Orange had been stored at Camp Carroll prior to 1978
- Look for area where rebuilt equipment (trucks) were stored
- Mr. Brown and his organization took orders from J-4 (BG – does not recall his name)
- The J-4 BG ordered Mr. Brown to ship the repackaged material
- Mr. Brown refused to ship citing CFR 49
- Mr. [redacted] b6 ipped the chemicals after Mr. Brown PCS'd to Germany
- Mr. [redacted] b6 d no chemical experience
    - No one at Camp Carroll at that time was qualified to ship hazardous materials Korean workers did not speak much English
    - Problem resulted from Korean workers not understanding English
- The old drums were considered scrap metal
    - Koreans picked up scrap metal
    - Took it off post
- Mr. [redacted] b6 was in charge of shipping documentation
    - Phone: [redacted] b6
    - Address: [redacted] CA 92708
- Some chemical drums were buried on a hill
    - Drums Mr. Brown repackaged were stacked in an open trench Drums were non-chemical drums
    - Material in drums and surrounding soil were repackaged in chemical drums (rubber lined) for shipment
    - Camp Carroll was a chemical depot at one time
- Rumors of nerve agent were circulating during Mr. Brown's time at Camp Carroll
- Agent Orange came from Camp Carroll in the 1960s
- Repackaged material and soil was shipped by land to Pouson (sp?) then by ship to the US – probably Dugway Proving Ground
- Old drums were not labeled well
    - Mr. Brown did not see any colored bands on the drums
    - The drums were steel OD colored drums
    - Stenciled on the drums was 'hazardous material' (none were marked Agent Orange
- Agent Orange stored at Camp Carroll in 1970s
- Chemicals were buried in several areas – materials were dug up from at least 2 sites and repackaged
- Korean farmers had problems with their rice patties being affected
    - Farmers were paid off
    - 8th Army should have record of this
- Korean workers wore masks to go into the areas where chemical were being repackaged
- Sealand (shipping company) was fined for transporting the repackaged chemical drums to US

- All repackaging done in 1978 was on same shipment to US
    - Mr. Brown only worked on open storage (identified at Area 41) Area 41 trench was 3-4 feet deep - looked like a drainage ditch
    - Open storage – was never covered
- He identified Area D as area where chemicals leaked into the rice patties – he did not work in this area
- Camp Carroll was originally the 8th Army Chemical Depot
- Later it became the Material Support Depot, Korea

Follow-up questions for Mr. James Brown

Per your request, the following answers are provided. August 2, 2011

James Brown

- When in 1981 did Mr. Brown depart Korea for Germany?

February 1981

- How did Mr. Brown order the chemical drums—through normal supply channels or did he have to special order from a specific place?

The chemical drums were requisitions through the normal supply channels on a transportation priority-1 (TP- 1), which was the highest priority and eligible to be airlifted to Korea. Which in this case, the drums were airlifted to Osan Air Force Base, Korea and transported by trucks to Camp Carroll, Korea.

- If from a specific place, what was it?

I have no ideal at this time without looking at a shipping order, which Army Depot. The chemical drums ship from. I do know they were of the specification, which I have provided [redacted] with in order for him to requisitions the drums. b6

- Were the drums he ordered used for just one excavation, both sites mentioned or more disposals not necessarily excavated?

The drums were order for all bulk chemical to be shipped on a onetime shipment.

- How does Mr. Brown know the excavated materials were corrosive and flammable?

I was provided with the name of the chemicals to be shipped on the material release order (MRO) and in accordance with code of federal regulations 49 CFR 49. Verified the hazards classification of the chemicals.

- How does Mr. Brown know the repackaged chemicals and dirt were going to Dugway Proving Ground?

Specified on the material release order as the destination.

- Was this normal procedure for shipment of hazardous material or a onetime shipment?

Absolutely not, mixing chemicals and dirt for shipping is in violation of CFR49 and all other hazardous materials regulations.

- To which organization at Dugway Proving Ground was the shipment sent?

Materials release order, which stated to the installation central receiving point.

- Mr. Brown states that the materials were already excavated when he arrived in August 1979. Were there any other excavations of hazardous materials during his tour or were the two excavations he spoke of both done before his arrival?

When I arrived in Korea. As for as I know all chemicals had been evacuated for shipping.

- Was there anything in the 500 area of Camp Carroll?

I cannot say at this point without looking at a detailed map of Camp Carroll.

- Mr. Brown states that Mr. [redacted] shipped the materials after he departed for Germany. How does he know this? b6 b6

Mr. [redacted] was selected for the position of transportation officer/traffic manager and it was his responsibility for all shipments From Camp Carroll, which was the position I held until transferring to Germany. That would also include all hazardous materials shipments.

- Who notified the Coast Guard about the ship with the hazardous cargo? Was this normal procedure?

I have no idea. However, all shipments of hazardous materials are verified from the cargo manifest, "including the hazardous certification signed by the shipper which would have been the transportation officer at Camp Carroll" with the Coast Guard.

- **How does Mr. Brown know that the Coast Guard investigating the ship came out of San Francisco?**

Coast Guard representative presented a presentation with a video in the annual transportation seminar held in San Diego. Summer 1983. In addition, this was presented a case study of how not to make hazardous material shipping.

- **How does Mr Brown know that the Coast Guard filmed the ship and made a case study for presentation at the 1983 Transportation Seminar? Did they say what happened to the shipment after it was intercepted and fined?**

I attended the 1983 seminar and the Coast Guard representative stated the amount, which had been fined the shipping company.

- **How does Mr. Brown know the shipping company was fined? How much was the fine?**

As stated by the Coast Guard representative and I am not sure of the exact amount. However, this information should be on file with the coast guard. This information also was included in the presentation and on the Video.

- **Who repackaged the excavated drums and dirt?**

Military personnel assigned to the supply transportation director (S&T) under the direct supervision of Mr. [redacted] and overall supervised by Mr. [redacted] deputy director(S&T).

- **Did the workers wear anything special (besides masks) while repackaging?**

Military hazardous chemical suits

- **Does Mr. Brown remember which unit was normally used to transport shipments from Camp Carroll to Busan?**

The military unit that was responsible for transportation cargo in Korea was the 69th transportation Battalion, headquarters located at Camp Carroll. Several commercial transportation companies transported commercial cargo. However, Sealand was the major containerization company utilized by Camp Carroll. We would order a container for transportation of cargo and Sealand would send a container from Pusan to be loaded and transported back to Pusan, using their own drivers.

- **Does Mr. Brown have contact information for** [redacted]

No, the last time I hear of Mr. [redacted] he was working at bluegrass Army Depot, Kentucky.

- **What does Mr. Brown mean by "Agent Orange came from Camp Carroll in the 1960s?" Can he clarify—was Carroll a storage area or did it pass through? How does he know this?**

Came Carroll is the major storage facility in Korea; chemicals are stored at camp Carroll and distributed throughout Korea.

- **Was anything besides 55-gallon drums excavated or repackaged during his tour?**

Not that I am aware of. However, I am not familiar with ever Item that was evacuated. That would be Mr. [redacted] responsibility to reply to this question or someone assigned to the supply division.

- **How did Mr. Brown know it was SeaLand? Does he know how much the fine was?**

Under my supervision Mr. [redacted] chief, freight branch orders shipping containers from Sealand. At one time, we were considering shipping the chemicals by Milvans, which are containers that are the property of Department of Defense. However, there was a serious shortage of Milvans worldwide and I was unable to obtain the amount that was required for this amount of hazardous materials.

End of replies to your questions.

James Brown.
Phone number: 253-952-6202

Mr. Hwang Ui Chon Interview (UNCLASSIFIED)

[redacted] MAJ MIL USA EUSA

You replied on 7/27/2011 4:03 PM.
Extra line breaks in this message were removed.

Sent: Fri 7/1/2011 4:09 PM
To: Gayle, Kathleen [redacted] USA IMCOM KOREA
Cc: [redacted] CIV USA IMCOM; [redacted] CIV USA IMCOM; [redacted] CIV USA IMCOM; [redacted] CPT MIL USA EUSA

Classification: UNCLASSIFIED
Caveats: FOUO

Ma'am,

FYI on an interview I did on Mr. Hwang...

Mr. Hwang recently retired from S&T Division in MSC-K and he was the one who we've been waiting for last two weeks. Since he worked more than 30 years in the shipping division, he had a knowledge on the shipment of hazardous waste. Below is a summary of what he talked to me about.

1. He saw ten 20-ft MILVANs being loaded with 55-gall drums filled with contaminated soil, chemicals and asphalt. He saw one of the drums being loaded with contaminated asphalt. The drums were packaged professionally ("doubled bagged and double drummed").

2. He said 69th Trans CO (with two US drivers) transported the MILVANs to Busan. The point of debarkation was Pier 8, but 837th was not the unit back then. He did not know whether it was a military or commercial vessel, but he stated it would have been most likely a military since commercial vessels did not like to handle hazardous vessels.

3. Mr. [redacted] was working with him during this time. Mr. [redacted] has passed away. Mr. Brown was "kicked out" before this incident. There was a branch that had custom inspectors with a NCOIC (E7). He does not remember any of US names.

4. He does not remember seeing any Agent Orange at that time.

5. No Korean news reporter was interested in talking with him about this since his story goes against the media hype.

v/r, [redacted]

V/R,
MAJ [redacted]
NIPR) [redacted]@korea.army.mil
SIPR) [redacted]us.army.smil.mil
☎ IMCOM-K Office-- DSN) [redacted] COM) [redacted] ☎ Cell-- [redacted]

Classification: UNCLASSIFIED
Caveats: FOUO

RE: LTG Johnson update and Cp Carroll 17 June Environmental/public health meeting (UNCLASSIFIED)

b6 [redacted] Dr CIV USA IMCOM

Sent: Thu 6/16/2011 10:12 AM

To: [redacted] Mr CIV USA IMCOM b6 b6

Cc: [redacted] Mr CIV USA IMCOM; [redacted] Mr CIV USA IMCOM; [redacted] MSG MIL USA IMCOM

Signed By: [redacted] s.army.mil

b6

Classification: UNCLASSIFIED
Caveats: FOUO

I was not involved with the burial or the excavation; my predecessor as OIC/Commander of the LB Detachment of the 5th PMU (then CPT Scott Rowden) supervised the digging up of the drums and some of my staff at the LB Detachment were there at the time. I took over the LB Detachment in December 1981, and was involved with verification of the removal of the material from Camp Carroll, but I was unable to find any documentation. I was forced to conclude there was no documented proof of removal from Camp Carroll; however, I was told that the drums had been taken away by a contractor to DRDO-Pusan for disposal in the U.S. (possibly Dugway Proving Ground). I did look at the excavation location (as well as Area 41) in early 1982, and observed the ground had been recently disturbed. I could find no records of who, when, or how the drums were removed - nor where they went. I do feel confident, though, that the drums I examined in early 1982 at Area 41 were not the drums which had been dug up - due to lack of dirt or clay on them, nor other evidence of having been buried.

In 1982, there were no drums of AO in any locations I visited on Camp Carroll. No one mentioned the words "Agent Orange" in the audits and meetings at Camp Carroll at that time.

The norm at that time would have been to inspect the containers; if any were damaged or leaking, to repackage the drums in overpack drums meeting DOT specs (these were usually plastic). Practice would have been to use a (Korean ?) local contractor for the transport, as we did with other chemicals in that timeframe.

I have communicated with MAJ(Ret) Scott Rowden and re-verified what he told me in 1982 when I began the project of looking into the ultimate disposal of the excavated drums.

---

b6

[redacted] Ph.D., PE, CIH, CSP, CPEA, RS, DAAS, FAIC (LTC (Ret), MS, USA)
Chief, Environmental Division, Directorate of Public Works
US Army Garrison-Red Cloud, Unit 15707
APO AP 96258-5707
Office Phone: Commercial [redacted] DSN [redacted]
Mobile Phone: [redacted]

b6 b6 b6

Please take a few minutes to break the ICE and tell us how we are doing in the USAG-RC Environmental Office. Hold down the control key, click on the site below and complete the comment card. Thank you.

http://ice.disa.mil/index.cfm?fa=card&service_provider_id=117869&site_id=260

&service_category_id=5

This message is for the designated recipient(s) only and may contain privileged, proprietary, FOUO, or otherwise private information. If you have received it in error, please notify the sender immediately and delete the original. Any other use of the e-mail by you is prohibited.

-----Original Message-----
From: [redacted] Mr CIV USA IMCOM
Sent: Thursday, June 16, 2011 9:43 AM
Cc: [redacted] Mr CIV USA IMCOM
Subject: LTG Johnson update and Cp Carroll 17 June Environmental/public health meeting (UNCLASSIFIED)
Importance: High

Classification: UNCLASSIFIED
Caveats: FOUO

In preparation for tomorrow's 0900 meeting at Cp Carroll and as a means of updating the brief that will prepare LTG Johnson to brief DA this evening please provide answers to the following questions as soon as possible (we must update the brief in the next hour but still send the info if it is after that).

