

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X

GC/MS-SIM Analysis of Selected BNA's by SW8270

BNA's by SW8270		Units				
2-Methylnaphthalene	ug/kg	3.1	1.5	2.9	1.2 J	1.6
Acenaphthene	ug/kg	1.3 J	1.2 J	0.52 J	0.83 U	2.0
Acenaphthylene	ug/kg	0.46 J	0.82 U	0.82 U	0.83 U	0.84 U
Anthracene	ug/kg	1.1 J	2.4	0.82 U	1.0 J	3.8
Benzo(a)anthracene	ug/kg	4.7	5.3	0.82 U	1.5 J	16
Benzo(a)pyrene	ug/kg	2.6	2.1	0.59 J	0.78 J	6.8
Benzo(b)fluoranthene	ug/kg	6.7	6.0	4.7	4.5	16
Benzo(g,h,i)perylene	ug/kg	4.5	3.5	4.1	2.6	8.3
Benzo(k)fluoranthene	ug/kg	1.8	1.3 J	0.82 U	0.70 J	3.1
Chrysene	ug/kg	4.1	5.6	12	7.6	14 J
Dibenz(a,h)anthracene	ug/kg	1.1 J	0.82 J	0.68 J	0.62 J	1.9
Fluoranthene	ug/kg	7.4	7.5	1.8	2.3	24 J
Fluorene	ug/kg	2.9	1.2 J	0.67 J	0.56 J	1.3 J
Indeno(1,2,3-c,d)pyrene	ug/kg	3.2	2.2	1.1 J	1.3 J	5.2

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X

GC/MS-SIM Analysis of Selected BNA's by SW8270

	Units				
2-Methylnaphthalene	ug/kg	1.9	2.0	1.7	2.8
Acenaphthene	ug/kg	0.78 J	0.71 J	0.84 U	0.54 J
Acenaphthylene	ug/kg	0.85 U	0.82 U	0.84 U	0.83 U
Anthracene	ug/kg	2.1	7.5	0.84 U	0.83 U
Benzo(a)anthracene	ug/kg	7.3	11	0.84 U	2.3
Benzo(a)pyrene	ug/kg	3.2	1.4 J	0.45 J	1.2 J
Benzo(b)fluoranthene	ug/kg	8.9	5.1	4.5	5.7
Benzo(g,h,i)perylene	ug/kg	6.0	3.8	3.0	5.4
Benzo(k)fluoranthene	ug/kg	1.9	0.98 J	0.84 U	0.57 J
Chrysene	ug/kg	8.3	8.3	9.4	9.6
Dibenz(a,h)anthracene	ug/kg	1.2 J	0.75 J	0.57 J	0.91 J
Fluoranthene	ug/kg	10	4.1	1.5 J	3.1
Fluorene	ug/kg	0.93 J	0.74 J	0.62 J	0.54 J
Indeno(1,2,3-c,d)pyrene	ug/kg	3.6	1.8	1.1 J	1.9

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X	1X	1X

GC/MS-SIM Analysis of Selected BNA's by SW8270

	Units			
2-Methylnaphthalene	ug/kg	2.2	2.1	1.8
Acenaphthene	ug/kg	0.54 J	0.57 J	0.82 U
Acenaphthylene	ug/kg	0.83 U	0.83 U	0.82 U
Anthracene	ug/kg	0.83 U	0.83 U	0.82 U
Benzo(a)anthracene	ug/kg	0.83 U	2.8	0.82 U
Benzo(a)pyrene	ug/kg	0.75 J	1.4 J	0.82 U
Benzo(b)fluoranthene	ug/kg	3.9	5.6	3.2
Benzo(g,h,i)perylene	ug/kg	4.3	3.6	1.5
Benzo(k)fluoranthene	ug/kg	0.83 U	0.95 J	0.82 U
Chrysene	ug/kg	8.6	8.3	6.5
Dibenz(a,h)anthracene	ug/kg	0.60 J	0.66 J	0.65 J
Fluoranthene	ug/kg	1.5 J	4.5	1.1 J
Fluorene	ug/kg	0.49 J	0.66 J	0.50 J
Indeno(1,2,3-c,d)pyrene	ug/kg	1.3 J	1.7	0.58 J

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Naphthalene	ug/kg 2.6	1.9	2.6	1.5 J	1.8
Phenanthrene	ug/kg 9.2	7.3	9.1	4.6	16
Pyrene	ug/kg 5.9	5.9	1.8	2.0	18

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Naphthalene	ug/kg 2.0	2.6	1.7	2.9	3.7
Phenanthrene	ug/kg 11	7.7	4.7	7.4	23
Pyrene	ug/kg 8.1	3.6	1.4 J	3.2	2.6

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:		83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:		083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:		337826	337828	337830
Lab Name:		CTLB	CTLB	CTLB
Sample Date:		8/12/2013	8/12/2013	8/12/2013
Field QC:				
Analysis Information:		1X	1X	1X
Naphthalene	ug/kg	2.2	2.4	2.8
Phenanthrene	ug/kg	6.4	9.1	3.9
Pyrene	ug/kg	1.8	3.6	0.72 J

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Residue, Total (Gravimetric, Dried at 103-105 Degree Celsius) Units					
Solids	PERCENT T 98	98	97	96	96

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Residue, Total (Gravimetric, Dried at 103-105 Degree Celsius) Units					
Solids	PERCENT T 94	97	95	96	95

