

Summary of Results

LL 6 & 9 Floor Sweeping Waste Characterization Samples

Analyte**, Method No., Units	LL6 Floorsweep-001	LL9 Floorsweep-001
Sample Date	12/12/2002	12/12/2002
PCB Analysis (8082 µg/kg)		
Arocler 1016	BRL	BRL
Arocler 1221	BRL	BRL
Arocler 1232	BRL	BRL
Arocler 1242	BRL	BRL
Arocler 1248	8800	BRL
Arocler 1254	BRL	920
Arocler 1260	BRL	BRL
Explosives (8330 µg/kg)		
HMX	27000	BRL
RDX	6800	BRL
1,3,5-Trinitrotoluene	BRL	BRL
1,3-Dinitrobenzene	BRL	BRL
Nitrobenzene	BRL	BRL
2,4,6-Trinitrtoluene	130000	BRL
Tetryl	BRL	BRL
2,4-Dinitrotoluene	BRL	BRL
2,6-Dinitrotoluene	BRL	BRL
2-Nitrotoluene	BRL	BRL
4-Nitrtoluene	BRL	BRL
3-Nitrotoluene	BRL	BRL
TCLP Metals (6010B/7470A µg/L)		
Arsenic	BRL	0.010(B)
Barium	0.35(B)	0.28(B)
Cadmium	1.8	0.35
Chromium	0.023(B)	0.019(B)
Lead	7.2	0.45
Selenium	BRL	0.011(B)
Silver	BRL	BRL
Mercury	BRL	BRL
** = Only detected compounds listed		
µg/kg = micrograms per kilogram (parts per billion)		
BRL = Below Reporting Limit		
µg/L = micrograms per liter		
B Qualifier = Result is less than reporting limit, but greater than method detection limit		

FORM TYPE (Form designed for use on elite (12-pitch) typewriter.)

EPA Form 8700-22 (Rev. 6-89)

Form Approved: OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. OH5210020736 HW002

Manifest Document No.

2. Page 1 of 1 Information in the shaded areas is not required by Federal law, but is required by Illinois law.

3. Generator's Name and Mailing Address: Ravenna Army Ammunition Plant, 8451 State Route 5, Ravenna OH 44266

A. Illinois Manifest Document Number: IL10119363 FEE PAID IF APPLICABLE

4. *24 HOUR EMERGENCY AND SPILL ASSISTANCE NUMBERS*

B. Generator's IL ID Number

5. Transporter 1 Company Name: Dart Trucking Company, Inc. 6. US EPA ID Number: OH D 0 0 9 8 6 5 8 2 5

C. Transporter's ID Number: UPW-0124009-04

7. Transporter 2 Company Name 8. US EPA ID Number

D. Transporter's Phone: (800) 541-8206

9. Designated Facility Name and Site Address: Onyx Environmental Services, 7 Mobile Avenue, Sugar IL 62201 10. US EPA ID Number: I L D 0 9 8 6 4 2 4 2 4

F. Transporter's Phone ()

G. Facility's IL ID Number: 1631310009

H. Facility's Phone: (618) 271-2804

Table with 5 columns: Description, Containers No., Type, Total Quantity, Unit Wt/Vol, Waste No. Row 1: RQ Hazardous Waste, Solid, NOS, 9, NA 3077, Pg III, (D006, D008) ERG#171, 0.03 CF, 0.15, 0.0 P, EPA HW Number D006, D008

J. Additional Description for Materials Listed Above: a. Floor sweeping debris Approval # 366538TWI b. K. Handling Codes for Wastes Listed Above: a. S01 c. b. d.

15. Special Handling Instructions and Additional Information: a. Index/blue Nitrile (Inner glove)(add'l codes) b. DSN--contains trace amounts of explosive materials. PCBs present at 20 ppm c. AR1248 --Non-TSCA Reactive category: E

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

17. Transporter 1 Acknowledgement of Receipt of Materials: Printed/Typed Name: Mark Patterson Signature: Mark Patterson Date: 03/20/03

18. Transporter 2 Acknowledgement of Receipt of Materials: Printed/Typed Name: MARTIN ZUNIGA Signature: Martin Zuniga Date: 03/20/03

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19: Printed/Typed Name: Jim Krug Signature: Jim Krug Date: 03/20/03

This information is authorized to require, pursuant to Illinois Revised Statute, 1989, Chapter 11 1/2, Section 1004 and 1021, that this information be submitted to the Agency. Failure to provide this information may result in a civil penalty against the owner or operator not to exceed \$25,000 per day of violation. Falsification of this information may result in a fine up to \$50,000 per day of violation and imprisonment up to 5 years. This form has been approved by the Forms Management Center.