What actions have you taken to answer the two investigative LOO questions?

What are your near term planned actions for answering the two investigative LOO questions?

As a reminder, the two investigative LOO questions we are trying to answer are:

Was agent orange buried at Camp Carroll?

--what proof do you have that it was or was not?

--what is the source of your information and how reliable is it?

What happened to the buried drums and spoil reportedly removed from Camp Carroll in 1979-80?

--what was the "norm" for getting rid of contaminants in this era?

--who have you contacted for information?

--who has responded and what information did they provide?

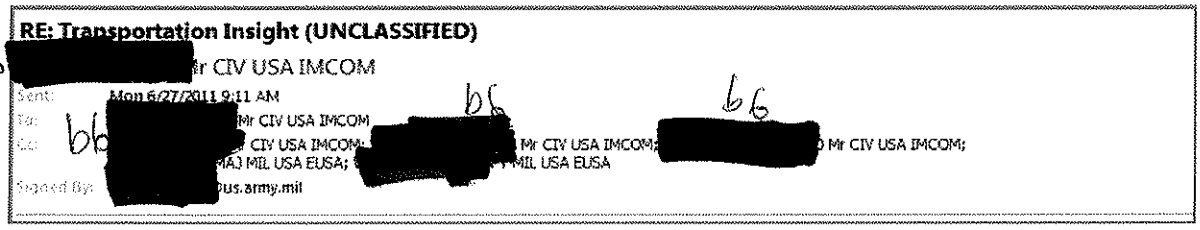
Please reply to this email and cc Mr. [redacted]

[redacted]

Plans Specialist
USAG Daegu PAIO
DSN [redacted]

2650

Classification: UNCLASSIFIED
Caveats: FOUO



The only unit that is still active on the peninsula is the 25th Transportation Battalion. When customers (shippers) need to transport cargo they would request support through the local TMO which was ran by the 25th Trans. The 25th Trans would determine what mode of transportation the cargo would go by.

The TMO office that would have handled any cargo movement out of Camp Carroll was located at the Weagwan Train Station during that time frame.

There was a Korean employee that passed commitments (Transportation Requests) to me while I was in the S-3 of the 69th Transportation Battalion and his name was Mr Ha, I don't recall his full name.

V/r

Chief, Transportation Division
US Army Garrison Daegu
DSN:
CML:
CELL:
"Success is the Only Option"

-----Original Message-----
From: Mr CIV USA IMCOM
Sent: Monday, June 27, 2011 8:33 AM
To: Mr CIV USA IMCOM
Cc: CIV USA IMCOM; Mr CIV USA IMCOM; Mr CIV USA IMCOM; MAJ MIL USA EUSA; PT MIL USA EUSA
Subject: RE: Transportation Insight (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Once again, with you being the resident expert, the CCTF team is reaching out to you for assistance. Can you identify which current military shipping units might have records/knowledge of hazardous material being trucked out of Cp Carroll 1978-1985 timeframe?

And, contact the sections managing historic records and ask the following questions?:

1) Are there any records for hazardous material being shipped out of Camp Carroll 1978-1985?

2) For potential interviews, are there any individuals (probably long tenure KNs) who worked for the shipping unit on Cp Carroll 1978-1985 timeframe who may have knowledge of hazardous material being shipped out of Camp Carroll?

3) If their unit didn't ship a particular cargo, are they aware of the names of Korean shipping companies that would have?

Please let me know if you are able to assist and your approach if you are able.

Vr
Ken

[redacted] b6

USAG Daegu
Plans, Analysis and Integration Office (PAIO) Lead Management and Program Analyst
DSN: [redacted] b6
CELL:
EMAIL: [redacted]Korea.army.mil

-----Original Message----- b6
From: [redacted] Mr CIV USA IMCOM
Sent: Wednesday, June 22, 2011 1:02 PM
To: [redacted] Mr CIV USA IMCOM [redacted] b6
Cc: [redacted] Mr CIV USA IMCOM; [redacted] Mr CIV USA IMCOM; b6 [redacted] Mr CIV USA IMCOM; [redacted] MAJ MIL USA EUSA
Subject: RE: Transportation Insight (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[redacted] b6

See below...

I hope this will help, sorry it took so long.

V/r [redacted] b6

Chief, Transportation Division
US Army Garrison-Daegu
DSN: [redacted] b6
CML:
CELL:
"Success is the Only Option"

-----Original Message-----
From: [redacted] Mr CIV USA IMCOM

b6

Sent: Wednesday, June 22, 2011 9:58 AM
To: [redacted] CIV USA IMCOM
Cc: [redacted] Mr CIV USA IMCOM; [redacted] Mr CIV USA IMCOM; [redacted] Mr CIV USA IMCOM; [redacted] MAJ MIL USA EUSA
Subject: Transportation Insight (UNCLASSIFIED)
Importance: High

Classification: UNCLASSIFIED
Caveats: FOUO

[redacted]

Our conversation this morning was very enlightening. We are really glad you are on our side in the investigation with such extensive institutional knowledge.

As I mentioned, these are the key points we are seeking which will assist our research efforts - and of course anything else that comes to mind that you figure would be helpful.

NOTE: We are near certain Agent Orange did not exist on Cp Carroll. Therefore, we are seeking data on the movement of any products from Cp Carroll which may have been buried, dug up, and transported out (Destination e.g., DPDO-Pusan, Johnston Island, Utah.)

1) What was the framework of transportation units on Cp Carroll 1978-1985?
Answer: There was the 46th Transportation Company, a Trailer Transfer Point, and the 69th Transportation Battalion. The 46th Transportation Company was responsible for the port of Pusan (Pier 3) and PSF by transportation cargo up Camp Carroll or Camp Humphrey's.

2) What was the normal means of transporting hazardous material/waste out of Cp Carroll 1978-1985 (e.g., military trans company, Korean contractor)?
Answer: Over 90% of all DOD cargo that was transported within Korea during that time it was either done by the 25th Transportation Battalion that operated rail cars or either it was done by the 69th Transportation Battalion which provided line-haul transportation throughout Korea.

3) What was the administrative process for transporting such material out of Cp Carroll that time frame?
Answer: All DoD cargo that fell in a category as ammo, weapons, explosive, or hazardous required MP escort, no matter if it was transported by rail or truck. Plus, this type of cargo required certification by the shipper.

4) What units may have been associated with the digging, extracting, packaging, movement?
Answer: For digging and extracting, the only company on Camp Carroll at that time was D Co. 802nd Engineers. For packaging/creating and certification that would have come from the S & T branch of MSC-K. For movement of cargo, it would have been the 25th/69th Transportation Battalion depending on the mode of transportation.

You can see by the general questions what we are interested in. Please feel free to express all details you recall - such as, you mentioned 99% of such movements were by military transport. Your contribution will greatly aide us in our phase of research and where we could potentially seek data.

Thank you Randy !!!

Vr
Ken

[redacted] b6
USAG Daegu
Plans, Analysis and Integration Office (PAIO)
Lead Management and Program Analyst
DSN: [redacted] b6
CELL:
EMAIL: [redacted]@Korea.army.mil

Classification: UNCLASSIFIED
Caveats: FOUO

MINISTRY OF COMMERCE AND INDUSTRY

SUKWAN 1315-391

30 March 1981

SUBJECT: Notification of Blanket Disposal Instructions on U.S. Excess Property in Korea

TO: Commander
Korea Det, DPDR-PAC

1. Reference is made to our letter, SUKWAN 1313-2420, dated 29 Dec 80.

2. Currently, U.S. excess property in Korea is being disposed of via transmitting PL on a case by case basis to this Ministry for our disposal instruction in accordance with this Ministry's Public Notice No. 80-33 (Procedure For Disposal of US Excess Property in Korea), Article 4, paragraph 1.

3. For expeditious disposal of excess property, listings of property which may be imported intact and which can not be (only in mutilated/ smelted condition) are hereby provided at enclosure 1 in accordance with Paragraph 2 of aforementioned Article. Therefore, the Korea Sales Office may dispose of those property covered by provided listings and the customs Chiefs may issue customs clearance on sold property accordingly.

4. However, please be advised that PLs for property not covered by provided listings will be prepared and transmitted on a case by case basis as usual.

a/MINISTER OF MCI

Translated by: [redacted] b6

Prop Disp Spec

2656

BLANKET DISPOSAL INSTRUCTIONS ON U.S. EXCESS PROPERTY

MINISTRY OF COMMERCE AND INDUSTRY

9657

I. LISTINGS OF PROPERTY IMPORTABLE AS IT IS

CCCN	ITEM
2503	Sulphur
2510	Calcium Phosphate, Natural Aluminum Calcium Phosphates
2519	Magnesium Carbonate, Magnesium Oxide
2522	Quicklime, Slaked Lime
2801	Chlorine, Fluorine, Bromine, Iodine
2802	Sulphur Sublimed, Colloidal Sulphur
2803	Carbon Black
2805	Mercury, Lithium, Sodium, Potassium, Cæsium
2806	Hydrochloric Acid, Chlorosulphuric Acid, Sulphuric Acid, Oleum
2809	Nitric Acid, Sulphonitric Acid
2810	Phosphorus Pentoxide, Qrtho-phosphoric Acid, Meta-phosphoric Acid, Pyro-phosphoric Acid
2812	Borac Acid, Boric oxide
2813	Oxide, Arsenic Acid, Arsenic Trioxide,Arsenic Pentoxide, Hydrofluoric Acid, Hydrosulphite, Sulphonic Acid,Perchloric Acid, Chloric Acid, phosphorous Acid, Hypophosphorous Acid Carbon Dioxide, Carbon Monoxide, Silicon Oxide, Silicic Acid, Silicagel, white carbon, nitrous oxide, nitric oxide
2814	Iodine Trichoride, Phosphorous Trichloride, Phosphorous Pentachloride, Sulphur Dichloride, Thionyl Chloride, Boron Trifluoride
2815	Carbon Disulphide, phisphorous sulphide, Arsenic Sulphade silicon sulphade.
2816	Ammonia, Anhydrous Solution
2817	Caustic Soda, Potassium Hydroxide, Sodium Peroxide

CCCN	ITEM
2818	Barium Hydroxide, Magnesium Hydroxide, Magnesium Peroxide, Barium Oxide, Barium Peroxide, Strontium Oxide.
2819	Zinc Oxide, Zinc Peroxide
2820	Aluminum Oxide, Aluminum Hydroxide, Alumina gel, Artificial Corundum
2821	Chromium Oxides, Chromium Hydroxides.
2822	Manganese Oxides
2823	Iron Oxides, Iron Hydroxides
2824	Cobaltic Oxide, Other Cobalt Oxides, Cobaltous Hydroxide
2825	Titanium Oxides
2827	Lead Oxides, Red Lead, Orange Lead
2828	Oxides Nickel, Peroxides Nickel, Hydrozine, Hydrate, Lithium Oxides, Lithium Hydroxides, Calcium Oxides, Calcium Hydroxides, Nickel Hydroxides, Antimony Oxides, Tungsten Oxides, Tungsten Hydroxides, Copper Hydroxides, Vanadic Pentoxide, Hydrozine, Hydroxylamine, Inorganic Salts of Hydrozine, Inorganic Salts of Hydroxylamine.
2829	Artificial croylite, Calcium Fluoride, Sodium Fluorosilicate Aluminum Fluorides, Antimony Fluorides, Fluorosilicates Fluoroborates, Fluorophosphates
2830	Ammonium Chloride, Calcium Chloride, Zinc Chloride, Cobalt Chloride, Nickel Chloride, Copper Chloride, Mercury Chloride, Aluminum Chloride, Hydroxychlorides
2831	Sodium Chlorites, Aluminum Chlorites, Potassium Hypochloritee
2832	Sodium Chlorates, Potassium Chlorate, Barium Chlorate, Ammonium Iodates, Periodates
2835	Sulphides, Polysulphite

2659

CCCN	ITEM
2836	Dithionites, Sodium Dithionite, Calcium Dithionite, Sulphoxylates Formeldehyde.
2837	Sulphites, Sodium Sulphites, Sodium Bisulphites, Potassium Sulphite, Potassium Thiosulphate.
2838	Sodium Sulphate, Sodium Hydrogen Sulphate, Sodium Pyrosulphate Alums, Aluminum Sulphate, Copper Sulphate, Magnesium Sulphate, Barium Sulphate, Zinc Sulphate, Nickel Sulphate, Chromium Sulphates, Aluminum Persulphate, Sodium Persulphate
2839	Sodium Nitrites, Potassium Nitrites, Barium Nitrites, Sodium Nitrate, Potassium Nitrate, Nagnesiums Nitrate
2840	Phosphites, Sodium Hypophosphite, Calcium Hypophosphite, Sodium Phosphates, Sodium Tripolyphosphate, Sodium Metaphosphate Sodium Pyrophosphate, Sodium Polyphosphate, Dicalcium Phosphate
2842	Sodium Cyanide, Potassium Cyanide, Copper Cyanide, Zinc Cyanide, Ferrocyanides
2844	Cyanates, Sodium Thiocyanate, Potassium Thiocyanate
2845	Sodium Silicates, Potassium Silicates, Barium Silicates
2846	Perborates, Borates, Sodium Borates
2847	Potassium Chromates, Dichromates, Sodium Dichromate, Potassium Dichromate, Potassium Chromate, Manganates, Permanganates, Stannates Molybdates, Antimonates, Aluminates, Tungstates, Germanates, Bismuthates
2848	Arsenates, Arsenites, Salts of Selenium, Salts of Tellurium Acids Double or Comlex Chlorides, Double or Complex Iodides, Nitro cobaltates, Borotungstates, Double or Complex Nitrates, Double or Complex Phosphate, Double or Complex Salts of Selenium, Double or Complex Salts of Tellurium

