Range Scrap (Firing Point) Study
Waste Profile Notices

June 2005

Prepared for

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland

RANGE SCRAP (FIRING POINT) STUDY
WASTE PROFILE NOTICES

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland

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LIST OF WASTE PROFILE NOTICES

Munitions Item	Residue/Scrap Item (Part)
Cartridge, 5.56mm	Case, Cartridge, Fired, Brass
Cartridge, 5.56mm Blank	Case, Cartridge, Fired, Brass
Cartridge, 7.62mm	Case, Cartridge, Fired, Brass
Cartridge, 7.62mm Blank	Case, Cartridge, Fired, Brass
Cartridge, 9mm	Case, Cartridge, Fired, Brass
Cartridge, .22 Caliber	Case, Cartridge, Fired, Brass
CTG, CAL .45 Ball M1911	Cartridge Case, Fired Brass
Cartridge, .50 Caliber	Case, Cartridge, Fired, Brass/Steel
Cartridge, .50 Caliber Blank, Linked	Case, Cartridge, Fired, Brass
Cartridge, .50 Caliber, Plastic	Case, Cartridge, Fired, Plastic
Expended Cartridge, 10 Gauge	Case, Cartridge, Fired, Brass and Paper/Plastic
Cartridge, 12 GA Shotgun Buckshot	Case, Cartridge, Fired, Brass/Steel Base and Paper/Plastic Case
Cartridge, 20mm	Case, Cartridge, Fired
Cartridge, 25mm	Case, Cartridge, Fired
Cartridge, 30mm, TP M788	Case, Cartridge, Fired
Cartridge, 40mm	Expended 40mm Cartridge Cases, Aluminum Alloy/Brass/Nylon
Expended 40mm Practice Cartridge	40 mm Practice Cartridge, Low Velocity
Cartridge, 75mm Blank Saluting Round	Case, Cartridge, Fired
Igniter, Time Blasting M6	Cap, Blasting, Electric M6
Igniter, Time Blasting M60	Igniter, Time Blasting M60 (with cadmium plated pull ring)
Igniter, Time Blasting Fuse M81	Expended, Igniter, Device Plastic
Primer, Percussion, M82	Case, Cartridge, Fired, Brass
M11 Nonelectric Blasting Cap W/30 FT Shock Tube	Expended, M11 Blasting Cap, M11 Shock Tube
M12 Non-Electric Blasting Cap with Shock Tube	Expended, M12 Blasting Cap with Shock Tube
Fusee, Warning RR Signal, Red M72	Residue, Fusee Signal RR Red
Grenade Fuze M201A1	Expended Grenade Fuze M201A1, DODAC 1330-6874

LIST OF WASTE PROFILE NOTICES (CONTINUED)

Munitions Item	Residue/Scrap Item (Part)
Firing Device, Demolition Pressure Release, M5	Steel Assembly, Firing Device Demolition M5
Grenade, Hand, Smoke, HC AN-M8	Expended Grenade, Hand, Smoke, HC AN-M8
Grenade, Hand, Riot, CS M7A3	Expended Grenade, Hand, Riot CS M7A3
Grenade, Hand, Smoke, Yellow M18	Expended Grenade, Hand, Smoke, Yellow M18 Canister without Fuze
Grenade, Hand, Smoke, Green M18	Expended Grenade, Hand, Smoke, Green M18 Canister without Fuze
Grenade, Hand, Smoke, Violet M18	Expended Grenade, Hand, Smoke, Violet M18 Canister without Fuze
Grenade, Hand, Smoke, Red M18	Expended Grenade, Hand, Smoke, Red M18 Canister without Fuze
Grenade, Hand, Smoke, Red M48 w/M227 Fuze	Expended Grenade, Hand, Smoke, Red M48 w/M227 Fuze
Smoke Pot Floating Type HC M4A2	Expended Smoke Pot Floating Type HC M4A2
Smoke Pot Floating Type M8	Expended Smoke Pot, Practice, Floating XM8/M8
Projectile, 155mm Smoke Illumination	Expended Canister, 155mm Smoke HC M1
Signal Kit, Personal Distress, Red XM185	XM20 Projector and Cartridges
White Star Parachute Cartridge, L312/L314/L311	Case, Cartridge, Fired
Expended Simulator Flash Arty M21	Expended M21 Simulator Assembly
Expended Rocket, AT4	AT4 Rocket Launcher

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 5.56MM

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1305-A059	CTG, 5.56MM BALL M855
1305-A062	CTG, 5.56MM BALL M855 LNKD
1305-A063	CTG, 5.56MM TR M856
1305-A064	CTG, 5.56MM BALL TR 4/1 M855, M856
1305-A065	CTG, 5.56MM PLASTIC M862
1305-A068	CTG, 5.56MM TR M196
1305-A071	CTG, 5.56MM BALL M193

III. Characterization Data

This item was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentration of lead in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, elevated concentrations of barium (8.3 mg/L) were noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual metal constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 5.56mm cartridge cases listed above are classified as a **hazardous waste (EPA HW No. D008)** per 40 CFR 261 and contain levels of lead above the Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. The items should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 5.56mm Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
Barium	VB1	mg/L	8.6	1.0	7.5	9.1	8.3	100.0	21
	VB2	mg/L	8.9						
	VB3	mg/L	7.5						
Lead	VB1	mg/L	7.2	0.20	6.9	7.5	**7.3**	**5.0**	**0.75**
	VB2	mg/L	7.6						
	VB3	mg/L	7.0						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 5.56MM BLANK

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1305-A075 CTG, 5.56mm Blank, M200
1305-A080 CTG, 5.56mm Blank, M200

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. A residual explosive compound, nitroglycerin, was detected in this item at an average concentration of 1093 µg/kg.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual explosive constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, the expended 5.56mm blank cartridge cases listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base-specific ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 5.56mm Blank M200 Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	B1	mg/L	4.2	1	3.79	5.68	4.7	100.0	NA
	B2	mg/L	5.2						
	B3	mg/L	4.8						
Lead	B1	mg/L	4.5	1	3.97	4.63	4.3	5.0	NA
	B2	mg/L	4.2						
	B3	mg/L	4.2						
SVOC Analysis									
Diphenylamine	B1	µg/kg	350	330	66	424	285	NA	NA
	B2	µg/kg	<RL[c]						
	B3	µg/kg	<RL[c]						
Explosives Analysis									
Nitroglycerin	B1	µg/kg	1700	1000	0	2247	1100	NA	NA
	B2	µg/kg	<RL[c]						
	B3	µg/kg	1100						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 7.62MM