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X	1X	1X

Residue, Total (Gravimetric, Dried at 103-105 Degree Celsius) Units

Solids	PERCENT T	96	97	97
--------	--------------	----	----	----

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Nitrogen, Nitrate-Nitrite (Colorimetric Units Automated, Cadmium Reduction)					
Nitrocellulose	mg/kg	100 U	100 U	100 U	100 UJ

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Nitrogen, Nitrate-Nitrite (Colorimetric Units Automated, Cadmium Reduction)					
Nitrocellulose	mg/kg	100 U	100 U	100 U	100 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X	1X	1X
Nitrogen, Nitrate-Nitrite (Colorimetric Units Automated, Cadmium Reduction)			
Nitrocellulose	mg/kg	100 U	100 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X,5X	1X,5X	1X,5X	1X,5X	1X,5X

Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry

	Units				
Aluminum	mg/kg	11000	12000	2000	18000
Antimony	mg/kg	1.0	1.1	0.86 J	0.96
Arsenic	mg/kg	14	17	1.9	18
Barium	mg/kg	74	83	12	110
Beryllium	mg/kg	0.65	0.67	0.10	0.92
Cadmium	mg/kg	0.11 U	0.10 U	0.10 U	0.11 U
Calcium	mg/kg	23000	32000	6000	47000
Chromium	mg/kg	17	19	3.1	26
Cobalt	mg/kg	12	14	1.8	16
Copper	mg/kg	20	21	3.5	25
Iron	mg/kg	25000	28000	4300	39000
Lead	mg/kg	21	12	1.7	17
Magnesium	mg/kg	6100	8100	1500	11000

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X,5X	1X,5X	1X,5X	1X,5X	1X,5X

Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry

	Units				
Aluminum	mg/kg	13000	11000	13000	12000
Antimony	mg/kg	1.2 J	1.0 J	0.92 J	0.92 J
Arsenic	mg/kg	14	13	12	12
Barium	mg/kg	78	70	80	76
Beryllium	mg/kg	0.68	0.61	0.64	0.59
Cadmium	mg/kg	0.10 U	0.046 J	0.10 U	0.11 U
Calcium	mg/kg	29000	24000	36000	31000
Chromium	mg/kg	18	16	19	18
Cobalt	mg/kg	12	11	13	12
Copper	mg/kg	21	20	21	19
Iron	mg/kg	27000	24000	26000	25000
Lead	mg/kg	12	11	12	11
Magnesium	mg/kg	7500	6700	8800	8000

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X,5X	1X,5X	1X,5X

Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry

	Units			
Aluminum	mg/kg	11000	11000	10000
Antimony	mg/kg	1.0 J	1.1 J	1.3 J
Arsenic	mg/kg	13	11	11
Barium	mg/kg	80	77	59
Beryllium	mg/kg	0.58	0.57	0.53
Cadmium	mg/kg	0.10 U	0.10 U	0.10 U
Calcium	mg/kg	34000	32000	27000
Chromium	mg/kg	17	16	15
Cobalt	mg/kg	13	8.8	9.1
Copper	mg/kg	19	17	17
Iron	mg/kg	25000	24000	22000
Lead	mg/kg	9.1	9.2	8.6
Magnesium	mg/kg	7700	7000	6900

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X,5X	1X,5X	1X,5X	1X,5X	1X,5X
Manganese	mg/kg 430	520	65	590	480
Nickel	mg/kg 28	31	4.9	38	25 J
Potassium	mg/kg 1200	1400	1700	1600	1700
Selenium	mg/kg 0.21 U	0.20 U	0.21 U	0.21 U	0.20 UJ
Silver	mg/kg 0.053 U	0.050 U	0.051 U	0.053 U	0.051 U
Sodium	mg/kg 49	68	88	67	67
Thallium	mg/kg 1.3 U	1.2 U	0.25 U	1.3 U	1.2 U
Vanadium	mg/kg 18	19	3.2 U	26	16 J
Zinc	mg/kg 60	63	10	85	46 J

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:		83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:		083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:		337818	337820	337822	337824	337832
Lab Name:		CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:		8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:			Field Duplicate			
Analysis Information:		1X,5X	1X,5X	1X,5X	1X,5X	1X,5X
Manganese	mg/kg	430	380	440	390	280
Nickel	mg/kg	29	27	30	28	17
Potassium	mg/kg	1300	1300	1600	1600	1600
Selenium	mg/kg	0.21 U	0.20 U	0.20 U	0.21 U	0.21 U
Silver	mg/kg	0.052 U	0.050 U	0.051 U	0.053 U	0.052 U
Sodium	mg/kg	55	54	73	76	82
Thallium	mg/kg	1.2 U	0.24 U	0.25 U	0.25 U	0.25 U
Vanadium	mg/kg	19	17	19	18	15
Zinc	mg/kg	70	64	62	59	34

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X,5X	1X,5X	1X,5X
Manganese	mg/kg 480	310	310
Nickel	mg/kg 29	23	23
Potassium	mg/kg 1600	1500	1500
Selenium	mg/kg 0.20 U	0.20 U	0.20 U
Silver	mg/kg 0.050 U	0.051 U	0.050 U
Sodium	mg/kg 91	85	96
Thallium	mg/kg 0.24 U	0.24 U	0.24 U
Vanadium	mg/kg 17	17	16
Zinc	mg/kg 55	51	49