CCCN	ITEM
2854	Hydrogen Peroxide
2855	Copper Phosphide, Iron Phosphide, Calcium Phosphide, Zinc Phosphide
2856	Calcium Carbide, Silicon Carbide, Tungsten Carbide, Carbides, Complex Carbides
2857	Hydrides, Nitrides, Azides, Silicides, Borides
2858	Liquid Air, Compressed Air, Amalgam
2901	Ethylene, Propylene, Butadiene, Cyclohexane, Benzene, Toluene, Ortho-Xylene Para-Xylene, Meta-Xylene, Mixed Xylene Styrene, Alkyl benzene
2902	Vinyl Chloride, Trichloroethylene, Ethylene Dichloride
2904	Methanol, 2-ethylhexyl alcohol, Ethylen glycol, Propylene glycol, Pentaerythritol
2906	Phenol
2909	Ethylene Oxide, Propylene oxide
2911	Formaldehyde, Acetaldehyde
2913	Acetone, Ethyl Mechyl Ketone, Isobutyl methyl Ketone, Cyclohexanone Keton
2914	Acetic Acid, Ethyl Acetate
2915	Maleic, Anhydride, Phthalic Anhydride, Terephthalic acid, Dimethyl terephthate, Potassium Oxalate
2927	Acrylonitrile
3102	Nitrogenous Fertilizer
3103	Phosphatic Fertilizer
3104	Potassic Fertilizer
3105	Complex Fertilizer
3206	Colour Lakes
3207	Colouring Matter; inorganic produts of a Kind used as luminophores

CCCN	ITEM
3208	Prepared Pigments
3209	Vanishes and Lacquers, water-thinned paints, Paints and Enamels, Oil paints,
3210	Amusement Colours and the like
3211	Prepared Driers
3212	Glazier's putty, Grafting putty, painter's Fillings, non-refractory Surfacing preparations
3213	Printing Inks, Writing Inks, Drawing Inks, Copying Inks. Metallic Inks.
3701	Film photographic
3702	Film photographic
3703	Paper photographic
3901	Epoxy Resin, Phenol Resin, Medamine Resin unsaturated Polyester Resin
3902	HDPE Resin, VPPE Resin, PVC Resin PP Resin, PS Resin, PVA Resin, Petloleum Resin
4002	Synthetic rubber latex, synthetic rubber
4009	Rubber hose
4011	Rubber tire and inner tube
4014	Rubber Erasers, Stoppers and Rings for Bottles
4109	Leather
4203	Leather gloves (for athletics included), belts, suspensions
4205	Other articles of leather or of composition leather
4421	Complete wooden packing cases, Boxes, Crates, drums and similar packings.
4427	Household wooden furnitures (Kaskets, cigarette boxes, trays, fruit bowls, etc).

FW: HAZARDOUS MATERALS SITUATION, CAMP CARROLL, KORES 1978 TO 1981

b6 [redacted] CIV USA IMCOM AEC
Sent: Sat 8/6/2011 3:31 AM
To: [redacted] CIV USA IMCOM
Cc: [redacted] CIV USA IMCOM AEC

b6 [redacted] have not digested Mr. Brown's comments, yet, but wanted you to have them. I'll prepare input for the interview list well before the next telecom.

Have a great weekend!

Vr,

[redacted] b6

[redacted] b6

Chief, Public Affairs
US Army Environmental Command
US Army Installation Management Command
1835 Army Boulevard, BSMT
Fort Sam Houston, TX 78234
Office: [redacted] b6
Blackberry: [redacted]

-----Original Message-----
From: [redacted] b6 [mailto:[redacted]]
Sent: Friday, August 05, 2011 1:16 PM
To: [redacted] CIV USA IMCOM AEC
Subject: HAZARDOUS MATERALS SITUATION, CAMP CARROLL, KORES 1978 TO 1981

Ms. [redacted] b6

I have no problem replying to your questions, to assist you in your investigation. The investigation should have been conducted more than 30 years ago, when the chemicals were first observed leaking into the nearby rice paddy.

Yes, we did ship hazardous materials to Taegu and Osan Air Force Bases. However, we did not ship hazardous waste to either Air Force Base. In addition, we did not ship hazardous waste to camp market; Bupyeong, Korea.

I will explain the shipping procedures for air eligible cargo that we ship to both of the above Air Force bases. First, our major air terminal in Korea was Osan air base, daily we shipped high-priority cargo, by open truck's to Osan air base. The transportation system was set up and staffed by air force personnel to receive air eligible cargo, including hazardous cargo from all activities throughout Korea. However, MSC – K was their largest customer, "except during team spirit which was a major exercise conducted by all forces in Korea". In addition, other units assigned to Korea from conus and Japan. The above exercise was approximately 30 days in duration and did not have a major impact on MSC – K backlog of cargo.

Our shipments to Taegu air base were very few, even though the airbase was located only 29 miles from Camp Carroll. However, if we had a large amount of air

eligible cargo that was not hazardous materials they would make an exception on a space available basis to receive the cargo at Taegu Air Force Base, as they were not staffed to receive large amounts of cargo and especially hazardous cargo. Most of the cargo was then transported by aircraft to Osan airbase, for reconsolidation and onward movement out of country.

Camp market was one of the two-property disposal receiving points, the other being property disposal office, (PDO), Pusan. In addition, camp market was headquarters for the property disposal and reutilization operations in Korea. Hazardous waste was not an item that could be disposed of in Korea or used in reutilization in Korea, Pusan was the main operation that MSC - K utilized for property disposal. One of the main functions of PDO operations is reselling property on the local economy to recoup monies, which was returned to the Department of Defense funding system. Therefore, hazardous waste was a nonreturnable item. However, we did ship line items to both PDO's that was classified as hazardous materials, i.e. instruments, and all types of materials with low-level radioactive parts.

The PDO managers from both operations would visit Camp Carroll approximately every 90 days and review MRO's and actually inspect items for condition codes and serviceability of items that were on backlog, awaiting shipment, select the items to be shipped to their respective operation for resale, especially high-dollar value items. All items shipped to the PDO operations were staged in open storage areas or shed #15 that were controlled by the shipping branch, which was a branch of transportation division, and under my direct control.

I hope I have been of some assistance in replying to your questions concerning shipments of hazardous materials from MSC - K to Taegu/Osan air bases and to both PDO operations in Korea.

[redacted] b6

b6

-----Original Message -----
From: [redacted] CIV USA IMCOM AEC Decker" [redacted] us.army.mil> b6
To: [redacted] q.com
Sent: Thursday, August 4, 2011 7:11:47 AM
Subject: RE: HAZARDOUS MATERALS SITUATION, CAMP CARROLL, KORES 1978 TO 1981

Mr. Brown - again, thank you!

We have one more question (and I hope it's the last one).

We know that MSC-K shipped HAZMAT out of Taegu Airbase. Do you have any knowledge of MSC-K S&T ever shipping hazardous waste out of Taegu Airbase, Osan Airbase or Bupyeong (Camp Market)?

Hope you and your wife have a great day!

Vr, [redacted] b6

[redacted] b6

2664

Chief, Public Affairs
US Army Environmental Command
US Army Installation Management Command
1835 Army Boulevard, BSMT
Fort Sam Houston, TX 78234
Office: [redacted] b6
Blackberry: [redacted]

-----Original Message-----
From: [redacted].com [mailto:[redacted]@q.com] b6
Sent: Tuesday, August 02, 2011 5:01 PM
To: [redacted] USA IMCOM AEC
Subject: HAZARDOUS MATERALS SITUATION, CAMP CARROLL, KORES 1978 TO 1981

Ms. [redacted] b6

Reference your e-mail: subject: hazardous materials situation, Camp Carroll, Korea, 1978, to19 81 and attachment: Subject: follow-up questions for Mr. James Brown. Dated: August 2, 2011.

I have replied to your questions in the attachment to the best of my ability at this time, however, if you would like to have me expand on any questions or subject concerning this situation than at Camp Carroll," I have no problems with written questions. In fact that the method I prefer, as there will be a definite record to your questions". Moreover, I will be more than glad to reply to any questions. As long as it was under my purview as the transportation officer for Camp Carroll, Korea.

Yes, I can understand the hot weather in Texas as we were in Singapore and Vietnam last year, with temperatures over 115° plus humidity, of course, Singapore is only 8° from the equator. Everyone expects type of hot weather. Here in Washington. The temperature is approximately 70° and very seldom do we really have hot weather or for that matter, in the winter very seldom do we have any snow. So overall Washington State is one of the better areas to live in United States.

Jim Brown,

NOTIFICATION TO EPA OF HAZARDOUS WASTE ACTIVITIES

Region 8

This publication (SW 897.8) was prepared by the Office of Solid Waste from information supplied by the EPA Regions. The listing for each Region is in a separate volume:

Region 1	SW 897.1
Region 2	SW 897.2
Region 3	SW 897.3
Region 4	SW 897.4
Region 5	SW 897.5
Region 6	SW 897.6
Region 7	SW 897.7
Region 8	SW 897.8
Region 9	SW 897.9
Region 10	SW 897.10

U.S. ENVIRONMENTAL PROTECTION AGENCY

1980

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

2666

Preface

Section 3010 of the Resource Conservation and Recovery Act of 1976 (RCRA) requires any person who generates or transports hazardous waste or who owns or operates a facility for the treatment, storage, or disposal of hazardous waste to notify EPA of their hazardous waste activity within 90 days of the promulgation or revision of regulations under Section 3001 of RCRA for identifying or listing hazardous waste. EPA promulgated regulations under Section 3001 of RCRA on May 19, 1980, and published revisions to those regulations on July 16, 1980. This report presents information from notifications which EPA received and processed between May 19, 1980, and November 19, 1980.

EPA received approximately 59,000 notifications during this period. This report contains information from approximately 56,000 of these. Several hundred notifiers requested that their information be held confidential. The Agency is still processing some of these requests, and has not included the information from these notifiers in this report. The Agency did not process the remaining 2,600 or so notifications in time to include information from them in this report.

Certain firms who notified EPA may not now be handling hazardous waste. For example, some "played it safe" and notified to meet the legal requirement and have subsequently determined that they do not handle hazardous waste, while others have been exempted as the result of technical amendments issued since May 19.

This report has ten volumes; one volume for each of EPA's ten regions. The inside front cover of each volume has a list of the geographical areas in each region and the names, addresses and phone numbers of persons you can contact for further information.

The information for each installation is listed alphabetically under the State where it is located. The following page explains the format that is used to show the individual information items for each installation. The information presented in this report is the information which notifiers submitted to EPA. The Agency has not verified its accuracy.

NOV 26 1980

Date

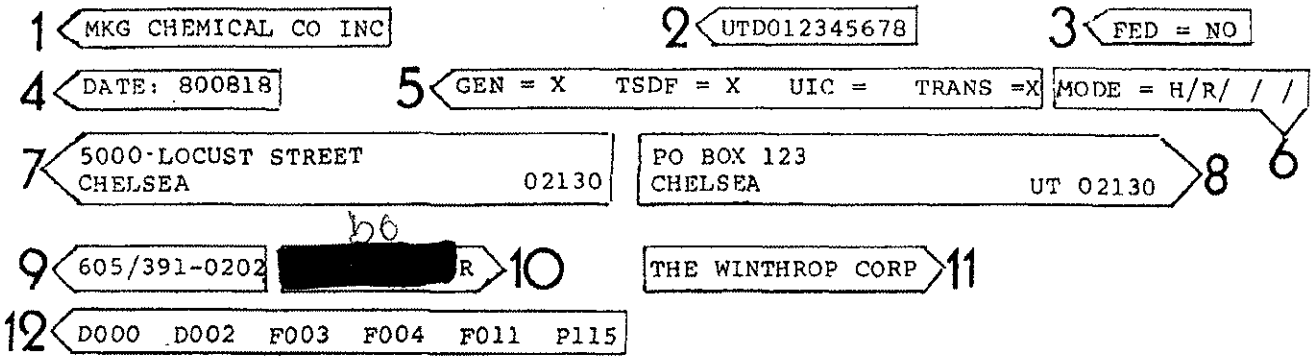
[redacted]

Deputy Assistant Administrator
for Solid Waste (WH-562)

2667

INFORMATION FORMAT

Below is an example of the information format used in this report and an explanation of the individual information items.