232048

In case of a spill call the Illinois Office of Emergency Response at 217/782-7860 and the National Response Center at 800/424-8802 or 202/426-2675.

STL Chicago is part of Severn Trent Laboratories, Inc.

SAMPLE INFORMATION
Date: 01/02/2003

Job Number.: 214116
Customer...: MKM Engineers, Inc.
Attn.....: Brian Stockwell

Project Number.....: 20002825
Customer Project ID....: RAVENNA - LL6, 9, WS
Project Description....: Ravenna - LL6, 9, WS Demo

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
214116-1	LL6-FLOORSWEEP-001	Soil	12/12/2002	13:55	12/13/2002	09:30
214116-2	LL9-FLOORSWEEP-001	Soil	12/12/2002	14:00	12/13/2002	09:30

LABORATORY TEST RESULTS

Job Number: 214116

Date: 01/02/2003

CUSTOMER: HKM Engineers, Inc.

PROJECT: RAVENNA - LL6, 9, WS

ATTN: Brian Stockwell

Customer Sample ID: LL6-FLOORSWEEP-001
 Date Sampled.....: 12/12/2002
 Time Sampled.....: 13:55
 Sample Matrix.....: Soil

Laboratory Sample ID: 214116-1
 Date Received.....: 12/13/2002
 Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q-FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination										
	% Solids, Solid	95.3		0.10	0.10	1	%	71743		12/14/02 1622	clb
	% Moisture, Solid	4.7		0.10	0.10	1	%	71743		12/14/02 1622	clb
8082	PCB Analysis										
	Aroclor 1016, Solid*	1700	U	300	1700	100.000	ug/Kg	72732		12/21/02 0652	mgk
	Aroclor 1221, Solid*	1700	U	700	1700	100.000	ug/Kg	72732		12/21/02 0652	mgk
	Aroclor 1232, Solid*	1700	U	310	1700	100.000	ug/Kg	72732		12/21/02 0652	mgk
	Aroclor 1242, Solid*	1700	U	660	1700	100.000	ug/Kg	72732		12/21/02 0652	mgk
	Aroclor 1248, Solid*	8800	U	240	1700	100.000	ug/Kg	72732		12/21/02 0652	mgk
	Aroclor 1254, Solid*	1700	U	280	1700	100.000	ug/Kg	72732		12/21/02 0652	mgk
	Aroclor 1260, Solid*	1700	U	260	1700	100.000	ug/Kg	72732		12/21/02 0652	mgk
8330	Explosives by 8330 (HPLC)										
	HMX, Solid	27000		1100	2500	10.0000	ug/Kg	72899		12/28/02 2015	san
	RDX, Solid	6800		580	1000	10.0000	ug/Kg	72899		12/28/02 2015	san
	1,3,5-Trinitrobenzene, Solid	1000	U	170	1000	10.0000	ug/Kg	72899		12/28/02 2015	san
	1,3-Dinitrobenzene, Solid	1000	U	180	1000	10.0000	ug/Kg	72899		12/28/02 2015	san
	Nitrobenzene, Solid	1000	U	220	1000	10.0000	ug/Kg	72899		12/28/02 2015	san
	2,4,6-TNT, Solid	130000		3400	10000	100.000	ug/Kg	72899	D1	12/31/02 0935	san
	Tetryl, Solid	2000	U	430	2000	10.0000	ug/Kg	72899		12/28/02 2015	san
	2,4-Dinitrotoluene, Solid	1000	U	350	1000	10.0000	ug/Kg	72899		12/28/02 2015	san
	2,6-Dinitrotoluene, Solid	2000	U	470	2000	10.0000	ug/Kg	72899		12/28/02 2015	san
	2-Nitrotoluene, Solid	2000	U	330	2000	10.0000	ug/Kg	72899		12/28/02 2015	san
	4-Nitrotoluene, Solid	5000	U	460	5000	10.0000	ug/Kg	72899		12/28/02 2015	san
	3-Nitrotoluene, Solid	2000	U	500	2000	10.0000	ug/Kg	72899		12/28/02 2015	san
7470A	Leachable, Mercury (CVAA)										
	Mercury, TCLP Leach	0.0020	U	0.0020	0.0020	1	mg/L	72036		12/17/02 1707	gok

