



DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY JOINT MUNITIONS COMMAND
1 ROCK ISLAND ARSENAL
ROCK ISLAND, IL 61299-6000

REPLY TO
ATTENTION OF:

January 9, 2007

Safety/Rad Waste Directorate

Mr. James Cameron
Nuclear Regulatory Commission
Region III
Decommissioning Branch
2443 Warrenville Road
Lisle, Illinois 60532-4352

Dear Mr. Cameron:

In accordance with Nuclear Regulatory Commission license number SUC-1380, we are providing water sample results from Lake City Army Ammunition Plant, Independence, Missouri. We took the samples on November 7, 2006. The U.S. Army Center for Health Promotion and Preventive Medicine analyzed the samples for uranium. None of the samples exceeded the limits set by Title 10, Code of Federal Regulations, part 20, appendix B.

The point of contact is Mr. Gary Buckrop, AMSJM-SF, (309) 782-2969/0338/0880, electronic mail address rock-amsjm-sf.conus.army.mil.

Sincerely,

Timothy J. Gallagher
Acting Director, Safety/Rad
Waste Directorate

Enclosure

RECEIVED JAN 16 2007



DEPARTMENT OF THE ARMY
US ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
5158 BLACKHAWK ROAD
ABERDEEN PROVING GROUND MD 21010-5403

MCHB-TS-LRD

13 DEC 2006

MEMORANDUM FOR U.S. Army Operations Supply Command (Mr. Gary Buckrop),
1 Rock Island Arsenal, Rock Island, IL 61299-6000

SUBJECT: Directorate of Laboratory Sciences Final Analytical Report

1. We are enclosing one copy of the report.
2. Please contact us if this report or any of our services did not meet your needs or expectations.
3. Point of contact for additional information is Mr. Thomas Beegle, DSN 584-8244 or commercial (410) 436-8244.

Encl

A handwritten signature in cursive script that reads "Ronald J. Swatski".

RONALD J. SWATSKI
Chief, Radiologic, Classic and
Clinical Chemistry Division

Readiness thru Health

Printed on  Recycled Paper

Encl



U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE

DIRECTORATE OF LABORATORY SCIENCES (DLS)

5158 BLACKHAWK ROAD

ABERDEEN PROVING GROUND, MARYLAND 21010-5403

(410) 436-2208

13 DEC 2006

FINAL ANALYTICAL REPORT

**CLIENT: Mr. Gary Buckrop
U.S. Army Operations Sup Cmd
1 Rock Island Arsenal
Rock Island IL 612996000
DSN: 793-2969/0338**

**PROJECT SITE: LAKE CITY AAP
PROGRAM 79 SUBJONO: 1236
DLS PROFILE #: 32194 DLS WORK ORDER #: 23151
REPORT SERIAL NUMBER: 319338**

This report shall not be reproduced except in full without the written approval of DLS. The results relate only to the specific samples identified within the report.

REPORT RELEASE AUTHORIZATION:

Signature: *Ronald J. Swatski* **Date:** 13 December 2006
Ronald J. Swatski, Chief, Radiologic, Classic, and Clinical Chemistry Division

DLS HOLDS ACCREDITATION FROM AIHA, A2LA, NLLAP, AND COLA

Readiness thru Health

DLS Final Analytical Report, LAKE CITY AAP

Program 79, SUBJONO 1236, DLS WO# 23151, Report Serial No. 319338, 12/13/2006

CASE NARRATIVE

1. Provided are the results of analyzing six water samples from Lake City AAP for uranium analysis. The samples were collected on 07 Nov 06 and received in DLS in good condition on 14 Nov 06 with a receipt temperature of 18 degrees C.

3. Sample Preparation:

a. The samples were digested for uranium by EPA method 3020A, (Acid Digestion of Aqueous Samples for the Determination of Total Metals By GFAA and ICP-MS) on 04 Dec 06. There is no separate preparation holding time requirement.

4. Sample Analysis:

a. The samples were analyzed for uranium-238 on 05 Dec 06 by EPA Method 200.8, (Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Mass Spectrometry). All required holding times were met.

b. The results are in units of microgram per liter (ug/L).