1. Name of Installation
2. Installation's EPA Identification Number
3. Federally Owned Installation - yes or no
4. Date of Notification - year, month, day
5. Type of Hazardous Waste Activity - indicated by an "X", where GEN = Generator, TSDF = Treatment, Storage, or Disposal Facility, UIC = Underground Injection Well, and TRANS = Transportation.
6. MODE OF TRANSPORTATION (for transporters only) - A = Air, R = Rail, H = Highway, W = Water, and O = Other.
7. Location of Installation
8. Installation Mailing Address
9. Installation Contact's Phone Number
10. Installation Contact's Name
11. Installation Owner's Name
12. Hazardous Waste Codes - See next page for explanation.

WASTE BY PROMULGATION SCHEDULE
ALL1 ALL WASTE PROMULGATED ON MAY 19, 1980
ALL2 ALL WASTE PROMULGATED ON JULY 16, 1980
NON-LISTED TOXIC WASTE ON NOTIFICATION
D000 ANY COMBINATION OF WASTE D004 THROUGH D007
NON-LISTED CHARACTERISTICS OF HAZARDOUS WASTES
D001 NON-LISTED IGNITABLE WASTES
D002 NON-LISTED CORROSIVE WASTES
D003 NON-LISTED REACTIVE WASTES
CONTAMINANTS CHARACTERISTIC OF EP TOXICITY
D004 ARSENIC
D005 BARIUM
D006 CADMIUM
D007 CHROMIUM
D008 LEAD
D009 MERCURY
D010 SELENIUM
D011 SILVER
D012 ENDRIN
D013 LINDANE
D014 METHOXYCHLOR
D015 TOXAPHENE
D016 2,4-DICHLOROPHENOXYACETIC ACID
D017 2,4,5-TP SILVEX ACID
HAZARDOUS WASTES FROM NONSPECIFIC SOURCES
F001 SPENT HALO CHLORIDES & SLUDGE FM GRAY IRON FOUNDRIES
F002 HALO SOLV AND REC STILL BOTTOMS
F003 NON-HALOGENATED SOLV AND SOLV REC STILL BOTTOMS
F004 NON-HALOGENATED SOLV AND SOLV REC STILL BOTTOMS
F005 NON-HALOGENATED SOLV AND SOLV REC STILL BOTTOMS
F006 ELECTROPLATING TREAT SLUDGE
F007 SPENT BATH SOLU FM ELECTROPLATING OPER
F008 SLUDGES FM BOTTOM OF BATH FM ELECTRPLTNG OPER
F009 SPENT STRIP & CLEAN BATH SOLU FM ELECTRPLTNG OPER
F010 QUENCH OIL BATH SLUDGE FM METAL HEAT TREATNG OPER
F011 SALT BATH POT CLEANING SOLU FM METAL HEAT TREAT OPER
F012 WASTEWATR TREATMENT SLUDGE FM METAL HEAT TREAT OPER
F013 FLOTATION TAILINGS FM MIN MET REC OPER
F014 WASTEWATR TREAT TAILING POND SED FM MIN MET REC OPER
F015 SPENT CYANIDE BATH SOLU FM MIN MET REC OPER
F016 COKE OVEN & FURN AIR POLUTN CONTRL SCRUBR SLUDGE
F017 PAINT RESIDUES GENERATED FROM INDUSTRIAL PAINTING
F018 WASTEWATR TREATMNT SLUDGE FM INDUSTRL PAINTNG

Figure 1 - Hazardous Wastes Codes (1 of 12)

HAZARDOUS WASTES FROM SPECIFIC SOURCES
K001 BOTTOM SED SLUDGE FM WOOD-TREATING PROC
K002 TREAT SLUDGE FM MANU CHROME YEL & OR PIGMENT
K003 TREAT SLUDGE FM MANU MOLYBDATE OR PIGMENT
K004 TREAT SLUDGE FM MANU ZINC YEL PIGMENT
K005 TREAT SLUDGE FM MANU CHROME GREEN PIGMENT
K006 TREAT SLUDGE FM MANU CHROME OXIDE GREEN PIGMENT
K007 TREAT SLUDGE FM MANU IRON BLUE PIGMENTS
K008 OVEN RESI FM MANU CHROME OXIDE GREEN PIGMENTS
K009 BOTTOMS FM PROD ACETALDEHYDE FM ENTHYLENE
K010 DIST SIDE CUTS FM PROD OF ACETALDEHYDE FM ETHYLENE
K011 BOTTOMS FM STRIPPER PROD ACRYLONITRILE
K012 STILL BOTTOM PURI ACRYLONITRILE
K013 BOTTOMS FM QUENCH COLUMN ACRYLONITRILE PROD
K014 STREAM FM ACETRONITRILE PURI PROD ACRYLONITRILE
K015 STILL BOTTOMS FM DIST OF BENZYL CHLORIDE
K016 ENDS OR RESI FM CARBON TETRACHLORIDE FRAC TOWER
K017 BOTTOMS FM FRAC PROD EPICHLOROHYDRIN
K018 ENDS FM FRAC ETHYL CHLORIDE PROD
K019 ENDS FM DIST ETHYLENE DICHLORIDEIN PROD
K020 DIST ENDS VINYL CHLORIDE MONO PROD VINYL CHLORIDE
K021 SPENT CATA FM FLUO REA PROD FLOURIMETHANES
K022 TARS FM PROD PHENOL/ACETONE FM CUMENE
K023 DIST ENDS PROD PHTHALIC ANHYDRIDE FM NAPHTHALENE
K024 RESI FM PROD PHTHALIC ANHYDRIDE FM NAPHTHALENE
K025 DIST BOTTOM FM PROD NITROBENZENE
K026 STILL TAILS FM PROD METHYL ETHYL PYRIDINES
K027 CENT RESI FM TOLUENE DIISICYANATE PROD
K028 SPENT CAT FM REA PROD 1,1,1-TRICHLOROETHANE
K029 WASTE FM PROD OF 1,1,1-TRICHLOROETHANE
K030 BOTTOMS/ENDS COMB PROD TRICH & PERCH
K031 BY-PRODUCTS SALTS PROD CACODYLIC ACID
K032 TREAT SLUDGES FM PROD CHLORDANE
K033 FM CHLORINATION OF CYCLOPENTADIENE PROD CHLORDANE
K034 FILTER SOLIDS FM FILT HEXACHLOROCYCLOPENTADIENE
K035 TREAT SLUDGES FM PROD CREOSOTE
K036 BOTTOMS FM TOLUENE RECL DIST PROD DISULFOTON
K037 TREAT SLUDGES FM PROD DISULFOTON
K038 WASTE FM WASH, STRIP & FILTER PHORATE IN PROD
K039 FM FILT DIETHYLPHOSPHORODITHORIC ACID PROD PHORATE
K040 TREAT SLUDGES FM PROD PHORATE
K041 TREAT SLUDGE FM PROD TOXAPHENE
K042 ENDS DIST RESI FM TETRACHLOROBENZENE PROD 2,4,5-T
K043 2,6-D BY-PRODUCTS FM PROD 2,4-D
K044 TREAT SLUDGES FM MANY EXPL & PROPELLANT COMPOUND
K045 CARBON COLUMNS USE TREAT IAP OPER
K046 TREAT SLUDGE PROD IAP INITIATING COMPOUND
K047 RED & PINK WATER SLUDGES FM TNT PROD IAP OPER
K048 DAF FM OILY WATER SEWER PETRO REFIN
K049 SLOP OIL FM OILY WATER SEWER PETRO REFIN
K050 PETRO REFIN EXE BUNDLE CLEANING SOLV
K051 API SLUDGE FM API OILY SEWER PETRO REFIN
K052 BOTTOMS (LEADED) FM PETRO REFIN INDUSTRY
K053 CHROME TRIM FM LEATHER TANNING & FINISHING OPER

Figure 1 - Hazardous Waste Codes (2 of 12)

K054 CHROME SHAVE FM LEATHER TANNING & FINISHING OPER
K055 DUST FM LEATHER TANNING & FINISHING OPER
K056 SEWER SCREENING FM LEATHER TANNING & FINISHING
K057 WASTEWATR TREAT SLUDGE FM LEATHER TANNING/FINISHING
K058 WASTEWATR TREAT SLUDGE FM LEATHER TANNING/FINISHING
K059 WASTEWATR TREAT SLUDGE FM LEATHER TANNING/FINISHING
K060 COKING: AMONIA STILL LIME SLUDGE
K061 EMISSION CONTROL DUST FM ELEC FURN PROD STEEL
K062 STEEL FINISHING: WASTE PICKLE LIQUOR
K063 STEEL FINISHING: WASTE PICKLE LIQUOR TREAT SLUDGE
K064 PLANT BLOWDOWN SOLID FM PRI COPPER PROD
K065 SURFACE IMPOUND LEAD SMELTERS FM PRI LEAD PROD
K066 PLANT BLOWDOWN FM PRI ZINC PROD
K067 ELECTROLYLIC ANODE FM PRI ZINC PROD
K068 CODMIUM PLANT LEACHATE RESI FM PRI ZINC PROD
K069 CONTROL DUST/SLUDGE FM SEC LEAD SMELTING
K071 MERCURY SLUDGES & PURI MUDS IN CHLORINE PROD
K073 HYDROCARBN WST USNG GRAPHITE ANODES PROD CHLORINE
K074 TREATMNT SLUDGES FM PROD TI02 BY CHLORIDE PROCESS
K078 SOLVENT CLEANING WASTES FM PAINT MANUFACTURING
K079 WATER CLEANING WASTES FM PAINT MANUFACTURING
K081 WSTWTR TREATMNT SLUDGE FM PAINT MANUFACTURING
K082 AIR POLLUTN CONTRL SLUDGES FM PAINT MANUFACTURING
K083 STILL BOTTOMS FM ANILINE PRODUCTION
K084 ARSNIC/ORGANO-ARSNIC SLUDGE FM PROD VET PHARMAS
K085 DIST RESI FM SEP CHLOROBENZENES PROD CHLOROBENZENE
K086 SLUDGES/WASTES FM TUB WASHERS (INK FORMULATION)
K087 COKING: DECANTER TANK TAR/PITCH/SLUDGE
K088 SPENT POTLINERS(CATHODES) FM PRI ALUMINUM PROD
K089 LEAD BEARNG TREATMNT SLUDGE FM GRAY IRON FOUNDRIES
K090 CONTRL DUST/SLUDGE FM FERRO-CHROMIUM-SILICON PROD
K091 CONTRL DUST/SLUDGE FM FERRO-CHROME PRODUCTION
K092 CONTRL DUST/SLUDGE FM FERRO-MANGANESE PRODUCTION

CHEMICALS MANUFACTURED/FORMULATED FOR COMMERCIAL OR MANU. USE

P001 3-(ALPHA-A CETONYLBENLY)-4-HYDROXYCOUMAR & SALT *

ANTHROMBIN	RAT-GUARD
COUMADIN	RAT-KILL
COUMAFEN	RAT-MIX
D-CON	RAT-NO-MORE
DETHMOR	RAT-OLA
DETHNEL	RATOREX
EASTERN STATES DUOCIDE	RAT'TUNAL
FASCO FASCRAT POWER	RAT-TROL
KUMADER	RO-DETH
KYPFARIN	RUSEX
MAREVAN	ROUGH & READY MOUSE MIX
MAR-FRIN	SPRAY-TROL BRAND RODEN-TROL
MARTIN'D MAR-FRIN	SODIUM COUMADIN
MARVERAN	SODIUM WARFARIN
PANIVARFIN	SOLFARIN
PANWARFIN	TWIN LIGHT RAT AWAY
PROTHROMADIN	WARCOUMIN
RAT & MICE BAIT	WARFARIN SODIUM
RAT-B-GON	ZOOCOUMARIN

Figure 1 - Hazardous Wastes Codes (3 of 12)