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1305-A130	CTG, 7.62MM NATO BALL M80
1305-A131	CTG, 7.62MM 4 BALL M59/M80/1 TR M62
1305-A136	CTG, 7.62MM NATO SPEC BALL M118
1305-A143	CTG, 7.62MM NATO BALL M80 LNKD
1305-A151	CTG, 7.62MM 4 BALL M80/1 TR M62 OHF
1305-A165	CTG, 7.62MM 4 BALL M80/1 TR M62 LNKD M13
1305-A171	CTG, 7.62MM MATCH M852
1305-AA11	CTG, 7.62MM M118 LRA

III. Characterization Data

This item was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 7.62mm cartridge cases listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 7.62mm Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
Barium	SB1	mg/L	<RL[c]	1.0	.35	.98	0.67	100.0	NA
	SB2	mg/L	1.0						
	SB3	mg/L	<RL[c]						
Lead	SB1	mg/L	1.9	0.20	1.8	2.1	2.0	5.0	NA
	SB2	mg/L	2.2						
	SB3	mg/L	2.0						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 7.62MM BLANK

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1305-A111 CTG, 7.62MM BLK M82 LNKD M13
1305-A112 CTG, 7.62MM BLK M82 LNKD

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended management and disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 7.62mm blank cartridge cases listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed this item in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 7.62mm Blank Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	G1	mg/L	1.4	1.0	1.2	2.0	1.6	100.0	NA
	G2	mg/L	1.4						
	G3	mg/L	2.0						
Lead	G1	mg/L	2.4	0.2	2.2	2.7	2.5	5.0	NA
	G2	mg/L	2.3						
	G3	mg/L	2.7						
SVOC Analysis									
No SVOC compounds detected.									
Explosives Analysis									
No explosive compounds detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 9MM

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1305-A358 CTG, 9mm PRAC AT-4 M287
1305-A363 CTG, 9mm Ball M882

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentration of lead (12.9 mg/L) in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, elevated levels for barium (20 mg/L) and nitroglycerin (800 µg/kg) were noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of metal and explosive constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 9mm cartridge cases listed above are classified as a **hazardous waste (EPA HW No. D008)** per 40 CFR 261 and contain levels of barium and lead above the Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. The items should be managed in accordance with AR 420-49 and base-specific ISWMP. The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 9mm Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	E1	mg/L	14	1.0	9.6	**30.4**	20	100.0	21
	E2	mg/L	15						
	E3	mg/L	31						
Lead	E1	mg/L	7.7	0.20	3.4	22.4	**12.9**	**5.0**	**0.75**
	E2	mg/L	8.0						
	E3	mg/L	23						
SVOC Analysis									
No SVOCs detected									
Explosives Analysis									
Nitroglycerin	E1	µg/kg	<RL[c]	1000	234	1366	800	NA	NA
	E2	µg/kg	<RL[c]						
	E3	µg/kg	1400						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, .22 CALIBER

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1305-A091	CTG, CAL .22 LR Ball Match Grade
1305-A093	CTG, CAL .22 LR Ball
1305-A106	CTG, CAL .22 LR Ball

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentration of lead in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, elevated concentrations for barium (74 mg/L) were noted. Analysis for explosive residuals in this item also revealed the presence of pentaerythritol tetranitrate.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual metal and explosive constituents, it is recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended .22 caliber cartridge cased listed above are classified as a **hazardous waste (EPA HW No. D008)** per 40 CFR 261 and contain levels of barium and lead above the Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. The items should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for .22 Caliber Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	C1	mg/L	76	1.0	67.6	79.73	**74**	100.0	**21**
	C2	mg/L	70						
	C3	mg/L	75						
Lead	C1	mg/L	110	0.20	110	110	**110**	**5.0**	**0.75**
	C2	mg/L	110						
	C3	mg/L	110						
SVOC Analysis									
No SVOCs detected									
Explosives Analysis									
Pentaerythritol tetranitrate (PETN)	C1	µg/kg	1400	1000	234	1366	800	NA	NA
	C2	µg/kg	<RL[c]						
	C3	µg/kg	<RL[c]						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CTG CAL .45 BALL M1911

I. Part

CTG CASE, FIRED BRASS

II. Applicable Munitions by DODAC

1305- A475 CTG, CAL .45 BALL M1911

III. Characterization Data

The residue was sampled for TCLP metals (including mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentration of lead (7.4 mg/L) in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, elevated concentrations of barium (12.6 mg/L) were noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of hazardous constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, the .45 caliber ball cartridge case is classified as a **hazardous waste (EPA HW No. D008)** and should be managed in accordance with Subtitle C of the Resource Conservation and Recovery Act and all applicable state and local requirements.

Residue Analytical Results for .45 Caliber Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
Barium	A475-1	mg/L	12	5.0		1.43	12.6	100.0	21
	A475-2	mg/L	13						
	A475-3	mg/L	13						
Lead	A475-1	mg/L	6.7	0.5		1.59	7.4	5.0	0.75
	A475-2	mg/L	7.3						
	A475-3	mg/L	8.1						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
Nitroglycerin	A475-1	mg/L	0.7			0.74	0.79	NA	NA
	A475-2	mg/L	0.7						
	A475-3	mg/L	0.97						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods

EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)

EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

CAD 55.1, Explosive compounds for method

WASTE PROFILE NOTICE
FOR
CARTRIDGE, .50 CALIBER

I. Part

Case, Cartridge, Fired, Brass/Steel

II. Applicable Munitions by DODAC

1305-A520	CTG, CAL .50 4 BALL M33/1 TR M17 LNKD M15A2
1305-A540	CTG, CAL .50 4 API M8/1 TR M17 LNKD
1305-A552	CTG, CAL .50 BALL M33
1305-A555	CTG, CAL .50 BALL M33 LNKD
1305-A557	CTG, CAL .50 4 BALL M33/1 TR M17 LNKD M9
1305-A570	CTG, CAL .50 TR M17
1305-A572	CTG, CAL .50 TR M17
1305-A576	CTG, CAL .50 4 API M8/1 API-T M20 LNKD
1305-A585	CTG, CAL .50 API-T M20 LNKD

