U.S. Department of Energy
Grand Junction Office
2597 B¾ Road
Grand Junction, CO 81503

MAY 13 2002

Chris Rittiger
Pennsylvania Department of Environmental Protection
400 Waterfront Drive
Pittsburgh, PA 15222-4745

Subject: Data Validation Package for the Canonsburg/Burrell Long-Term Surveillance and Monitoring Site, November 2001

Dear Mr. Rittiger:

Enclosed is a copy of the data validation for sampling at the Canonsburg/Burrell, Pennsylvania, Long-Term Surveillance and Monitoring site in November 2001. A disk is also enclosed for your use.

If you have any questions or comments, please call me at 970/248-6037 or Mike Widdop at 970/248-6793.

Sincerely,

Arthur Kleinrath
LTSM Program Manager

Enclosures

cc w/enclosures:
S. Harper, Department of Environmental Protection
M. Layton, Nuclear Regulatory Commission

cc w/o enclosures:
M. Widdop, MACTEC-ERS
File Project LCAN 6.7 thru A. Garcia
File Project LBUR 6.7 thru A. Garcia

Add: Mike Layton
Paper Copy

awk/dvpnov.doc

Nms508

UMTRA
Ground Water Project

DATA VALIDATION
CANONSBURG / BURRELL, PA
LONG-TERM SURVEILLANCE AND MAINTENANCE PROGRAM

October / November 2001
Water Sampling

U.S. Department of Energy
Grand Junction, Colorado

Prepared by the
U.S. Department of Energy
Grand Junction Office

CANONSBURG/BURRELL, PENNSYLVANIA
Sampled October 2001

DATA PACKAGE CONTENTS

This data package includes the following information:

Item No.	Description of Contents
1.	**Site Hydrologist Summary**
2.	**Data Package Assessment,** which includes the following: a. Field procedures verification checklist b. Confirmation that chain-of-custody was maintained. c. Confirmation that holding time requirements were met. d. Evaluation of the adequacy of the QC sample results.
3.	**Data Assessment Summary,** which describes problems identified in the data validation process and summarizes the validator's findings.
4.	**Suspected Anomalies Reports** generated by the UMTRA database system. This report compares the new data set with historical data and designates "suspected anomalies" based on the many criteria listed as footnotes on each page. In aggregate, these criteria cause the suspected anomaly program to be very conservative; many of the data shown in the tables are not, in the evaluators judgment, truly anomalies, but merely natural variations in data or routine changes in laboratory detection limits. The designation "OK" affirms the judgment that the particular entry is not an anomaly and, therefore, requires no further inquiry.
5.	**Anomalous Data Review Checksheets** which list the subset of data from the Suspected Anomalies Report that merits explanation or follow-up action. The "Disposition" column of this report describes the evaluator's judgments on the listed anomalies.
6.	**UMTRA Database Printouts** of analytical data organized as follows: a. Ground water quality data (included on disk) b. Surface water quality data (included on disk) c. Equipment blank data (included on disk) d. Time versus concentration graphs e. Static ground water level measurement data
7.	**Sampling and Analysis Work Order and Trip Report.**

Site Hydrologist Summary

Site: Canonsburg / Burrell

Sampling Period: October 29 – November 3, 2001

SUMMARY CRITERIA

1. **Did concentrations in water from any domestic wells sampled exceed a ground water standard, primary drinking water standard, or health advisory?**

   Domestic wells were not sampled during this event.

2. **Were standards exceeded at any point-of-compliance wells?**

   Concentrations of uranium did not exceed the alternate concentration limit (ACL) of 1.0 milligram per liter (mg/L) in point-of-compliance (POC) wells 412, 413, and 414 at the Canonsburg site. There are no POC wells at the Burrell site.

3. **As a result of this sampling round, is there any indication of contaminated ground water movement?**

   No. Graphs of uranium concentrations versus time for these wells are included with the analytical data.

4. **Is there statistical evidence that UMTRA Project related contaminants were detected in a surface body of water in greater concentrations than upstream ambient water quality?**

   Surface water concentrations in Chartiers Creek downstream of the Canonsburg site (locations 602 and 603) were compared to benchmark values derived from historical data from upstream location 601. Downstream concentrations of UMTRA related contaminants were less than the respective benchmark values, which indicates no site induced impact on water quality in Chartiers Creek. Concentrations of uranium did not exceed the ACL of 0.01 mg/L at the point of exposure at location 602 in Chartiers Creek. Designated surface water sampling locations at the Burrell site were dry.

