Per the Federal Facility Agreement for Iowa Army Ammunition Plant, Article X.B.1, the attached document is the final version of the submitted document.

ECO-RISK ROUND 2 SAMPLING

PREFORMED BY: HARZA
SEARS TOWER
2333 SOUTH WACKER DRIVER
CHICAGO, IL 60606-6392

PERFROMED FOR: USACE
OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NE 68102-4978

SEPTEMBER 2000

HARZA

HARZA ENGINEERING COMPANY, INC.
WATER & ENVIRONMENT

2

January 10, 2000

Mr. Alvin Kam
USACE, Omaha District
Attn: CENWO-PM-HB
215 North 17th Street
Omaha, Nebraska 68102-4978

Subject: Surface Water and Sediment Data
Ecological Risk Assessment
Iowa Army Ammunition Plant (IAAAP)
Harza Project 5644.GN.1

Dear Mr. Kam:

Harza Engineering Company (Harza) is pleased to provide the surface water and sediment data collected during Round 2 sampling at the IAAAP in September. Six data tables containing explosives, dissolved metals, and total metals in water, and explosives, total metals, and semi-volatile organic compounds (SVOC) in sediment are enclosed. Data for water samples collected during Round 1 are also included. Herbicides and pesticides/PCBs in water and sediment and SVOCs in water were not detected in any of the samples.

Please note the following:

"U" means not detected
"J" means estimated
"=" means detected

A location map for Round 2 sampling is also enclosed.

If there are any questions, please contact me at 312-831-3452.

Very truly yours,

Pinaki Banerjee

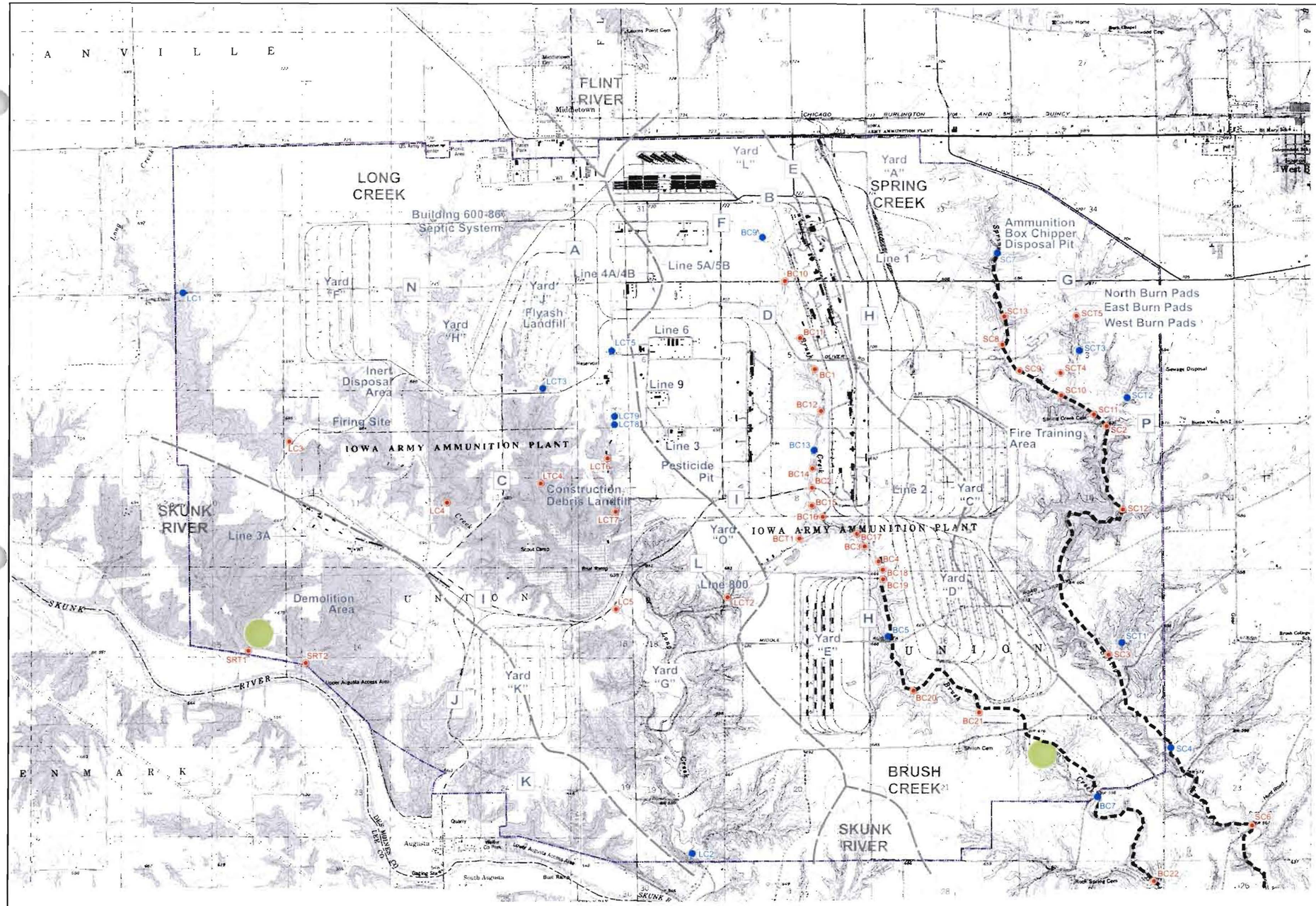
Pinaki Banerjee

cc: R. Allison, IAAAP
K. Howe, USACE

Sears Tower 233 South Wacker Drive Chicago, Illinois 60606-6392 Tel: 312.831.3000 Fax: 312.831.3999 Web: www.harza.com

J. Haffner, IAAAP
M, Bazar, CHPPM
M, Coffey, US Fish and Wildlife
P, Thomason, USACE
R, Sellers, USACE
S, Sorensen, USACE
S. Marquess, USEPA
R, Blackburn, Techlaw
C, Gorton, USACE
D, Moses, USACE
L, Baxter, AO

EXHIBIT 4



LEGEND:

- SAMPLING LOCATIONS (See Note 2)
- SAMPLING LOCATIONS (See Note 3)
- A — ROAD NAME
- PLANT PROPERTY BOUNDARY
- ORANGE THROAT DARTER DISTRIBUTION
- INDIANA BAT RECORD

NOTES:

1. BC8 - Brush Creek at Hunt Road, not shown on map.
2. Analysis for explosives and metals.
3. Analysis for explosives, metals, PCB, pesticides, herbicides and SVOC
4. Water samples from sites LC3 and LC4 were analyzed for uranium, gross alpha and gross beta under the Long Term Monitoring Program.

Scale 0 2000 4000 6000 8000 Feet

1997 ECOLOGICAL SAMPLING

	SRT1	SRT2	LC1	LC2	LCT2	BC1	BC2	BC3	BC4	BC5	BC7	BC8	BC9	BC10	SC2	SC3	SC4	SC6
MAMMALS			•	•				•	•				•	•	•		•	
SOILS			•	•				•	•				•	•	•		•	
BENTHOS	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
FISH				•						•		•			•		•	•

WATER AND SEDIMENT SAMPLING LOCATION SECOND PHASE
ECOLOGICAL RISK ASSESSMENT
IOWA ARMY AMMUNITION PLANT
Middletown, Iowa

HARZA *Consulting Engineers and Scientists*

O:\graphics\iowa\risk-assessment\...\action2.cdr 04/10/2000

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC01	BC01	BC02	BC02	BC03	BC03	BC04	BC04	BC05	BC05	BC07	BC07
Sample Date		5/23/00	9/27/00	5/23/00	9/26/00	5/23/00	9/26/00	5/24/00	9/26/00	5/24/00	9/25/00	5/24/00	9/25/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.2 U	0.16 U	0.28 U	0.16 U
1,3-Dinitrobenzene	ug/L	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.2 U	0.16 U	0.28 U	0.16 U
2,4,6-Trinitrotoluene	ug/L	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.2 U	0.16 U	0.28 U	0.16 U
2,4-Dinitrotoluene	ug/L	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.2 U	0.16 U	0.28 U	0.16 U
2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.4 U	0.31 U	0.56 U	0.31 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.31 U	0.16 J	0.37 U	0.078 J	0.31 U	0.31 U	0.31 U	0.086 J	0.4 U	0.22 J	0.56 U	0.31 U
2-Nitrotoluene	ug/L	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.4 U	0.31 U	0.56 U	0.31 U
3-Nitrotoluene	ug/L	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.4 U	0.31 U	0.56 U	0.31 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.31 U	0.3 J	0.37 U	0.17 J	0.31 U	0.2 J	0.31 U	0.18 J	0.4 U	0.39 =	0.56 U	0.31 U
4-Nitrotoluene	ug/L	0.78 U	0.78 U	0.94 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	1 U	0.78 U	1.4 U	0.78 U
RDX	ug/L	3.8 =	12 =	2.9 =	7.3 =	4.2 =	5.6 =	4.3 =	3.9 =	3.9 =	8.9 =	2.3 =	5.2 =
Nitrobenzene	ug/L	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.2 U	0.16 U	0.28 U	0.16 U
HMX	ug/L	4.3 =	7.5 =	3 =	3.3 =	3 =	2.5 =	2.4 =	2.2 =	1.9 =	3.7 =	1.8 =	2.2 =
Tetryl	ug/L	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.4 U	0.31 U	0.56 U	0.31 U

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC08	BC08	BC09	BC09	BC10	BC10	BC11	BC11	BC12	BC12	BC13	BC13
Sample Date		5/24/00	9/25/00	5/24/00	9/27/00	5/24/00	9/27/00	5/24/00	9/27/00	5/24/00	9/27/00	5/23/00	9/27/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.25 U	0.16 U	0.16 U	0.24 U	0.21 U	0.18 U	0.16 U	0.17 U	0.16 U
1,3-Dinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.25 U	0.16 U	0.16 U	0.24 U	0.21 U	0.18 U	0.16 U	0.17 U	0.16 U
2,4,6-Trinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.25 U	0.16 U	0.16 U	0.24 U	0.21 U	0.18 U	0.16 U	0.17 U	0.16 U
2,4-Dinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.25 U	0.16 U	0.16 U	0.24 U	0.21 U	0.18 U	0.16 U	0.17 U	0.16 U
2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.51 U	0.31 U	0.31 U	0.48 U	0.42 U	0.35 U	0.31 U	0.34 U	0.31 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.51 U	0.31 U	0.31 U	0.48 U	0.42 U	0.35 U	0.16 J	0.34 U	0.31 U
2-Nitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.51 U	0.31 U	0.31 U	0.48 U	0.42 U	0.35 U	0.31 U	0.34 U	0.31 U
3-Nitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.51 U	0.31 U	0.31 U	0.48 U	0.42 U	0.35 U	0.31 U	0.34 U	0.31 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.51 U	0.31 U	0.31 U	0.48 U	0.42 U	0.35 U	0.31 U	0.34 U	0.31 U
4-Nitrotoluene	ug/L	0.78 U	0.78 U	0.78 U	1.3 U	0.78 U	0.78 U	1.2 U	1.1 U	0.88 U	0.78 U	0.84 U	0.78 U
RDX	ug/L	1.1 =	5.2 =	0.16 U	0.25 U	3.8 =	2.8 =	4.5 =	15 =	3.1 =	9.3 =	3.1 =	10 =
Nitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.25 U	0.16 U	0.16 U	0.24 U	0.21 U	0.18 U	0.16 U	0.17 U	0.16 U
HMX	ug/L	0.93 =	2.4 =	0.39 U	0.64 U	4.3 =	1.4 =	5.2 =	0.53 E	2.5 =	6.4 =	3.3 =	5.8 =
Tetryl	ug/L	0.31 U	0.31 U	0.31 U	0.51 U	0.31 U	0.31 U	0.48 U	0.42 U	0.35 U	0.31 U	0.34 U	0.31 U

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC14	BC14	BC15	BC15	BC16	BC16	BC17	BC17	BC18	BC18	BC19	BC19
Sample Date		5/23/00	9/27/00	5/23/00	9/27/00	5/23/00	9/27/00	5/23/00	9/26/00	5/24/00	9/26/00	5/23/00	9/26/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.2 U	0.19 U	0.16 U	0.19 U	0.2 U	0.18 U	0.22 U	0.16 U	0.16 U	0.4 U	0.2 U	0.2 U
1,3-Dinitrobenzene	ug/L	0.2 U	0.19 U	0.16 U	0.19 U	0.2 U	0.18 U	0.22 U	0.16 U	0.16 U	0.4 U	0.2 U	0.2 U
2,4,6-Trinitrotoluene	ug/L	0.2 U	0.19 U	0.16 U	0.19 U	0.2 U	0.18 U	0.22 U	0.16 U	0.16 U	0.4 U	0.2 U	0.2 U
2,4-Dinitrotoluene	ug/L	0.2 U	0.19 U	0.16 U	0.19 U	0.2 U	0.18 U	0.22 U	0.16 U	0.16 U	0.4 U	0.2 U	0.2 U
2,6-Dinitrotoluene	ug/L	0.4 U	0.39 U	0.31 U	0.39 U	0.4 U	0.36 U	0.45 U	0.31 U	0.31 U	0.8 U	0.4 U	0.4 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.4 U	0.39 U	0.31 U	0.39 U	0.4 U	0.36 U	0.45 U	0.14 J	0.31 U	0.8 U	0.4 U	0.4 U
2-Nitrotoluene	ug/L	0.4 U	0.39 U	0.31 U	0.39 U	0.4 U	0.36 U	0.45 U	0.31 U	0.31 U	0.8 U	0.4 U	0.4 U
3-Nitrotoluene	ug/L	0.4 U	0.39 U	0.31 U	0.39 U	0.4 U	0.36 U	0.45 U	0.31 U	0.31 U	0.8 U	0.4 U	0.4 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.4 U	0.21 J	0.31 U	0.39 U	0.4 U	0.36 U	0.45 U	0.26 J	0.31 U	0.8 U	0.4 U	0.4 U
4-Nitrotoluene	ug/L	1 U	0.97 U	0.78 U	0.97 U	1 U	0.91 U	1.1 U	0.78 U	0.78 U	2 U	1 U	1 U
RDX	ug/L	3.6 =	10 =	3.3 =	9 =	2.7 =	8.2 =	3.7 =	5.9 =	2.8 =	3 =	2.8 =	5 =
Nitrobenzene	ug/L	0.2 U	0.19 U	0.16 U	0.19 U	0.2 U	0.18 U	0.22 U	0.16 U	0.16 U	0.4 U	0.2 U	0.2 U
HMX	ug/L	3.4 =	5.1 =	3.4 =	3.9 =	2.8 =	3.7 =	3.2 =	2.6 =	2.4 =	1.3 =	2.4 =	2.8 =
Tetryl	ug/L	0.4 U	0.39 U	0.31 U	0.39 U	0.4 U	0.36 U	0.45 U	0.31 U	0.31 U	0.8 U	0.4 U	0.4 U