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2	
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO	
Lab Sample ID:	337811	337812	337834	337813	337815	
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB	
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013	
Field QC:						
Analysis Information:	1X	1X	1X	1X	1X	
Mercury in Soil (Manual Cold-Vapor Technique)	Units					
Mercury	mg/kg	0.034 J	0.010 J	0.0076 J	0.0090 J	0.0072 J

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Mercury in Soil (Manual Cold-Vapor Technique) Units					
Mercury	mg/kg	0.013 J	0.012 J	0.0097 J	0.0075 J

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X	1X	1X

Mercury in Soil (Manual Cold-Vapor Technique) Units

Mercury	mg/kg	0.0073 J	0.0065 J	0.0063 J
---------	-------	----------	----------	----------

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB7
Field Sample ID:	083SB-0012M-0001-SO
Lab Sample ID:	337828
Lab Name:	CTLB
Sample Date:	8/12/2013
Field QC:	
Analysis Information:	1X

**Organochlorine Pesticides by
Capillary GC**

	Units	
Aldrin	ug/kg	1.2 UJ
alpha-BHC (alpha-Hexachlorocyclohexane)	ug/kg	1.2 UJ
alpha-Chlordane	ug/kg	1.2 UJ
alpha-Endosulfan	ug/kg	1.2 UJ
beta-BHC (beta-Hexachlorocyclohexane)	ug/kg	1.2 UJ
beta-Endosulfan	ug/kg	1.2 UJ
delta-BHC (delta-Hexachlorocyclohexane)	ug/kg	1.1 J
Dieldrin	ug/kg	1.2 UJ
Endosulfan Sulfate	ug/kg	1.2 UJ
Endrin	ug/kg	1.2 UJ
Endrin Aldehyde	ug/kg	1.2 UJ
Endrin Ketone	ug/kg	1.2 UJ

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB7	
Field Sample ID:	083SB-0012M-0001-SO	
Lab Sample ID:	337828	
Lab Name:	CTLB	
Sample Date:	8/12/2013	
Field QC:		
Analysis Information:	1X	
gamma-BHC (Lindane)	ug/kg	1.2 UJ
gamma-Chlordane	ug/kg	1.2 UJ
Heptachlor	ug/kg	1.2 UJ
Heptachlor Epoxide	ug/kg	1.2 UJ
Methoxychlor	ug/kg	1.2 UJ
p,p'-DDD	ug/kg	1.2 UJ
p,p'-DDE	ug/kg	1.2 UJ
p,p'-DDT	ug/kg	1.2 UJ
Toxaphene	ug/kg	12 UJ

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB7
Field Sample ID:	083SB-0012M-0001-SO
Lab Sample ID:	337828
Lab Name:	CTLB
Sample Date:	8/12/2013
Field QC:	
Analysis Information:	1X

Polychlorinated Biphenyls (PCB)	Units	
PCB-1016 (Arochlor 1016)	ug/kg	21 U
PCB-1221 (Arochlor 1221)	ug/kg	21 U
PCB-1232 (Arochlor 1232)	ug/kg	21 U
PCB-1242 (Arochlor 1242)	ug/kg	21 U
PCB-1248 (Arochlor 1248)	ug/kg	21 U
PCB-1254 (Arochlor 1254)	ug/kg	21 U
PCB-1260 (Arochlor 1260)	ug/kg	21 U
PCB-1262 (Arochlor 1262)	ug/kg	21 U
PCB-1268 (Arochlor 1268)	ug/kg	21 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	338807	338808	338810	337814	337816
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/14/2013	8/14/2013	8/14/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X

Volatile Organic Compounds by GC/MS

	Units				
1,1,1-Trichloroethane	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,1,2-Trichloroethane	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,1-Dichloroethane	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,1-Dichloroethene	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,2-Dibromoethane (EDB)	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,2-Dichloroethane	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,2-Dichloroethene	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
1,2-Dichloropropane	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U
2-Butanone (MEK)	ug/kg	8.3 U	9.5 U	9.5 U	10 U
2-Hexanone	ug/kg	17 U	19 U	19 U	20 U
4-Methyl-2-pentanone (MIBK)	ug/kg	8.3 U	9.5 U	9.5 U	10 U
Acetone	ug/kg	8.3 U	9.5 U	9.5 U	10 U
Benzene	ug/kg	0.83 U	0.95 U	0.95 U	1.0 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337819	337821	337823	337825	337833
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X

Volatile Organic Compounds by GC/MS

	Units				
1,1,1-Trichloroethane	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,1,2,2-Tetrachloroethane	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,1,2-Trichloroethane	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,1-Dichloroethane	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,1-Dichloroethene	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,2-Dibromoethane (EDB)	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,2-Dichloroethane	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,2-Dichloroethene	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
1,2-Dichloropropane	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U
2-Butanone (MEK)	ug/kg	9.0 U	9.1 U	9.4 U	9.7 U
2-Hexanone	ug/kg	18 U	18 U	19 U	19 U
4-Methyl-2-pentanone (MIBK)	ug/kg	9.0 U	9.1 U	9.4 U	9.7 U
Acetone	ug/kg	9.0 U	9.1 U	9.4 U	9.7 U
Benzene	ug/kg	0.90 U	0.91 U	0.94 U	0.97 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0020-0001-TB	083SB-0012M-0001-SO	083SB-0016-0001-TB	083SB-0013M-0001-SO
Lab Sample ID:	337827	338809	337829	337835	337831
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/14/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X