III. Characterization Data

This item was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. Analysis for explosive residuals in this item indicated the presence of 2,4-Dinitrotoluene at 282 µg/kg.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of explosive constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended .50 caliber cartridge cases listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for .50 Caliber Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
Barium	TB1	mg/L	1.8	1.0	1.7	2.2	1.9	100.0	NA
	TB2	mg/L	1.8						
	TB3	mg/L	2.2						
Lead	TB1	mg/L	1.7	0.20	1.3	1.8	1.6	5.0	NA
	TB2	mg/L	1.3						
	TB3	mg/L	1.7						
SVOC Analysis									
No SVOCs detected									
Explosives Analysis									
2,4-Dinitro-toluene	TB1	µg/kg	<RL[c]	250	124	439	282	2600[d]	NA
	TB2	µg/kg	410						
	TB3	µg/kg	310						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.
[d]This value represents the maximum theoretical leaching limit (20 times the respective TCLP limit) to determine whether TCLP analysis is warranted: 20 X 0.13 mg/L = 2.6 mg/L = 2.6 ppm = 2600 µg/kg. The concentration of 2,4-Dinitrotoluene in this sample does not warrant a TCLP analysis (i.e., the result does not approach the regulatory level.).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, .50 CALIBER BLANK, LINKED

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1305-A559	CTG CAL .50 BLK M1A1 LNKD
1305-A598	CTG CAL .50 BLK M1A1 LNKD
1305-A599	CTG CAL .50 BLK M1A1 LNKD

III. Characterization Data

The residue was sampled for TCLP metals, semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended .50 caliber blank cartridge cases are classified as a **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Cartridge, .50 Caliber, Blank, Linked

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	H1	mg/L	4.7	1.0	2.6	4.7	3.7	100	NA
	H2	mg/L	3.6						
	H3	mg/L	2.8						
Lead	H1	mg/L	2.7	0.2	2.1	2.6	2.4	5.0	NA
	H2	mg/L	2.3						
	H3	mg/L	2.2						
SVOC Analysis									
2,4-Dinitrotoluene	H1	µg/kg	450	330	440	452	446	2,600[c]	NA
	H2	µg/kg	440						
	H3	µg/kg	450						
2,6-Dinitrotoluene	H1	µg/kg	570	330	560	572	566	NA	NA
	H2	µg/kg	560						
	H3	µg/kg	570						
Explosives Analysis									
No explosives detected[d]									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]This value represents the maximum theoretical leaching limit (20 times the respective TCLP limit) to determine whether TCLP analysis is warranted: 20 X0.13 mg/L = 2.6 mg/L = 2.6 ppm = 2600 µg/kg. The concentration of 2,4-Dinitrotoluene in this sample does not warrant a TCLP analysis (i.e., the result does not approach the regulatory level.).
[d]The PETN results for the 8332 analysis were rejected due to matrix interference. However, PETN is not a suspected contaminant for this item.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, .50 CALIBER, PLASTIC

I. Part

Case, Cartridge, Fired, Plastic

II. Applicable Munitions by DODAC

1305-A602 CTG CAL .50 M858 TP/M860 TP-T (4 TO 1 MIX)

III. Characterization Data

The residue was sampled for TCLP metals, semivolatile and explosive compounds (see table below). Results indicate that the concentration of lead in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, an elevated concentration of barium (12 mg/L) was noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual metal constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended .50 caliber plastic cartridge cases are classified as a **hazardous waste (EPA HW No. D008)** per 40 CFR 261 and contain levels of lead above the Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. The items should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for .50 Caliber Plastic Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	ZB1	mg/l	12	1.0	10.9	13.0	12	100	NA
	ZB2	mg/l	13						
	ZB3	mg/l	11						
Lead	ZB1	mg/l	9.4	0.2	9.3	9.8	**9.6**	**5.0**	NA
	ZB2	mg/l	9.8						
	ZB3	mg/l	9.6						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards are not applicable to items meeting the definition of debris (solid material exceeding a 60mm particle size) according to 40 CFR 268.3.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
Expended Cartridge, 10 Gauge

I. Part

Case, Cartridge, Fired, Brass and Paper/Plastic

II. Applicable Munitions by DODAC

1305-A010

III. Waste Characterization

The residue was sampled and analyzed for TCLP metals, semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals in the samples did not exceed the toxicity threshold limits established in 40 CFR 261.24. No detectable levels of semi-volatiles or explosive compounds (nitroglycerin and PETN) were found. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP).

Disposal:

When disposed of, the expended cases are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan.

Residue Analytical Results for Expended Cartridge, 10 Gauge

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
Lead	A1	mg/L	<RL[c]	0.5	NA	NA	**0.34**	**5.0**	**0.75**
	A2	mg/L	<RL[c]						
	A3	mg/L	0.52						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-DNT)
CAD 55.1, (to also include Nitroglycerin and PETN)

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 12 GA SHOTGUN BUCKSHOT

I. Part

Case, Cartridge, Fired, Brass/Steel Base and Paper/Plastic Case

II. Applicable Munitions by DODAC

1305-A011 CTG, 12 GA Shotgun Buckshot
1305-A014 CTG, 12 GA Shotgun #9 Buckshot
1305-A017 CTG, 12 GA Shotgun #11

III. Waste Characterization

The residue was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. The explosive residue nitroglycerin is present at an average concentration of 2733 µg/kg.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual explosive constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, the expended 12 GA shotgun cartridge cases are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base-specific ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 12 ga Shotgun Buckshot Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	A1	mg/L	11	1.0	11.6	31.8	21.7	100.0	NA
	A2	mg/L	28						
	A3	mg/L	26						
Lead	A1	mg/L	1.0	0.2	0.64	1.1	0.87	5.0	NA
	A2	mg/L	0.63						
	A3	mg/L	0.97						
SVOC Analysis									
Diphenylamine	A1	µg/kg	1200	330	148	1282	715	NA	NA
	A2	µg/kg	780						
	A3	µg/kg	<RL[c]						
Explosives Analysis									
Nitroglycerin	A1	µg/kg	2200	1000	0	5501	2733	NA	NA
	A2	µg/kg	5500						
	A3	µg/kg	<RL[c]						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 20MM

I. Part

Case, Cartridge, Fired

II. Applicable Munitions by DODAC

1305-A896 CTG, 20MM 4 TP M55A2/1 TP-T M220 LNKD

III. Characterization Data

This item was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 20mm cartridge cases listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed this item in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 20mm Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
Barium	QB1	mg/L	<RL[c]	1.0	0.35	0.98	0.67	100.0	NA
	QB2	mg/L	1.0						
	QB3	mg/L	<RL[c]						
Lead	QB1	mg/L	0.73	0.20	0.58	0.83	0.71	5.0	NA
	QB2	mg/L	0.81						
	QB3	mg/L	0.58						
SVOC Analysis									
Phenol	QB1	µg/kg	650	330	22	632	327	NA	NA
	QB2	µg/kg	<RL[c]						
	QB3	µg/kg	<RL[c]						
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 25MM