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC20	BC20	BC21	BC21	BC22	BC22	BCT01	BCT01	LC01	LC01	LC02	LC02
Sample Date		5/23/00	9/25/00	5/23/00	9/25/00	5/24/00	9/25/00	5/23/00	9/27/00	5/24/00	9/27/00	5/25/00	9/27/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.18 U	0.18 U	0.2 U	0.16 U	0.22 U	0.16 U	0.2 U	0.18 U	0.16 U	0.18 U	0.16 U	0.16 U
1,3-Dinitrobenzene	ug/L	0.18 U	0.18 U	0.2 U	0.16 U	0.22 U	0.16 U	0.2 U	0.18 U	0.16 U	0.18 U	0.16 U	0.16 U
2,4,6-Trinitrotoluene	ug/L	0.18 U	0.18 U	0.2 U	0.16 U	0.22 U	0.16 U	0.2 U	0.18 U	0.16 U	0.18 U	0.16 U	0.16 U
2,4-Dinitrotoluene	ug/L	0.18 U	0.18 U	0.2 U	0.16 U	0.22 U	0.16 U	0.2 U	0.18 U	0.16 U	0.18 U	0.16 U	0.16 U
2,6-Dinitrotoluene	ug/L	0.35 U	0.36 U	0.39 U	0.31 U	0.44 U	0.31 U	0.41 U	0.36 U	0.31 U	0.35 U	0.31 U	0.31 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.35 U	0.1 J	0.39 U	0.31 U	0.44 U	0.31 U	0.41 U	0.33 J	0.31 U	0.35 U	0.31 U	0.31 U
2-Nitrotoluene	ug/L	0.35 U	0.36 U	0.39 U	0.31 U	0.44 U	0.31 U	0.41 U	0.36 U	0.31 U	0.35 U	0.31 U	0.31 U
3-Nitrotoluene	ug/L	0.35 U	0.36 U	0.39 U	0.31 U	0.44 U	0.31 U	0.41 U	0.36 U	0.31 U	0.35 U	0.31 U	0.31 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.35 U	0.24 J	0.39 U	0.17 J	0.44 U	0.31 U	0.41 U	0.73 =	0.31 U	0.35 U	0.31 U	0.31 U
4-Nitrotoluene	ug/L	0.88 U	0.91 U	0.99 U	0.78 U	1.1 U	0.78 U	1 U	0.91 U	0.78 U	0.88 U	0.78 U	0.78 U
RDX	ug/L	3.3 =	8.6 =	2.3 =	6.6 =	1.7 =	5.5 =	0.2 U	10 =	0.16 U	0.18 U	0.16 U	0.16 U
Nitrobenzene	ug/L	0.18 U	0.18 U	0.2 U	0.16 U	0.22 U	0.16 U	0.2 U	0.18 U	0.16 U	0.18 U	0.16 U	0.16 U
HMX	ug/L	2.4 =	3.6 =	1.7 =	2.5 =	1.5 =	2.7 =	0.51 U	2.5 =	0.39 U	0.44 U	0.39 U	0.39 U
Tetryl	ug/L	0.35 U	0.36 U	0.39 U	0.31 U	0.44 U	0.31 U	0.41 U	0.36 U	0.31 U	0.35 U	0.31 U	0.31 U

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		LC03	LC03	LC04	LC04	LC05	LCT02	LCT02	LCT03	LCT03	LCT04	LCT04	LCT05
Sample Date		5/24/00	9/27/00	5/26/00	9/27/00	9/27/00	5/25/00	9/27/00	5/26/00	9/27/00	5/26/00	9/27/00	5/26/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.3 U	0.21 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,3-Dinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.3 U	0.21 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
2,4,6-Trinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.3 U	0.17 J	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
2,4-Dinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.3 U	0.21 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.6 U	0.42 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.6 U	0.42 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
2-Nitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.6 U	0.42 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
3-Nitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.6 U	0.42 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.6 U	0.42 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
4-Nitrotoluene	ug/L	0.78 U	0.78 U	0.78 U	1.5 U	1 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
RDX	ug/L	0.16 U	0.16 U	0.16 U	0.3 U	0.21 U	0.16 U	0.16 U	0.16 U	9.1 =	0.16 U	0.16 U	0.16 U
Nitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.3 U	0.21 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 =	0.16 U
HMX	ug/L	0.39 U	0.39 U	0.39 U	0.75 U	0.52 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.35 =	0.39 U
Tetryl	ug/L	0.31 U	0.31 U	0.31 U	0.6 U	0.42 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		LCT05	LCT06	LCT06	LCT07	LCT07	LCT08	LCT09	SC02	SC02	SC03	SC03	SC04
Sample Date		9/27/00	5/26/00	9/27/00	5/26/00	9/28/00	9/28/00	9/27/00	5/25/00	9/26/00	5/25/00	9/25/00	5/24/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.18 U	0.16 U	0.21 U	0.16 U	0.25 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	0.16 U	0.19 U
1,3-Dinitrobenzene	ug/L	0.18 U	0.16 U	0.21 U	0.16 U	0.25 U	0.16 U	0.11 J	0.16 U	0.17 U	0.17 U	0.16 U	0.19 U
2,4,6-Trinitrotoluene	ug/L	0.18 U	0.16 U	0.82 =	0.16 U	0.25 U	0.56 =	0.16 U	0.16 U	0.17 U	0.17 U	0.16 U	0.19 U
2,4-Dinitrotoluene	ug/L	0.18 U	0.16 U	0.71 =	0.16 U	0.25 U	0.69 =	0.16 U	0.16 U	0.17 U	0.17 U	0.16 U	0.19 U
2,6-Dinitrotoluene	ug/L	0.36 U	0.31 U	0.42 U	0.31 U	0.49 U	0.31 U	0.31 U	0.31 U	0.34 U	0.34 U	0.31 U	0.38 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.36 U	0.31 U	2.6 =	0.31 U	0.49 U	5.6 =	8 =	0.31 U	0.34 U	0.34 U	0.31 U	0.38 U
2-Nitrotoluene	ug/L	0.36 U	0.31 U	0.42 U	0.31 U	0.49 U	0.31 U	0.31 U	1.8 =	0.34 U	1 =	0.31 U	0.38 U
3-Nitrotoluene	ug/L	0.36 U	0.31 U	0.42 U	0.31 U	0.49 U	0.31 U	0.31 U	0.31 U	0.34 U	0.34 U	0.31 U	0.38 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.36 U	0.31 U	12 =	0.31 U	0.49 U	21D	11D	0.31 U	0.34 U	0.34 U	0.31 U	0.38 U
4-Nitrotoluene	ug/L	0.91 U	0.78 U	1 U	0.78 U	1.2 U	0.78 U	0.78 U	0.78 U	0.84 U	0.84 U	0.78 U	0.95 U
RDX	ug/L	0.18 U	0.16 U	0.21 U	0.16 U	0.25 U	0.16 U	0.96 =	0.91 =	0.8 =	0.93 =	0.16 U	0.71 =
Nitrobenzene	ug/L	0.18 U	0.16 U	0.21 U	0.16 U	0.25 U	0.94 =	0.16 =	0.16 U	0.17 U	0.17 U	0.16 U	0.19 U
HMX	ug/L	0.45 U	0.39 U	0.84 =	0.39 U	0.62 U	0.8 =	1.7 =	0.76 =	0.42 U	0.45 =	0.2 J	0.47 U
Tetryl	ug/L	0.36 U	0.31 U	0.42 U	0.31 U	0.49 U	0.31 U	0.31 U	0.31 U	0.34 U	0.34 U	0.31 U	0.38 U

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		SC04	SC06	SC06	SC07	SC07	SC08	SC08	SC09	SC09	SC10	SC10	SC11
Sample Date		9/25/00	5/24/00	9/25/00	5/25/00	9/27/00	5/25/00	9/26/00	5/25/00	9/26/00	5/25/00	9/26/00	5/25/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.18 U	0.23 U	0.16 U	0.21 U	0.16 U	0.16 U	0.19 U	0.1 J	0.16 U
1,3-Dinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.18 U	0.23 U	0.16 U	0.21 U	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U
2,4,6-Trinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.18 U	0.23 U	0.16 U	0.21 U	0.16 U	0.16 U	0.27 =	0.16 U	0.22 =
2,4-Dinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.18 U	0.23 U	0.16 U	0.21 U	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U
2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.36 U	0.47 U	0.31 U	0.42 U	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.36 U	0.47 U	0.31 U	0.42 U	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U
2-Nitrotoluene	ug/L	0.31 U	0.72 =	0.31 U	0.36 U	0.47 U	0.31 U	0.42 U	0.31 U	0.31 U	1.7 =	0.31 U	1.6 =
3-Nitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.36 U	0.47 U	0.31 U	0.42 U	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.36 U	0.47 U	0.31 U	0.42 U	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U
4-Nitrotoluene	ug/L	0.78 U	0.78 U	0.78 U	0.91 U	1.2 U	0.78 U	1 U	0.78 U	0.78 U	0.94 U	0.78 U	0.78 U
RDX	ug/L	0.16 U	0.55 =	0.16 U	0.18 U	0.23 U	6.4 =	1 =	8.9 =	2.2 =	0.96 =	0.4 =	0.8 =
Nitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.18 U	0.23 U	0.16 U	0.21 U	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U
HMX	ug/L	0.39 U	0.52 =	0.39 U	0.45 U	0.58 U	1 =	0.52 U	1.2 =	0.54 =	0.47 U	0.39 U	0.66 =
Tetryl	ug/L	0.31 U	0.31 U	0.31 U	0.36 U	0.47 U	0.31 U	0.42 U	0.31 U	0.31 U	0.37 U	0.31 U	0.31 U

Iowa Army Ammunition Plant

Explosives in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		SC11	SC12	SC12	SC13	SCT01	SCT01	SCT02	SCT03	SRT01	SRT01	SRT02	SRT02
Sample Date		9/26/00	5/23/00	9/26/00	9/26/00	5/25/00	9/25/00	9/26/00	5/25/00	5/25/00	9/27/00	5/25/00	9/27/00
Parameter	**Units**												
1,3,5-Trinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,3-Dinitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
2,4,6-Trinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
2,4-Dinitrotoluene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
2-Amino-4,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
2-Nitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
3-Nitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
4-Amino-2,6-Dinitrotoluene	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
4-Nitrotoluene	ug/L	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
RDX	ug/L	0.56 =	1.5 =	0.34 =	4.7 =	0.16 U	0.16 U	0.16 U	0.16 U	6 =	8.8 =	0.16 U	0.16 U
Nitrobenzene	ug/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
HMX	ug/L	0.39 U	0.19 =	0.39 U	0.93 =	0.39 U	0.39 U	0.39 U	0.39 =	1.8 =	2.6 =	0.39 U	0.39 U
Tetryl	ug/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U

Iowa Army Ammunition Plant

Dissolved M Is in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC01	BC01	BC02	BC02	BC03	BC03	BC04	BC04	BC05	BC05	BC07	BC07	BC08	BC08
Sample Date		5/23/00	9/27/00	5/23/00	9/26/00	5/23/00	9/26/00	5/24/00	9/26/00	5/24/00	9/25/00	5/24/00	9/25/00	5/24/00	9/25/00
Parameter	**Units**														
Aluminum	ug/L	48 U	72.7 U	56 J	72.7 U	48 U	72.7 U	60.8 J	72.7 U	72.7 U	72.7 U	69 J	72.7 UJ	72.7 U	72.7 U
Antimony	ug/L	12.7 J	5.5 U	11.6 J	5.5 U	8.3 U	5.5 U	10.9 J	5.5 U	5.5 U	5.5 U	14.6 J	5.5 U	5.5 U	5.5 U
Arsenic	ug/L	8 J	4.4 U	2.5 U	4.4 U	3.3 J	4.4 U	2.4 U	4.4 U	4.4 U	4.4 U	2.4 U	4.4 U	4.4 U	4.4 U
Barium	ug/L	112 =	89.7 =	112 =	77.8 =	133 =	80 =	122 =	76.3 =	110 J	78.6 =	121 =	87.6 J	113 J	72.5 =
Beryllium	ug/L	1.1 J	0.5 U	0.3 U	0.5 U	0.3 J	0.5 U	0.3 U	0.5 U	1 J	0.5 U	0.3 U	0.5 U	0.8 J	0.5 U
Cadmium	ug/L	1.3 J	0.7 U	0.5 J	0.7 U	0.5 J	0.7 U	0.4 U	0.7 U	0.7 U	0.7 U	0.4 U	0.7 U	0.7 U	0.7 U
Calcium	ug/L	35300 =	44300 =	43000 =	36900 =	47600 =	37700 =	48900 =	42300 =	50800 =	41500 =	51700 =	43500 =	56900 =	35600 =
Chromium	ug/L	5 J	3.2 J	4.8 J	2.6 J	2.5 U	3.1 J	3.6 J	2.8 J	0.7 U	3.7 J	3.7 J	5.6 J	0.7 U	2.5 J
Cobalt	ug/L	3 U	1.1 U	3 U	1.6 J	3 U	1.3 J	5.3 =	1.1 U	1.1 U	1.1 J	5.8 =	3.3 J	1.1 U	1.1 U
Copper	ug/L	10.5 =	3.5 J	2.6 U	2.8 J	6 J	4.1 J	2.6 U	4.3 J	1.6 J	4.8 J	2.6 U	9.9 J	1.3 U	3.2 J
Iron	ug/L	28.4 U	23.3 U	28.4 U	23.3 U	28.4 U	23.3 U	26.6 U	23.3 U	23.3 U	50.7 =	26.6 U	96.7 =	23.3 U	23.3 U
Lead	ug/L	4.5 J	1.3 U	2.1 J	1.3 U	1.7 U	1.3 U	1.7 U	1.3 U	2.6 U	1.3 U	2.6 J	1.3 U	2.6 U	1.3 U
Magnesium	ug/L	16400 =	14200 =	19500 =	12400 =	19700 =	12300 =	19900 =	14400 =	19400 =	12900 =	19800 =	13100 =	21300 =	10800 =
Manganese	ug/L	15.2 =	2 J	2.1 J	6.3 J	4.7 J	13.9 =	6.9 J	15.8 =	2.8 J	4.8 J	19.2 =	15.6 =	17.5 =	15.3 =
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	14.2 =	2.6 J	2.4 J	4 J	4.7 J	2.5 J	1.8 J	1.6 U	3 J	3.4 J	3.1 J	30.4 =	3.7 J	1.6 U
Potassium	ug/L	1580 =	2880 =	1580 =	2200 =	2010 =	2190 =	2470 =	1870 J	2220 J	2530 =	2150 =	3890 =	2200 J	3600 =
Selenium	ug/L	7 =	3.3 U	2.6 U	3.3 U	3.7 J	3.3 U	2.6 U	3.3 U	4.1 U	3.3 U	2.6 U	3.3 U	4.3 J	3.3 U
Silver	ug/L	8.7 =	1.4 J	4.5 J	1.5 J	2.8 U	2.6 J	4.6 J	2 J	0.6 U	3.3 J	4 J	3.2 J	0.6 U	2.5 J
Sodium	ug/L	29800 =	14700 J	38300 =	10200 J	37000 =	10300 J	42000 =	14200 J	29100 =	11100 J	23600 =	11400 J	18800 =	9090 J
Thallium	ug/L	10.1 =	3.4 U	4.6 J	3.4 U	4.5 U	3.4 U	10.3 =	3.4 U	6.3 U	3.4 U	11.6 =	3.4 U	6.3 U	3.4 U
Vanadium	ug/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.6 U	1.5 U	1.5 J	1.5 J	1.6 U	3.5 J	1.6 J	1.5 U
Zinc	ug/L	15.2 =	3 J	2.3 J	2.9 J	7.2 J	2.7 J	4.5 J	2.1 J	15.6 J	4.3 J	2.7 J	4 J	0.7 J	1.3 J