5. Quality Control:

a. Laboratory Control Samples (LCS), Pre-digestion and Post-digestion Duplicates, Pre-digestion Matrix Spikes and Pre-digestion Matrix Spike Duplicates (MS/MSD), Post-digestion Spikes and Reagent Blank were prepared for the analysis. During the analysis, an Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) was analyzed every tenth sample for instrument stability. All QC were within acceptance limits.

b. The method acceptance criteria for the ICV and CCV is 100% +/- 10% for uranium. The method acceptance criteria for the LCS is 100% +/- 20% for uranium. The method acceptance criteria for the MS and MSD is 100% +/- 30% for uranium. The acceptance criteria for all the duplicate analyses is +/- 20% relative percent difference (RPD).

6. For additional information on this report, please contact the laboratory at (410) 436-3983.

List of the report contents:

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Sample Summary	1
Analytical Data Report	2
Quality Control Data Report	5
Raw Data	0
Terminology/Abbreviations	1

Report Point-of-Contact: Thomas Beegle ^{tlp}
Reviewer: ADC / RJS *RLC*

List of all tests used:

DLS Procedure	Count
EPA 200.8	7

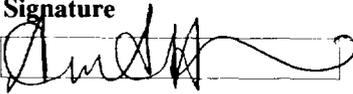
Number of samples included in the report, by matrix:

Matrix	Quantity
Water (Ground water)	7

DLS Final Analytical Report, LAKE CITY AAP

Program 79, SUBJONO 1236, DLS WO# 23151, Report Serial No. 319338, 12/13/2006

Analyst(s):

Analyst Code	Analyst Name	Signature
0033	HENINAA	

SAMPLE SUMMARY

Sorted by DLS ID

Field ID	DLS ID	Date Collected	Matrix
LC-1	23151001	07-Nov-06	Water (Ground water)
LC-2	23151002	07-Nov-06	Water (Ground water)
LC-3	23151003	07-Nov-06	Water (Ground water)
LC-4	23151004	07-Nov-06	Water (Ground water)
LC-5	23151005	07-Nov-06	Water (Ground water)
LC-6	23151006	07-Nov-06	Water (Ground water)
LC-7	23151007	07-Nov-06	Water (Ground water)

ANALYTICAL DATA REPORT

(FORMAT OPTION 1)

Sorted by DLS ID

FINAL REPORT

Field ID: LC-1

DLS ID: 23151001

ANALYTE	RESULT/UNITS	METHOD REPORTING LIMIT	ANALYTICAL METHOD	ANALYST	DATE ANALYZED
Uranium-238	2.43 ug/L	0.100	EPA 200.8	0033	05-Dec-06

Field ID: LC-2

DLS ID: 23151002

ANALYTE	RESULT/UNITS	METHOD REPORTING LIMIT	ANALYTICAL METHOD	ANALYST	DATE ANALYZED
Uranium-238	0.266 ug/L	0.100	EPA 200.8	0033	05-Dec-06

Field ID: LC-3

DLS ID: 23151003

ANALYTE	RESULT/UNITS	METHOD REPORTING LIMIT	ANALYTICAL METHOD	ANALYST	DATE ANALYZED
Uranium-238	1.63 ug/L	0.100	EPA 200.8	0033	05-Dec-06

Field ID: LC-4

DLS ID: 23151004

ANALYTE	RESULT/UNITS	METHOD REPORTING LIMIT	ANALYTICAL METHOD	ANALYST	DATE ANALYZED
Uranium-238	0.640 ug/L	0.100	EPA 200.8	0033	05-Dec-06

Field ID: LC-5

DLS ID: 23151005

ANALYTE	RESULT/UNITS	METHOD REPORTING LIMIT	ANALYTICAL METHOD	ANALYST	DATE ANALYZED
Uranium-238	0.253 ug/L	0.100	EPA 200.8	0033	05-Dec-06

Field ID: LC-6

DLS ID: 23151006

ANALYTE	RESULT/UNITS	METHOD REPORTING LIMIT	ANALYTICAL METHOD	ANALYST	DATE ANALYZED
Uranium-238	0.0960 ug/L	0.100	EPA 200.8	0033	05-Dec-06

FINAL REPORT

Field ID: LC-7

DLS ID: 23151007

ANALYTE	RESULT/UNITS	METHOD REPORTING LIMIT	ANALYTICAL METHOD	ANALYST	DATE ANALYZED
Uranium-238	1.22 ug/L	0.100	EPA 200.8	0033	05-Dec-06

Report ID: HMA0189v1

Report Seq: 319252



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**US Army Center for Health Promotion and Preventive Medicine
Directorate Of Laboratory Sciences (DLS)**