I. Part

Case, Cartridge, Fired

II. Applicable Munitions by DODAC

1305-A940 CTG, 25mm
1305-A976 CTG, 25mm TP-T M793

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended management and disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 25mm cartridge cases listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed this item in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 25mm Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	P1	mg/L	<RL[c]	1.0	0.5	2.5	1.5	100.0	NA
	P2	mg/L	2.2						
	P3	mg/L	1.7						
Chromium	P1	mg/L	0.35	0.20	0.02	0.34	0.18	5.0	NA
	P2	mg/L	<RL[c]						
	P3	mg/L	<RL[c]						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosive compounds detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 30MM, TP M788

I. Part

Case, Cartridge, Fired

II. Applicable Munitions by DODAC

1305-B118 CTG, 30 MM, TP, M788

III. Characterization Data

This item was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentration of lead in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, elevated concentrations of barium (7.8 mg/L) were noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual hazardous constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 30 mm cartridge cases listed above are classified as a **hazardous waste (EPA HW No. D008)** per 40 CFR 261. The items should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Expended 30 MM CTG

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	30-A-1	mg/L	9.8	5.0		2.64	7.8	100.0	NA
	30-A-2	mg/L	5.9						
	30-A-3	mg/L	7.8						
Lead	30-A-1	mg/L	5.2	0.5		2.13	5.6	5.0	NA
	30-A-2	mg/L	4.5						
	30-A-3	mg/L	7.0						
SVOC Analysis									
bis(2-Ethylhexyl) phthalate	30-B-1	µg/kg	2400	660		1500	2733	NA	NA
	30-B-2	µg/kg	2300						
	30-B-3	µg/kg	3500						
Explosives Analysis									
Nitroglycerin	30-C-1	µg/kg	32.7	0.008		6.7	41.2	NA	NA
	30-C-2	µg/kg	55.6						
	30-C-3	µg/kg	35.2						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods
EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Method 8095, (modified to also include Nitroglycerin and PETN)

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 40MM

I. Part

Expended 40mm Cartridge Cases, Aluminum Alloy/Brass/Nylon

II. Applicable Munitions by DODAC

Various 40mm cartridges

1310-B504	1310-B519	1310-B571
1310-B505	1310-B535	1310-B584
1310-B506	1310-B536	1310-B592
1310-B508	1310-B542	
1310-B509	1310-B546	

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended management and disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended 40mm cartridge cases listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed this item in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 40mm Cartridge Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	I1	mg/L	1.0	1.0	1.0	1.8	1.4	100.0	NA
	I2	mg/L	1.7						
	I3	mg/L	1.5						
Lead	I1	mg/L	0.89	0.2	0.69	1.3	0.86	5.0	NA
	I2	mg/L	0.69						
	I3	mg/L	1.0						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosive compounds detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Method 8332, Nitroglycerin and PETN

WASTE PROFILE NOTICE
FOR
EXPENDED 40 MM PRACTICE CARTRIDGE

I. Part

40 mm Practice Cartridge, Low Velocity

II. Applicable Munitions by DODAC

1310-01-211-8073 M781

III. Characterization Data

The expended 40 mm practice cartridge was sampled for TCLP metals, explosives, and semi-volatiles. Results indicate that the concentrations of regulated constituents in the waste were below the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials may exclude this item from the recycling option. In accordance with Federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with Army Regulation 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended 40 mm practice rounds are classified as a **non-hazardous waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Expended 40 mm Practice Cartridge

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Lead	40MM1	mg/L	3.1	0.50		0.65	3.1	5.0	NA
	40MM2	mg/L	3.7						
	40MM3	mg/L	2.5						
SVOC Analysis									
No RCRA-C regulated constituents detected									
Explosives Analysis									
No RCRA-C regulated constituents detected									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals
EPA SW-846 Method 1311, EPA SW-846 Method 8270, for SVOCs (including 2,4-Dinitrotoluene and hexachloroethane)
CAD SOP 55.3 (Modified EPA Method 8330) for explosives

WASTE PROFILE NOTICE
FOR
CARTRIDGE, 75MM BLANK SALUTING ROUND

I. Part

Case, Cartridge, Fired, M337A2 75MM Blank Saluting Round

II. Applicable Munitions by DODAC

1315-C025 CASE, CTG, FIRED, COPPER ALLOY

III. Characterization Data

The residue was sampled for TCLP metals, semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended 75mm blank saluting round cartridge cases are classified as a **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Cartridge, 75mm Blank Saluting Round

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Chromium	R1	mg/L	0.37	0.20	0.32	0.54	0.43	5.0	NA
	R2	mg/L	0.55						
	R3	mg/L	0.38						
SVOC Analysis									
2,4-Dinitrotoluene	R1	µg/kg	450	330	450	450	450	2,600[c]	NA
	R2	µg/kg	450						
	R3	µg/kg	450						
2,6-Dinitrotoluene	R1	µg/kg	560	330	557	569	563	NA	NA
	R2	µg/kg	560						
	R3	µg/kg	570						
Explosives Analysis									
No explosive compounds detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]This value represents the maximum theoretical leaching limit (20 times the respective TCLP limit) to determine whether TCLP analysis is warranted: 20 X0.13 mg/L = 2.6 mg/L = 2.6 ppm = 2600 µg/kg. The concentration of 2,4-Dinitrotoluene in this sample does not warrant a TCLP analysis (i.e., the result does not approach the regulatory level.).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
IGNITER, TIME BLASTING M6

I. Part

Cap, Blasting, Electric M6

II. Applicable Munitions by DODAC

1375-M130 Cap, Blasting, Electric w/Wire (12 FT) M6

III. Characterization Data

The residue was sampled for TCLP metals and semivolatile compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261-24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The recycle value of the M6 electric blasting cap may be limited due to the presence of non-metallic materials and the metallic composition of the item. However, recycling and reclamation should be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended M6 electric blasting caps are classified as a **non-hazardous waste** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Time Blasting M6 Igniter

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Cadmium	W1	mg/L	<RL[c]	0.1	0	0.17	0.08	1.0	0.11
	W2	mg/L	0.11						
Lead	W1	mg/L	<RL[c]	0.2	0	1.94	0.55	5.0	0.75
	W2	mg/L	1.00						
SVOC Analysis									
No elevated readings noted.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
IGNITER, TIME BLASTING M60

I. Part

Igniter, Time Blasting M60 (with cadmium plated pull ring)

II. Applicable Munitions by DODAC

1375-M766 Igniter, Time Blasting M60 (with cadmium plated pull ring)