Dick Heydenburg
Site Hydrologist

15 Apr 2002
Date

DATA ASSESSMENT

DATA PACKAGE ASSESSMENT

REQUISITION NUMBERS: 17671 SITE: Canonsburg LABORATORY: GJO ANALYSIS DATES: 11-7-01 to 11-13-01

REVIEWER: Sam Campbell (NAME (print)) Sam Campbell (SIGNATURE) 12-14-01 (DATE)

	ICP-MS	ICP-AES	GFAA	FAA	$NaBH_4$	AS	LSc	PC	IC	Gravimetric	Colorimetric	Other
CHAIN 0F CUSTODY	OK	OK	NA	NA	NA	NA	NA	NA	OK	NA	NA	NA
HOLDING TIME	OK	OK	↓	↓	↓	↓	↓	↓	OK	↓	↓	↓
CALIB. VERIFICATION (For AS, internal tracer)	OK	OK	↓	↓	↓	↓	↓	↓	OK	NA	↓	↓
PREP. BLANKS (Only if digestion)	NA	NA	↓	↓	↓	↓	↓	↓	NA	↓	NA	↓
INT/CONT CAL. BLANKS	(1)	OK	↓	↓	↓	NA	NA	NA	OK	NA	↓	↓
ICP SERIAL DILUTION	OK	(2)	NA	NA	NA	NA	NA	NA	NA	NA	NA	↓
ICS (ICP only)	NA	OK	NA	NA	NA	NA	NA	NA	NA	NA	NA	↓
LAB. CONTROL SAMPLE	OK	NA	↓	↓	↓	↓	↓	NA	NA	↓	↓	↓
DUPLICATES	OK	OK	↓	↓	↓	↓	↓	↓	OK	↓	↓	↓
POSTDIGEST. SPKS. (Only if MS fails)	NA	NA	↓	↓	↓	NA	NA	NA	NA	NA	NA	↓
MATRIX SPKS.	OK	OK	↓	↓	↓	↓	↓	↓	OK	NA	↓	↓
OVERALL ASSESS.	OK	OK	↓	↓	↓	↓	↓	↓	OK	↓	↓	↓

DATA REQUIRING FLAGS: (1) U flag uranium results from samples 282761-282766, 282769, 282770, and 282772 because of CCB contamination. (2) J flag all K results because of the serial dilution result.

DATA PACKAGE ASSESSMENT

REQUISITION NUMBERS: 17672 SITE: Burrell LABORATORY: GJO ANALYSIS DATES: 11-5 to 12-2-01

REVIEWER: Sam Campbell (NAME (print)) Sam Campbell (SIGNATURE) 12-14-01 (DATE)

	ICP-MS	ICP-AES	GFAA	FAA	$NaBH_4$	AS	LSc	PC	IC	Gravimetric	Colorimetric	Other
CHAIN 0F CUSTODY	OK	OK	NA	NA	OK	NA	OK	OK	OK	OK	OK	NA
HOLDING TIME	OK	OK			OK		OK	OK	OK	OK	OK	
CALIB. VERIFICATION (For AS, internal tracer)	OK	OK			OK		OK	OK	OK	NA	OK	
PREP. BLANKS (Only if digestion)	NA	NA			NA		OK	OK	NA	NA	NA	
INT/CONT CAL. BLANKS	1	2			OK	NA	NA	NA	3	NA	4	
ICP SERIAL DILUTION	OK	OK	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ICS (ICP only)	NA	OK	NA	NA	NA	NA	NA	NA	NA	NA	NA	
LAB. CONTROL SAMPLE	NA	NA			NA		OK	OK	NA	OK	NA	
DUPLICATES	OK	OK			OK		OK	OK	OK	OK	OK	
POSTDIGEST. SPKS. (Only if MS fails)	NA	NA			NA	NA	NA	NA	NA	NA	NA	
MATRIX SPKS.	OK	OK			OK		NA	5	OK	NA	OK	
OVERALL ASSESS.	OK	OK			OK		OK	OK	OK	OK	OK	

REVIEWER COMMENTS:
2 Mg detected in ~~one~~ two CCBs- no samples affected. Mn and Na detected in CCBs- no samples affected.
4 NH_4 detected in CCBs- no samples affected

ITEMS REQUIRING ATTENTION:
1 U flag all Pb results and U results 282773-776, and 282778-781 and 282918 because of CCB contamination. 2 U flag SO_4 result 282918 because of CCB contamination 5 J flag all gross α results because the matrix spike recovery did not meet criteria.