Iowa Army Ammunition Plant

Dissolved M s In Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC09	BC09	BC10	BC10	BC11	BC11	BC12	BC12	BC13	BC13	BC14	BC14	BC15	BC15
Sample Date		5/24/00	9/27/00	5/24/00	9/27/00	5/24/00	9/27/00	5/24/00	9/27/00	5/23/00	9/27/00	5/23/00	9/27/00	5/23/00	9/27/00
Parameter	**Units**														
Aluminum	ug/L	48 U	19.4 UJ	72.7 U	19.4 UJ	43.6 J	19.4 UJ	54.6 J	72.7 U	48 U	72.7 U	43.2 J	72.7 U	54.8 J	72.7 U
Antimony	ug/L	8.3 U	2.9 U	5.5 U	2.9 U	8.4 J	2.9 U	8.3 U	5.5 U	8.3 U	5.5 U	8.3 U	5.5 U	9.6 J	5.5 U
Arsenic	ug/L	5.8 J	4.1 J	4.4 U	2.2 U	2.4 U	2.9 J	2.4 U	4.4 U	2.5 U	4.4 U	2.4 U	4.4 U	4.5 J	4.4 U
Barium	ug/L	120 =	108 J	113 J	89.6 J	121 =	96.5 J	115 =	91 =	105 =	98.2 =	103 =	91.9 =	113 =	97.9 =
Beryllium	ug/L	0.6 J	0.3 U	0.8 J	0.3 U	0.3 U	0.3 U	0.3 U	0.5 U	0.3 U	0.5 U	0.3 U	0.5 U	0.3 U	0.5 U
Cadmium	ug/L	0.7 J	0.3 J	0.7 U	0.2 U	0.4 U	0.2 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U
Calcium	ug/L	56600 =	59100 J	52300 =	44400 J	50600 =	44800 J	43500 =	45200 =	43400 =	46000 =	42300 =	41500 =	41800 =	45100 =
Chromium	ug/L	2.5 U	1.1 U	1.2 J	1.1 U	2.1 J	1.1 U	2.6 J	2.9 J	2.7 J	3.5 J	1.8 U	2.1 J	2.5 U	4.8 J
Cobalt	ug/L	3 U	1 U	1.1 U	1 U	4.1 J	1 U	4.8 J	1.3 J	3 U	2.6 J	3 U	1.1 U	3 U	1.1 U
Copper	ug/L	4.5 J	1.1 U	1.3 U	1.1 U	2.6 U	1.1 U	2.6 U	3.6 J	2.6 U	4.6 J	2.6 U	4.8 J	3.5 J	5.7 J
Iron	ug/L	28.4 U	20.3 UJ	23.3 U	20.3 UJ	26.6 U	20.3 UJ	26.6 U	23.3 U	28.4 U	23.3 U	26.6 U	23.3 U	28.4 U	23.3 U
Lead	ug/L	1.7 U	1.3 U	2.6 U	1.3 U	1.7 U	1.3 U	1.7 U	1.3 U	3.5 J	1.3 U	1.7 U	1.3 U	2.5 J	1.3 U
Magnesium	ug/L	22700 =	15900 J	19200 =	12600 J	18700 =	13800 J	19000 =	14200 =	18700 =	14900 =	18400 =	13700 =	19100 =	14500 =
Manganese	ug/L	8.6 J	9 J	28.8 =	25.9 J	47 =	21.1 J	31.4 =	1.4 J	1 J	4.4 J	1 J	4 J	1.1 J	2.9 J
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	4.6 J	1 U	3 J	1 U	1.7 U	1 U	1.7 U	3.8 J	1.7 U	2.2 J	2.9 J	2 J	1.7 U	1.6 U
Potassium	ug/L	486 J	1470 J	1500 J	2180 =	1430 =	2270 =	1510 =	2580 =	1480 =	2750 =	1510 =	2370 =	1610 =	2540 =
Selenium	ug/L	9 =	3.3 U	4.1 U	3.3 U	2.6 U	3.3 U	3.6 J	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U
Silver	ug/L	2.8 U	1.7 U	0.6 U	1.7 U	2.8 U	1.7 U	2.8 U	1.9 J	2.8 J	3 J	2.8 U	1.8 J	2.8 U	2.8 J
Sodium	ug/L	12100 =	8520 J	20000 =	16900 J	21400 =	16700 J	27200 =	14100 J	31700 =	13300 J	31700 =	11800 J	37600 =	13500 J
Thallium	ug/L	7.4 J	3.4 U	6.3 U	3.4 U	4.6 J	3.4 U	4.5 U	3.4 U	4.5 U	3.4 U	4.9 J	3.4 U	6.3 J	3.4 U
Vanadium	ug/L	1.5 U	3.5 J	1.5 U	2.8 J	1.6 U	3.4 J	1.6 U	1.5 U	1.5 U	1.5 U	1.6 U	1.5 U	1.5 U	1.8 J
Zinc	ug/L	6.7 J	1.3 J	1.1 J	1.3 J	2 J	0.7 J	1.7 U	2 J	1.7 U	2.6 J	1.7 U	26.6 =	2.4 J	3.9 J

Iowa Army Ammunition Plant

Dissolved M. .ls in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC16	BC16	BC17	BC17	BC18	BC18	BC19	BC19	BC20	BC20	BC21	BC21	BC22	BC22
Sample Date		5/23/00	9/27/00	5/23/00	9/26/00	5/24/00	9/26/00	5/23/00	9/26/00	5/23/00	9/25/00	5/23/00	9/25/00	5/24/00	9/25/00
Parameter	**Units**														
Aluminum	ug/L	48 U	72.7 U	39.1 J	72.7 U	61.3 J	72.7 U	41.8 J	72.7 U	48 U	72.7 U	51.1 J	72.7 U	50.9 J	72.7 U
Antimony	ug/L	11.6 J	5.5 U	14.2 J	5.5 U	8.3 U	5.5 U	13.7 J	5.5 U	15.6 J	5.5 U	17.8 J	5.5 U	9.2 J	5.5 U
Arsenic	ug/L	2.5 U	4.4 U	2.4 U	4.4 U	2.4 U	4.4 U	2.4 U	4.4 U	3.8 J	4.4 U	2.5 U	4.4 U	2.4 U	4.4 U
Barium	ug/L	116 =	96.4 =	121 =	82.5 =	122 =	75.6 =	119 =	81.6 =	106 =	79.1 =	105 =	71.4 =	123 =	84.8 =
Beryllium	ug/L	0.3 U	0.5 U	0.3 U	0.5 U	0.3 U	0.5 U	0.3 U	0.5 U	0.3 U	0.5 U	0.3 U	0.5 U	0.3 U	0.5 U
Cadmium	ug/L	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U
Calcium	ug/L	41300 =	44800 =	42700 =	39200 =	48900 =	41800 =	48000 =	42700 =	46900 =	40200 =	48700 =	36600 =	51100 =	39200 =
Chromium	ug/L	3.2 J	4.1 J	3.9 J	2.3 J	1.8 J	2.7 J	2.7 J	2 J	2.5 J	2.8 J	3.1 J	2.6 J	2.6 J	0.7 U
Cobalt	ug/L	3 U	1.7 J	5.2 =	1.1 U	3.4 J	1.1 U	3.3 J	1.1 U	3 U	1.1 U	3 U	1.2 J	4.4 J	1.1 U
Copper	ug/L	2.6 U	5.7 J	2.6 U	4.4 J	2.6 U	4.5 J	2.6 U	3.8 J	2.6 U	3.3 J	2.6 J	3.9 J	2.6 U	3 J
Iron	ug/L	28.4 U	47.1 J	26.6 U	23.3 U	26.6 U	23.3 U	26.6 U	23.3 U	28.4 U	23.3 U	28.4 U	23.3 U	26.6 U	23.3 U
Lead	ug/L	2.7 J	1.3 U	4.1 J	1.3 U	1.7 U	1.3 U	3 J	1.3 U	1.7 U	1.3 U	1.7 U	1.3 U	2 J	1.3 U
Magnesium	ug/L	18700 =	14300 =	18500 =	12800 =	20000 =	14000 =	19700 =	14400 =	18900 =	12500 =	18900 =	11600 =	19400 =	12400 =
Manganese	ug/L	1 U	1.4 U	4.6 J	11.8 =	4 J	12.6 =	1.1 J	8 J	4.1 J	7.7 J	9.7 J	7.5 J	33.4 =	11.4 =
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.29 =	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	2.7 J	4.6 J	1.8 J	2.1 J	2.9 J	2.1 J	1.7 U	3.3 J	3.1 J	2.8 J	2.8 J	2.9 J	2 J	1.6 U
Potassium	ug/L	1590 =	2880 =	2230 =	2250 =	2350 =	1860 J	2370 =	2170 =	2290 =	2900 =	2190 =	2700 =	2270 =	3260 =
Selenium	ug/L	2.6 U	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U
Silver	ug/L	2.8 U	4.2 J	3.6 J	2 J	3.3 J	1.9 J	2.9 J	0.8 J	3.9 J	1.5 J	4.8 J	1.6 J	3 J	0.6 U
Sodium	ug/L	35600 =	12000 J	43100 =	9810 J	43100 =	13200 J	42200 =	14000 J	37800 =	10700 J	20100 =	10000 J	20000 =	14200 J
Thallium	ug/L	9.5 J	3.4 U	8.7 J	3.4 U	4.5 J	3.4 U	8.1 J	3.4 U	9.3 J	3.4 U	6.2 J	3.4 U	7.3 J	3.4 U
Vanadium	ug/L	1.5 U	1.9 J	1.6 U	1.5 U	1.6 U	1.5 U	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.6 U	1.5 U
Zinc	ug/L	1.7 U	2.2 J	1.8 J	2.3 J	4.3 J	2.3 J	2.3 J	4.2 J	4.4 J	4.2 J	2.7 J	3.3 J	2 J	1.6 J

Iowa Army Ammunition Plant

Dissolved M. ...ls in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BCT01	BCT01	LC01	LC01	LC02	LC02	LC03	LC03	LC04	LC04	LC05	LCT02	LCT02	LCT03
Sample Date		5/23/00	9/27/00	5/24/00	9/27/00	5/25/00	9/27/00	5/24/00	9/27/00	5/26/00	9/27/00	9/27/00	5/25/00	9/27/00	5/26/00
Parameter	**Units**														
Aluminum	ug/L	48 U	72.7 U	72.7 U	19.4 UJ	72.7 U	72.7 U	51.6 J	26.5 J	72.7 U	72.7 U	72.7 U	77.7 J	72.7 U	72.7 U
Antimony	ug/L	10.3 J	5.5 U	5.5 U	2.9 U	8.3 U	5.5 U	9.6 J	2.9 U	8.3 U	5.5 U	5.5 U	8.3 U	5.5 U	5.5 U
Arsenic	ug/L	2.5 U	4.4 U	4.4 U	4.6 J	4.4 U	4.4 U	2.4 U	4 J	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
Barium	ug/L	102 =	88 =	125 J	106 J	92.7 =	75.6 =	125 =	102 J	120 =	80.9 =	48.6 =	117 =	143 =	219 =
Beryllium	ug/L	0.3 U	0.5 U	0.8 J	0.3 U	0.5 J	0.5 U	0.3 U	0.3 U	0.7 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cadmium	ug/L	0.4 U	0.7 U	0.7 U	0.2 J	0.7 U	0.7 U	0.4 U	0.3 J	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Calcium	ug/L	47200 =	35400 =	48600 =	52000 J	49000 =	39800 =	52300 =	48100 J	57400 =	41200 =	27100 =	70500 =	90700 =	94700 =
Chromium	ug/L	2.5 J	1.8 J	0.7 U	1.1 U	1.8 U	35.7 =	1.9 J	1.1 U	1.8 U	2.8 J	0.7 U	1.8 U	2.9 J	0.7 U
Cobalt	ug/L	3 U	1.1 U	1.1 U	1 U	3 U	1.1 U	4.2 J	1 U	3 U	1.1 U	1.3 J	3 U	1.1 U	1.1 J
Copper	ug/L	2.6 U	3.6 J	1.3 U	2.2 J	2.6 U	2.8 J	2.6 U	2 J	2.6 U	4.3 J	3.3 J	2.6 U	2.8 J	1.3 U
Iron	ug/L	28.4 U	23.3 U	23.3 U	20.3 UJ	26.6 U	59.9 =	26.6 U	20.3 UJ	26.6 U	23.3 U	23.3 U	26.6 U	23.3 U	23.3 U
Lead	ug/L	1.7 U	1.3 U	2.6 U	1.3 U	2.6 J	1.3 U	2.1 J	1.3 U	2.6 U	2.1 J	1.3 U	4.9 J	1.3 U	2.6 U
Magnesium	ug/L	19600 =	12600 =	19700 =	18200 J	20100 =	15500 =	21000 =	15700 J	22600 =	13000 =	13900 =	29500 =	36000 =	40300 =
Manganese	ug/L	1.9 J	18.6 =	6.6 J	45 J	12.6 =	15.3 =	12.8 =	12.8 J	1.4 U	1.5 J	1.5 J	92.7 =	508 =	1240 J
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	1.7 U	1.6 U	2.3 J	1 U	2.7 J	17.8 =	1.7 U	1 U	2.8 J	1.6 J	2.2 J	4.8 J	2.7 J	2.6 J
Potassium	ug/L	778 =	1630 J	1160 J	6320 =	2800 =	2810 =	2100 =	7470 =	2240 =	6810 =	2730 =	1330 =	2320 =	1750 J
Selenium	ug/L	2.6 U	3.3 U	4.4 J	3.8 J	4.1 U	3.3 U	2.6 U	3.3 U	4.1 U	3.3 U	3.3 U	4.4 J	3.3 U	4.7 J
Silver	ug/L	2.8 U	1.8 J	0.6 U	1.7 U	2.8 U	1 J	2.8 U	1.7 U	2.8 U	1.7 J	0.6 U	2.8 U	1.9 J	0.6 U
Sodium	ug/L	12700 =	6410 J	14200 =	21000 J	15900 =	8330 J	13800 =	19200 J	14300 =	15000 J	9310 J	13700 =	14800 J	18800 =
Thallium	ug/L	7.6 J	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	4.5 U	3.4 U	6.3 U	3.4 U	3.4 U	6.3 U	3.4 U	6.3 U
Vanadium	ug/L	1.5 U	1.5 U	1.5 U	5.9 =	1.5 U	1.5 U	1.6 U	4.4 J	1.8 J	1.5 J	1.5 J	1.5 U	1.5 U	1.5 U
Zinc	ug/L	1.7 U	4.9 J	4.2 J	2 J	1.7 U	2.9 J	1.7 U	0.8 J	1.7 U	2.2 J	3.3 J	36.6 =	6.2 J	2.9 J

Iowa Army Ammunition Plant

Dissolved M ils in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		LCT03	LCT04	LCT04	LCT05	LCT05	LCT06	LCT06	LCT07	LCT07	LCT08	LCT09	SC02	SC02	SC03
Sample Date		9/27/00	5/26/00	9/27/00	5/26/00	9/27/00	5/26/00	9/27/00	5/26/00	9/28/00	9/28/00	9/27/00	5/25/00	9/26/00	5/25/00
Parameter	**Units**														
Aluminum	ug/L	21.4 J	72.7 U	21.4 J	72.7 U	19.4 UJ	72.7 U	72.7 U	72.7 U	19.4 UJ	19.4 UJ	22.5 J	72.7 U	72.7 U	72.7 U
Antimony	ug/L	2.9 U	5.5 U	2.9 U	5.5 U	2.9 U	5.5 U	5.5 U	5.5 U	2.9 U	2.9 U	2.9 U	5.5 U	5.5 U	8.3 U
Arsenic	ug/L	2.2 U	4.9 J	2.2 U	4.4 U	2.2 U	4.4 U	4.4 U	4.4 U	2.2 U	2.2 U	2.2 J	4.4 U	4.4 U	4.4 U
Barium	ug/L	150 J	132 =	101 J	97.3 =	106 J	159 =	58.8 =	86.8 =	56 J	57.5 J	61.5 J	92.6 J	94.1 =	119 =
Beryllium	ug/L	0.3 U	0.9 J	0.3 U	0.5 J	0.3 U	0.7 J	0.5 U	0.6 J	0.3 U	0.3 U	0.3 U	0.7 J	0.5 U	0.6 J
Cadmium	ug/L	0.2 U	0.7 U	0.2 J	0.7 U	0.2 U	0.7 U	0.7 U	0.7 U	0.2 U	0.2 J	0.2 U	0.7 U	0.7 U	0.7 U
Calcium	ug/L	79400 J	82400 =	74900 J	51600 =	52400 J	84200 =	70300 =	55400 =	51500 J	77200 J	76200 J	65400 =	41600 =	63500 =
Chromium	ug/L	1.1 U	0.7 U	1.1 U	0.7 U	1.1 U	0.7 U	3.3 J	0.7 U	1.1 U	1.1 U	1.1 U	0.7 U	1.5 J	1.8 U
Cobalt	ug/L	1 U	1.2 J	1 U	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1 U	1 U	1 U	1.1 U	1.6 J	3 U
Copper	ug/L	1.7 J	1.3 U	1.9 J	1.3 U	1.1 U	1.3 U	2.2 J	1.3 U	1.1 U	1.7 J	1.1 U	1.3 U	4.8 J	2.6 U
Iron	ug/L	20.3 UJ	23.3 U	20.3 UJ	23.3 U	20.3 UJ	23.3 U	23.3 U	23.3 U	20.3 UJ	20.3 UJ	20.3 UJ	23.3 U	23.3 U	26.6 U
Lead	ug/L	1.3 U	2.6 U	1.3 U	2.6 U	1.3 U	2.6 U	1.3 U	2.6 U	1.3 U	1.3 U	1.3 U	3.3 J	1.3 U	3.1 J
Magnesium	ug/L	28300 J	33700 =	19800 J	18800 =	15800 J	32100 =	18400 =	23100 =	18600 J	18900 J	18500 J	21500 =	13300 =	22900 =
Manganese	ug/L	0.6 UJ	269 J	9 J	5.3 J	4.3 J	43.4 J	13.2 =	99 J	6.6 J	146 J	420 J	166 =	90.7 =	136 =
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	1 U	4 J	1 U	2 J	1 U	2.3 J	2.4 J	4.4 J	1 U	1.3 J	1.7 J	5.1 J	3.7 J	5.1 J
Potassium	ug/L	3960 =	3230 J	5650 =	388 J	1070 J	1790 J	3360 =	2290 J	5610 =	3710 =	3850 =	12400 J	7310 =	7670 =
Selenium	ug/L	3.3 U	4.1 U	4.8 J	4.1 U	3.3 U	4.2 J	3.3 U	4.1 U	3.3 U	3.3 U	3.7 J	4.9 J	3.3 U	4.2 J
Silver	ug/L	1.7 U	0.6 U	1.7 U	0.6 U	1.7 U	0.6 U	2 J	0.6 U	1.7 U	1.7 U	1.7 U	0.6 U	1.1 J	2.8 U
Sodium	ug/L	11400 J	16900 =	7400 J	13400 =	10800 J	15100 =	30200 J	21500 =	13700 J	29900 J	32000 J	64000 =	40000 J	42000 =
Thallium	ug/L	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	3.4 U	4.4 J	6.3 U	3.4 U	6.3 U
Vanadium	ug/L	4.2 J	2 J	3.7 J	1.5 U	3.8 J	1.8 J	1.5 U	1.5 U	3.5 J	4.4 J	5.2 =	1.6 J	2.4 J	2.5 J
Zinc	ug/L	3.2 J	1.4 J	2 J	4.9 J	7.8 J	1.1 J	5.3 J	0.9 J	2.4 J	3.2 J	3.2 J	10.9 J	4.1 J	2.4 J