III. Characterization Data

The residue was sampled for TCLP metals (including mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentration of cadmium (125 mg/L) in the TCLP extract exceeded the toxicity threshold limit for cadmium of 1.0 mg/L. In addition, elevated concentrations for barium (2.33 mg/L), chromium (0.22 mg/L), and lead (0.32 mg/L) were noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The recycle value of the M60 igniter may be limited due to the presence of non-metallic materials and the metallic composition of the item. However, recycling and reclamation should be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended M60 igniters with cadmium plated pull rings are classified as a **hazardous waste (EPA HW No. D006)** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Time Blasting M60 Igniter

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	W1	mg/L	2.4	1.0	2.12	2.55	2.33	100.0	NA
	W2	mg/L	2.4						
	W3	mg/L	2.2						
Cadmium	W1	mg/L	110	0.1	85	165	**125**	**1.0**	NA
	W2	mg/L	140						
	W3	mg/L	120						
Chromium	W1	mg/L	0.24	0.2	0.17	0.27	0.22	5.0	NA
	W2	mg/L	0.20						
	W3	mg/L	<RL[c]						
Lead	W1	mg/L	0.31	0.2	0.29	0.35	0.32	5.0	NA
	W2	mg/L	0.33						
	W3	mg/L	0.42						
SVOC Analysis									
No elevated readings noted.									
Explosives Analysis									
No elevated readings noted.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards are not applicable to items meeting the definition of debris (solid material exceeding a 60mm particle size) according to 40 CFR 268.3.
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
IGNITER, TIME BLASTING FUSE M81

I. Part

Expended, Igniter, Device Plastic

II. Applicable Munitions by DODAC

1375-MN08 IGNITER, TIME BLASTING FUSE M81

III. Characterization Data

The residue was sampled for TCLP metals, semivolatiles, and explosive compounds (see table below). Results indicate that the concentration of cadmium in the TCLP extract exceeded the toxicity threshold limit for cadmium of 1.0 mg/L. In addition, elevated concentrations of barium (1.3 mg/L) and lead (0.5 mg/L) were noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The recycle value of the expended M81 igniters may be limited due to the presence of non-metallic materials and the metallic composition of the item. However, recycling and reclamation should be evaluated based on local factors and conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M81 igniters are classified as a **hazardous waste (EPA HW No. D006)** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for M81 Igniter, Time Blasting Fuse

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	PB1	mg/L	1.8	1.0	0.9	1.8	1.3	100	NA
	PB2	mg/L	1.3						
	PB3	mg/L	1						
Cadmium	PB1	mg/L	300	0.1	273	339	**306**	**1.0**	NA
	PB2	mg/L	340						
	PB3	mg/L	280						
Lead	PB1	mg/L	1	0.2	0.1	0.9	0.5	5.0	NA
	PB2	mg/L	0.26						
	PB3	mg/L	0.37						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards are not applicable to items meeting the definition of debris (solid material exceeding a 60mm particle size) according to 40 CFR 268.3.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
PRIMER, PERCUSSION, M82

I. Part

Case, Cartridge, Fired, Brass

II. Applicable Munitions by DODAC

1390-N523 PRIMER, PERC, M82

III. Characterization Data

This item was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentration of lead in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, elevated concentrations for barium (3.8 mg/L) were noted.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual metal constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended M82 cartridge case is classified as a **hazardous waste (EPA HW No. D008)** per 40 CFR 261 and contain levels of lead above the Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. The items should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for M82 Percussion Primer Case

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
Barium	V1	mg/L	3.7	1.0	3.7	3.9	3.8	100.0	21
	V2	mg/L	3.8						
	V3	mg/L	3.9						
Lead	V1	mg/L	30	0.20	30.1	34.6	**32.3**	**5.0**	**0.75**
	V2	mg/L	34						
	V3	mg/L	33						
SVOC Analysis									
No SVOCs detected.									
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
M11 NONELECTRIC BLASTING CAP W/30 FT SHOCK TUBE

I. Part

Expended, M11 Blasting Cap, M11 Shock Tube

II. Applicable Munitions by DODAC

1375-ML47 M11 NONELECTRIC BLASTING CAP W/30 FT SHOCK TUBE
1375-MN36 M11 NONELECTRIC BLASTING CAP W/30 FT SHOCK TUBE

III. Characterization Data

The residue was sampled for TCLP metals, semivolatile and explosive compounds (see table below). Results indicate that the concentrations of metals, semivolatiles and explosives in the samples do not exceed the toxicity threshold limits established in 40 CFR 261-24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The recycle value of the expended M11 non-electric blasting cap and shock tube may be limited due to the presence of non-metallic materials and the metallic composition of the item. However, recycling and reclamation should be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M11 non-electric blasting cap and shock tube are classified as a **non-hazardous waste** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for M11 Non-Electric Blasting Cap w/30 ft Shock Tube

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Lead	GBHB1	mg/l	2.1	0.2	0.0	3.2	1.55	5.0	NA
	GBHB2	mg/l	1						
SVOC Analysis									
Pyrene	GBHB1	µg/kg	280	330	177	549	363	NA	NA
	GBHB2	µg/kg	560						
	GBHB3	µg/kg	250						
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
M12 NON-ELECTRIC BLASTING CAP W/SHOCK TUBE

I. Part

Expended, M12 Blasting Cap, M12 Shock Tube

II. Applicable Munitions by DODAC

1375-MN02 M12 NONELECTRIC BLASTING CAP W/SHOCK TUBE
1375-MN35 M12 NONELECTRIC BLASTING CAP W/SHOCK TUBE

III. Characterization Data

The residue was sampled for TCLP metals, semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The recycle value of the expended M12 non-electric blasting cap and shock tube may be limited due to the presence of non-metallic materials and the metallic composition of the item. However, recycling and reclamation should be evaluated based on local factors and conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M12 non-electric blasting cap and shock tube are classified as a **non-hazardous waste** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for M12 Non-Electric Blasting Cap w/Shock Tube

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
No metals detected.									
SVOC Analysis									
Naphthalene	IJB1	µg/kg	360	330	320	419	370	NA	NA
	IJB2	µg/kg	330						
	IJB3	µg/kg	420						
Pyrene	IJB1	µg/kg	<RL[c]	330	313	333	223	NA	NA
	IJB2	µg/kg	<RL[c]						
	IJB3	µg/kg	340						
Explosives Analysis									
No explosives detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.