P002 1-ACETYL-2-THIOUREA OR USAF EK-4890
P003 ACROLEIN
P004 ALDRIN
P005 ALLYL ALCOHOL OR MEGATOX
P006 ALUMINUM PHOSPHIDE
P007 5-(AMINOMETHYL)-3-ISOXAZOLOL*
AGARIN PANTHERINE
MUSCIMOL
P008 4-AMINOPYRIDINE OR AVITROL, PHILIPS 1861
P009 AMONIUM PICRATE
P010 ARSENIC ACID
P011 ARSENIC PENTOXIDE
P012 ARSENIC TRIOXIDE
P013 BARIUM CYANIDE
P014 BENZENETHIOL OR PHENYL MERCAPTAN
P015 BERYLLIUM DUST
P016 BIS (CHLOROMETHYL) ETHER OR BCME
P017 BROMOACETONE
P018 BRUCINE
P019 2-BUTANONE PEROXIDE
P020 2-SEC-BUTYL-4,6-DINITROPHENOL*
ARETIT DOW GENERAL WEED KILLER
BASENITE DOW SELECTIVE WEED KILLER
BUTAPHENE ELGETOL
CALDON GERUTOX
CHEMOX GENERAL KILOSEB
CHEMOX P.E. PHENOTAN
DINOSEB PREMERGE
DINOSEBE SPARIC
DNBP SPURGE
DOW GENERAL SUBTEX
P021 CALCIUM CYANIDE
P022 CARBON DISULFIDE
P023 CHLOROACETALDEHYDE
P024 P-CHLOROANILINE
P025 1-(P-CHLOROBENZOYL)-5-METHOXY-2-METHYLINDOLE-3-ACETIC-ACID
P026 1-(O-CHLOROPHENYL) THIOUREA
P027 3-CHLOROPROPIONITRILE
P028 ALPHA-CHLOROTOLUENE
P029 COPPER CYANIDE
P030 CYANIDES
P031 CYANOGEN OR DICYANOGEN
P032 CYANOGEN BROMIDE
P033 CYANOGEN CHLORIDE
P034 2-CYCLOHEXYL-4,6-DINITROPHENOL*
DINITROCYCLOHEXYLPHENOL
P035 2,4-DICHLOROPHENOXYACETIC ACID (2,4-D)
P036 DICHLOROPHENYLARSINE
P037 DIELDRIN*
ALVIT ILLOXOL
DIELDREX PANORAM
OCTALOX QUINTOX
P038 DIETHYLARSINE
P039 0,0-DIETHYL-S-ESTER OF PHOSPHOROTHIOIC ACID*
DISULFOTON
P040 0,0-DIETHYL-0-(2-PYRAZINYL)PHOSPHOROTHIOATE

Figure 1 - Hazardous Waste Codes (4 of 12)

P041 O,O-DIETHYL PHOSPHORIC ACID, O-P-NITROPHENYL ESTER
P042 3,4-DIHYDROXY-ALPHA-METHYL BENZYL ALCOHOL*
EPINEPHRINE
METHYL NIRON
P043 DI-ISOPROPYLFLUOROPHOSPHATE OR DEP
P044 DIMETHOATE OR DIMETATE
P045 3,3-DIMETHYL-(METHYLTHIO)-2-BUTANONE-O1(METHYLAMINO)CARBONYL-OXIME
P046 ALPHA, ALPHA-DIMETHYLPHENETHYLAMINE
P047 4,6-DINITRO-O-CRESOL AND SALTS
P048 2,4-DINTROPHENOL*

ALDIFEN	SOLFOBLACK SB
PENOXYL CARBON N	TETROSULFUR BLACK PB
SOLFOBLACK BB	TETROSULPHAR PBR

P049 2,4-DITHIOBIURET
P050 ENDOSULFAN*
BENZOEPIN
CYCLODAN
1,4,5,6,7,7-HEXACHLORO-CYCLIC-5-NORBORNENE-2,3-DIMETHANOL SULFITE
INSECTOPHENE
KOP-THIODAN
MALIK
THIODAN
THIOFOR
THIOMUL
THIONEX
THIOSULFAN TIONEL
TIOVEL
P051 ENRIN
P052 ETHYLCYANIDE
P053 ETHYLENEDIAMINE
P054 ETHYLENEIMINE OR AMINOETHYLENE, AZIRIDENE
P055 FERRIC CYANIDE
P056 FLUORINE OR SODIRM FLUOROACETATE
P057 2-FLUOROACETAMIDE OR 1081, FUSSOF, YANOCK
P058 FLUOROACETIC ACID, SODIUM SALT OR 1080, YASOKNOCK, FRATOL
P059 HEPATACHLOR
P060 ENDO-DIMETHANONAPH*
1,4,5,8-DIMETHANONAPHTHALENE 1,2,3,4,10,10-HEXACHLORO-1,4,4A, 8,8AHEXAHYDRO, ENDO
ISODRIN
P061 HEXACHLOROPROPENE OR AZOFOS, AZOPHOS
P062 HEXAETHYL TETRAPHOSPHATE*
TETRAPHOSPHORIC ACID, HEXAETHYL ESTER
P063 HYDROCYANIC ACID
P064 ISOCYANIC ACID, METHYL ESTER OR METHYL ISOCYANATE
P065 MERCURY FULMINATE
P066 METHOMYL
P067 2-METHYLAZIRIDINE
P068 METHYL HYDRAZINE OR HYDRAZOMETHANE
P069 2-METHYLLACTONITRILE*
ACETONE CYANOHYDRIN
USAF RH-8
P070 2-METHYL-2-PROPIONALDEHYDE-O-OXIME OR TEMIC, TEMIK
P071 METHYL PARATHION*

BLADAN-M	METAPHOS

Figure 1 - Hazardous Waste Codes (5 of 12)

	FOLODOL-80	METHYL-E 605
	FLOLDOL M	METRON
	FOSFERNO M50	PENNCAP-M
	GEARPHOS	PHOSPHORIC ACID 0,0-DIMETHYL-0-(P-NITROPHENYL)ESTER
	METACID 50	TEKWAISA
	METAFOS	THIOPHENIT
	METAPHOR	
	VOFATOX	
P072	1-NAPHTHYL-2-THIOUREA OR BANTU, WOFOTOX	
P073	NICKEL CARBONYL OR ANTURAT	
P074	NICKEL CYANIDE	
P075	NICOTINE AND SALTS	
P076	NITRIC OXIDE	
P077	P-NITROANILINE	
P078	NITROGEN DIOXIDE	
P079	NITROGEN PEROXIDE	
P080	NITROGEN TETROXIDE	
P081	NITROGLYCERINE (R)	
P082	N-NITROSODIMETHYLAMINE	
P083	N-NITROSODIPHENYLAMINE	
P084	N-NITROSOMETHYLVINYLAMINE	
P085	OCTAMETHYLPYROPHOSPHORAMIDE*	
	OMPA	PESTOX III
	OMPACIDE	SCHRADAN
	OMPAX	SYSTAM
P086	OLEYL ALCOHOL CONDENSED W/2 MOLES ETHYLENE OXIDE	
P087	OSMIUM TETROXIDE	
P088	7-OXABICYCLOHEPTANE-2,3-DICARBOXYLIC ACID*	
	AQUATHOL	
P089	PARATHION	
P090	PENTACHLOROPHENOL*	
	CHEM-TOL	PERMATOX
	DOWICIDE G	PERMITE
	PCP	PERTOX
	PENTACHLORPHENATE	SANTOBRITE
	PENTA-KILL	SANTOPHEN
	PENTASOL	SANTOPHEN-20
	PENWAR	TERM-I-TROL
	PERMICIDE	THOMPSON'S WOOD FIX
	PERMAGUARD	
P091	PHENYLDICHLOROARSINE OR FEMMA	
P092	PHENYLMERCURY ACETATE*	
	AGROSAN GN 5	LIQUIPHENE
	ALGIMYCIN	MERSOLITE
	ANTIMUCIN WDR	METASOL 30
	BUFEN	NYLMERATE
	CERESAN	OCTAN
	CERSAN	PHENMAD
	DYANACIDE	PHIX
	FUNGITOX OR	SPOR-KILL
	GALLOTOX	TAG FUNGICIDE
	HOSTAQUICK	THIFOR
	HOSTAQUIK	THIMUL
	KWIKSAN	ZIARMIK
	LEYTOSAN	

Figure 1 - Hazardous Waste Codes (6 of 12)

P093 N-PHENYLTHIOUREA
P094 PHORATE
P095 PHOSGENE
P096 PHOSPHINE
P097 PHOS ACID W/N,N-DIMETHYL BENZENE SULFONAMIDE
P098 POTASSIUM CYANIDE
P099 POTASSIUM SILVER CYANIDE
P100 1,2-PROPANEDIOL
P101 PROPIONITRILE
P102 2-PROPYN-1-01 OR PROPARGYL ALCOHOL
P103 SELENOUREA
P104 SILVER CYANIDE
P105 SODIUM AZIDE OR SMITE
P106 SODIUM CYANIDE
P107 STRONTIUM SULFIDE
P108 STRYCHNINE & SALTS*
CRETOX
DOLCO MOUSE CEREAL
KWIK-KIL
MOLE DEATH
MOUSE-NOTS
MOUSE-RID
MOUSE-TOX
PIED PIPER MOUSE SEED
SANASEED
P109 TETRAETHYLDITHIOPYROPHOSPHATE
P110 TETRAETHYL LEAD
P111 TETRAETHYLPYROPHOSPHATE
P112 TETRANITROMETHANE
P113 THALLIC OXIDE OR THALLIUM PEROXIDE
P114 THALLIUM SELENITE
P115 THALLIUM (I) SULFATE
P116 THIOSEMICARBAZIDE
P117 THIURAM
P118 TRICHLOROMETHANETHIOL
P119 VANADIC ACID, AMMONIUM SALT/AMMONIUM METAVANADATE
P120 VANADIUM PENTOXIDE OR WANADU
P121 ZINC CYANIDE
P122 ZINCE PHOSPHIDE (R,T)
U001 ACETALDEHYDE
U002 ACETONE (I)
U003 ACETONITRILE (I,T) OR CYANOMETHANE
U004 ACETOPHENONE
U005 2-ACETYLAMINOFLOURENE
U006 ACETYL CHLORIDE
U007 ACRYLAMIDE
U008 ACRYLIC ACID (I)
U009 ACRYLONITRILE
U010 AMINO-HYDROXYMETHYL-METHYLCARBAMATE-AZIRINO...*
MITROMYCIN C
U011 AMITROLE OR 3-AMINO-5-1H-1,2,4-TRIAZOLE,HYDRATE
U012 ANILINE (I)
U013 ASBESTOS
U014 AURAMINE*
4-4-(IMIDOCARBONYL)BIS(N,N-DIMETHYL)ANILINE

Figure 1 - Hazardous Waste Codes (7 of 12)

U015 AZASERINE
U016 BENZ[A]ACRIDINE
U017 BENZAL CHLORIDE OR DICHLOROMETHYLBENZENE
U018 BENZ[A]ANTHRACENE
U019 BENZENE
U020 BENZENESULFONYL CHLORIDE
U021 BENZIDINE
U022 BENZO[A]PYRENE
U023 BENZOTRICHLORIDE OR ALPHA-TRICHLOROTOLUENE
U024 BIS(2-CHLOROETHOXY)METHANE
U025 BIS(2-CHLOROETHYL)ETHER
U026 N,N-BIS(2-CHLOROETHYL)-2-NAPHTHYLAMINE
U027 BIS(20CHLOROISOPROPYL)ETHER
U028 BIS(2-ETHYLHEXYL)PHTHALATE
U029 BROMOMETHANE
U030 4-BROMOPHENYL PHENYL ETHER
U031 N-BUTYL ALCOHOL
U032 CALCIUM CHROMATE
U033 CARBONYL FLUORIDE
U034 CHLORAL
U035 CHLORAMBUCIL
U036 CHLORDANE
U037 CHLOROBENZENE
U038 CHLOROBENZILATE
U039 P-CHLORO-M-CRESOL
U040 CHLORODIBROMOMETHANE
U041 1-CHLORO-2,3-EPOXYPROPANE
U042 CHLOROETHYL VINYL ETHER
U043 CHLOROETHENE OR VINYL CHLORIDE
U044 CHLOROFORM (I,T)
U045 CHLOROMETHANE (I,T)
U046 CHLOROMETHYL METHYL ETHER
U047 2-CHLORONAPHTHALENE
U048 2-CHLOROPHENOL
U049 4-CHLORO-O-TOLUIDINE HYDROCHLORIDE
U050 CHRYSENE
U051 CRESOTE
U052 CRESOLS
U053 CROTONALDEHYDE
U054 CRESYLIC ACID
U055 CUMENE
U056 CYCLOHEXANE (I)
U057 CYCLOHEXANONE (I)
U058 CYCLOPHOSPHAMIDE
U059 DAUNOMYCIN
U060 DDD
U061 DDT
U062 DIALLATE
U063 DIBENZ(O)[A,H]ANTHRACENE
U064 DIBENZO[A,I]PYRENE
U065 DIBROMOCHLOROMETHANE
U066 1,2-DIBROMO-3-CHLOROPROPANE
U067 1,2-DIBROMOETHANE
U068 DIBROMOMETHANE
U069 DI-N-BUTYL PHTHALATE

Figure 1 - Hazardous Waste Codes (8 of 12)