Iowa Army Ammunition Plant

Dissolved M .ls in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		SC03	SC04	SC04	SC06	SC06	SC07	SC07	SC08	SC08	SC09	SC09	SC10	SC10	SC11
Sample Date		9/25/00	5/24/00	9/25/00	5/24/00	9/25/00	5/25/00	9/27/00	5/25/00	9/26/00	5/25/00	9/26/00	5/25/00	9/26/00	5/25/00
Parameter	**Units**														
Aluminum	ug/L	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U
Antimony	ug/L	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	8.3 U	5.5 U	5.5 U	5.5 U	8.3 U	5.5 U	8.3 U	5.5 U	8.3 U
Arsenic	ug/L	4.4 U	4.8 J	6.8 J	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.5 J	4.4 U	4.4 U	4.4 U	4.4 U
Barium	ug/L	75.3 =	116 J	90.7 =	115 J	89 =	123 =	106 =	123 J	59.2 =	131 =	62.2 =	90.8 =	82.2 =	90.8 =
Beryllium	ug/L	0.5 U	0.8 J	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	0.7 J	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	0.6 J
Cadmium	ug/L	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Calcium	ug/L	36500 =	61500 =	44400 =	63400 =	42500 =	62300 =	51300 =	61200 =	28000 =	61800 =	26800 =	64600 =	39000 =	64700 =
Chromium	ug/L	2.8 J	0.7 U	2.5 J	0.7 U	2.6 J	1.8 U	2.5 J	0.7 U	3.1 J	1.8 U	2.2 J	1.8 U	2.9 J	1.8 U
Cobalt	ug/L	1.1 U	1.4 J	3.3 J	1.1 U	2 J	3 U	1.1 J	1.1 U	1.1 U	3 U	1.1 U	3 U	1.1 U	3 U
Copper	ug/L	4.2 J	1.7 J	3.9 J	1.3 U	5 J	2.6 U	8.2 J	1.3 U	4.1 J	2.6 U	3.3 J	2.6 U	3.2 J	2.6 U
Iron	ug/L	23.3 U	23.3 U	23.3 U	23.3 U	23.3 U	26.6 U	23.3 U	23.3 U	23.3 U	26.6 U	23.3 U	26.6 U	23.3 U	26.6 U
Lead	ug/L	1.3 U	2.6 U	1.3 U	2.6 U	1.3 U	2.6 U	1.3 U	2.6 U	1.3 U	2.6 U	1.3 U	2.6 U	2.1 J	2.6 U
Magnesium	ug/L	11300 =	22300 =	14000 =	23300 =	13300 =	25500 =	17900 =	24500 =	9950 =	24800 =	9500 =	21400 =	12400 =	21400 =
Manganese	ug/L	61.6 =	94.5 =	65.3 =	96.6 =	60.9 =	30.6 =	30.2 =	24.3 =	11.2 =	13.4 =	4.5 J	103 =	81.2 =	153 =
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	2.2 J	5.5 J	4.2 J	4.4 J	4.1 J	2.9 J	3.1 J	3.7 J	1.6 U	3.9 J	2.6 J	4.4 J	3.2 J	4.5 J
Potassium	ug/L	7110 =	6970 J	8020 =	6770 J	8120 =	2890 =	2310 =	2870 J	1230 J	2780 =	1270 J	12600 =	7650 =	12500 =
Selenium	ug/L	3.3 U	7.8 =	3.6 J	4.1 U	3.3 U	4.1 U	3.3 U	4.1 U	3.3 U	4.8 J	3.3 U	4.1 U	3.3 U	4.1 U
Silver	ug/L	2.5 J	0.6 U	1.5 J	0.6 U	2.1 J	2.8 U	1.4 J	0.6 U	3 J	2.8 U	1.9 J	2.8 U	2.8 J	2.8 U
Sodium	ug/L	27000 J	34000 =	34200 J	34500 =	31600 J	28300 =	24200 J	24000 =	13600 J	24800 =	14000 J	65600 =	41800 J	66100 =
Thallium	ug/L	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U
Vanadium	ug/L	1.5 U	2.4 J	2.1 J	2.4 J	3.6 J	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Zinc	ug/L	3.1 J	7.8 J	3 J	3.1 J	2.8 J	5.6 J	2.7 J	1.3 J	2.1 J	1.7 U	3.7 J	8.4 J	4.4 J	14.4 =

Iowa Army Ammunition Plant

Dissolved M .ls in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		SC11	SC12	SC13	SCT01	SCT01	SCT02	SCT03	SRT01	SRT01	SRT02	SRT02
Sample Date		9/26/00	9/26/00	9/26/00	5/25/00	9/25/00	9/26/00	5/25/00	5/25/00	9/27/00	5/25/00	9/27/00
Parameter	**Units**											
Aluminum	ug/L	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	20.9 J	72.7 U	21.2 J
Antimony	ug/L	5.5 U	5.5 U	5.5 U	5.5 U	6.5 J	5.5 U	5.5 U	5.5 U	2.9 U	8.3 U	2.9 U
Arsenic	ug/L	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	2.2 U	4.4 U	2.5 J
Barium	ug/L	81.7 =	88.7 =	53.7 =	109 =	99.4 =	32.2 =	336 =	74.7 J	70.8 J	74.2 =	74.3 J
Beryllium	ug/L	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	0.5 U	0.7 J	0.7 J	0.3 U	0.5 U	0.3 U
Cadmium	ug/L	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.2 J	0.7 U	0.2 U
Calcium	ug/L	37100 =	38100 =	25500 =	60700 =	51300 =	51300 =	74900 =	74000 =	63200 J	88000 =	75300 J
Chromium	ug/L	2.1 J	0.9 J	2.5 J	0.7 U	2.1 J	1.6 J	0.7 U	0.7 U	1.1 U	1.8 U	1.1 U
Cobalt	ug/L	1.1 U	2.9 J	1.1 U	1.1 U	1.8 J	1.1 U	1.1 U	1.1 U	1 U	3 U	1 U
Copper	ug/L	3.7 J	3.7 J	4 J	1.3 U	5.1 J	3.1 J	1.3 U	1.3 U	1.1 U	2.6 U	1.1 U
Iron	ug/L	23.3 U	23.3 U	23.3 U	23.3 U	23.3 U	23.3 U	23.3 U	23.3 U	20.3 UJ	26.6 U	20.3 UJ
Lead	ug/L	1.3 U	1.3 U	1.3 U	2.6 U	1.3 U	1.3 U	2.6 U	2.6 U	1.3 U	3 J	1.3 U
Magnesium	ug/L	11900 =	12200 =	9150 =	25400 =	18800 =	15500 =	22300 =	23700 =	20700 J	31000 =	25700 J
Manganese	ug/L	79.1 =	97.3 =	8 J	24.5 J	9.8 J	87.7 =	546 J	33.1 =	21.3 J	61.3 =	0.6 UJ
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	2.5 J	4 J	1.6 U	3.6 J	4.4 J	3.4 J	4.5 J	2.9 J	1 U	2.2 J	1 U
Potassium	ug/L	6480 =	6720 =	1100 J	4020 J	9090 =	15300 =	2990 J	4080 J	5740 =	1590 =	3080 =
Selenium	ug/L	3.3 U	3.3 U	3.3 U	4.5 J	3.3 U	3.3 U	4.1 U	4.1 U	3.3 U	4.5 J	6.3 =
Silver	ug/L	2.4 J	0.6 J	0.9 J	0.6 U	1.4 J	1.3 J	0.6 U	0.6 U	1.7 U	2.8 U	1.7 U
Sodium	ug/L	38200 J	37400 J	13900 J	11900 =	30800 J	70300 J	22600 =	27200 =	25000 J	5390 =	4870 J
Thallium	ug/L	3.4 U	3.4 U	3.4 U	6.3 U	3.4 U	3.4 U	6.3 U	6.3 U	3.4 U	6.3 U	3.4 U
Vanadium	ug/L	1.5 U	2.3 J	1.5 U	1.5 U	2.4 J	1.5 U	1.5 U	1.5 J	2.5 J	1.5 U	3.5 J
Zinc	ug/L	4.6 J	5.5 J	1.4 J	0.3 J	1.9 J	7.6 J	0.5 J	3.2 J	3.2 J	13.6 =	1 J

Iowa Army Ammunition Plant

Total Met[illegible]n Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC01	BC01	BC02	BC02	BC03	BC03	BC04	BC04	BC05	BC05	BC07	BC07	BC08	BC08
Sample Date		5/23/00	9/27/00	5/23/00	9/26/00	5/23/00	9/26/00	5/24/00	9/26/00	5/24/00	9/25/00	5/24/00	9/25/00	5/24/00	9/25/00
Parameter	**Units**														
Aluminum	ug/L	1400 =	1600 J	726 =	460 J	1480 =	454 J	1580 =	302 J	401 =	696 J	156 J	1520 J	163 J	2560 J
Antimony	ug/L	8.3 U	5.5 U	8.3 U	2.5 U	8.3 U	2.5 U	8.3 U	2.5 U	5.5 U	2.5 U	8.3 U	2.5 U	5.5 U	2.5 U
Arsenic	ug/L	2.5 U	4.4 U	2.5 U	2 U	4.4 J	2 U	2.4 U	2 U	4.4 U	2 U	2.4 U	2 U	4.4 U	2 U
Barium	ug/L	110 =	121 J	130 =	102 J	152 =	107 J	136 =	94.7 J	117 J	102 J	120 =	104 J	119 J	108 J
Beryllium	ug/L	0.3 U	1.7 J	0.3 U	0.2 J	0.3 U	0.2 U	0.3 U	0.2 U	0.5 U	0.2 J	0.3 U	0.2 U	0.5 U	0.2 U
Cadmium	ug/L	0.4 U	0.7 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.7 U	0.4 U	0.4 U	0.4 U	0.7 U	0.4 U
Calcium	ug/L	35600 =	44600 J	41700 =	45200 =	45900 =	46000 =	52400 =	49100 =	50800 =	46500 =	55100 =	43700 =	58300 =	41900 =
Chromium	ug/L	4 J	3.9 J	2.5 U	3.9 J	3.3 J	3.7 J	2.1 J	3.2 J	2.5 J	3.3 J	1.8 U	4 J	1.9 J	5.2 J
Cobalt	ug/L	3 U	1.1 U	3 U	1 U	3 U	1 U	3 U	1 U	1.1 U	1 U	3 U	1 U	1.1 U	1 U
Copper	ug/L	3.1 J	1.3 U	4.3 J	3 J	10.3 =	2.5 J	2.8 J	1.9 J	3 J	2.6 J	2.6 U	3.2 J	1.6 J	4.5 J
Iron	ug/L	1380 =	1730 J	581 =	432 J	1240 =	466 J	1280 =	239 J	361 =	654 J	98.3 J	1490 J	134 =	2600 J
Lead	ug/L	1.7 U	2.6 U	1.7 U	1.2 U	2.6 J	1.2 U	1.7 J	1.6 J	3.6 J	2.2 J	1.7 J	1.4 J	3 J	2.2 J
Magnesium	ug/L	18100 =	14300 J	20300 =	15200 =	20800 =	15200 =	20500 =	17000 =	19700 =	15000 =	20300 =	13900 =	21500 =	13200 =
Manganese	ug/L	128 =	166 J	45.9 =	26.6 =	86.5 =	52.2 =	123 =	37.1 =	46.6 =	40.1 =	40.3 =	78 =	74.4 =	109 =
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	1.7 U	1.6 U	1.7 U	1.8 J	2.1 J	1.6 J	1.7 U	1 U	1.6 U	1.6 J	1.7 U	2.1 J	1.6 U	3.2 J
Potassium	ug/L	1820 =	2910 =	1680 =	2990 J	2230 =	3160 J	2690 =	2570 J	2180 J	3300 J	2040 =	4290 J	2150 J	4910 J
Selenium	ug/L	2.6 U	3.3 U	2.6 U	2.7 U	2.6 U	2.7 U	3.7 J	2.7 U	4.1 U	3.3 J	2.6 U	2.7 U	4.6 U	2.7 U
Silver	ug/L	2.8 U	0.6 U	2.8 U	2 J	2.8 U	1.1 J	2.8 U	1.1 U	0.6 U	1.1 U	2.8 U	1.1 U	0.6 U	1.1 U
Sodium	ug/L	33300 =	18300 J	39600 =	13300 J	41600 =	12900 J	44700 =	16500 J	29400 =	14300 J	24700 =	13400 J	18000 =	11600 J
Thallium	ug/L	4.5 U	3.4 U	4.5 U	3.5 U	4.5 U	3.5 U	4.5 U	3.5 U	6.3 U	3.5 U	4.5 U	3.5 U	6.3 U	3.5 U
Vanadium	ug/L	3.8 J	4.3 J	1.5 U	2.9 J	3 J	3.8 J	4.5 J	2.6 J	1.8 J	2.3 J	1.6 U	6.5 =	1.5 J	8.2 =
Zinc	ug/L	10.2 =	14.8 J	18.9 =	5.3 J	8.7 J	6.1 J	10.3 =	6.3 J	6.3 J	10.1 J	3.2 J	10.2 J	10.1 J	12.6 J