Volatile Organic Compounds by GC/MS

	Units				
1,1,1-Trichloroethane	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (EDB)	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U
2-Butanone (MEK)	ug/kg	9.3 U	10 U	10 U	10 U
2-Hexanone	ug/kg	19 U	20 U	20 U	20 U
4-Methyl-2-pentanone (MIBK)	ug/kg	9.3 U	10 U	10 U	10 U
Acetone	ug/kg	9.3 U	15 J	10 U	10 U
Benzene	ug/kg	0.93 U	1.0 U	1.0 U	1.0 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID: 83-1039-DU1-SB8

Field Sample ID: 083SB-0018-0001-TB

Lab Sample ID: 337836

Lab Name: CTLB

Sample Date: 8/12/2013

Field QC:

Analysis Information: 1X

Volatile Organic Compounds by GC/MS

	Units	
1,1,1-Trichloroethane	ug/kg	1.0 U
1,1,2,2-Tetrachloroethane	ug/kg	1.0 U
1,1,2-Trichloroethane	ug/kg	1.0 U
1,1-Dichloroethane	ug/kg	1.0 U
1,1-Dichloroethene	ug/kg	1.0 U
1,2-Dibromoethane (EDB)	ug/kg	1.0 U
1,2-Dichloroethane	ug/kg	1.0 U
1,2-Dichloroethene	ug/kg	1.0 U
1,2-Dichloropropane	ug/kg	1.0 U
2-Butanone (MEK)	ug/kg	10 U
2-Hexanone	ug/kg	20 U
4-Methyl-2-pentanone (MIBK)	ug/kg	10 U
Acetone	ug/kg	10 U
Benzene	ug/kg	1.0 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	338807	338808	338810	337814	337816
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Bromochloromethane	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Bromodichloromethane	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Bromoform	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Bromomethane	ug/kg 0.83 UJ	0.95 UJ	0.95 UJ	1.0 UJ	1.0 UJ
Carbon Disulfide	ug/kg 1.7 U	1.9 U	1.9 U	2.0 U	2.0 U
Carbon Tetrachloride	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Chlorobenzene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Chloroethane	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Chloroform	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Chloromethane	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
cis-1,2-Dichloroethylene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Dibromochloromethane	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Ethylbenzene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
m,p-Xylene	ug/kg 1.7 U	1.9 U	1.9 U	2.0 U	2.0 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337819	337821	337823	337825	337833
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Bromochloromethane	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Bromodichloromethane	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Bromoform	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Bromomethane	ug/kg 0.90 UJ	0.91 UJ	0.94 UJ	0.97 UJ	1.0 UJ
Carbon Disulfide	ug/kg 1.8 U	1.8 U	1.9 U	1.9 U	2.1 U
Carbon Tetrachloride	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Chlorobenzene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Chloroethane	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Chloroform	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Chloromethane	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
cis-1,2-Dichloroethylene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
cis-1,3-Dichloropropene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Dibromochloromethane	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Ethylbenzene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
m,p-Xylene	ug/kg 1.8 U	1.8 U	1.9 U	1.9 U	2.1 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0020-0001-TB	083SB-0012M-0001-SO	083SB-0016-0001-TB	083SB-0013M-0001-SO
Lab Sample ID:	337827	338809	337829	337835	337831
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/14/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Bromochloromethane ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Bromodichloromethane ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Bromoform ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Bromomethane ug/kg	0.93 UJ	1.0 U	1.0 UJ	1.0 U	0.90 UJ
Carbon Disulfide ug/kg	1.9 U	2.0 U	2.0 U	2.0 U	1.8 U
Carbon Tetrachloride ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Chlorobenzene ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Chloroethane ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Chloroform ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Chloromethane ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
cis-1,2-Dichloroethylene ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
cis-1,3-Dichloropropene ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Dibromochloromethane ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Ethylbenzene ug/kg	0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
m,p-Xylene ug/kg	1.9 U	2.0 U	2.0 U	2.0 U	1.8 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB8	
Field Sample ID:	083SB-0018-0001-TB	
Lab Sample ID:	337836	
Lab Name:	CTLB	
Sample Date:	8/12/2013	
Field QC:		
Analysis Information:	1X	
Bromochloromethane	ug/kg	1.0 U
Bromodichloromethane	ug/kg	1.0 U
Bromoform	ug/kg	1.0 U
Bromomethane	ug/kg	1.0 U
Carbon Disulfide	ug/kg	2.0 U
Carbon Tetrachloride	ug/kg	1.0 U
Chlorobenzene	ug/kg	1.0 U
Chloroethane	ug/kg	1.0 U
Chloroform	ug/kg	1.0 U
Chloromethane	ug/kg	1.0 U
cis-1,2-Dichloroethylene	ug/kg	1.0 U
cis-1,3-Dichloropropene	ug/kg	1.0 U
Dibromochloromethane	ug/kg	1.0 U
Ethylbenzene	ug/kg	1.0 U
m,p-Xylene	ug/kg	2.0 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	338807	338808	338810	337814	337816
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Methylene Chloride	ug/kg 1.7 U	1.9 U	1.9 U	2.0 U	2.0 U
o-Xylene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Styrene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
tert-Butyl Methyl Ether (MTBE)	ug/kg 0.83 U	0.95 U	0.95 U		
Tetrachloroethene (PCE)	ug/kg 0.83 UJ	0.95 UJ	0.95 UJ	1.0 UJ	1.0 UJ
Toluene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Trichloroethene (TCE)	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Vinyl Chloride	ug/kg 0.83 U	0.95 U	0.95 U	1.0 U	1.0 U
Xylenes, Total	ug/kg 1.7 U	1.9 U	1.9 U	2.0 U	2.0 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337819	337821	337823	337825	337833
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Methylene Chloride	ug/kg 1.8 U	1.8 U	1.9 U	1.9 U	2.1 U
o-Xylene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Styrene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
tert-Butyl Methyl Ether (MTBE)	ug/kg				
Tetrachloroethene (PCE)	ug/kg 0.90 UJ	0.91 UJ	0.94 UJ	0.97 UJ	1.0 UJ
Toluene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
trans-1,2-Dichloroethene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
trans-1,3-Dichloropropene	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Trichloroethene (TCE)	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Vinyl Chloride	ug/kg 0.90 U	0.91 U	0.94 U	0.97 U	1.0 U
Xylenes, Total	ug/kg 1.8 U	1.8 U	1.9 U	1.9 U	2.1 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0020-0001-TB	083SB-0012M-0001-SO	083SB-0016-0001-TB	083SB-0013M-0001-SO
Lab Sample ID:	337827	338809	337829	337835	337831
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/14/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Methylene Chloride	ug/kg 1.9 U	2.0 U	2.0 U	2.0 U	1.8 U
o-Xylene	ug/kg 0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Styrene	ug/kg 0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
tert-Butyl Methyl Ether (MTBE)	ug/kg	1.0 U			
Tetrachloroethene (PCE)	ug/kg 0.93 UJ	1.0 U	1.0 UJ	1.0 U	0.90 UJ
Toluene	ug/kg 0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
trans-1,2-Dichloroethene	ug/kg 0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
trans-1,3-Dichloropropene	ug/kg 0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Trichloroethene (TCE)	ug/kg 0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Vinyl Chloride	ug/kg 0.93 U	1.0 U	1.0 U	1.0 U	0.90 U
Xylenes, Total	ug/kg 1.9 U	2.0 U	2.0 U	2.0 U	1.8 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB8
Field Sample ID:	083SB-0018-0001-TB
Lab Sample ID:	337836
Lab Name:	CTLB
Sample Date:	8/12/2013
Field QC:	
Analysis Information:	1X
Methylene Chloride	ug/kg 2.0 U
o-Xylene	ug/kg 1.0 U
Styrene	ug/kg 1.0 U
tert-Butyl Methyl Ether (MTBE)	ug/kg
Tetrachloroethene (PCE)	ug/kg 1.0 U
Toluene	ug/kg 1.0 U
trans-1,2-Dichloroethene	ug/kg 1.0 U
trans-1,3-Dichloropropene	ug/kg 1.0 U
Trichloroethene (TCE)	ug/kg 1.0 U
Vinyl Chloride	ug/kg 1.0 U
Xylenes, Total	ug/kg 2.0 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X

Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry

	Units					
1,2,4-Trichlorobenzene	ug/kg	61 U	62 U	62 U	62 U	63 U
1,2-Dichlorobenzene	ug/kg	61 U	62 U	62 U	62 U	63 U
1,3-Dichlorobenzene	ug/kg	61 U	62 U	62 U	62 U	63 U
1,4-Dichlorobenzene	ug/kg	61 U	62 U	62 U	62 U	63 U
2,2'-Oxybis(1-chloro)propane	ug/kg	61 U	62 U	62 U	62 U	63 U
2,4,5-Trichlorophenol	ug/kg	310 U	310 U	310 U	310 U	320 U
2,4,6-Trichlorophenol	ug/kg	310 U	310 U	310 U	310 U	320 U
2,4-Dichlorophenol	ug/kg	310 U	310 U	310 U	310 U	320 U
2,4-Dimethylphenol	ug/kg	310 U	310 U	310 U	310 U	320 U
2,4-Dinitrophenol	ug/kg	310 U	310 U	310 U	310 U	320 U
2,4-Dinitrotoluene	ug/kg	61 U	62 U	62 U	62 U	63 U
2,6-Dinitrotoluene	ug/kg	61 U	62 U	62 U	62 U	63 U
2-Chloronaphthalene	ug/kg	61 U	62 U	62 U	62 U	63 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X

Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry

	Units					
1,2,4-Trichlorobenzene	ug/kg	64 U	62 U	63 U	62 U	63 U
1,2-Dichlorobenzene	ug/kg	64 U	62 U	63 U	62 U	63 U
1,3-Dichlorobenzene	ug/kg	64 U	62 U	63 U	62 U	63 U
1,4-Dichlorobenzene	ug/kg	64 U	62 U	63 U	62 U	63 U
2,2'-Oxybis(1-chloro)propane	ug/kg	64 U	62 U	63 U	62 U	63 U
2,4,5-Trichlorophenol	ug/kg	320 U	310 U	320 U	310 U	320 U
2,4,6-Trichlorophenol	ug/kg	320 U	310 U	320 U	310 U	320 U
2,4-Dichlorophenol	ug/kg	320 U	310 U	320 U	310 U	320 U
2,4-Dimethylphenol	ug/kg	320 U	310 U	320 U	310 U	320 U
2,4-Dinitrophenol	ug/kg	320 U	310 U	320 U	310 U	320 U
2,4-Dinitrotoluene	ug/kg	64 U	62 U	63 U	62 U	63 U
2,6-Dinitrotoluene	ug/kg	64 U	62 U	63 U	62 U	63 U
2-Chloronaphthalene	ug/kg	64 U	62 U	63 U	62 U	63 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X	1X	1X

Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry

	Units			
1,2,4-Trichlorobenzene	ug/kg	62 U	62 U	62 U
1,2-Dichlorobenzene	ug/kg	62 U	62 U	62 U
1,3-Dichlorobenzene	ug/kg	62 U	62 U	62 U
1,4-Dichlorobenzene	ug/kg	62 U	62 U	62 U
2,2'-Oxybis(1-chloro)propane	ug/kg	62 U	62 U	62 U
2,4,5-Trichlorophenol	ug/kg	310 U	310 U	310 U
2,4,6-Trichlorophenol	ug/kg	310 U	310 U	310 U
2,4-Dichlorophenol	ug/kg	310 U	310 U	310 U
2,4-Dimethylphenol	ug/kg	310 U	310 U	310 U
2,4-Dinitrophenol	ug/kg	310 U	310 U	310 U
2,4-Dinitrotoluene	ug/kg	62 U	62 U	62 U
2,6-Dinitrotoluene	ug/kg	62 U	62 U	62 U
2-Chloronaphthalene	ug/kg	62 U	62 U	62 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
2-Chlorophenol	ug/kg 610 U	620 U	620 U	620 U	630 U
2-Methylphenol (o-Cresol)	ug/kg 610 U	620 U	620 U	620 U	630 U
2-Nitroaniline	ug/kg 61 U	62 U	62 U	62 U	63 U
2-Nitrophenol	ug/kg 310 U	310 U	310 U	310 U	320 U
3,3'-Dichlorobenzidine	ug/kg 150 U	150 U	150 U	160 U	160 U
3-Nitroaniline	ug/kg 61 U	62 U	62 U	62 U	63 U
4,6-Dinitro-2-methylphenol	ug/kg 310 U	310 U	310 U	310 U	320 U
4-Bromophenyl phenyl ether	ug/kg 61 U	62 U	62 U	62 U	63 U
4-Chloro-3-Methylphenol	ug/kg 610 U	620 U	620 U	620 U	630 U
4-Chloroaniline	ug/kg 61 U	62 U	62 U	62 U	63 U
4-Chlorophenyl Phenyl Ether	ug/kg 61 U	62 U	62 U	62 U	63 U
4-Nitroaniline	ug/kg 61 U	62 U	62 U	62 U	63 U
4-Nitrophenol	ug/kg 610 U	620 U	620 U	620 U	630 U
Benzoic acid	ug/kg 1500 U	1500 U	1500 U	1600 U	1600 U
Benzyl Alcohol	ug/kg 120 U	120 U	120 U	120 U	130 R