U070 1,2-DICHLOROBENZENE
U071 1,3-DICHLOROBENZENE
U072 1,4-DICHLOROBENZENE
U073 3,3'-DICHLOROBENZIDINE OR C.I. 23060*
3,3'-DICHLORO-4-4'-DIAMINOBIPHENYL
U074 1,4-DICHLORO-2-BUTENE
U075 DICHLORODIFLUOROMETHANE
U076 1,1-DICHLOROETHANE
U077 1,2-DICHLOROETHANE
U078 1,1-DICHLOROETHYLENE OR VINYLIDENE CHLORIDE
U079 1,2-TRANS-DICHLOROETHYLENE
U080 DICHLOROMETHANE
U081 2,4-DICHLOROPHENOL
U082 2,6-DICHLOROPHENOL
U083 1,2-DICHLOROPROPANE
U084 1,3-DICHLOROPROPENE
U085 DIEPOXYBUTANE (I,T)
U086 1,2-DIETHYLHYDRAZINE
U087 0,0-D-S-M ESTER OF PHOSPHORODITHIOIC ACID
U088 DIETHYL PHTHALATE
U089 DIETHYLSTILBESTROL
U090 DIHYDROSAFROLE
U091 3,3'-DIMETHOXYBENZIDINE
U092 DIMETHYLAMINE
U093 P-DIMETHYLAMINOAZOBENZENE
U094 7,12-DIMETHYLBENZ[A]ANTHRACENE
U095 3,3'-DIMETHYLBENZIDINE
U096 ALPHA, ALPHA-DIMETHYLBENZYLHYDROPEROXIDE
U097 DIMETHYLCARBAMOYL CHLORIDE
U098 1,1-DIMETHYLHYDRAZINE
U099 1,2-DIMETHYLHYDRAZINE
U100 DIMETHYLNITROSOAMINE
U101 2,4-DIMETHYLPHENOL
U102 DIMETHYL PHTHALATE
U103 DIMETHYL SULFATE
U104 2,4-DINITROPHENOL
U105 2,4-DINITROTOLUENE
U106 2,6-DINITROTOLUNE
U107 DI-N-OCTYL PHTHALATE
U108 1,4-DIOXANE
U109 1,2-DIPHENYLHYDRAZINE
U110 DIPROPYLAMINE
U111 DI-N-PROPYLNITROSAMINE
U112 ETHYL ACETATE (I)
U113 ETHYL ACRAYLATE (I)
U114 ETHYLENEBISDITHIOCARBAMATE*
4,4'-(IMIDOCARBONYL)BIS(N,N-DIMETHYL)ANILINE
U115 ETHYLENE OXIDE (I,T)
U116 ETHYLENE THIOUREA
U117 ETHYL ETHER (I,T)
U118 ETHYLMETHACRYLATE
U119 ETHYL METHANE SULFONATE
U120 FLUORANTHENE
U121 FLUOROTRICHLOROMETHANE
U122 FORMALDEHYDE

Figure 1 - Hazardous Waste Codes (9 of 12)

U123 FORMIC ACID (C,T)
U124 FURAN (I)
U125 FURFURAL (I)
U126 GLYCIDYLALDEHYDE
U127 HEXACHLOROBENZENE
U128 HEXACHLOROBUTADIENE
U129 HEXACHLOROCYCLOHEXANE
U130 HEXACHLOROCYCLOPENTADIENE
U131 HEXACHLOROETHANE
U132 HEXACHLOROPHENE
U133 HYDRAZINE (R,T)
U134 HYDROFLUORIC ACID (C,T)
U135 HYDROGEN SULFIDE
U136 HYDROXYDIMETHYL ARSINE OXIDE
U137 INDENO (1,2,3-CD)PYRENE
U138 IODOMETHANE OR METHYL IODIDE
U139 IRON DEXTRAN
U140 ISOBUTYL ALCOHOL
U141 ISOSAFROLE
U142 KEPONE
U143 LASIOCARPINE
U144 LEAD ACETATE
U145 LEAD PHOSPHATE
U146 LEAD SUBACETATE
U147 MALEIC ANHYDRIDE
U148 MALEIC HYDRAZIDE
U149 MALONONITRILE
U150 MELPHALAN
U151 MERCURY
U152 METHACRYLONITRILE
U153 METHANETHIOL
U154 METHANOL OR METHYL ALCOHOL
U155 METHAPYRILENE
U156 METHYL CHLOROCARBONATE OR METHYL CHLOROFORMATE
U157 3-METHYLCHOLANTHRENE
U158 4,4'-METHYLENE-BIS-(2-CHLOROANILINE)
U159 METHYL ETHYL KETONE
U160 METHYL ETHYL KETONE PEROXIDE
U161 METHYL ISOBUTYL KETORE
U162 METHYL METHACRYLATE
U163 N-METHYL-N'-NITRO-N-NITROSOGUANIDINE
U164 METHYLTHIOURACIL
U165 NAPHTHALENE
U166 1,4-NAPHTHOQUINONE
U167 1-NAPHTHYLAMINE
U168 2-NAPHTHYLAMINE
U169 NITROBENZENE (I,T) OR NITROBENZOL
U170 4-NITROPHENOL
U171 2-NITROPROPANE
U172 N-NITROSODI-N-BUTYLAMINE
U173 N-NITROSODIETHANOLAMINE
U174 N-NITROSODIETHYLAMINE
U175 N-NITROSODI-N-PROPYLAMINE
U176 N-NITROSO-N-ETHYLUREA
U177 N-NITROSO-N-METHYLUREA

Figure 1 - Hazardous Waste Codes (10 of 12)

U178 N-NITROSO-N-METHYLURETHANE
U179 N-NITROSOPIPERIDINE
U180 N-NITROSOPYRROLIDINE
U181 5-NITRO-O-TOLUIDINE
U182 PARALDEHYDE
U183 PENTACHLOROBENZENE
U184 PENTACHLOROETHENE
U185 PENTACHLORONITROBENZENE OR PENB
U186 1,3-PENTADIENE (I)
U187 PHENACETIN
U188 PHENOL OR CARBOLIC ACID, HYDROXYBENZENE
U189 PHOSPHOROUS SULFIDE (R)
U190 PHTHALIC ANHYDRIDE
U191 2-PICOLINE
U192 PRONAMIDE
U193 1,3-PROPANE SULTONE
U194 N-PROPYLAMINE
U196 PYRIDINE
U197 QUINONES
U200 RESERPINE
U201 RESORCINOL
U202 SACCHARIN/1,2-BENZISOTHIAZOLIN-3-1,1,1-DIOXIDE
U203 SAFROLE
U204 SELENIOUS ACID
U205 SELENIUM SULFIDE (R,T)
U206 STREPTOZOTOCIN
U207 1,2,4,5-TETRACHLOROBENZENE
U208 1,1,1,2-TETRACHLOROETHANE
U209 1,12,2-TETRACHLOROETHANE/ACETYLENE TETRACHLORIDE
U210 TETRACHLOROETHANE*
PERC
PERCHLORETHYLENE
TETRACHLOROETHYLENE
U211 TETRACHLOROMETHANE OR CARBON TETRACHLORIDE
U212 2,3,4,6-TETRACHLOROPHENOL
U213 TETRAHYDROFURAN (I) OR 1,4-EPOXYBUTANE
U214 THALLIUM (I) ACETATE
U215 THALLIUM (I) CARBONATE
U216 THALLIUM (I) CHLORIDE
U217 THALLIUM (I) NITRATE
U218 THIOACETAMIDE
U219 THIOUREA
U220 TOLUENE
U221 TOLUENEDIAMINE
U222 O-TOLUIDINE HYDROCHLORIDE
U223 TOLUENE DIISOCYANATE
U224 TOXAPHENE
U225 TRIBROMOMETHANE
U226 1,1,1-TRICHLOROMETHANE*
AEROTHENE TT
CHLOROETHENE NU
U227 1,1,2-TRICHLOROETHENE
U228 TRICHLOROETHENE*
ACETYLENE TRICHLORIDE
TRICHLOROETHYLENE
TRI-CLENE

Figure 1 - Hazardous Waste Codes (11 of 12)

U229 TRICHLOROFLUOROMETHANE
U230 2,4,5-TRICHLOROPHENOL
U231 2,4,6-TRICHLOROPHENOL
U232 2,4,5-TRICHLOROPHENOXYACETIC ACID (2,4,5-T)
U233 2,4,5-TRICHLOROPHENOXYPROPIONIC ACID/SILVEX
U234 TRINITROBENZENE
U235 TRIS(2,3-DIBROMOPROPROPLY)PHOSPHATE/FIREMASTER T23P
U236 TRYPAN BLUE
U237 URACIL MUSTARD
U238 URETHANE
U239 XYLENE

Figure 1 - Hazardous Waste Codes (12 of 12)

DUGWAY PROVING GROUNDS US ARMY UT3750211259 FED = YES
DATE: 800815 GEN = X TSDF = UIC = TRANS =
ATTN STEPD-PO-E COMMANDER
DUGWAY 84022 DUGWAY UT 84022
801/522-3531 PRATT VICTOR ENV COO FEDERAL GOVERNMENT

DUNN PROPERTY UTD000710491 FED = NO
DATE: 800818 GEN = X TSDF = X UIC = TRANS =
P O BOX 1207
SAN JUAN COUNTY MOAB UT 84532
801/259-5131 WEAVER R R PRESIDENT ATLAS MINERALS DIV ATLAS CORPORATION

DURBAND METALS UTD069806883 FED = NO
DATE: 801112 GEN = TSDF = UIC = TRANS = X MODE = H/ / / /
W 29TH & RR YARD PO BOX 1556
OGDEN 84401 OGDEN UT 84402
801/621-5221 DURBAND DENNIS V PRE DURBAND METALS INC
D001 F017 F018

E-SYSTEMS INC MONTEK DIVISION UTD059513879 FED = NO
DATE: 801006 GEN = X TSDF = X UIC = TRANS =
2268 S 3270 W 2268 S 3270 W
SALT LAKE CITY 84119 SALT LAKE CITY UT 84119
801/973-4300 WILLIAMS DAVID E FAC E-SYSTEMS INC DALLAS TEXAS
D000 D001 D002 D003 F001 F002 F003 F005 F007 F008 F017 F018

EDO WESTERN CORPORATION UTD009073305 FED = NO
DATE: 800814 GEN = X TSDF = UIC = TRANS =
2645 SO 300 WEST PO BOX 15789
SALT LAKE CITY 84115 SALT LAKE CITY UT 84115
801/486-7481 BONNEMA DONALD VP/CE EDO CORPORATION
D000

EIMCO FOUNDRY DIV ENVIROTECH UTD009082744 FED = NO
DATE: 800915 GEN = X TSDF = UIC = TRANS = X MODE = H/ / / /
870 SO 500 WEST PO BOX 1740
SALT LAKE CITY 84110 SALT LAKE CITY UT 84110
801/521-2000 DELANEY JOE GENERAL ENVIROTECH CORPORATION

EKKER UTD00071606A FED = NO
DATE: 800818 GEN = X TSDF = X UIC = TRANS = X MODE = R/H/ / /
SUITE 900 1515 ARAPAHOE STREET
EMERY COUNTY DENVER CO 80202
303/623-8317 GLASIER GEORGE COUNS ENERGY FUELS LTD
D000 D001 D002 D003

EKOTEK INCORPORATED UTD093119196 FED = NO
DATE: 800716 GEN = X TSDF = X UIC = TRANS = X MODE = H/ / / /
1628 NORTH CHICAGO STREET PO BOX 2106
SALT LAKE CITY 84116 SALT LAKE CITY UT 84116
801/533-9662 MECHAM CROSBY PLANT EKOTEK INCORPORATED
D000

ENERGY FUELS EXPLORATION STOATS MINE UTD000716308 FED = NO
DATE: 800818 GEN = X TSDF = X UIC = TRANS = X MODE = R/H/ / /
SUITE 900 1515 ARAPHOE STREET

ROUTE U83 PO BOX 524
30 MILES NW OF BRIGHAM 84302 BRIGHAM CITY UT 84302
801/863-8885 TAYLOR RON PROCESS E THIOKOL CORPORATION & US GOVERNMENT
D000 D001 D002 D003 F001 F002 F003 F004 F005 K044 P022 P030 P035 P077 P081 P105 U002 U013 U037 U044 U117 U127 U133 U151 U154 U159 U169 U220 U226 U235 U238 U239

TINTIC DIVISION KENNECOTT MINERALS CO UTD049783624 FED = NO
DATE: 800818 GEN = X TSDF = X UIC = TRANS =
6 MILES SE OF EUREKA PO BOX 250
EUREKA 84628 EUREKA UT 84628
801/433-6854 TAYLOR,CRAIG ENGINEE KENNECOTT CORPORATION
D000 D002 F013 P030

TOMSICH UTD000716332 FED = NO
DATE: 800818 GEN = X TSDF = X UIC = TRANS = X MODE = R/H/ / /
SUITE 900 1515 ARAPAHOE STREET
EMERY COUNTY DENVER CO 80202
303/623-8317 GLASIER GEORGE COUNS ENERGY FUELS LTD
D000 D001 D002 D003

TOOELE ARMY DEPOT UT3213820894 FED = YES
DATE: 800818 GEN = X TSDF = X UIC = TRANS = X MODE = A/R/H/ /
NA NA
TOOELE 84074 TOOELE UT 84074
801/833-2891 FISHER LARRY ENV COO UNITED STATES ARMY
D000 D001 D002 D003 F001 F002 F003 F004 F005 F006 F007 F008 F009 K001 K045 P001 P035 P090 P122 U002 U013 U036 U052 U080 U117 U151 U159 U188 U220 U226 U227 U228 U239