Iowa Army Ammunition Plant

Total Mel in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC09	BC09	BC10	BC10	BC11	BC11	BC12	BC12	BC13	BC13	BC14	BC14	BC15	BC15
Sample Date		5/24/00	9/27/00	5/24/00	9/27/00	5/24/00	9/27/00	5/24/00	9/27/00	5/23/00	9/27/00	5/23/00	9/27/00	5/23/00	9/27/00
Parameter	**Units**														
Aluminum	ug/L	587 =	1080 J	805 =	386 J	921 =	385 J	828 =	391 J	522 =	364 J	434 =	220 J	1480 =	609 J
Antimony	ug/L	8.3 U	2.9 U	5.5 U	2.9 U	8.3 U	2.9 U	8.3 U	5.5 U	8.3 U	5.5 U	8.3 U	5.5 U	8.3 U	5.5 U
Arsenic	ug/L	2.5 U	2.2 U	4.4 U	2.2 U	2.4 U	2.2 U	2.9 J	4.4 U	4.2 J	4.4 U	2.4 U	4.4 U	2.5 U	4.4 U
Barium	ug/L	136 =	140 J	130 J	115 J	130 =	127 J	124 =	93.5 J	125 =	93.3 J	122 =	84.9 J	154 =	110 J
Beryllium	ug/L	0.3 U	0.3 U	0.5 U	0.3 U	0.3 U	0.3 U	0.3 U	1.5 J	0.3 U	2.2 J	0.3 U	2.1 J	0.3 U	0.5 U
Cadmium	ug/L	0.4 U	0.2 U	0.7 U	0.2 U	0.4 U	0.2 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U
Calcium	ug/L	51900 =	67300 J	53900 =	53600 J	54300 =	55200 J	47000 =	43800 J	44600 =	43100 J	49600 =	39300 J	44500 =	45300 J
Chromium	ug/L	2.5 U	2 J	3.1 J	5.3 J	2.2 J	1.1 U	1.8 U	3.8 J	2.5 U	1.6 J	1.8 U	1.6 J	3.3 J	0.8 J
Cobalt	ug/L	3 U	1 U	1.1 U	1 U	3 U	1 U	3 U	1.1 U	3 U	1.1 U	3 U	1.1 U	3 U	1.1 U
Copper	ug/L	2.6 U	1.9 J	2.3 J	1.9 J	2.6 U	1.1 U	2.6 U	1.3 U	3.1 J	1.3 U	2.6 U	1.3 U	3.7 J	1.3 U
Iron	ug/L	356 =	798 J	679 =	289 J	729 =	333 J	687 =	339 J	407 =	363 J	341 =	224 J	1310 =	570 J
Lead	ug/L	1.7 U	27.1 =	4.4 J	1.3 U	2.4 J	1.3 U	1.7 U	2.6 U	1.7 U	2.6 U	2.2 J	2.6 U	1.7 U	2.6 U
Magnesium	ug/L	23200 =	18100 J	19700 =	15400 J	19400 =	16800 J	19800 =	13800 J	20600 =	13800 J	20900 =	12500 J	21400 =	15100 J
Manganese	ug/L	13.2 =	50.7 J	74.1 =	51.5 J	69.9 =	60.6 J	66.4 =	38.6 J	34.6 =	33.2 J	36.7 =	29.7 J	113 =	30.3 J
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	1.7 U	1 U	1.6 U	1 U	8 J	1 U	1.7 U	1.6 U	1.7 U	1.6 U	1.7 U	1.6 U	1.7 U	1.6 U
Potassium	ug/L	520 =	1800 J	1550 J	2720 =	1540 =	2820 =	1600 =	2650 =	1490 =	2350 =	1530 =	2170 =	1960 =	2730 =
Selenium	ug/L	2.6 U	3.3 U	4.1 U	3.3 U	3.7 J	3.3 U	2.6 U	3.3 U	3.8 J	3.3 U	2.6 U	3.3 U	2.6 U	3.3 U
Silver	ug/L	2.8 U	1.7 U	0.6 U	1.7 U	2.8 U	1.7 U	2.8 U	1.8 J	2.8 U	0.6 U	2.8 U	0.6 U	2.8 U	0.6 U
Sodium	ug/L	12400 =	10400 J	19600 =	20600 J	22900 =	21200 J	29300 =	16500 J	34500 =	17000 J	36800 =	16000 J	41700 =	15600 J
Thallium	ug/L	4.5 U	3.4 U	6.3 U	3.4 U	4.5 U	3.4 U	4.5 U	3.4 U	4.5 U	3.4 U	4.5 U	3.4 U	4.5 U	3.4 U
Vanadium	ug/L	1.5 U	6.5 =	2.7 J	5.4 =	4.1 J	4.9 J	3.6 J	1.5 U	1.5 U	1.5 U	2.2 J	2.1 J	4.3 J	2.4 J
Zinc	ug/L	7.5 J	14.1 =	4.4 J	6.6 J	8.5 J	12.2 =	7.7 J	5.2 J	14.6 =	4.1 J	4.1 J	4.7 J	8.7 J	7.4 J

Iowa Army Ammunition Plant

Total Metal Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC16	BC16	BC17	BC17	BC18	BC18	BC19	BC19	BC20	BC20	BC21	BC21	BC22	BC22
Sample Date		5/23/00	9/27/00	5/23/00	9/26/00	5/24/00	9/26/00	5/23/00	9/26/00	5/23/00	9/25/00	5/23/00	9/25/00	5/24/00	9/25/00
Parameter	**Units**														
Aluminum	ug/L	6020 =	677 J	1460 =	484 J	1170 =	377 J	2070 =	536 J	757 =	844 J	369 =	971 J	222 =	2520 J
Antimony	ug/L	8.3 U	5.5 U	8.3 U	2.5 U	8.3 U	2.5 U	8.3 U	2.5 U	8.3 U	2.5 U	8.3 U	2.5 U	8.3 U	2.5 U
Arsenic	ug/L	5 J	4.4 U	2.4 U	2 U	2.4 U	2 U	2.4 U	2 U	2.5 U	2 U	3.5 J	2 U	2.4 U	2 U
Barium	ug/L	224 =	112 J	157 =	108 J	137 =	97.8 J	149 =	99.3 J	136 =	102 J	116 =	98.3 J	129 =	113 J
Beryllium	ug/L	0.3 U	0.5 U	0.3 U	0.2 J	0.3 U	0.2 J	0.3 U	0.2 U	0.3 U	0.2 J	0.3 U	0.2 J	0.3 U	0.2 U
Cadmium	ug/L	0.4 U	0.7 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Calcium	ug/L	43300 =	44800 J	52200 =	46500 =	53300 =	49400 =	54400 =	49500 =	51100 =	45400 =	46900 =	43000 =	56400 =	44600 =
Chromium	ug/L	10.4 =	1.1 J	1.8 J	2.8 J	3.3 J	3.6 J	3.5 J	2.4 J	2.5 U	3.7 J	2.5 U	3.6 J	1.8 U	3.8 J
Cobalt	ug/L	3.4 J	1.1 U	3 U	1 U	3 U	1 U	3 U	1 U	3 U	1 U	3 U	1 U	3 U	1 U
Copper	ug/L	7.5 J	1.3 U	2.8 J	2.3 J	2.6 U	2.1 J	5.2 J	2.1 J	2.6 J	3 J	2.6 U	3.2 J	2.6 U	4.1 J
Iron	ug/L	6110 =	668 J	1240 =	477 J	909 =	328 J	1820 =	460 J	561 =	882 J	228 =	946 J	181 =	2170 J
Lead	ug/L	5.3 =	2.6 U	1.7 U	2.1 J	3.4 J	1.2 U	3 J	1.8 J	1.7 U	1.2 U	1.7 U	1.7 J	1.7 U	2.3 J
Magnesium	ug/L	21200 =	15000 J	21600 =	15400 =	20800 =	17000 =	21300 =	17000 =	21700 =	14500 =	19600 =	13800 =	20700 =	14600 =
Manganese	ug/L	352 =	37.3 J	134 =	39.2 =	118 =	46.8 =	194 =	47.1 =	52.6 =	45.5 =	37.6 =	50.9 =	69.1 =	86.8 =
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	6 J	1.6 U	1.7 U	1.7 J	1.7 U	1.2 J	2.2 J	1 U	1.7 U	1.2 J	1.7 U	2 J	1.7 U	2.2 J
Potassium	ug/L	2820 =	2880 =	2560 =	3110 J	2450 =	2650 J	2650 =	2710 J	2410 =	3630 J	2140 =	3600 J	2240 =	4570 J
Selenium	ug/L	2.6 U	3.3 U	2.6 U	2.7 U	2.6 U	3.1 J	2.6 U	3.7 J	2.6 U	2.7 U	2.6 U	2.7 U	2.7 J	2.7 U
Silver	ug/L	2.8 U	0.6 U	2.8 U	1.1 U	2.8 U	1.1 U	2.8 U	1.1 U	2.8 U	1.1 U	2.8 U	1.1 U	2.8 U	1.1 U
Sodium	ug/L	38500 =	14500 J	51900 =	13300 J	46800 =	16300 J	46600 =	16400 J	42900 =	13700 J	20200 =	12500 J	21500 =	17000 J
Thallium	ug/L	4.5 U	3.4 U	4.5 U	3.5 U	4.5 U	3.5 U	4.5 U	3.5 U	4.5 U	3.5 U	4.5 U	3.5 U	4.5 U	3.5 U
Vanadium	ug/L	13.4 =	1.5 U	4.3 J	2.1 U	5.4 J	2.3 J	5.9 J	2.9 J	1.7 J	4.4 J	1.5 U	2.4 J	1.6 U	7.3 =
Zinc	ug/L	23.9 =	6.5 J	9.4 J	7.4 J	8.9 J	7.5 J	18.6 =	32.3 J	19.2 =	7.6 J	4.6 J	7.4 J	7.5 J	12.6 J

Iowa Army Ammunition Plant

Total Met[illegible]n Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BCT01	BCT01	LC01	LC01	LC02	LC02	LC03	LC03	LC04	LC04	LC05	LCT02	LCT02	LCT03
Sample Date		5/23/00	9/27/00	5/24/00	9/27/00	5/25/00	9/27/00	5/24/00	9/27/00	5/26/00	9/27/00	9/27/00	5/25/00	9/27/00	5/26/00
Parameter	**Units**														
Aluminum	ug/L	1030 =	402 J	148 J	1030 J	510 =	1200 J	483 =	493 J	260 =	461 J	1700 J	1040 =	5340 J	385 N
Antimony	ug/L	8.3 U	5.5 U	5.5 U	2.9 U	8.3 U	5.5 U	8.3 U	3.2 J	8.3 U	5.5 U	5.5 U	8.3 U	5.5 U	5.5 U
Arsenic	ug/L	3.7 J	5.4 J	4.4 U	2.2 U	4.4 U	4.4 U	2.4 U	2.2 U	4.4 U	4.4 U	5.4 J	4.4 U	4.4 U	4.4 U
Barium	ug/L	123 =	103 J	129 J	132 J	106 =	81.5 J	135 =	121 J	128 =	75.2 J	76.9 J	132 =	239 J	245 =
Beryllium	ug/L	0.3 U	0.5 U	0.5 U	0.3 U	0.5 U	2 J	0.3 U	0.3 U	0.5 U	2.3 J	2.4 J	0.5 U	2.3 J	0.5 U
Cadmium	ug/L	0.4 U	0.7 U	0.7 U	0.2 U	0.7 U	0.7 U	0.4 U	0.2 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Calcium	ug/L	47900 =	38000 J	48500 =	58500 J	45300 =	40300 J	57600 =	54100 J	59200 =	37200 J	35500 J	69000 =	116000 J	96000 =
Chromium	ug/L	2.6 J	0.7 U	1.2 J	1.1 U	1.8 U	3 J	1.8 U	1.1 U	1.8 U	1.4 J	2 J	2 J	6.6 J	2.1 J
Cobalt	ug/L	3 U	2.2 J	1.1 U	1 U	3 U	1.1 U	3 U	1 U	3 U	2 J	1.9 J	3 U	6.2 =	1.5 J
Copper	ug/L	4.9 J	1.3 U	1.8 J	2 J	2.6 U	1.3 U	2.6 J	2.7 J	10.2 =	1.3 U	1.4 J	2.8 J	5.1 J	1.3 U
Iron	ug/L	719 =	336 J	114 =	1020 J	447 =	1420 J	411 =	406 J	170 =	470 J	2150 J	875 =	7700 J	2110 =
Lead	ug/L	1.7 U	2.6 U	2.6 U	1.3 U	2.6 U	2.6 U	2.4 J	1.7 J	2.6 U	2.6 U	4.8 J	2.6 U	9 =	3.2 U
Magnesium	ug/L	21500 =	13900 J	19600 =	20400 J	19700 =	15100 J	22400 =	17800 J	22300 =	11600 J	14800 J	30300 =	40600 J	40000 =
Manganese	ug/L	26.4 =	55.4 J	16.1 =	92 J	89.1 =	157 J	41.1 =	44.1 J	27.2 =	11.4 J	239 J	99.3 =	1330 J	1640 J
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	1.7 U	1.9 J	1.6 U	1 U	1.7 U	1.6 U	1.7 U	1 U	1.7 U	2 J	4.8 J	2.7 J	10.9 =	1.6 U
Potassium	ug/L	919 =	1840 J	1050 J	7230 =	2710 =	2670 =	2040 =	8580 =	2140 =	5660 =	2690 =	1470 =	3020 =	1810 J
Selenium	ug/L	2.6 U	3.3 U	4.1 U	3.3 U	4.1 U	3.3 U	4 J	3.3 U	4.1 U	3.3 U	3.8 J	4.1 U	3.3 U	4.1 U
Silver	ug/L	2.8 U	0.6 U	0.6 U	1.7 U	2.8 U	0.7 J	2.8 U	1.7 U	2.8 U	0.6 U	0.6 U	2.8 U	0.6 U	0.6 U
Sodium	ug/L	13700 =	8330 J	13500 =	24200 J	16500 =	1640 J	15100 =	22200 J	15900 =	18700 J	12900 J	15200 =	19800 J	17400 =
Thallium	ug/L	4.5 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	4.5 U	3.4 U	6.3 U	3.4 U	3.4 U	6.3 U	3.4 U	6.3 U
Vanadium	ug/L	2 J	3.2 J	1.5 U	9.7 =	1.8 J	2.7 J	4.1 J	7.2 =	2.4 J	3.6 J	5.9 =	2.5 J	15 =	1.5 U
Zinc	ug/L	10.9 =	10 J	3.1 J	23.4 =	3.8 J	7.8 J	4.4 J	12.9 =	9.1 J	6.1 J	15.5 J	7 J	33.2 J	15.3 =

Iowa Army Ammunition Plant

Total Met[illegible] in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		LCT03	LCT04	LCT04	LCT05	LCT05	LCT06	LCT06	LCT07	LCT07	LCT08	LCT09	SC02	SC02	SC03
Sample Date		9/27/00	5/26/00	9/27/00	5/26/00	9/27/00	5/26/00	9/27/00	5/26/00	9/28/00	9/28/00	9/27/00	5/25/00	9/26/00	5/25/00
Parameter	**Units**														
Aluminum	ug/L	62000 J	419 N	12700 J	1170 N	1870 J	1410 N	139 J	3970 N	1020 J	1100 J	1310 J	93.6 J	26600 J	978 =
Antimony	ug/L	6.4 J	5.5 U	2.9 U	5.5 U	2.9 U	5.5 U	5.5 U	5.5 U	2.9 U	2.9 U	2.9 U	5.5 U	2.5 U	8.3 U
Arsenic	ug/L	23.7 =	4.4 U	5.2 J	4.4 U	2.2 U	4.4 U	6.1 J	4.4 U	2.9 J	2.2 U	2.2 J	4.4 U	7.7 J	4.4 U
Barium	ug/L	893 J	144 =	209 J	113 =	144 J	181 =	51.4 J	136 =	73.3 J	75.8 J	77.1 J	101 J	266 J	146 =
Beryllium	ug/L	2.6 J	0.5 U	0.5 J	0.5 U	0.3 U	0.5 U	2.4 J	0.5 U	0.3 U	0.3 U	0.3 U	0.5 U	1.2 J	0.5 U
Cadmium	ug/L	0.2 U	0.7 U	0.2 U	0.7 U	0.2 U	0.7 U	0.7 U	0.7 U	0.2 U	0.2 U	0.2 U	0.7 U	0.4 U	0.7 U
Calcium	ug/L	121000 J	82800 =	91600 J	53000 =	62800 J	86300 =	66100 J	59600 =	56200 J	84300 J	81400 J	67700 =	50800 =	59100 =
Chromium	ug/L	72.7 =	2.1 J	11.9 =	3.6 J	1.1 U	3.4 J	0.9 J	5.8 J	1.1 U	1.1 U	1.1 U	1.2 J	33.7 J	1.8 U
Cobalt	ug/L	39.8 =	1.1 U	5.2 =	1.1 U	1 U	1.1 U	1.1 U	2.5 J	1 U	2 J	2 J	1.1 U	6 =	3 U
Copper	ug/L	60.6 =	1.3 U	13.2 =	1.8 J	3.3 J	1.7 J	1.3 U	5.1 J	2.3 J	3.4 J	2.9 J	3.7 J	23.6 =	2.6 U
Iron	ug/L	76500 J	510 =	15800 J	940 =	1420 J	1070 =	100 J	4620 =	1200 J	1510 J	1400 J	106 =	26700 J	1040 =
Lead	ug/L	46.4 =	3.2 J	9.7 =	4.4 J	1.7 J	5.2 =	2.6 U	7.2 =	1.8 J	1.8 J	2.1 J	3.5 J	9.9 =	2.6 U
Magnesium	ug/L	44900 J	33600 =	26000 J	18900 =	18900 J	32600 =	16500 J	24000 =	20400 J	20600 J	19800 J	22000 =	19300 =	22600 =
Manganese	ug/L	4820 J	750 J	375 J	38.2 J	66.4 J	107 J	27.2 J	595 J	107 J	426 J	573 J	223 =	327 =	294 =
Mercury	ug/L	0.11 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	67 =	1.6 U	11.9 =	1.6 U	1 U	1.6 U	4.3 J	5.6 J	1 U	2.9 J	3.3 J	1.6 U	22.6 =	2 J
Potassium	ug/L	11500 =	3130 J	8100 =	605 J	1550 J	1970 J	2790 =	3070 J	6230 =	4140 =	4300 =	12200 J	11600 J	7590 =
Selenium	ug/L	4.7 J	4.1 U	3.3 U	4.3 J	3.3 U	5.2 =	3.3 U	4.1 U	3.3 U	4.7 J	4.7 J	5.3 =	2.7 U	4.1 U
Silver	ug/L	1.7 U	0.6 U	1.7 U	0.6 U	1.7 U	0.6 U	0.6 U	0.6 U	1.7 U	1.7 U	1.7 U	0.6 U	3 J	2.8 U
Sodium	ug/L	15000 J	16000 =	9500 J	12500 =	14100 J	14700 =	37200 J	20700 =	15700 J	33200 J	34900 J	64000 =	48200 J	43200 =
Thallium	ug/L	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	6.3 U	3.4 U	3.4 U	3.4 U	6.3 U	3.5 U	6.3 U
Vanadium	ug/L	173 =	1.5 U	34.2 =	3.5 J	8.4 =	4.3 J	1.6 J	8.7 J	7.2 =	8.1 =	9.8 =	1.5 J	53.6 =	3.2 J
Zinc	ug/L	219 =	9.8 J	44.2 =	18.5 =	29 =	7.6 J	7.9 J	25.8 =	11.6 =	23.4 =	23.3 =	17.8 J	78.5 J	9.6 J