[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Methods 8330 and 8332, explosive compounds for methods

WASTE PROFILE NOTICE
FOR
FUSEE SIGNAL RR RED

I. Part

Residue, Fusee Signal RR Red

II. Applicable Munitions by DODAC

1370-L508 FUSEE, WARNING RR SIGNAL, RED M72

III. Waste Characterization

The fusee residue was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, the residue from the expended RR Red Fusee Signal is classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base-specific ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Fusee Signal RR Cartridge Residue

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
No metals detected									
SVOC Analysis									
No SVOCs detected									
Explosives Analysis									
No elevated readings noted.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods

EPA SW-846 Method 1311, RCRA TCLP listed metals

EPA SW-846 Method 8270, list of SVOCs for method

CAD 55.1, Explosive compounds for method

WASTE PROFILE NOTICE
FOR
GRENADE FUZE M201A1

I. Part

Expended Grenade Fuze M201A1, DODAC 1330-6874

II. Applicable Munitions by DODAC

Various smoke hand grenades (fuze only)

1330-G900	1330-G950
1330-G930	1330-G955
1330-G940	1330-G963
1330-G945	1330-G982

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261-24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended management and disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan (ISWMP). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended M201A1 grenade fuzes are classified as **non-hazardous solid waste** per 40 CFR 261 and this item should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Grenade Fuze M201A1

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	J1	mg/L	19	1.0	4.6	18.8	11.7	100.0	NA
	J2	mg/L	6.6						
	J3	mg/L	9.4						
Chromium	J1	mg/L	3.9	0.2	1.1	3.9	2.5	5.0	NA
	J2	mg/L	1.4						
	J3	mg/L	2.2						
SVOC Analysis									
No SVOCs detected									
Explosives Analysis									
No explosive compounds detected[c]									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]The 8330 analysis for this item was rejected during data quality review. The 8332 analysis resulted in no compounds detected, however the presence of 8330 compounds cannot be evaluated.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)
EPA SW-846 Method 8332, explosive compounds for method (8330 analysis was rejected)

WASTE PROFILE NOTICE
FOR
FIRING DEVICE DEMOLITION M5

I. Part

Steel Assembly, Firing Device Demolition M5

II. Applicable Munitions by DODAC

1375-M627 FIRING DEVICE, DEMOLITION PRESSURE RELEASE, M5

III. Characterization Data

The expended item was sampled for TCLP metals (including mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentration of cadmium (7.6 mg/L) in the TCLP extract exceeded the toxicity threshold limit for cadmium of 1.0 mg/L.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of hazardous constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, the expended Steel Assembly, Firing Device Demolition M5 is classified as a **hazardous waste (EPA HW No. D006)** and should be managed in accordance with Subtitle C of the Resource Conservation and Recovery Act and all applicable state and local requirements.

Residue Analytical Results for Steel Assembly, Firing Device Demolition M5

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Cadmium	M627-1	mg/L	4.4	0.1		4.4	7.6	1.0	0.11
	M627-2	mg/L	4.6						
	M627-3	mg/L	14						
SVOC Analysis									
No elevated readings noted.									
Explosives Analysis									
No elevated readings noted.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods

EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)

EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

CAD 55.1, Explosive compounds for method

WASTE PROFILE NOTICE
FOR
GRENADE, HAND, SMOKE, HC AN-M8

I. Part

Expended Grenade, Hand, Smoke, HC AN-M8

II. Applicable Munitions by DODAC

1330-G930 Grenade, Hand, Smoke, HC AN-M8

III. Characterization Data

The residue of each sample was analyzed for TCLP metals (including mercury) and semivolatile compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261-24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with Federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended HC AN-M8 Smoke Hand Grenades are classified as a **non-hazardous waste** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Grenade, Hand, Smoke, HC AN-M8

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	L1	mg/l	7.1	1.0	2.32	7.15	4.73	100	NA
	L2	mg/l	2.7						
	L3	mg/l	4.4						
Lead	L1	mg/l	1.1	.20	0.42	1.10	0.76	5	NA
	L2	mg/l	0.68						
	L3	mg/l	0.50						
SVOC Analysis									
No SVOCs detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
GRENADE, HAND, RIOT CS M7A3

I. Part

Expended Grenade, Hand, Riot CS M7A3

II. Applicable Munitions by DODAC

1330-G963 Grenade, Hand, Riot, CS M7A3

III. Characterization Data

The residue of each sample was analyzed for TCLP metals (including mercury) and semivolatile compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261-24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with Federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended CS M7A3 Riot Hand Grenades are classified as a **non-hazardous waste** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Grenade, Hand, Riot CS M7A3

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	Z1	mg/l	<RL[c]	1.0	0.51	1.75	1.13	100	NA
	Z2	mg/l	1.6						
	Z3	mg/l	1.3						
SVOC Analysis									
No SVOCs detected.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit
J Data qualifier – the reported value is an estimated value due to quality control review of analytical data

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
GRENADE, HAND, SMOKE, YELLOW M18

I. Part

Expended Grenade, Hand, Smoke, Yellow M18 Canister without fuze

II. Applicable Munitions by DODAC

1330-G945 GREN Hand Smk YLW M18

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury) and semivolatiles (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M18 yellow smoke canisters are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Yellow M18 Smoke Hand Grenade Canister without Fuze

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
No metals detected									
SVOC Analysis									
No SVOCs detected									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method

WASTE PROFILE NOTICE
FOR
GRENADE, HAND, SMOKE, GREEN M18

I. Part

Expended Grenade, Hand, Smoke, Green M18 Canister without fuze

II. Applicable Munitions by DODAC

1330-G940 GREN Hand Smk GRN M18

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury) and semivolatiles (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M18 green smoke canisters are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Green M18 Smoke Hand Grenade Canister without Fuze

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
Barium	T1	mg/L	2.1	1.0	0.5	2.7	1.6	100.0	NA
	T2	mg/L	2.3						
	T3	mg/L	<RL[c]						
SVOC Analysis									
O-Toluidine	T1	µg/kg	5900J	3300	0	6374	3038	NA	NA
	T2	µg/kg	3400J						
	T3	µg/kg	<RL[c]						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit
J Data qualifier – the reported value is an estimated value due to quality control review of analytical data

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method

WASTE PROFILE NOTICE
FOR
GRENADE, HAND, SMOKE, VIOLET M18

I. Part

Expended Grenade, Hand, Smoke, Violet M18 Canister without Fuze

II. Applicable Munitions by DODAC

1330-G955 Grenade, Hand, Smoke, Violet M18

III. Characterization Data

The residue was sampled for TCLP metals and semivolatile compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261-24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M18 Violet Smoke Hand Grenade are classified as a **non-hazardous waste** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Violet M18 Smoke Hand Grenade Canister without Fuze