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
2-Chlorophenol	ug/kg 640 U	620 U	630 U	620 U	630 U
2-Methylphenol (o-Cresol)	ug/kg 640 U	620 U	630 U	620 U	630 U
2-Nitroaniline	ug/kg 64 U	62 U	63 U	62 U	63 U
2-Nitrophenol	ug/kg 320 U	310 U	320 U	310 U	320 U
3,3'-Dichlorobenzidine	ug/kg 160 U	150 U	160 U	160 U	160 U
3-Nitroaniline	ug/kg 64 U	62 U	63 U	62 U	63 U
4,6-Dinitro-2-methylphenol	ug/kg 320 U	310 U	320 U	310 U	320 U
4-Bromophenyl phenyl ether	ug/kg 64 U	62 U	63 U	62 U	63 U
4-Chloro-3-Methylphenol	ug/kg 640 U	620 U	630 U	620 U	630 U
4-Chloroaniline	ug/kg 64 U	62 U	63 U	62 U	63 U
4-Chlorophenyl Phenyl Ether	ug/kg 64 U	62 U	63 U	62 U	63 U
4-Nitroaniline	ug/kg 64 U	62 U	63 U	62 U	63 U
4-Nitrophenol	ug/kg 640 U	620 U	630 U	620 U	630 U
Benzoic acid	ug/kg 1600 U	1500 U	1600 U	1600 U	1600 U
Benzyl Alcohol	ug/kg 130 U	120 U	130 U	120 U	130 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:		83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:		083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:		337826	337828	337830
Lab Name:		CTLB	CTLB	CTLB
Sample Date:		8/12/2013	8/12/2013	8/12/2013
Field QC:				
Analysis Information:		1X	1X	1X
2-Chlorophenol	ug/kg	620 U	620 U	620 U
2-Methylphenol (o-Cresol)	ug/kg	620 U	620 U	620 U
2-Nitroaniline	ug/kg	62 U	62 U	62 U
2-Nitrophenol	ug/kg	310 U	310 U	310 U
3,3'-Dichlorobenzidine	ug/kg	160 U	150 U	150 U
3-Nitroaniline	ug/kg	62 U	62 U	62 U
4,6-Dinitro-2-methylphenol	ug/kg	310 U	310 U	310 U
4-Bromophenyl phenyl ether	ug/kg	62 U	62 U	62 U
4-Chloro-3-Methylphenol	ug/kg	620 U	620 U	620 U
4-Chloroaniline	ug/kg	62 U	62 U	62 U
4-Chlorophenyl Phenyl Ether	ug/kg	62 U	62 U	62 U
4-Nitroaniline	ug/kg	62 U	62 U	62 U
4-Nitrophenol	ug/kg	620 U	620 U	620 U
Benzoic acid	ug/kg	1600 U	1500 U	1500 U
Benzyl Alcohol	ug/kg	120 U	120 U	120 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Benzyl Butyl Phthalate ug/kg	120 U	120 U	120 U	120 U	130 U
bis(2-Chloroethoxy) Methane ug/kg	61 U	62 U	62 U	62 U	63 U
bis(2-Chloroethyl) Ether (2-Chloroethyl Ether) ug/kg	61 U	62 U	62 U	62 U	63 U
Carbazole ug/kg	61 U	62 U	62 U	62 U	63 U
Cresols, m & p ug/kg	1100 U	1100 U	1100 U	1100 U	1100 U
Dibenzofuran ug/kg	61 U	62 U	62 U	62 U	63 U
Diethyl Phthalate ug/kg	120 U	120 U	120 U	120 U	130 U
Dimethyl Phthalate ug/kg	120 U	120 U	120 U	120 U	130 U
Di-n-Butyl Phthalate ug/kg	140 J	90 J	120 U	120 U	130 U
Di-n-Octylphthalate ug/kg	61 U	91 J	62 U	62 U	63 U
Hexachlorobenzene ug/kg	61 U	62 U	62 U	62 U	63 U
Hexachlorobutadiene ug/kg	120 U	120 U	120 U	120 U	130 U
Hexachlorocyclopentadiene ug/kg	61 UJ	62 UJ	62 UJ	62 UJ	63 UJ
Hexachloroethane ug/kg	61 U	62 U	62 U	62 U	63 U
Isophorone ug/kg	61 U	62 U	62 U	62 U	63 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Benzyl Butyl Phthalate	ug/kg 130 U	120 U	130 U	120 U	130 U
bis(2-Chloroethoxy) Methane	ug/kg 64 U	62 U	63 U	62 U	63 U
bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ug/kg 64 U	62 U	63 U	62 U	63 U
Carbazole	ug/kg 64 U	62 U	63 U	62 U	63 U
Cresols, m & p	ug/kg 1100 U	1100 U	1100 U	1100 U	1100 U
Dibenzofuran	ug/kg 64 U	62 U	63 U	62 U	63 U
Diethyl Phthalate	ug/kg 130 U	120 U	130 U	120 U	130 U
Dimethyl Phthalate	ug/kg 130 U	120 U	130 U	120 U	130 U
Di-n-Butyl Phthalate	ug/kg 130 U	120 U	130 U	120 U	130 U
Di-n-Octylphthalate	ug/kg 64 U	62 U	63 U	62 U	63 U
Hexachlorobenzene	ug/kg 64 U	62 U	63 U	62 U	63 U
Hexachlorobutadiene	ug/kg 130 U	120 U	130 U	120 U	130 U
Hexachlorocyclopentadiene	ug/kg 64 UJ	62 UJ	63 UJ	62 UJ	63 UJ
Hexachloroethane	ug/kg 64 U	62 U	63 U	62 U	63 U
Isophorone	ug/kg 64 U	62 U	63 U	62 U	63 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:		83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:		083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:		337826	337828	337830
Lab Name:		CTLB	CTLB	CTLB
Sample Date:		8/12/2013	8/12/2013	8/12/2013
Field QC:				
Analysis Information:		1X	1X	1X
Benzyl Butyl Phthalate	ug/kg	120 U	120 U	120 U
bis(2-Chloroethoxy) Methane	ug/kg	62 U	62 U	62 U
bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ug/kg	62 U	62 U	62 U
Carbazole	ug/kg	62 U	62 U	62 U
Cresols, m & p	ug/kg	1100 U	1100 U	1100 U
Dibenzofuran	ug/kg	62 U	62 U	62 U
Diethyl Phthalate	ug/kg	120 U	120 U	120 U
Dimethyl Phthalate	ug/kg	120 U	120 U	120 U
Di-n-Butyl Phthalate	ug/kg	120 U	120 U	120 U
Di-n-Octylphthalate	ug/kg	62 U	62 U	62 U
Hexachlorobenzene	ug/kg	62 U	62 U	62 U
Hexachlorobutadiene	ug/kg	120 U	120 U	120 U
Hexachlorocyclopentadiene	ug/kg	62 UJ	62 UJ	62 UJ
Hexachloroethane	ug/kg	62 U	62 U	62 U
Isophorone	ug/kg	62 U	62 U	62 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Nitrobenzene	ug/kg 61 U	62 U	62 U	62 U	63 U
n-Nitrosodi-n-propylamine	ug/kg 120 U	120 U	120 U	120 U	130 U
n-Nitrosodiphenylamine	ug/kg 120 U	120 U	120 U	120 U	130 U
Pentachlorophenol	ug/kg 310 U	310 U	310 U	310 U	320 U
Phenol	ug/kg 310 U	310 U	310 U	310 U	320 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Nitrobenzene	ug/kg 64 U	62 U	63 U	62 U	63 U
n-Nitrosodi-n-propylamine	ug/kg 130 U	120 U	130 U	120 U	130 U
n-Nitrosodiphenylamine	ug/kg 130 U	120 U	130 U	120 U	130 U
Pentachlorophenol	ug/kg 320 U	310 U	320 U	310 U	320 U
Phenol	ug/kg 320 U	310 U	320 U	310 U	320 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:		83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:		083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:		337826	337828	337830
Lab Name:		CTLB	CTLB	CTLB
Sample Date:		8/12/2013	8/12/2013	8/12/2013
Field QC:				
Analysis Information:		1X	1X	1X
Nitrobenzene	ug/kg	62 U	62 U	62 U
n-Nitrosodi-n-propylamine	ug/kg	120 U	120 U	120 U
n-Nitrosodiphenylamine	ug/kg	120 U	120 U	120 U
Pentachlorophenol	ug/kg	310 U	310 U	310 U
Phenol	ug/kg	310 U	310 U	310 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Nitroaromatics and Nitramines by HPLC		Units			
NITROGUANIDINE	mg/kg	0.12 U	0.12 U	0.12 U	0.12 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Nitroaromatics and Nitramines by HPLC		Units			
NITROGUANIDINE	mg/kg	0.12 U	0.12 U	0.12 U	0.12 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X	1X	1X
Nitroaromatics and Nitramines by HPLC		Units	
NITROGUANIDINE	mg/kg	0.12 U	0.12 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X