Iowa Army Ammunition Plant

Total Metals in Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		SC03	SC04	SC04	SC06	SC06	SC07	SC07	SC08	SC08	SC09	SC09	SC10	SC10	SC11
Sample Date		9/25/00	5/24/00	9/25/00	5/24/00	9/25/00	5/25/00	9/27/00	5/25/00	9/26/00	5/25/00	9/26/00	5/25/00	9/26/00	5/25/00
Parameter	**Units**														
Aluminum	ug/L	7170 J	970 =	7010 J	912 =	8990 J	318 =	7070 J	188 J	21000 J	249 =	32500 J	1940 =	26000 J	200 J
Antimony	ug/L	2.5 U	5.5 U	2.5 U	5.5 U	2.5 U	8.3 U	5.5 U	5.5 U	2.5 U	8.3 U	2.5 U	8.3 U	2.5 U	8.3 U
Arsenic	ug/L	3.9 J	4.4 U	4.1 J	4.4 U	4.8 J	7.6 J	4.6 J	4.4 U	4.5 J	4.4 U	9.8 J	4.4 U	9 J	4.4 U
Barium	ug/L	151 J	138 J	166 J	132 J	166 J	141 =	183 J	131 J	220 J	142 =	334 J	164 =	267 J	102 =
Beryllium	ug/L	0.2 U	0.5 U	0.4 J	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	1 J	0.5 U	1.5 J	0.5 U	1.2 J	0.5 U
Cadmium	ug/L	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.7 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U	0.4 U	0.7 U
Calcium	ug/L	43900 =	63700 =	52700 =	65300 =	48900 =	60500 =	63700 J	63000 =	34900 =	57100 =	37300 =	61800 =	52900 =	62100 =
Chromium	ug/L	11.2 J	2.7 J	11 J	2.3 J	11.9 J	1.8 U	7.5 J	1.2 J	28.3 J	1.8 U	40 J	3.9 J	35.1 J	1.8 U
Cobalt	ug/L	1.6 J	1.1 U	1.3 J	1.1 U	1.6 J	3 U	2.9 J	1.1 U	3.6 J	3 U	6.6 =	3.1 J	5.4 =	3 U
Copper	ug/L	11.9 =	3.6 J	9.9 J	3.5 J	10 =	2.6 U	4.6 J	2.5 J	14.4 =	2.6 U	24.4 =	7 J	34.1 =	2.8 J
Iron	ug/L	7390 J	1110 =	6820 J	963 =	9920 J	266 =	6910 J	206 =	19700 J	209 =	32700 J	2230 =	26300 J	172 =
Lead	ug/L	4.9 J	3.9 J	5.8 =	5.1 =	6.1 =	2.6 U	2.8 J	2.6 U	7.3 =	2.6 U	13.7 =	4.1 J	12.3 =	2.6 U
Magnesium	ug/L	14000 =	23000 =	17100 =	23800 =	16100 =	25700 =	23200 J	25000 =	15100 =	24700 =	17100 =	21600 =	19500 =	21700 =
Manganese	ug/L	280 =	246 =	311 =	220 =	293 =	122 =	150 J	84.5 =	136 =	79.2 =	306 =	401 =	344 =	207 =
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	7.4 J	3.4 J	8.4 J	2.5 J	9.3 J	1.7 U	7.1 J	1.6 U	17 =	2.4 J	25.3 =	3.9 J	22.2 =	3.1 J
Potassium	ug/L	8860 J	6970 J	9830 J	6570 J	9620 J	2780 =	3540 =	2790 J	3560 J	2670 =	4520 J	12200 =	12000 J	12300 =
Selenium	ug/L	2.7 U	4.1 U	2.7 U	4.1 U	2.7 U	4.1 U	3.3 U	4.1 U	2.7 J	4.1 U	3.3 J	4.1 U	2.9 J	4.1 U
Silver	ug/L	1.3 J	0.6 U	1.2 J	0.6 U	1.1 J	2.8 U	0.6 U	0.6 U	1.1 U	2.8 U	1.1 U	2.8 U	4.5 J	2.8 U
Sodium	ug/L	31200 J	34200 =	40600 J	33500 =	36500 J	30400 =	32300 J	23500 =	17000 J	25200 =	17200 J	67900 =	50000 J	69100 =
Thallium	ug/L	3.5 U	6.3 U	3.5 U	6.3 U	3.5 U	6.3 U	3.4 U	6.3 U	3.5 U	6.3 U	3.5 U	6.3 U	3.5 U	6.3 U
Vanadium	ug/L	17.1 =	3.8 J	15.3 =	3.6 J	20.9 =	1.5 U	16.3 =	2.6 J	40.2 =	1.5 U	63.6 =	3.8 J	51.6 =	2.7 J
Zinc	ug/L	29.2 J	7.6 J	28.2 J	11.7 J	54.8 J	6.6 J	21 J	2.7 J	52.6 J	4.2 J	87.7 J	23.1 =	87.7 J	26.5 =

Iowa Army Ammunition Plant

Total Met\ ,n Water

Spring and Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		SC11	SC12	SC12	SC13	SCT01	SCT01	SCT02	SCT03	SRT01	SRT01	SRT02	SRT02
Sample Date		9/26/00	5/23/00	9/26/00	9/26/00	5/25/00	9/25/00	9/26/00	5/25/00	5/25/00	9/27/00	5/25/00	9/27/00
Parameter	**Units**												
Aluminum	ug/L	29200 J	431 =	34500 J	25600 J	751 N	3440 J	1550 J	13700 N	267 =	126 J	114 J	61.8 J
Antimony	ug/L	2.5 U	8.3 U	2.5 U	2.5 U	5.5 U	2.5 U	2.5 U	5.5 U	5.5 U	2.9 U	8.3 U	2.9 U
Arsenic	ug/L	8.8 J	5.1 J	11.6 =	7.2 J	4.4 U	2.2 J	2.1 J	5.8 J	4.4 U	2.2 U	4.5 J	2.2 U
Barium	ug/L	284 J	132 =	385 J	239 J	122 =	143 J	53.3 J	728 =	78.6 J	76.9 J	78.5 =	77.1 J
Beryllium	ug/L	1.3 J	0.3 U	1.6 J	1.1 J	0.5 U	0.3 J	0.2 J	0.5 U	0.5 U	0.3 U	0.5 U	0.3 U
Cadmium	ug/L	0.4 U	0.4 U	0.4 U	0.4 U	0.7 U	0.4 U	0.4 U	0.7 U	0.7 U	0.2 U	0.7 U	0.2 U
Calcium	ug/L	53700 =	56200 =	56600 =	33200 =	62300 =	59100 =	58900 =	83600 =	76700 =	67200 J	81700 =	77400 J
Chromium	ug/L	39 J	2.5 U	48.6 J	32.6 J	2.4 J	6.7 J	4 J	17.9 =	2 J	1.1 U	1.8 U	1.1 U
Cobalt	ug/L	6.3 =	3 U	9 =	4.5 J	1.1 U	1.6 J	1 U	6.7 =	1.1 U	1 U	3 U	1 U
Copper	ug/L	33.7 =	3.9 J	55.1 =	17.4 =	26.3 =	5.7 J	10.9 =	13.5 =	30 =	1.9 J	2.6 U	1.6 J
Iron	ug/L	29200 J	426 =	48400 J	24600 J	714 =	3950 J	1580 J	14400 =	248 =	48.4 J	26.6 U	20.3 UJ
Lead	ug/L	12.7 =	1.7 U	19.8 =	9.1 =	3.4 J	4.4 J	3.9 J	13.2 =	2.7 J	1.3 U	2.6 U	1.3 U
Magnesium	ug/L	20400 =	21200 =	21100 =	15000 =	25400 =	21700 =	18300 =	25000 =	24300 =	22000 J	30500 =	26400 J
Manganese	ug/L	364 =	209 =	498 =	166 =	122 J	142 =	140 =	2250 J	65.7 =	32.4 J	123 =	49.6 J
Mercury	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	ug/L	24 =	4.3 J	30.2 =	17.9 =	1.6 U	5.7 J	4.5 J	14.9 =	1.6 U	1 U	1.7 U	1 U
Potassium	ug/L	12200 J	7640 =	11600 J	3830 J	4080 J	10300 J	18900 J	5020 J	4020 J	6190 =	1510 =	3230 =
Selenium	ug/L	2.7 U	5.1 =	3.4 J	3.1 J	4.1 U	2.7 U	2.7 U	5.1 =	4.1 U	3.3 U	4.1 U	3.3 U
Silver	ug/L	4.6 J	2.8 U	7 =	1.1 U	0.6 U	1.1 U	4.7 J	0.6 U	0.6 U	1.7 U	2.8 U	1.7 U
Sodium	ug/L	50100 J	44800 =	46000 J	16300 J	11000 =	34600 J	82400 J	23100 =	26700 =	28100 J	6200 =	5950 J
Thallium	ug/L	3.5 U	4.5 U	3.5 U	3.5 U	6.3 U	3.5 U	3.5 U	6.3 U	6.3 U	3.4 U	6.3 U	3.4 U
Vanadium	ug/L	57.9 =	1.5 U	70.2 =	48.9 =	2 J	12.1 =	2.7 J	29.6 =	1.5 U	4.1 J	1.5 U	5.1 =
Zinc	ug/L	89 J	13.2 =	135 J	61.6 J	15.2 =	17.9 J	20.1 J	55.7 =	20.6 J	8 J	4.2 J	6 J

Iowa Army Ammunition Plant

Explosives in Sediment

Fall 2000

	Site ID	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
	Sample ID	BC01	BC02	BC03	BC04	BC05	BC07	BC08	BC09	BC10	BC11	BC12	BC13	BC14
	Sample Date	9/27/00	9/26/00	9/26/00	9/26/00	9/25/00	9/25/00	9/25/00	9/28/00	9/27/00	9/27/00	9/27/00	9/27/00	9/27/00
Parameter	**Units**													
1,3,5-Trinitrobenzene	ug/Kg	99 U	100 U	98 U	88 J	98 U	98 U	98 U	98 U	100 U	100 U	24 J	100 U	98 U
1,3-Dinitrobenzene	ug/Kg	99 U	100 U	98 U	98 U	98 U	98 U	98 U	98 U	100 U	100 U	98 U	100 U	98 U
2,4,6-Trinitrotoluene	ug/Kg	99 U	1300 =	360 =	4500 =	130 =	170 =	98 U	98 U	100 U	100 U	330 =	100 U	190 =
2,4-Dinitrotoluene	ug/Kg	99 U	100 U	98 U	290 =	98 U	98 U	98 U	98 U	100 U	100 U	98 U	100 U	98 U
2,6-Dinitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Amino-4,6-Dinitrotoluene	ug/Kg	200 U	760 =	200 U	2400 =	200 U	200 U	200 U	200 U	200 U	200 U	260 =	200 U	200 U
2-Nitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
3-Nitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Amino-2,6-Dinitrotoluene	ug/Kg	200 U	420 =	200 U	620 =	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Nitrotoluene	ug/Kg	500 U	500 U	490 U	490 U	490 U	490 U	490 U	490 U	500 U	500 U	490 U	500 U	490 U
RDX	ug/Kg	99 U	2800 =	650 =	6700 D	350 =	210 =	98 U	98 U	4300 =	100 U	1200 =	100 U	1300 =
Nitrobenzene	ug/Kg	99 U	100 U	98 U	98 U	98 U	98 U	98 U	98 U	100 U	100 U	98 U	100 U	98 U
HMX	ug/Kg	250 U	250 U	250 U	570 =	240 U	240 U	250 U	240 U	290 =	250 U	240 U	250 U	240 U
Tetryl	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Iowa Army Ammunition Plant

Explosives - Sediment

Fall 2000

	Site ID	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
	Sample ID	BC15	BC16	BC17	BC18	BC19	BC20	BC21	BC22	BCT01	LC01	LC02	LC03	LC04
	Sample Date	9/27/00	9/27/00	9/26/00	9/26/00	9/26/00	9/25/00	9/25/00	9/25/00	9/27/00	9/28/00	9/27/00	9/28/00	9/27/00
Parameter	**Units**													
1,3,5-Trinitrobenzene	ug/Kg	100 U	99 U	100 U	100 U	100 U	98 U	50 J	98 U	98 U	98 U	100 U	98 U	98 U
1,3-Dinitrobenzene	ug/Kg	100 U	99 U	100 U	100 U	100 U	98 U	100 U	98 U	98 U	98 U	100 U	98 U	98 U
2,4,6-Trinitrotoluene	ug/Kg	560 =	99 =	950 =	340 =	310 =	200 =	2200 =	120 =	98 U	98 U	100 U	98 U	98 U
2,4-Dinitrotoluene	ug/Kg	100 U	99 U	85 J	100 U	100 U	98 U	190 =	98 U	98 U	98 U	100 U	98 U	98 U
2,6-Dinitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Amino-4,6-Dinitrotoluene	ug/Kg	440 =	200 U	600 =	200 U	200 U	200 U	2200 =	200 U	200 U	200 U	200 U	200 U	200 U
2-Nitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
3-Nitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Amino-2,6-Dinitrotoluene	ug/Kg	210 =	200 U	300 =	95 J	200 U	200 U	660 =	200 U	200 U	200 U	200 U	200 U	200 U
4-Nitrotoluene	ug/Kg	500 U	500 U	500 U	500 U	500 U	490 U	500 U	490 U	490 U	490 U	500 U	490 U	490 U
RDX	ug/Kg	1700 =	810 =	1200 =	320 =	700 =	200 =	3400 =	98 U	98 U	98 U	100 U	270 =	98 U
Nitrobenzene	ug/Kg	100 U	99 U	100 U	100 U	100 U	98 U	100 U	98 U	98 U	98 U	100 U	98 U	98 U
HMX	ug/Kg	180 J	130 J	250 U	250 U	250 U	240 U	1200 =	240 U	250 U	240 U	250 U	250 U	250 U
Tetryl	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Iowa Army Ammunition Plant