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Lead	AB1	mg/L	0.49	0.2	0.08	0.51	0.30	5.0	NA
	AB2	mg/L	0.3						
	AB3	mg/L	<RL[c]						
SVOC Analysis									
No elevated readings noted.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
GRENADE, HAND, SMOKE, RED M18

I. Part

Expended Grenade, Hand, Smoke, Red M18 Canister without Fuze

II. Applicable Munitions by DODAC

1330-G950 GREN Hand Smk Red M18

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury) and semivolatiles (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M18 red smoke canisters are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Red M18 Smoke Hand Grenade Canister without Fuze

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (including mercury)									
No metals detected									
SVOC Analysis									
No SVOCs detected									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method

WASTE PROFILE NOTICE
FOR
GRENADE, HAND, SMOKE, RED M48 W/M227 FUZE

I. Part

Expended Grenade, Hand, Smoke, Red M48 w/M227 Fuze

II. Applicable Munitions by DODAC

1330-G932 Grenade, Hand, Smoke, Red M48 w/M227 Fuze

III. Characterization Data

The residue was sampled for TCLP metals and semivolatile compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261-24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

This scrap item does not meet the federal requirements for scrap metal. In accordance with federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). This item should be managed in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M48 Red Smoke Hand Grenades are classified as a **non-hazardous waste** and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for Red M48 Smoke Hand Grenade w/M227 Fuze

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Lead	KM1	mg/L	1.5	0.2	0.87	1.83	1.35	5.0	NA
	KM2	mg/L	0.85						
	KM3	mg/L	1.7						
SVOC Analysis									
Acetophenone	KM1	µg/kg	4900	3300	1582	7452	4517	NA	NA
	KM2	µg/kg	<RL[c]						
	KM3	µg/kg	7000						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
SMOKE POT FLOATING TYPE HC M4A2

I. Part

Expended Smoke Pot Floating Type HC M4A2

II. Applicable Munitions by DODAC

1365-K867 Smoke Pot Floating Type HC M4A2

III. Characterization Data

The residue was sampled for TCLP metals (including mercury) and semivolatile compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with Federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M4A2 Floating Type Smoke Pots are classified as a **non-hazardous waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Expended Smoke Pot Floating Type HC M4A2

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	CB1	mg/l	20	1.0	16.52	26.81	21.67	100	NA
	CB2	mg/l	27						
	CB3	mg/l	18						
Lead	CB1	mg/l	<RL[c]	0.2	0.04	0.30	0.17	5.0	NA
	CB2	mg/l	<RL[c]						
	CB3	mg/l	.31						
SVOC Analysis									
No SVOCs detected[d]									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.
[d]Due to the nature of the sample matrix, a 5 gram extraction (instead of 20 gram) was performed on samples to obtain surrogate recoveries within established limits. Reporting limits for analytes of concern remained below regulatory levels.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene and hexachloroethane)

WASTE PROFILE NOTICE
FOR
SMOKE POT FLOATING TYPE M8

I. Part

Expended Smoke Pot, Practice, Floating XM8/M8

II. Applicable Munitions by DODAC

1365-01-380-1678 K511

III. Characterization Data

Residues from the expended M8 Smoke Pot were sampled for TCLP metals, explosives, and semi-volatiles. Results indicate that the concentrations of regulated constituents in the waste were below the toxicity threshold limits established in 40 CFR 261.24.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with Federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included). Recycling and reclamation may be evaluated based on local factors and should be conducted in accordance with Army Regulation 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, fully expended M8 Floating Type Smoke Pots are classified as a **non-hazardous waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Expended Smoke Pot, Practice, Floating XM8/M8

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Chromium	M8-1	mg/L	1.8	0.50		0.29	2.1	5.0	NA
	M8-2	mg/L	2.2						
	M8-3	mg/L	2.3						
SVOC Analysis									
No RCRA-C regulated constituents detected									
Explosives Analysis									
No RCRA-C regulated constituents detected									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene and hexachloroethane)
CAD SOP 55.3 (Modified EPA Method 8330) for explosives

WASTE PROFILE NOTICE
FOR
PROJECTILE, 155MM SMOKE ILLUMINATION

I. Part

Expended Canister, 155mm Smoke HC M1

II. Applicable Munitions by DODAC

1320-D445 Canister, 155mm Smoke HC M1

III. Characterization Data

This item was sampled and analyzed for TCLP metals (excluding mercury) and semivolatiles including hexachloroethane (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The presence of non-metallic materials and the quality of the canister metal composition may exclude this item from the recycling option. In accordance with federal regulatory guidance, recyclable scrap metal must contain ≥50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included).

Disposal:

Fully expended 155mm smoke canisters listed above are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results for 155mm Smoke HC M1 Canister

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis (excluding mercury)									
No metals detected									
SVOC Analysis									
Naphthalene	DB1	µg/kg	740	330	0	718	357	NA	NA
	DB2	µg/kg	<RL[c]						
	DB3	µg/kg	<RL[c]						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (excluding mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including hexachloroethane)

WASTE PROFILE NOTICE
FOR
KIT FLARE PERSONAL DISTRESS

I. Part XM20 Projector and Cartridges

II. Applicable Munitions by DODAC

1370-L116 SIGNAL KIT, PERSONAL DISTRESS, RED XM185

III. Characterization Data

The expended item was sampled for TCLP metals (including mercury), semivolatiles, and explosives compounds (see table below). Results indicate that the concentration of lead (9 mg/L) in the TCLP extract exceeded the toxicity threshold limit for lead of 5.0 mg/L. In addition, elevated concentrations for barium (16 mg/L), and chromium (0.26 mg/L).

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

The XM20 Projector and Cartridges meet the definition of recyclable scrap metal listed in 40 CFR 261; however, the legitimate recycle value of this item may be limited due to the presence of non-metallic materials. Recycling and reclamation should be evaluated based on discussions with scrap metal contractors and should be conducted in accordance with AR 420-49 and the base Integrated Solid Waste Management Plan (ISWMP). Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, this item is classified as a **hazardous waste** per 40 CFR 261 and should be managed in accordance with Subtitle C of the Resource Conservation and Recovery Act and all applicable state and local requirements.

Residue Analytical Results for XM20 Projector and Cartridges

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	L116-1	mg/L	15	5.0		2.49	16	100.0	5.0
	L116-2	mg/L	18						
	L116-3	mg/L	15						
Chromium	L116-1	mg/L	0.23	0.1		0.45	0.26	5.0	0.6
	L116-2	mg/L	0.31						
	L116-3	mg/L	0.24						
Lead	L116-1	mg/L	9.4	0.5		2.11	9	5.0	0.75
	L116-2	mg/L	7.6						
	L116-3	mg/L	10						
SVOC Analysis									
No elevated readings noted.									
Explosives Analysis									
No elevated readings noted.									