TRAMMELL CROW DISTRIBUTION CORPORATION UTD000710806 FED = NO
DATE: 800815 GEN = X TSDF = X UIC = TRANS =
BLDG F-10 FREEPORT CENTER BUILDING F-10 FREEPORT CENTER
CLEARFIELD 84016 CLEARFIELD UT 84016
801/825-9711 CARLOS WAYNE M GENER TRAMMELL CROW
D000 D001 D002 D003

TRANE COMPANY THE* UTD009074410 FED = NO
DATE: 800818 GEN = X TSDF = X UIC = TRANS =
5200 W 4715 S 5200 W 4715 S
SALT LAKE CY 84118 SALT LAKE CY UT 84118
801/968-3554 MARTEN HARV PLANT MA THE TRANE COMPANY
D001 F003 F017 F018

TROJAN DIVISION IMC INTRNTL MIN CHEM UTD041310962 FED = NO
DATE: 800815 GEN = X TSDF = X UIC = TRANS =
MOUTH OF SPANISH FORK CANYON P O BOX 310
SPANISH FORK 84660 SPANISH FORK UT 84660
801/798-8613 DONALD EDWARDS OPERA INTERNATIONAL MINERALS & CHEMICAL
D001 D002 D003 K044

U-E-4 UTD000716340 FED = NO
DATE: 800818 GEN = X TSDF = X UIC = TRANS = X MODE = R/H/ / /
SUITE 900 1515 ARAPAHOE STREET
SAN JUAN COUNTY DENVER CO 80202
303/623-8317 GLASIER GEORGE COUNS ENERGY FUELS LTD

Investigation into Allegations of Agent Orange Burial at Camp Carroll

Camp Carroll Task Force

EIGHTH ARMY

"PACIFIC VICTORS"

Investigative LOO

20 August 2011

Overall classification of this briefing is UNCLASSIFIED.

Purpose

To present the results of the investigation into former Soldier's allegation that he buried Agent Orange on Camp Carroll in 1978.

2684

Agenda

- Scope of Investigation
- Mr. House's Allegations of the Burial of Agent Orange at Camp Carroll
- History of the Use of Agent Orange
  - ✓ Use of Agent Orange in Korea
- Burial, Excavation, Disposition of Materials in Area D

BLUF

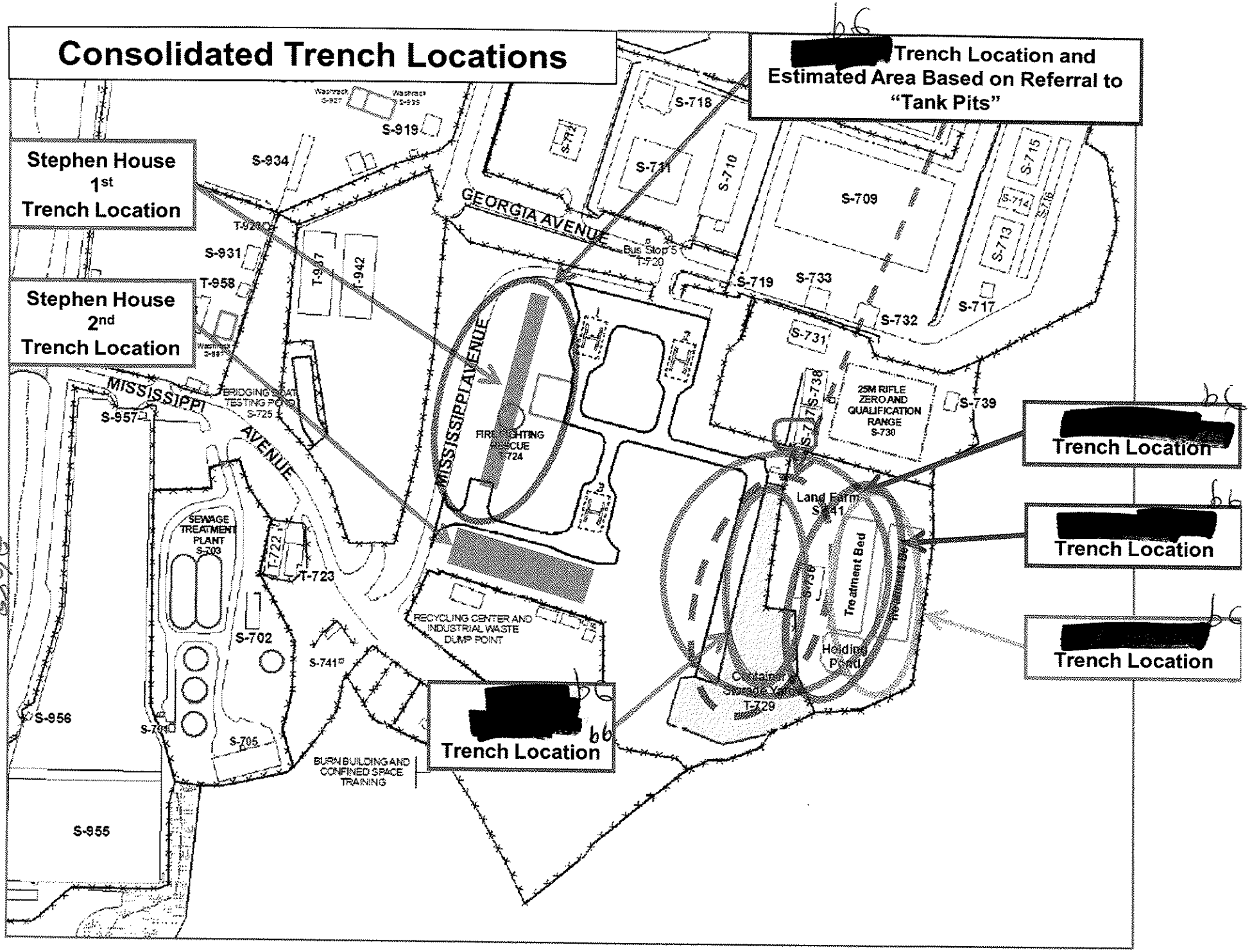
- Agent Orange was never buried at Camp Carroll.
- Hazardous waste excavated from Camp Carroll in 1979-80 was very likely shipped to the United States for disposal.

Scope of Investigation

- Over 170 personnel interviewed, including > 150 Korean Nationals

- 29 agencies assisted with document searches, personnel interviews:
  - ✓ Korean Ministry of National Defense
  - ✓ Chilgok County Government
  - ✓ U.S. Forces Korea; U.S. 8th Army; IMCOM-K; 19th ESC
  - ✓ U.S. Army Corps of Engineers
  - ✓ U.S. Army Test and Evaluation Command
  - ✓ U.S. Army Environmental Command
  - ✓ Surface Deployment and Distribution Command
  - ✓ U.S. Defense Logistics Agency
  - ✓ U.S. Chemical, Biological, Radiological, Nuclear-Information Resource Center (Edgewater Arsenal, Maryland)
  - ✓ U.S. Public Health Command
  - ✓ U.S. Military Sealift Command
  - ✓ U.S. Coast Guard

Mr. House's Allegations of the Burial of Agent Orange at Camp Carroll

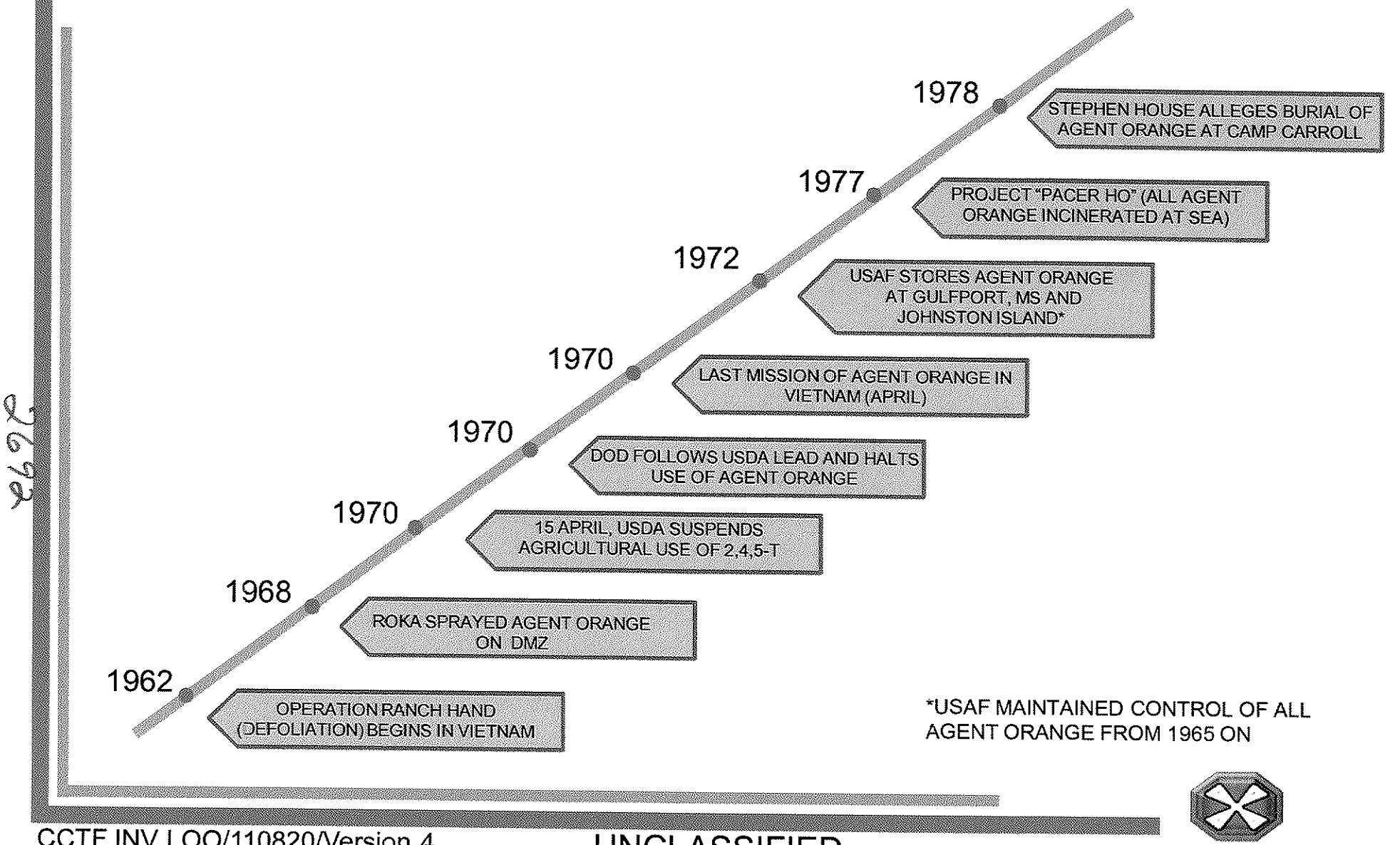

Consolidated Trench Locations
[redacted] Trench Location and Estimated Area Based on Referral to "Tank Pits"
Stephen House 1st Trench Location
Stephen House 2nd Trench Location
[redacted] Trench Location
[redacted] Trench Location
[redacted] Trench Location
[redacted] Trench Location
GEORGIA AVENUE
MISSISSIPPI AVENUE
MISSISSIPPI AVENUE
BRIDGING BOAT TESTING POND S-725
FIRE FIGHTING RESCUE S-724
25M RIFLE ZERO AND QUALIFICATION RANGE S-730
SEWAGE TREATMENT PLANT S-703
RECYCLING CENTER AND INDUSTRIAL WASTE DUMP POINT
Land Farm S-741
Treatment Bed
Holding Pond
Container Storage Yard T-729
BURN BUILDING AND CONFINED SPACE TRAINING
S-718
S-719
S-709
S-733
S-732
S-731
S-717
S-739
S-957
S-956
S-955
S-702
S-705
S-704
S-741
T-723
T-722
T-942
T-957
T-958
S-931
S-934
S-919
Bus Stop 5 T-720

Mr. House is Mistaken

- Agent Orange used 10 years earlier and 100s of miles away
- Documented chemical storage and burial on Camp Carroll does not support Agent Orange
  - ✓ Not available through normal supply channels
  - ✓ Can document the 1968 transit route
  - ✓ Reports indicate other pesticides, herbicides, solvents
- No Korean National interviewed ever saw Agent Orange anywhere on Camp Carroll
- Soil/water sampling and the 2008 excavation do not support Agent Orange burial

History of the Use of Agent Orange

Agent Orange Timeline



*USAF MAINTAINED CONTROL OF ALL AGENT ORANGE FROM 1965 ON

Use of Agent Orange in Korea

Use of Agent Orange in Korea

- 20 September 1967: ROK and US governments granted permission for use of tactical herbicides to be sprayed between DMZ south tape and Civilian Control Line to improve observation and fields of fire and to deny hostile forces concealment