Quality Control Report

DLS Workorder: 23151

Installation: LAKE CITY AAP

Project Officer: Mr. Gary Buckrop

Profile: 1236

Report ID: HMA0189v1
Report Seq: 319252
Workorder No: 23151
Installation: LAKE CITY AAP
Officer: Mr. Gary Buckrop
Subjono: 1236



Page 1 of 1
Date Generated: 12/13/2006 9:34:42 AM
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US Army Center for Health Promotion and Preventive Medicine
Directorate Of Laboratory Sciences (DLS)
Laboratory Control Samples Report

Analyte	Date	Sample Number	Mx	Observed		Theoretical		% Rec.	Analyst	Method	Reviewer	Outside	LCL	UCL
				Units	Units	Units	Units					Limits		
Uranium-238	12/5/2006	07LCS1-45	GW	11.848	ug/L	10	ug/L	118.48	HENINAA	EPA 200.8	BEEGLETE	<input type="checkbox"/>	80	120

Report ID: HMA0189v1

Report Seq: 319252

Workorder No: 23151

Installation: LAKE CITY AAP

Officer: Mr. Gary Buckrop

Subjono: 1236



Page 1 of 1

Date Generated: 12/13/2006 9:34:40 AM

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US Army Center for Health Promotion and Preventive Medicine
Directorate Of Laboratory Sciences (DLS)
Instrument Spike Sample Report

Analyte	Date	Sample Number	Mx	Initial Result	Units	Sample Volume	Spike Solution Conc	Spike Volume	Spiked Result	% Rec.	Analyst	Method	Reviewer	Outside Limits	LCL	UCL
Uranium-238	12/5/2006	23151001 IS	GW	2.426	ug/L	10	1000	0.1	13.077	107.82	HENINAA	EPA 200.8	BEEGLETE		75	125



Report ID: HMA0189v1
Report Seq: 319252
Workorder No: 23151
Installation: LAKE CITY AAP
Officer: Mr. Gary Buckrop
Subjono: 1236

US Army Center for Health Promotion and Preventive Medicine
Directorate Of Laboratory Sciences (DLS)
Matrix Spike Duplicates Report

Analyte	Date	Sample Number	Mx	MS		MSD		% RPD	Recovery	Analyst	Method	Reviewer	Outside Limits	LCL	UCL
				Result	Units	Result	Units								
Uranium-238	12/5/2006	23151001 MSD	GW	13.255	ug/L	13.566	ug/L	2.32	111.40	HENINAA	EPA 200.8	BEEGLETE	<input type="checkbox"/>	70	130

Report ID: HMA0189v1
 Report Seq: 319252
 Workorder No: 23151
 Installation: LAKE CITY AAP
 Officer: Mr. Gary Buckrop
 Subjono: 1236



Page 1 of 1
 Date Generated: 12/13/2006 9:34:46 AM
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US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Matrix Spike Report

Analyte	Date	Sample Number	Mx	Initial		MS		Theoretical	Units	% Rec.	Analyst	Method	Reviewer	Outside		
				Result	Units	Result	Units							Limits	LCL	UCL
Uranium-238	12/5/2006	23151001 MS	GW	2.426	ug/L	13.255	ug/L	10	ug/L	108.29	HENINAA	EPA 200.8	BEEGLETE	<input type="checkbox"/>	70	130

TERMINOLOGY/ABBREVIATIONS

Term	Description
MDA	The minimum detectable activity.
ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CFR	Code of Federal Regulations
OSHA	Occupational Safety and Health Administration
NIOSH	National Institute of Occupational Safety and Health
ACCURACY	A measure of how close a measured value is to a known true value. Accuracy is assessed by means of reference samples and percent recoveries of spiked samples.
ANALYSIS OF VARIANCE	A technique of statistical analysis by which the components of variation for different elements of the data set are separated and estimated.
BLANK	An artificial sample designed to monitor the introduction of artifacts or contamination into the analytical process. The blank is taken through the appropriate steps in the analytical process. Examples are: trip, field, equipment, and reagent blanks.
AIHA	American Industrial Hygiene Association



FIRST CLASS

DEPARTMENT OF THE ARMY
HQ JMC
1 ROCK ISLAND ARSENAL
ROCK ISLAND IL 61299 6000

OFFICIAL BUSINESS
AMSJM SF

MR JAMES CAMERON
NUCLEAR REGULATORY COMMISSION
REGION III
DECOMMISSIONING BRANCH
2443 WARRENVILLE ROAD
LISLE IL 60532 4352

FIRST CLASS

DA Label 18-1, Sep 83
Edition of Oct 74 will be used until exhausted.