Explosives ... Sediment

Fall 2000

	Site ID	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
	Sample ID	LC05	LCT02	LCT03	LCT04	LCT05	LCT06	LCT07	LCT08	LCT09	SC02	SC03	SC04	SC06
	Sample Date	9/27/00	9/27/00	9/28/00	9/28/00	9/28/00	9/27/00	9/28/00	9/28/00	9/28/00	9/26/00	9/25/00	9/25/00	9/25/00
Parameter	**Units**													
1,3,5-Trinitrobenzene	ug/Kg	1000 U	100 U	99 U	98 U	99 U	100 U	99 U	98 U	100 U	100 U	100 U	100 U	98 U
1,3-Dinitrobenzene	ug/Kg	1000 U	100 U	99 U	98 U	99 U	100 U	99 U	98 U	100 U	100 U	100 U	100 U	98 U
2,4,6-Trinitrotoluene	ug/Kg	1000 U	100 U	99 U	98 U	99 U	100 U	99 U	98 U	100 U	100 U	100 U	100 U	98 U
2,4-Dinitrotoluene	ug/Kg	1000 U	100 U	99 U	98 U	99 U	100 U	99 U	98 U	100 U	100 U	100 U	100 U	98 U
2,6-Dinitrotoluene	ug/Kg	2000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Amino-4,6-Dinitrotoluene	ug/Kg	2000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Nitrotoluene	ug/Kg	2000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
3-Nitrotoluene	ug/Kg	2000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Amino-2,6-Dinitrotoluene	ug/Kg	2000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Nitrotoluene	ug/Kg	5000 U	500 U	500 U	490 U	500 U	500 U	500 U	490 U	500 U	500 U	500 U	500 U	490 U
RDX	ug/Kg	1000 U	100 U	99 U	98 U	99 U	100 U	99 U	98 U	100 U	100 U	100 U	100 U	98 U
Nitrobenzene	ug/Kg	1000 U	100 U	99 U	98 U	99 U	100 U	99 U	98 U	100 U	100 U	100 U	100 U	98 U
HMX	ug/Kg	2500 U	250 U	250 U	250 U	250 U	250 U	250 U	240 U	250 U	250 U	250 U	250 U	250 U
Tetryl	ug/Kg	2000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Iowa Army Ammunition Plant

Explosives - Sediment

Fall 2000

	Site ID	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
	Sample ID	SC07	SC08	SC09	SC10	SC11	SC12	SC13	SCT01	SCT02	SCT03	SCT05	SRT01	SRT02
	Sample Date	9/27/00	9/26/00	9/26/00	9/26/00	9/26/00	9/26/00	9/26/00	9/25/00	9/26/00	9/26/00	9/26/00	9/28/00	9/28/00
Parameter	**Units**													
1,3,5-Trinitrobenzene	ug/Kg	98 U	100 U	100 U	99 U	100 U	98 U	98 U	98 U	100 U	100 U	100 U	98 U	100 U
1,3-Dinitrobenzene	ug/Kg	98 U	100 U	100 U	99 U	100 U	98 U	98 U	98 U	100 U	100 U	100 U	98 U	100 U
2,4,6-Trinitrotoluene	ug/Kg	98 U	100 U	100 U	99 U	100 U	98 U	98 U	98 U	100 U	100 U	100 U	98 U	100 U
2,4-Dinitrotoluene	ug/Kg	98 U	100 U	100 U	99 U	100 U	98 U	98 U	98 U	100 U	100 U	100 U	98 U	100 U
2,6-Dinitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Amino-4,6-Dinitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Nitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
3-Nitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Amino-2,6-Dinitrotoluene	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Nitrotoluene	ug/Kg	490 U	500 U	500 U	500 U	500 U	490 U	490 U	490 U	500 U	500 U	500 U	490 U	500 U
RDX	ug/Kg	98 U	100 U	100 U	99 U	100 U	98 U	98 U	98 U	100 U	100 U	100 U	98 U	100 U
Nitrobenzene	ug/Kg	98 U	100 U	100 U	99 U	100 U	98 U	98 U	98 U	100 U	100 U	100 U	98 U	100 U
HMX	ug/Kg	240 U	250 U	250 U	250 U	250 U	240 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Tetryl	ug/Kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Iowa Army Ammunition Plant

Total Metal Sediment

Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC01	BC02	BC03	BC04	BC05	BC07	BC08	BC09	BC10	BC11	BC12	BC13	BC14	BC15
Sample Date		9/27/00	9/26/00	9/26/00	9/26/00	9/25/00	9/25/00	9/25/00	9/28/00	9/27/00	9/27/00	9/27/00	9/27/00	9/27/00	9/27/00
Parameter	**Units**														
Aluminum	mg/Kg	7460 =	4220 =	3090 =	4720 =	5280 =	2120 =	4020 =	6100 =	6070 =	4790 =	4020 =	6150 =	2690 =	6030 =
Antimony	mg/Kg	0.63 U	0.55 UJ	0.47 UJ	0.61 UJ	0.58 UJ	0.61 UJ	0.56 UJ	0.65 UJ	0.62 UJ	0.57 UJ	0.6 U	0.8 U	0.68 U	0.64 U
Arsenic	mg/Kg	4.6 J	5.1 =	5.3 =	2.3 =	3.8 =	3.2 =	3.3 =	3.1 =	5.5 =	2.2 =	2.7 J	4.3 J	6.3 J	4.2 J
Barium	mg/Kg	80.2 J	167 J	208 J	114 J	133 J	72 J	94.7 J	111 =	158 =	70 =	127 J	115 J	109 J	177 J
Beryllium	mg/Kg	0.55 =	0.4 =	0.28 J	0.37 J	0.58 =	0.27 J	0.34 J	0.4 J	0.45 =	0.3 J	0.4 J	0.58 =	0.36 J	0.52 =
Cadmium	mg/Kg	0.28 J	0.07 U	0.06 U	0.08 U	0.07 U	0.08 U	0.07 U	0.12 J	0.1 J	0.07 U	0.08 U	0.1 U	0.09 U	0.08 J
Calcium	mg/Kg	21700 J	3480 =	2030 =	3170 =	8110 =	4410 =	10700 =	3810 =	2770 =	3130 =	3950 J	3750 J	2430 =	3260 =
Chromium	mg/Kg	11 J	14.1 =	20.5 =	11 =	11.1 =	7.5 =	9.2 =	8.8 =	27.9 =	7.8 =	11.6 J	13.8 J	8.8 J	14.9 J
Cobalt	mg/Kg	5.8 J	6.1 =	7.6 =	4.4 =	4.5 =	4.7 =	5.3 =	4.7 =	6.1 =	3.8 =	4 J	4.7 J	5.8 J	5.7 J
Copper	mg/Kg	10.5 =	6.6 =	4.6 =	7.2 =	9 =	3.9 =	6.8 =	9.4 =	10 =	6.6 =	8.5 =	9.6 =	5.1 =	10.3 =
Iron	mg/Kg	13000 J	10000 =	9410 =	8160 =	11100 =	7420 =	9290 =	9490 =	11800 =	7830 =	7840 J	10500 J	10700 =	10800 =
Lead	mg/Kg	8.8 J	10.8 =	7.9 =	7.7 =	9.5 =	7.4 =	8.1 =	9.3 =	12.3 =	7.3 =	7.5 J	10.1 J	12.1 J	11 J
Magnesium	mg/Kg	9260 =	1330 =	851 =	1360 =	2200 =	843 =	2780 =	1500 =	1310 =	1280 =	1390 =	1640 =	895 =	1440 =
Manganese	mg/Kg	430 J	688 =	1000 =	375 =	296 =	310 =	463 =	332 =	349 =	235 =	218 J	327 J	571 J	404 J
Nickel	mg/Kg	11.8 J	8.7 =	8.5 =	6.9 =	9.1 =	5.8 =	8.4 =	9 =	9.5 =	6.7 =	6.4 J	9.2 J	6.6 J	9.1 J
Potassium	mg/Kg	893 J	465 J	318 J	537 J	618 J	282 J	530 J	601 =	590 =	539 =	444 J	671 J	315 J	632 J
Selenium	mg/Kg	0.47 U	0.48 J	0.35 UJ	0.45 UJ	0.44 UJ	0.46 UJ	0.41 UJ	0.49 UJ	0.92 J	0.43 UJ	0.45 U	0.76 =	0.51 U	0.48 U
Silver	mg/Kg	0.07 U	0.47 J	0.3 J	2.5 =	1.3 =	0.4 J	0.33 J	0.07 U	1.4 =	0.06 U	1.4 =	0.16 J	0.29 J	0.88 =
Sodium	mg/Kg	908 J	589 =	449 =	681 =	794 =	444 =	630 =	797 J	869 J	729 J	708 J	833 J	447 =	780 =
Thallium	mg/Kg	0.72 U	0.63 U	0.54 U	0.7 U	0.67 U	0.7 U	0.64 U	0.75 U	0.71 U	0.66 U	0.69 U	0.92 U	0.78 U	0.73 U
Vanadium	mg/Kg	19.9 =	16.8 =	14.6 =	13.5 =	16 =	11.9 =	14.4 =	16.8 =	19.1 =	14.1 =	13.5 =	19.8 =	17.7 =	18.9 =
Zinc	mg/Kg	36.3 =	25.5 J	22.9 J	29.4 J	41.2 J	20.4 J	23.7 J	41.5 =	64.9 =	23.7 =	25.6 =	34.1 =	20.9 =	35.1 =

Iowa Army Ammunition Plant

Total Metals Sediment

Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC16	BC17	BC18	BC19	BC20	BC21	BC22	BCT01	LC01	LC02	LC03	LC04	LC05	LCT02
Sample Date		9/27/00	9/26/00	9/26/00	9/26/00	9/25/00	9/25/00	9/25/00	9/27/00	9/28/00	9/27/00	9/28/00	9/27/00	9/27/00	9/27/00
Parameter	**Units**														
Aluminum	mg/Kg	7600 =	4170 =	7810 =	5820 =	3330 =	6140 =	2320 =	11600 =	4920 =	4670 =	6610 =	2100 =	13100 =	10700 =
Antimony	mg/Kg	0.7 U	0.51 UJ	0.71 UJ	0.53 UJ	0.68 UJ	0.79 UJ	0.59 UJ	0.77 U	0.77 UJ	0.85 U	0.68 UJ	0.54 U	4.4 U	0.63 U
Arsenic	mg/Kg	3.8 J	5.9 =	4.6 =	3.6 =	2.6 =	3.6 =	3.4 =	3.4 J	4.7 =	3.8 J	4.1 =	6.8 J	6.1 J	5.4 J
Barium	mg/Kg	168 J	130 J	283 J	92.4 J	104 J	165 J	71.7 J	143 J	111 =	97 J	188 =	135 J	303 J	131 J
Beryllium	mg/Kg	0.58 =	0.37 =	0.57 =	0.39 =	0.26 J	0.48 J	0.15 J	0.75 =	0.31 J	0.51 J	0.52 =	0.38 J	0.65 J	0.72 =
Cadmium	mg/Kg	0.09 J	0.06 U	0.09 U	0.11 J	0.09 U	0.1 U	0.08 U	0.1 J	0.1 U	0.11 J	0.14 J	0.08 J	0.57 U	0.16 J
Calcium	mg/Kg	4400 =	7760 =	3140 =	23700 =	4290 =	5180 =	6520 =	3310 =	5140 =	11700 =	5990 =	3360 =	82200 =	9980 =
Chromium	mg/Kg	13.7 J	8.5 =	20.4 =	11.7 =	9.2 =	14.7 =	9.7 =	15 J	7.8 =	7.6 J	18 =	7.9 J	16.5 J	16.3 J
Cobalt	mg/Kg	6.8 J	9.3 =	5.5 =	5.5 =	3.7 =	5.8 =	4.6 =	5.1 J	6 =	7 J	5.8 =	10.9 J	7.9 J	11.6 J
Copper	mg/Kg	10.8 =	6.8 =	10 =	8.8 =	6 =	9.6 =	3.8 =	12.6 =	8.3 =	9.8 =	11.4 =	2.8 =	45 =	14.8 =
Iron	mg/Kg	12700 =	11500 =	12500 =	10600 =	8190 =	10900 =	7110 =	15200 =	9390 =	11100 =	11700 =	11700 =	18600 =	18100 =
Lead	mg/Kg	11.9 J	10.1 =	12.1 =	8 =	7.4 =	10.5 =	8.5 =	9.6 J	11.6 =	10 J	13.6 =	12.2 J	42.9 J	12.2 J
Magnesium	mg/Kg	2130 =	2890 =	1730 =	5490 =	1170 =	1710 =	1260 =	2460 =	1970 =	3340 =	1520 =	1010 =	10200 =	4190 =
Manganese	mg/Kg	455 J	797 =	335 =	584 =	293 =	497 =	358 =	261 J	556 =	781 J	320 =	1240 J	2730 J	655 J
Nickel	mg/Kg	10.9 J	10.2 =	9.9 =	10.8 =	6.1 =	9.9 =	6 =	13.2 J	8.2 =	11.4 J	10.5 =	8.7 J	24.6 J	17.9 J
Potassium	mg/Kg	726 J	468 J	871 J	971 J	377 J	680 J	312 J	1080 J	629 =	624 J	658 =	223 J	2720 J	918 J
Selenium	mg/Kg	0.52 U	0.38 UJ	0.53 UJ	0.4 UJ	0.5 UJ	0.59 UJ	0.44 UJ	0.57 U	0.57 UJ	0.68 J	0.51 UJ	0.41 U	3.3 U	0.47 U
Silver	mg/Kg	0.5 J	0.09 J	1.3 =	1.2 =	0.82 =	1.3 =	0.54 =	0.08 U	0.08 U	0.09 U	0.69 =	0.06 U	0.49 U	0.07 U
Sodium	mg/Kg	978 =	566 =	948 =	771 =	535 =	738 =	379 =	1090 =	766 J	702 J	977 J	365 =	772 J	1070 =
Thallium	mg/Kg	0.81 U	0.58 U	0.81 U	0.61 U	0.77 U	0.91 U	0.68 U	0.88 U	0.88 U	0.97 U	0.78 U	0.62 U	5.1 U	0.72 U
Vanadium	mg/Kg	21.3 =	17.1 =	22.4 =	15.1 =	12 =	19.2 =	10.9 =	26.8 =	16.8 =	17.6 =	19.8 =	19.5 =	34.1 =	29.2 =
Zinc	mg/Kg	60.9 =	23.7 J	37.2 J	30.9 J	24.6 J	39.1 J	20.2 J	57.9 =	30.4 =	33 =	48.2 =	17.1 =	77.9 =	37.9 =