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods

EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)

EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

CAD 55.1, Explosive compounds for method

WASTE PROFILE NOTICE
FOR
WHITE STAR PARACHUTE CARTRIDGE, L312/L314/L311

I. Part

Case, Cartridge, Fired

II. Applicable Munitions by DODAC

1370-L312, 1370-L311, 1370-L314

III. Characterization Data

This item was sampled and analyzed for TCLP metals (including mercury), semivolatiles, and explosive compounds (see table below). Results indicate that the concentration of lead in the TCLP extract was well below the toxicity threshold limit for lead of 5.0 mg/L.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Recommended disposition for this item is recycling or reclamation in accordance with AR 420-49 and the base-specific solid waste management and disposal procedures incorporated into the Integrated Solid Waste Management Plan (ISWMP). Due to the presence of residual hazardous constituents, it is also recommended that this item be managed and stored in a manner to prevent a loss of materials to the environment (e.g., covered storage). The base ISWMP should be developed in consideration of other applicable federal, state, and local requirements.

Disposal:

When disposed of, expended signal illumination grenade cartridges listed above are classified as a non- hazardous wastes per 40 CFR 261. The items should be managed in accordance with AR 420-49 and the base ISWMP. Base ISWMPs should be developed in consideration of other applicable federal, state, and local requirements.

Residue Analytical Results White Star Parachute, L312

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Lead	L312-A-1	mg/L	0.72	0.5		0.94	0.53	5.0	NA
	L312-A-2	mg/L	<RL[c]						
	L312-A-3	mg/L	0.63						
SVOC Analysis									
Bis(2-Ethylhexyl) phthalate	L312-C-1	mg/kg	250	82		16	270	NA	NA
	L312-C-2	mg/kg	210						
	L312-C-3	mg/kg	350						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals (including mercury)
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-Dinitrotoluene)

WASTE PROFILE NOTICE
FOR
EXPENDED SIMULATOR FLASH ARTY M21

I. Part

Expended M21 Simulator Assembly

II. Applicable Munitions by DODAC

1370-L602

III. Waste Characterization

The expended item was sampled and analyzed for TCLP metals, semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. The explosive residue nitroglycerin is present at an average concentration of 0.33 μg/g. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

This item does not meet the federal requirements for scrap metal. In accordance with federal regulatory guidance, recyclable scrap metal must contain >50% recyclable metal [OSWER Directive 9441.1990(09a)] in non-dispersible form (61 Federal Register 2362, 25 January 1996; small fines not included).

Disposal:

When disposed of, the expended simulators are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan.

Residue Analytical Results for Expended Simulator Flash Arty M21

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Metals Analysis									
Barium	602-1	mg/L	52	5.0		5.96	63	100	NA
	602-2	mg/L	72						
	602-3	mg/L	64						
Explosives Analysis									
Nitroglycerine	602-1	µg/g	<RL[c]	0.034		NA	0.33	NA	NA
	602-2	µg/g	0.96	0.032					
	602-3	µg/g	<RL[c]	0.035					

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-DNT)
CAD 55.1, (to also include Nitroglycerin and PETN)

WASTE PROFILE NOTICE
FOR
Expended Rocket, AT4

I. Part

AT4 Rocket Launcher, 1315-01-273-9352

II. Applicable Munitions by DODAC

1315-C995

III. Waste Characterization

The residue was sampled and analyzed for TCLP metals, semivolatiles, and explosive compounds (see table below). Results indicate that the concentrations of metals and semivolatiles in the samples do not exceed the toxicity threshold limits established in 40 CFR 261.24. The explosive residue nitroglycerin is present at an average concentration of 0.59µg/g. These results are representative of fully functioned/expended items.

IV. Waste Disposition and Best Management Practices

Recycling (Use/Reuse/Reclamation):

Installations should investigate the feasibility of recycling the expended AT4. However, since the molded plastic is not readily separable from the metal, it is unlikely that either scrap or plastic recyclers will have interest in receiving the item.

Storage:

This item has been assigned a controlled inventory item code of 3 and is therefore subject to the additional security requirements stated in AR 190-11 and AR 385-65 until the item is demilitarized. These regulations describe the proper marking/labeling procedures for the expended item and also establish criteria for the type of building and lock used for accumulation.

Disposal:

When disposed of, the expended cases are classified as **non-hazardous solid waste** per 40 CFR 261 and should be managed in accordance with AR 420-49 and the base-specific Integrated Solid Waste Management Plan.

Residue Analytical Results for Expended AT4 Rocket Launcher

Constituents Detected	Sample	Unit of Measure	Analytical Data					Regulatory Levels	
			Result	Reporting Limit	LCL	UCL	Mean	RCRA Level[a]	UTS Conc.[b]
TCLP Analysis									
Chromium	A1	mg/L	<RL[c]	0.100	NA	0.099	0.10	5.0	NA
	A2	mg/L	0.21						
	A3	mg/L	<RL[c]						
SVOC Analysis									
Phenol	A1	µg/kg	5400	2000	NA	3200	5366	NA	NA
	A2	µg/kg	2400						
	A3	µg/kg	8300						
Bis (2-ethylhexyl) phthalate	A1	µg/kg	3800	2000	NA	1020	3167	NA	NA
	A2	µg/kg	2100						
	A3	µg/kg	3600						
Explosives Analysis									
Nitroglycerin	A1	µg/g	1.4	0.050	NA	0.773	0.59	NA	NA
	A2	µg/g	<RL[c]						
	A3	µg/g	0.35						

[a]RCRA Regulatory Level, 40 CFR 261.24, Table 1, Maximum Concentration of Contaminants for Toxicity Characteristics.
[b]UTS – Universal Treatment Standards, Non-wastewater Standard, 40 CFR 268.48. These standards must be met for "underlying hazardous constituents" if the residue is classified as a hazardous waste; otherwise, the standards are not applicable (NA).
[c]If the analytical value is below the laboratory reporting limit, an assumed value of ½ the reporting limit was used in determining the mean of the sample set.

LCL Lower Confidence Level (80 percentile)
UCL Upper Confidence Level (80 percentile)
RL Reporting Limit
NA Not Applicable

Analytical Methods EPA SW-846 Method 1311, RCRA TCLP listed metals
EPA SW-846 Method 8270, list of SVOCs for method (including 2,4-DNT)
EPA SW-846 Method 8330, Explosive compounds for method (modified to also include Nitroglycerin and PETN)