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 214116

Date: 01/02/2003

CUSTOMER: MKM Engineers, Inc.

PROJECT: RAVENNA - LL6, 9, WS

ATTN: Brian Stockwell

Customer Sample ID: LL6-FLOORSWEEP-001
 Date Sampled.....: 12/12/2002
 Time Sampled.....: 13:55
 Sample Matrix.....: Soil

Laboratory Sample ID: 214116-1
 Date Received.....: 12/13/2002
 Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
6010B	Leachable, Metals Analysis (ICAP)											
	Arsenic, TCLP Leach	0.10	U		0.010	0.10	1	mg/L	72169		12/18/02 1740	tds
	Barium, TCLP Leach	0.35	B		0.010	1.0	1	mg/L	72169		12/18/02 1740	tds
	Cadmium, TCLP Leach	1.8			0.002	0.050	1	mg/L	72169		12/18/02 1740	tds
	Chromium, TCLP Leach	0.023	B		0.010	0.050	1	mg/L	72169		12/18/02 1740	tds
	Lead, TCLP Leach	7.2			0.0050	0.050	1	mg/L	72169		12/18/02 1740	tds
	Selenium, TCLP Leach	0.10	U		0.010	0.10	1	mg/L	72169		12/18/02 1740	tds
	Silver, TCLP Leach	0.050	U		0.005	0.050	1	mg/L	72169		12/18/02 1740	tds

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 214116

Date: 01/02/2003

CUSTOMER: MKM Engineers, Inc.

PROJECT: RAVENNA - LL6, 9, WS

ATTN: Brian Stockwell

Customer Sample ID: LL9-FLOORSWEEP-001
 Date Sampled.....: 12/12/2002
 Time Sampled.....: 14:00
 Sample Matrix.....: Soil

Laboratory Sample ID: 214116-2
 Date Received.....: 12/13/2002
 Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination											
	% Solids, Solid	84.9			0.10	0.10	1	%	71743		12/14/02 1622	clb
	% Moisture, Solid	15.1			0.10	0.10	1	%	71743		12/14/02 1622	clb
8082	PCB Analysis											
	Aroclor 1016, Solid*	200	U		34	200	10.0000	ug/Kg	72732		12/23/02 2119	mgk
	Aroclor 1221, Solid*	200	U		79	200	10.0000	ug/Kg	72732		12/23/02 2119	mgk
	Aroclor 1232, Solid*	200	U		35	200	10.0000	ug/Kg	72732		12/23/02 2119	mgk
	Aroclor 1242, Solid*	200	U		74	200	10.0000	ug/Kg	72732		12/23/02 2119	mgk
	Aroclor 1248, Solid*	200	U		27	200	10.0000	ug/Kg	72732		12/23/02 2119	mgk
	Aroclor 1254, Solid*	920	U		32	200	10.0000	ug/Kg	72732		12/23/02 2119	mgk
	Aroclor 1260, Solid*	200	U		29	200	10.0000	ug/Kg	72732		12/23/02 2119	mgk
8330	Explosives by 8330 (HPLC)											
	HMX, Solid	250	U		110	250	1.00000	ug/Kg	72899		12/29/02 0035	san
	RDX, Solid	99	U		58	99	1.00000	ug/Kg	72899		12/29/02 0035	san
	1,3,5-Trinitrobenzene, Solid	99	U		17	99	1.00000	ug/Kg	72899		12/29/02 0035	san
	1,3-Dinitrobenzene, Solid	99	U		18	99	1.00000	ug/Kg	72899		12/29/02 0035	san
	Nitrobenzene, Solid	99	U		22	99	1.00000	ug/Kg	72899		12/29/02 0035	san
	2,4,6-TMT, Solid	99	U		33	99	1.00000	ug/Kg	72899		12/29/02 0035	san
	Tetryl, Solid	200	U		43	200	1.00000	ug/Kg	72899		12/29/02 0035	san
	2,4-Dinitrotoluene, Solid	99	U		35	99	1.00000	ug/Kg	72899		12/29/02 0035	san
	2,6-Dinitrotoluene, Solid	200	U		47	200	1.00000	ug/Kg	72899		12/29/02 0035	san
	2-Nitrotoluene, Solid	200	U		33	200	1.00000	ug/Kg	72899		12/29/02 0035	san
	4-Nitrotoluene, Solid	490	U		46	490	1.00000	ug/Kg	72899		12/29/02 0035	san
3-Nitrotoluene, Solid	200	U		49	200	1.00000	ug/Kg	72899		12/29/02 0035	san	
7470A	Leachable, Mercury (CVAA)											
	Mercury, TCLP Leach	0.0020	U		0.0020	0.0020	1	mg/L	72036		12/17/02 1714	gok