- 10 April 1968: Supplies of Herbicide Orange (approximately 380 drums) were on hand in forward locations near the DMZ

- Agent Orange used in Korea came from Vietnam

- 3,345 Soldiers from the First Republic of Korea Army (FROKA) applied

- All stocks of tactical herbicides were exhausted before the defoliation mission was completed

- Once used, drums were rinsed and were the property of FROKA

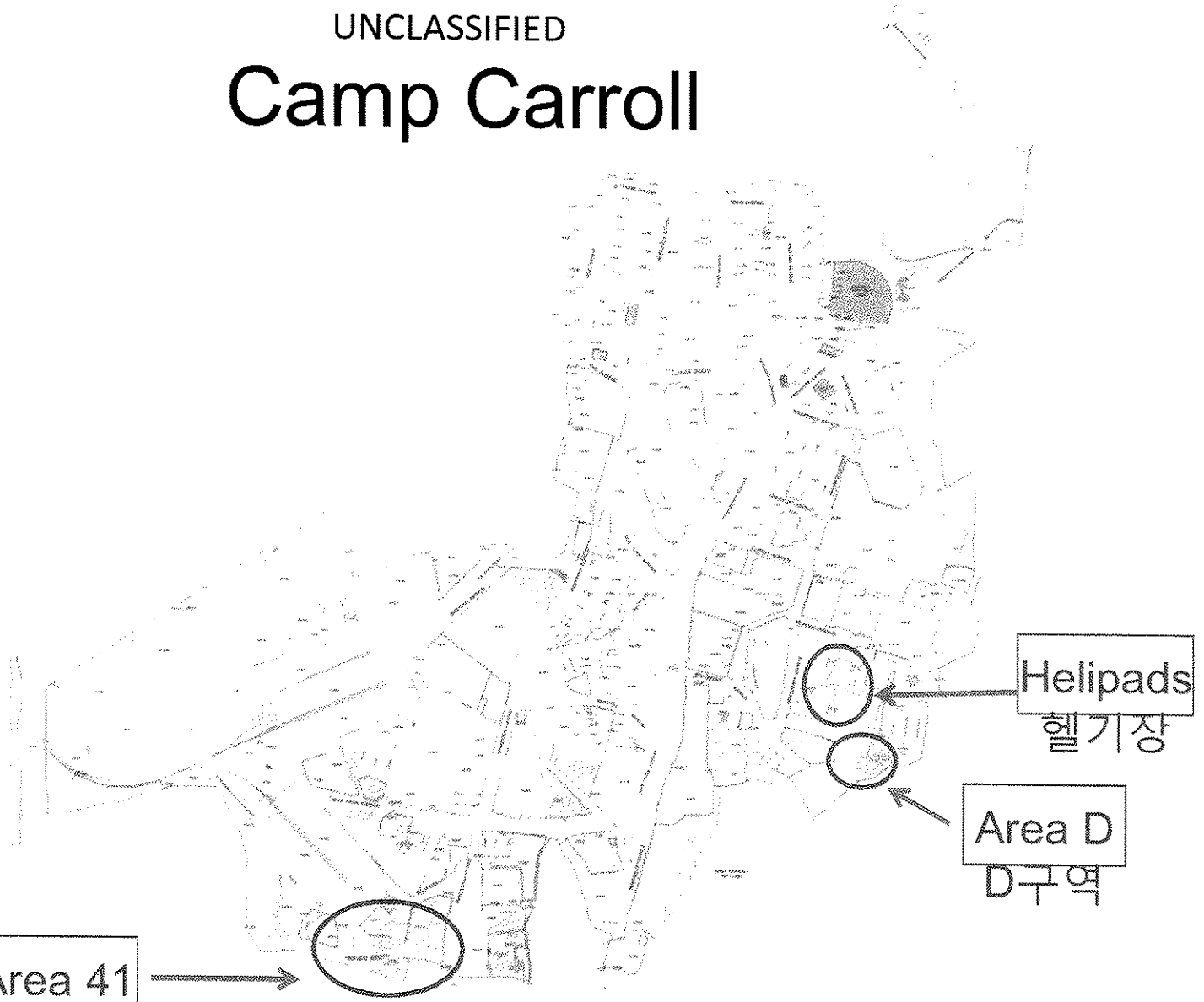
- This is the only documented shipment and use of Agent Orange in Korea

Agent Orange Barrels

Photos courtesy of Dr. Alvin Young

Burial, Excavation, and Disposition of Materials in Area D

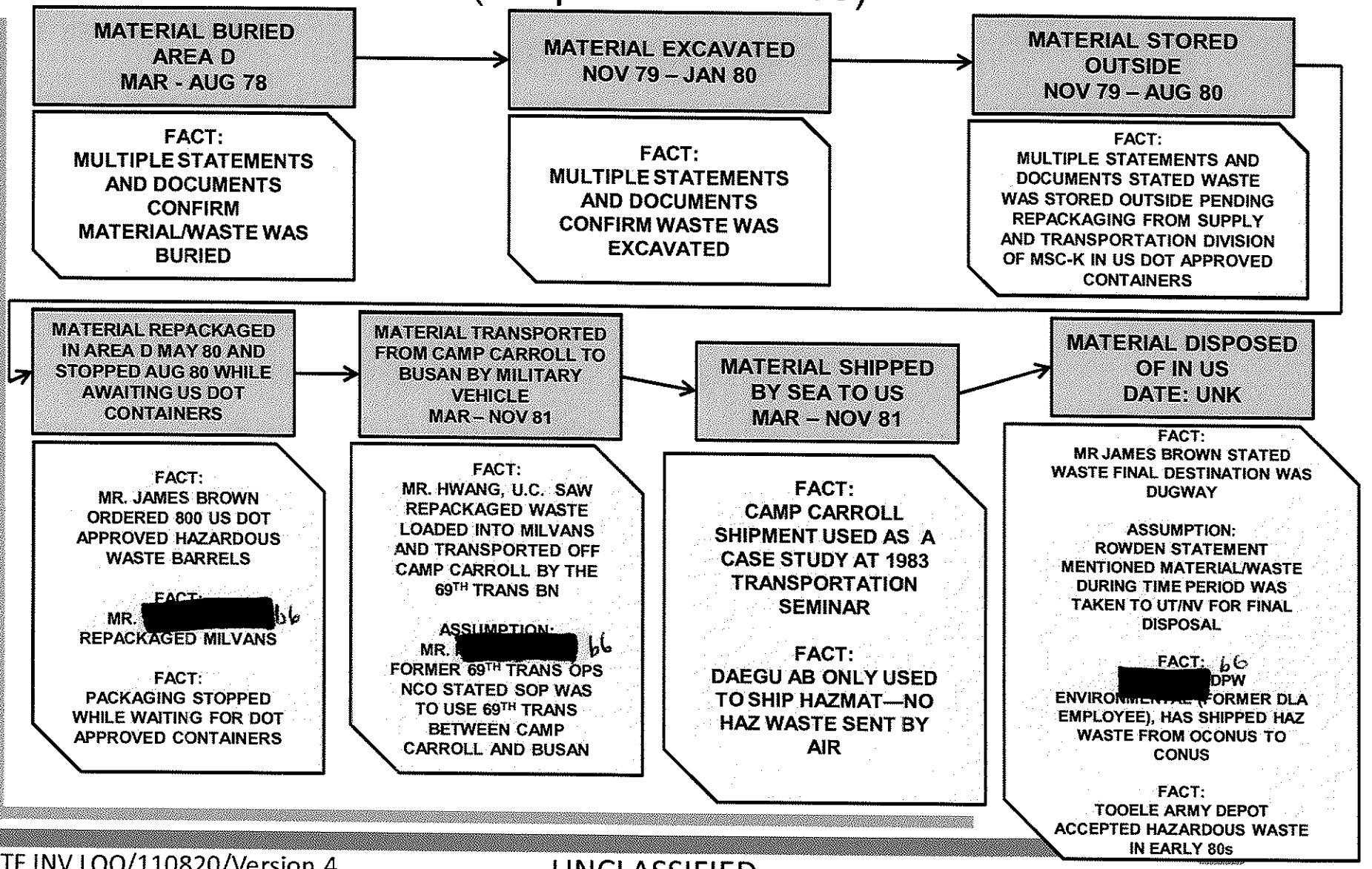
Camp Carroll



Camp Carroll Map, May 2011
2011년 5월 캠프 캐롤 지도

CCTF Investigative LOO SITEMP

(Disposal Process)



Burial

MATERIAL BURIED
AREA D
MAR - AUG 78

FACT:
MULTIPLE STATEMENTS AND DOCUMENTS CONFIRM MATERIAL/WASTE WAS BURIED

Supporting Data

- Mr. Stephen House Interview
- Mr. [redacted] Statement
- Mr. [redacted] nterview
- Mr. [redacted] Statement
- COL(R) Stephen Massey Statement
- Mr. [redacted] Interview

b6 b6 b6 b6 b6 b6

Excavation

MATERIAL EXCAVATED NOV 79 – JAN 80

FACT: MULTIPLE STATEMENTS AND DOCUMENTS CONFIRM WASTE WAS EXCAVATED

Supporting Data

- MAJ(R) Scott Rowden Interview
- SFC(R) [redacted] Statement
- SGM(R) [redacted] Interview
- Mr. [redacted] Interview
- Memorandum, US Army Pacific Environmental Health Engineering Agency, EHEA-ES, 24 November 1982, subject: Review of the Camp Carroll Chemical Disposal Problem

Storage

MATERIAL STORED OUTSIDE NOV 79 – AUG 80

FACT:
MULTIPLE STATEMENTS AND DOCUMENTS STATED WASTE WAS STORED OUTSIDE PENDING REPACKAGING FROM SUPPLY AND TRANSPORTATION DIVISION OF MSC-K IN US DOT APPROVED CONTAINERS

Supporting Data

- MAJ(R) Scott Rowden Interview
- Mr. James Brown Interview
- Memorandum, US Army Pacific Environmental Health Engineering Agency, EHEA-ES, 24 November 1982, subject: Review of the Camp Carroll Chemical Disposal Problem

1982

Repackaging

MATERIAL REPACKAGED IN AREA D MAY 80 AND STOPPED AUG 80 WHILE AWAITING US DOT CONTAINERS

FACT:
MR. JAMES BROWN ORDERED 800 US DOT APPROVED HAZARDOUS WASTE BARRELS

FACT:
MR. [redacted] b6
REPACKAGED MILVANS

FACT:
PACKAGING STOPPED WHILE WAITING FOR DOT APPROVED CONTAINERS

Supporting Data

- Mr. James Brown Interview
- [redacted] b6 Interview
- Memorandum, US Army Pacific Environmental Health Engineering Agency, EHEA-ES, 24 November 1982, subject: Review of the Camp Carroll Chemical Disposal Problem

Movement to Busan

MATERIAL TRANSPORTED FROM CAMP CARROLL TO BUSAN BY MILITARY VEHICLE MAR – NOV 81

FACT:
MR. HWANG, U.C. SAW REPACKAGED WASTE LOADED INTO MILVANS AND TRANSPORTED OFF CAMP CARROLL BY THE 69TH TRANS BN

ASSUMPTION:
MR. [redacted] b6 FORMER 69TH TRANS OPS NCO STATED SOP WAS TO USE 69TH TRANS BETWEEN CAMP CARROLL AND BUSAN

Supporting Data

- Mr. [redacted] b6 Interview
- Mr. [redacted] b6 Statement

Movement to CONUS

MATERIAL SHIPPED BY SEA TO US MAR – NOV 81

FACT:
CAMP CARROLL SHIPMENT USED AS A CASE STUDY AT 1983 TRANSPORTATION SEMINAR

FACT:
DAEGU AB ONLY USED TO SHIP HAZMAT—NO HAZ WASTE SENT BY AIR

Supporting Data

- Mr. [redacted] Interview
  b6
- Air Force/K-2 Records Check

Disposal

MATERIAL DISPOSED OF IN US DATE: UNK

FACT:
MR JAMES BROWN STATED WASTE FINAL DESTINATION WAS DUGWAY

ASSUMPTION:
ROWDEN STATEMENT MENTIONED MATERIAL/WASTE DURING TIME PERIOD WAS TAKEN TO UT/NV FOR FINAL DISPOSAL

FACT: b6
MR [redacted] DPW ENVIRONMENTAL, HAS SHIPPED HAZ WASTE FROM OCONUS TO CONUS

FACT:
TOOELE ARMY DEPOT ACCEPTED HAZARDOUS WASTE IN EARLY 80s

SOCE

Supporting Data

- Mr. James Brown Interview
- MAJ(R) Scott Rowden Interview
- Mr. [redacted] Historical Knowledge
  b6
- 1980 Notification to EPA of Hazardous Waste Activities

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20 August 2011

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