Iowa Army Ammunition Plant

Total Metal Sediment

Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		LCT03	LCT04	LCT05	LCT06	LCT07	LCT08	LCT09	SC02	SC03	SC04	SC06	SC07	SC08	SC09
Sample Date		9/28/00	9/28/00	9/28/00	9/27/00	9/28/00	9/28/00	9/28/00	9/26/00	9/25/00	9/25/00	9/25/00	9/27/00	9/26/00	9/26/00
Parameter	**Units**														
Aluminum	mg/Kg	6960 =	1620 =	7530 =	3080 =	5490 =	2310 =	7280 =	4110 =	2410 =	1140 =	833 =	2290 =	1390 =	2230 =
Antimony	mg/Kg	0.54 UJ	0.46 UJ	0.66 UJ	0.55 U	1.2 UJ	0.45 UJ	0.75 UJ	1.1 UJ	0.53 UJ	0.51 UJ	0.49 UJ	0.58 U	0.42 UJ	0.45 UJ
Arsenic	mg/Kg	5.5 =	3 =	4.8 =	14.7 J	4.1 =	11.1 =	4.5 =	1.4 J	5.5 =	1.7 =	1.2 =	8.9 J	10.1 =	15.7 =
Barium	mg/Kg	114 =	38.7 =	114 =	152 J	86.4 =	160 =	81.2 =	163 J	85.2 J	52.8 J	21.2 J	243 J	65 J	262 J
Beryllium	mg/Kg	0.55 =	0.15 J	0.52 =	0.71 =	0.31 J	0.35 =	0.67 =	0.1 U	0.3 J	0.06 J	0.04 U	0.53 =	0.23 J	0.49 =
Cadmium	mg/Kg	0.07 J	0.06 U	0.2 J	0.65 =	0.31 J	0.27 =	1.3 =	0.36 J	0.07 U	0.06 U	0.06 U	0.44 =	0.05 U	0.06 U
Calcium	mg/Kg	4250 =	5650 =	26300 =	11800 =	14600 =	11700 =	11500 =	16200 =	5070 =	6250 =	5780 =	1930 =	1560 =	4100 =
Chromium	mg/Kg	10.5 =	4.4 =	11.2 =	6.7 J	9.1 =	4.8 =	11.4 =	45.5 =	10.9 =	4.1 =	3.3 =	5 J	4 =	7.3 =
Cobalt	mg/Kg	7.8 =	4 =	6.3 =	33.6 J	6.6 =	14.5 =	19.7 =	3.1 =	7.8 =	4.2 =	3.2 =	14.8 J	9.5 =	14.5 J
Copper	mg/Kg	9.7 =	3.7 =	11.6 =	10.9 =	14.3 =	6.6 =	17.6 =	157 =	4 =	1.8 =	0.97 =	4.9 =	3 =	4.6 =
Iron	mg/Kg	13800 =	6730 =	13100 =	22500 =	11900 =	20700 =	14300 =	6010 =	15700 =	4700 =	3530 =	14000 =	11400 =	19700 =
Lead	mg/Kg	12.4 =	4.3 =	17.8 =	30.9 J	11.1 =	14.5 =	14 =	29.3 =	5.5 =	4.7 =	2.6 =	11.2 J	8.8 =	14.2 =
Magnesium	mg/Kg	1770 =	1720 =	2290 =	1690 =	2860 =	2520 =	2430 =	1540 =	1350 =	2160 =	1380 =	693 =	712 =	1110 =
Manganese	mg/Kg	746 =	331 =	525 =	1710 J	217 =	648 =	293 =	183 =	438 =	299 =	135 =	2170 J	558 =	1400 =
Nickel	mg/Kg	12 =	6 =	12.5 =	25.9 J	12.3 =	17.4 =	33.1 =	6.7 =	11.7 =	4.2 =	3.8 =	19.6 J	6.2 =	10.7 =
Potassium	mg/Kg	624 =	190 =	674 =	371 J	686 =	240 =	819 =	441 J	235 J	179 J	103 J	264 J	141 J	213 J
Selenium	mg/Kg	0.57 J	0.34 UJ	0.49 UJ	0.51 =	1.4 J	0.33 UJ	1.1 J	0.82 UJ	0.39 UJ	0.38 UJ	0.36 UJ	0.64 =	0.31 UJ	0.34 UJ
Silver	mg/Kg	0.06 U	0.05 U	0.07 U	0.06 U	0.13 U	0.05 U	0.08 U	35.9 =	0.07 J	0.06 U	0.05 U	0.06 U	0.05 U	0.05 U
Sodium	mg/Kg	873 J	294 J	882 J	669 =	860 J	491 J	1190 J	811 =	362 =	284 =	210 =	638 =	263 =	561 =
Thallium	mg/Kg	0.62 U	0.53 U	0.76 U	0.63 U	1.4 U	0.51 U	0.95 J	1.3 U	0.6 U	0.58 U	0.56 U	0.66 U	0.48 U	0.52 U
Vanadium	mg/Kg	23.4 =	10.6 =	21.3 =	34.2 =	18.1 =	26.2 =	21.3 =	11.4 =	17.2 =	6.6 =	4.6 =	22.6 =	13.5 =	30.3 =
Zinc	mg/Kg	30.2 =	11.4 =	107 =	97.5 =	65.9 =	52.9 =	118 =	209 J	23.7 J	9.8 J	7.6 J	18.1 =	13.6 J	26 J

Iowa Army Ammunition Plant

Total Meta Sediment

Fall 2000

	Site ID	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
	Sample ID	SC10	SC11	SC12	SC13	SCT01	SCT02	SCT03	SCT05	SRT01	SRT02
	Sample Date	9/26/00	9/26/00	9/26/00	9/26/00	9/25/00	9/26/00	9/26/00	9/26/00	9/28/00	9/28/00
Parameter	**Units**										
Aluminum	mg/Kg	5690 =	8110 =	2540 =	2360 =	1260 =	7540 =	2170 =	9750 =	3290 =	2920 =
Antimony	mg/Kg	0.87 UJ	1.4 UJ	0.45 UJ	0.48 UJ	0.44 UJ	0.65 UJ	0.45 UJ	0.6 UJ	0.53 UJ	0.54 UJ
Arsenic	mg/Kg	3.1 =	3.4 =	14.2 =	16.3 =	5.1 =	3.1 =	9.5 =	9.1 =	4.7 =	6.3 =
Barium	mg/Kg	245 J	407 J	306 J	294 J	113 J	97.3 J	176 J	141 J	89.9 =	35.8 =
Beryllium	mg/Kg	0.4 J	0.39 J	0.55 =	0.49 =	0.33 =	0.41 J	0.42 =	0.78 =	0.33 J	0.24 J
Cadmium	mg/Kg	0.35 =	0.86 =	0.06 U	0.21 =	0.06 U	0.08 U	0.06 U	0.08 U	0.09 J	0.08 J
Calcium	mg/Kg	14200 =	37200 =	6180 =	7220 =	2740 =	10700 =	4740 =	4190 =	10100 =	5600 =
Chromium	mg/Kg	26 =	87.5 =	6.5 =	7.3 =	4.5 =	17.1 =	6.1 =	13.9 =	8.4 =	5.7 =
Cobalt	mg/Kg	4.8 =	5.6 =	19.1 =	33.8 =	13.1 =	5.3 =	16.1 =	14.3 =	8.2 =	4.1 =
Copper	mg/Kg	72.7 =	290 =	7.5 =	5.8 =	3.4 =	42.9 =	3.8 =	12.3 =	5 =	4.7 =
Iron	mg/Kg	10200 =	12000 =	22400 =	20700 =	9840 =	12200 =	14100 =	21100 =	11900 =	7460 =
Lead	mg/Kg	20.3 =	52.9 =	23.5 =	16.4 =	8.3 =	19.3 =	15.8 =	17.1 =	9.2 =	6.3 =
Magnesium	mg/Kg	2110 =	4130 =	1250 =	747 =	939 =	2180 =	1040 =	2620 =	2010 =	2260 =
Manganese	mg/Kg	253 =	618 =	1900 =	3660 =	1140 =	262 =	1710 =	665 =	737 =	238 =
Nickel	mg/Kg	9.4 =	13.9 =	13.4 =	13.4 =	8.4 =	11 =	11.3 =	14.6 =	10.9 =	7.1 =
Potassium	mg/Kg	704 J	889 J	283 J	251 J	163 J	720 J	224 J	1040 J	445 =	402 =
Selenium	mg/Kg	0.65 UJ	1.9 J	0.34 UJ	0.45 J	0.33 UJ	0.48 UJ	0.33 UJ	0.45 UJ	0.39 UJ	0.4 UJ
Silver	mg/Kg	14.5 =	65.6 =	0.05 U	0.05 J	0.05 U	4.5 =	0.05 U	0.07 U	5.7 =	0.06 U
Sodium	mg/Kg	829 =	1430 =	628 =	435 =	360 =	834 =	430 =	917 =	606 J	418 J
Thallium	mg/Kg	1 U	1.6 U	0.52 U	0.55 U	0.51 U	0.74 U	0.51 U	0.69 U	0.6 U	0.62 U
Vanadium	mg/Kg	15.6 =	18.1 =	24.5 =	25.4 =	14.6 =	20.8 =	24 =	32.3 =	14.7 =	10 =
Zinc	mg/Kg	106 J	387 J	31.2 J	22.2 J	22.5 J	62.3 J	15.7 J	33.2 J	21.8 =	24.5 =

Iowa Army Ammunition Plant

SVOCs in Sediment

Fall 2000

	Site ID	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
	Sample ID	BC05	BC07	BC09	BC13	LC01	LC02	LCT03	LCT05	LCT08	LCT09	SC04	SC07
	Sample Date	9/25/00	9/25/00	9/28/00	9/27/00	9/28/00	9/27/00	9/28/00	9/28/00	9/28/00	9/28/00	9/25/00	9/27/00
Parameter	**Units**												
1,2,4-Trichlorobenzene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
1,2-Dichlorobenzene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
1,3-Dichlorobenzene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
1,4-Dichlorobenzene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2,4,5-Trichlorophenol	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
2,4,6-Trichlorophenol	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2,4-Dichlorophenol	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2,4-Dimethylphenol	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2,4-Dinitrophenol	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
2,4-Dinitrotoluene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2,6-Dinitrotoluene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2-Chloronaphthalene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2-Chlorophenol	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2-Methylnaphthalene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2-Methylphenol (O-Cresol)	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
2-Nitroaniline	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
2-Nitrophenol	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
3,3'-Dichlorobenzidine	ug/Kg	1000 U	950 U	1200 U	1200 U	1300 U	1300 U	870 U	1100 U	830 U	1300 U	840 U	850 U
3-Nitroaniline	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
4,6-Dinitro-2-methylphenol	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
4-Bromophenyl Phenyl Ether	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
4-Chloro-3-methylphenol	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
4-Chloroaniline	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
4-Chlorophenyl Phenyl Ether	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
4-Methylphenol (P-Cresol)	ug/Kg	510 U	480 U	590 U	620 U	130 J	650 U	440 U	570 U	420 U	640 U	420 U	420 U
4-Nitroaniline	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
4-Nitrophenol	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
Acenaphthene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Acenaphthylene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Anthracene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Benzo(a)anthracene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Benzo(a)pyrene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Benzo(b)fluoranthene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Benzo(g,h,i)perylene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Benzo(k)fluoranthene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Benzyl Butyl Phthalate	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U

Iowa Army Ammunition Plant

SVOCs in Sediment

Fall 2000

Site ID		IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO	IAAPECO
Sample ID		BC05	BC07	BC09	BC13	LC01	LC02	LCT03	LCT05	LCT08	LCT09	SC04	SC07
Sample Date		9/25/00	9/25/00	9/28/00	9/27/00	9/28/00	9/27/00	9/28/00	9/28/00	9/28/00	9/28/00	9/25/00	9/27/00
Parameter	**Units**												
Bis(2-Chloroethoxy) Methane	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Bis(2-Chloroethyl) Ether	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Bis(2-Ethylhexyl) Phthalate	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Chrysene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Di-N-Butyl Phthalate	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Di-N-Octylphthalate	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Dibenz(a,h)Anthracene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Dibenzofuran	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Fluoranthene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Fluorene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Hexachlorobenzene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Hexachlorobutadiene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Hexachlorocyclopentadiene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Hexachloroethane	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Indeno(1,2,3-CD)pyrene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Isophorone	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
N-Nitrosodi-N-Propylamine	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
N-Nitrosodiphenylamine	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Naphthalene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Nitrobenzene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Pentachlorophenol	ug/Kg	2500 U	2400 U	3000 U	3100 U	3200 U	3200 U	2200 U	2900 U	2100 U	3200 U	2100 U	2100 U
Phenanthrene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Phenol	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U
Pyrene	ug/Kg	510 U	480 U	590 U	620 U	640 U	650 U	440 U	570 U	420 U	640 U	420 U	420 U

Iowa Army Ammunition Plant
SVOCs in Sediment
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	Site ID	IAAPECO	IAAPECO	IAAPECO
	Sample ID	SCT01	SCT02	SCT03
	Sample Date	9/25/00	9/26/00	9/26/00
Parameter	**Units**			
1,2,4-Trichlorobenzene	ug/Kg	400 U	600 U	400 U
1,2-Dichlorobenzene	ug/Kg	400 U	600 U	400 U
1,3-Dichlorobenzene	ug/Kg	400 U	600 U	400 U
1,4-Dichlorobenzene	ug/Kg	400 U	600 U	400 U
2,4,5-Trichlorophenol	ug/Kg	2000 U	3000 U	2000 U
2,4,6-Trichlorophenol	ug/Kg	400 U	600 U	400 U
2,4-Dichlorophenol	ug/Kg	400 U	600 U	400 U
2,4-Dimethylphenol	ug/Kg	400 U	600 U	400 U
2,4-Dinitrophenol	ug/Kg	2000 U	3000 U	2000 U
2,4-Dinitrotoluene	ug/Kg	400 U	600 U	400 U
2,6-Dinitrotoluene	ug/Kg	400 U	600 U	400 U
2-Chloronaphthalene	ug/Kg	400 U	600 U	400 U
2-Chlorophenol	ug/Kg	400 U	600 U	400 U
2-Methylnaphthalene	ug/Kg	400 U	600 U	400 U
2-Methylphenol (O-Cresol)	ug/Kg	400 U	600 U	400 U
2-Nitroaniline	ug/Kg	2000 U	3000 U	2000 U
2-Nitrophenol	ug/Kg	400 U	600 U	400 U
3,3'-Dichlorobenzidine	ug/Kg	810 U	1200 U	800 U
3-Nitroaniline	ug/Kg	2000 U	3000 U	2000 U
4,6-Dinitro-2-methylphenol	ug/Kg	2000 U	3000 U	2000 U
4-Bromophenyl Phenyl Ether	ug/Kg	400 U	600 U	400 U
4-Chloro-3-methylphenol	ug/Kg	400 U	600 U	400 U
4-Chloroaniline	ug/Kg	400 U	600 U	400 U
4-Chlorophenyl Phenyl Ether	ug/Kg	400 U	600 U	400 U
4-Methylphenol (P-Cresol)	ug/Kg	400 U	6400 =	400 U
4-Nitroaniline	ug/Kg	2000 U	3000 U	2000 U
4-Nitrophenol	ug/Kg	2000 U	3000 U	2000 U
Acenaphthene	ug/Kg	400 U	600 U	400 U
Acenaphthylene	ug/Kg	400 U	600 U	400 U
Anthracene	ug/Kg	400 U	600 U	400 U
Benzo(a)anthracene	ug/Kg	400 U	600 U	400 U
Benzo(a)pyrene	ug/Kg	400 U	600 U	400 U
Benzo(b)fluoranthene	ug/Kg	400 U	600 U	400 U
Benzo(g,h,i)perylene	ug/Kg	400 U	600 U	400 U
Benzo(k)fluoranthene	ug/Kg	400 U	600 U	400 U
Benzyl Butyl Phthalate	ug/Kg	400 U	600 U	400 U

Iowa Army Ammunition Plant
SVOCs in Sediment
Fall 2000

	Site ID	IAAPECO	IAAPECO	IAAPECO
	Sample ID	SCT01	SCT02	SCT03
	Sample Date	9/25/00	9/26/00	9/26/00
Parameter	**Units**			
Bis(2-Chloroethoxy) Methane	ug/Kg	400 U	600 U	400 U
Bis(2-Chloroethyl) Ether	ug/Kg	400 U	600 U	400 U
Bis(2-Ethylhexyl) Phthalate	ug/Kg	400 U	1200 =	400 U
Chrysene	ug/Kg	400 U	600 U	400 U
Di-N-Butyl Phthalate	ug/Kg	400 U	600 U	400 U
Di-N-Octylphthalate	ug/Kg	400 U	600 U	400 U
Dibenz(a,h)Anthracene	ug/Kg	400 U	600 U	400 U
Dibenzofuran	ug/Kg	400 U	600 U	400 U
Fluoranthene	ug/Kg	400 U	600 U	400 U
Fluorene	ug/Kg	400 U	600 U	400 U
Hexachlorobenzene	ug/Kg	400 U	600 U	400 U
Hexachlorobutadiene	ug/Kg	400 U	600 U	400 U
Hexachlorocyclopentadiene	ug/Kg	400 U	600 U	400 U
Hexachloroethane	ug/Kg	400 U	600 U	400 U
Indeno(1,2,3-CD)pyrene	ug/Kg	400 U	600 U	400 U
Isophorone	ug/Kg	400 U	600 U	400 U
N-Nitrosodi-N-Propylamine	ug/Kg	400 U	600 U	400 U
N-Nitrosodiphenylamine	ug/Kg	400 U	600 U	400 U
Naphthalene	ug/Kg	400 U	600 U	400 U
Nitrobenzene	ug/Kg	400 U	600 U	400 U
Pentachlorophenol	ug/Kg	2000 U	3000 U	2000 U
Phenanthrene	ug/Kg	400 U	600 U	400 U
Phenol	ug/Kg	400 U	600 U	400 U
Pyrene	ug/Kg	400 U	600 U	400 U