* In Description = Dry Wgt.

Job Number: 214116

LABORATORY TEST RESULTS

Date: 01/02/2003

CUSTOMER: MKM Engineers, Inc.

PROJECT: RAVENNA - LL6, 9, WS

ATTN: Brian Stockwell

Customer Sample ID: LL9-FLOORSWEEP-001
 Date Sampled.....: 12/12/2002
 Time Sampled.....: 14:00
 Sample Matrix.....: Soil

Laboratory Sample ID: 214116-2
 Date Received.....: 12/13/2002
 Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
6010B	Leachable, Metals Analysis (ICAP)											
	Arsenic, TCLP Leach	0.010	B		0.010	0.10	1	mg/L	72169		12/18/02 1832	tds
	Barium, TCLP Leach	0.28	B		0.010	1.0	1	mg/L	72169		12/18/02 1832	tds
	Cadmium, TCLP Leach	0.35			0.002	0.050	1	mg/L	72169		12/18/02 1832	tds
	Chromium, TCLP Leach	0.019	B		0.010	0.050	1	mg/L	72169		12/18/02 1832	tds
	Lead, TCLP Leach	0.45			0.0050	0.050	1	mg/L	72169		12/18/02 1832	tds
	Selenium, TCLP Leach	0.011	B		0.010	0.10	1	mg/L	72169		12/18/02 1832	tds
	Silver, TCLP Leach	0.050	U		0.005	0.050	1	mg/L	72169		12/18/02 1832	tds

* In Description = Dry Wgt.

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. OH5210020736	Manifest Doc. No. NH005	2. Page 1 of 1
3. Generator's Name and Mailing Address Ravenna Army Ammunition Plant 8451 State Rt. 5 Ravenna, Oh. 44264				
4. Generator's Phone (330) 358-7311				
5. Transporter 1 Company Name Emerald Env. Services, Inc.		6. US EPA ID Number OHR000102053	A. Transporter's Phone 330-677-0785	
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter's Phone	
9. Designated Facility Name and Site Address COUNTYWIDE LANDFILL 3619 Gracemont St. S.W. East Sparta, Ohio 44626		10. US EPA ID Number N/A	C. Facility's Phone 330-874-3855	
11. Waste Shipping Name and Description Non Hazardous/Non Regulated Material (Floor Sweepings)			12. Containers No. 001 Type B	13. Total Quantity 3000
			14. Unit lbs	
11a) 510957			E. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information Lead line 9, floor Sweepings				
EMERGENCY CONTACT: 330-677-0785				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name IRVING VENGEL		Signature <i>Irving Vengel</i>		Month Day Year 17 23 03
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name SHAWN HERSHBERGER		Signature <i>Shawn Hershberger</i>
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature
19. Discrepancy Indication Space		Month Day Year		
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name Leslie Hall		Signature <i>Leslie Hall</i>		Month Day Year

EMERGENCY CONTACT: 330-677-0785

TRANSPORTER #1