Nitroaromatics and Nitramines by HPLC		Units				
1,3,5-Trinitrobenzene	mg/kg	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
1,3-Dinitrobenzene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,4,6-Trinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,4-Dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,6-Dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Nitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
3,5-Dinitroaniline	mg/kg	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
3-Nitrotoluene	mg/kg	0.30 U	0.30 U	0.30 U	0.30 U	0.30 UJ
4-Amino-2,6-Dinitrotoluene	mg/kg	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
4-Nitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	mg/kg	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Nitrobenzene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X

Nitroaromatics and Nitramines by HPLC		Units				
1,3,5-Trinitrobenzene	mg/kg	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
1,3-Dinitrobenzene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,4,6-Trinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,4-Dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,6-Dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Nitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
3,5-Dinitroaniline	mg/kg	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
3-Nitrotoluene	mg/kg	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
4-Amino-2,6-Dinitrotoluene	mg/kg	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
4-Nitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	mg/kg	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Nitrobenzene	mg/kg	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:	083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:	337826	337828	337830
Lab Name:	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013
Field QC:			
Analysis Information:	1X	1X	1X

Nitroaromatics and Nitramines by HPLC

	Units			
1,3,5-Trinitrobenzene	mg/kg	0.30 U	0.30 U	0.30 U
1,3-Dinitrobenzene	mg/kg	0.20 U	0.20 U	0.20 U
2,4,6-Trinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U
2,4-Dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U
2,6-Dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U
2-Nitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U
3,5-Dinitroaniline	mg/kg	0.20 UJ	0.20 UJ	0.20 UJ
3-Nitrotoluene	mg/kg	0.30 U	0.30 U	0.30 U
4-Amino-2,6-Dinitrotoluene	mg/kg	0.20 UJ	0.20 UJ	0.20 UJ
4-Nitrotoluene	mg/kg	0.20 U	0.20 U	0.20 U
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	mg/kg	0.30 U	0.30 U	0.30 U
Nitrobenzene	mg/kg	0.20 U	0.20 U	0.20 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB	83-1039-DU1-SB1	83-1039-DU1-SB2
Field Sample ID:	083SB-0001M-0001-SO	083SB-0002M-0001-SO	083SB-0015M-0001-SO	083SB-0003M-0001-SO	083SB-0004M-0001-SO
Lab Sample ID:	337811	337812	337834	337813	337815
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:					
Analysis Information:	1X	1X	1X	1X	1X
Nitroglycerin	mg/kg 1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	mg/kg 0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Pentaerythritol Tetranitrate	mg/kg 1.2 U	1.2 U	1.2 U	1.2 U	1.2 UJ
Tetryl	mg/kg 0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:	83-1039-DU1-SB3	83-1039-DU1-SB3	83-1039-DU1-SB4	83-1039-DU1-SB5	83-1039-DU1-SB5
Field Sample ID:	083SB-0005M-0001-SO	083SB-0006M-0001-SO	083SB-0008M-0001-SO	083SB-0009M-0001-SO	083SB-0014-0001-SO
Lab Sample ID:	337818	337820	337822	337824	337832
Lab Name:	CTLB	CTLB	CTLB	CTLB	CTLB
Sample Date:	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013
Field QC:		Field Duplicate			
Analysis Information:	1X	1X	1X	1X	1X
Nitroglycerin	mg/kg 1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	mg/kg 0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Pentaerythritol Tetranitrate	mg/kg 1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Tetryl	mg/kg 0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

Chemistry Results

Ravenna Army Ammunition Plant

RVAAP, QAPP Oct. 2012

Summer 2013 RI/SI Sampling Event Sampling Event

Site Name: Site 83

Location ID:		83-1039-DU1-SB6	83-1039-DU1-SB7	83-1039-DU1-SB8
Field Sample ID:		083SB-0011M-0001-SO	083SB-0012M-0001-SO	083SB-0013M-0001-SO
Lab Sample ID:		337826	337828	337830
Lab Name:		CTLB	CTLB	CTLB
Sample Date:		8/12/2013	8/12/2013	8/12/2013
Field QC:				
Analysis Information:		1X	1X	1X
Nitroglycerin	mg/kg	1.2 U	1.2 U	1.2 U
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	mg/kg	0.30 U	0.30 U	0.30 U
Pentaerythritol Tetranitrate	mg/kg	1.2 U	1.2 U	1.2 U
Tetryl	mg/kg	0.20 U	0.20 U	0.20 U

Notes:

J = Detected, Estimated

UJ = Compound was not detected and reporting limit is estimated

U = Compound was Not Detected

ID = Identification

QC = Quality Control

CTLB = CT LABS., BARABOO, WI

MG/KG = Milligrams per Kilogram

PERCENT = Percent

UG/KG = Micrograms per Kilogram

UG/L = Micrograms per Liter

This page intentionally left blank.