UGW Water Sampling Field Activities Verification Checklist

Project Canonsburg/Burrell, PA
Date(s) of Verification 3/20/02

Date(s) of Water Sampling 10/29 → 11/3/02
Name of Verifier JEFF PRICE

	Response (Yes, No, N/A)	Comments
1. Is the SAP the primary document directing field procedures?	YES	
List other documents, SOP's, instructions.		Work Order
2. Were the sampling locations specified in the planning documents sampled?	YES	Except for locations 0611 & 0612 (dry); location 0406 was damaged.
3. Was field equipment calibrated as specified in the above named documents?	YES	
Were the number and types (alkalinity, temperature, Ec, pH, turbidity, DO, ORP) of field measurements taken as specified?	YES	Except for alkalinity - equipment damaged during shipping.
Were the standard solutions used for the calibration and operational checks of the field instruments brought to within 10 degrees C of the temperature of the water to be sampled?	YES	
Was the calibration information recorded on the field data sheets?	YES	
4. Was depth to water measured before purging?	YES	
Was this information used to calculate purge volume?	YES	
5. If conventional purging was used, were the wells purged until parameters stabilized and 3 casing volumes were removed, until the well was purged dry, or until 10 casing volumes were removed?	YES	
6. If low-flow purging was used, was the purge rate less than 0.125 gal/min, and was the drawdown less than 0.3 ft?	NA	

7. Were duplicates taken at a frequency of one per 20 samples?	YES	
8. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	YES	
9. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
10. Were QC samples assigned a fictitious site identification number?	YES	
Was the true identity of the samples recorded in the field notes?	YES	
11. Were samples collected in the containers specified?	YES	
Were certified pre-cleaned containers used for the sampling?	YES	
12. Were samples filtered and preserved as specified?	YES	
13. Were the number and types of samples collected as specified?	YES	
14. Were chain of custody records completed and was sample custody maintained?	YES	
15. Were sample ticket book numbers recorded on field data forms and on the chain of custody?	YES	
16. Are field data sheets signed and dated by the team leader?	YES	
17. Was all other pertinent information documented on the field data sheets?	YES	
18. Was the presence or absence of ice in the cooler documented at every sample location?	YES	
19. Were water levels measured at the locations specified in the planning documents?	YES	

CANONSBURG/BURRELL, PENNSYLVANIA
OCTOBER 2001 SAMPLING
DATA ASSESSMENT SUMMARY

The DOE-GJO Analytical Laboratory analyzed samples and reported results for this sampling event under requisition numbers 17672 (Burrell) and 17671 (Canonsburg).

METALS/MAJOR CATIONS ANALYSIS

The determination of calcium, iron, magnesium, manganese, molybdenum, potassium, sodium, and vanadium was performed by inductively coupled plasma-atomic emission spectrometry (ICP-AES). Lead and uranium were analyzed by inductively coupled plasma-mass spectrometry (ICP-MS).

INORGANIC ANALYSIS

Chloride and sulfate were determined by ion chromatography (IC). Total dissolved solids (TDS) were determined gravimetrically.

RADIOCHEMICAL ANALYSES

The determination of gross alpha was performed using gas proportional counting (PC). Although not requested, gross beta results are included in this report because gross beta activity is determined concurrently with gross alpha activity. Radium-226 and radium-228 were determined by liquid scintillation spectrometry according to SOC RC-7.

Radiological results that were less than the minimum detectable activity (MDA) and/or the 3-sigma counting statistic range were qualified with a "U" flag in the database.

FIELD ANALYSIS/ACTIVITIES

Sample results from wells 522 and 523 at the Burrell site had pH values greater than 9 and were qualified with a "G" flag in the database indicating potential grout contamination. Results from wells 410, 412, 413, 414A, and 424 at the Canonsburg site were qualified with a "L" flag in the database indicating less than three casing volumes of water were purged prior to sampling.

One equipment blank was collected and analyzed for the same constituents as the other environmental samples. There were no UMTRA related contaminants detected in the equipment blank in concentrations above the contract required detection limit (CRDL) or MDA/3σ; therefore, equipment blank results are acceptable.

Duplicate samples were collected from well 524 (Burrell), surface location 602 (Canonsburg), and well 424 (Canonsburg). There are no established regulatory criteria for the evaluation of field duplicate samples; therefore, EPA guidance for *laboratory* duplicates (which is conservative for field duplicates) was used to assess the precision of the field duplicates. The duplicate results met the laboratory duplicate criteria (less than 20 relative percent difference).

SAR

Because of technical constraints, a suspected anomalies report (SAR) could not be generated for the Burrell site (CAN03) and is not included in this data package. **Instead, historical data were reviewed as part of the evaluation of suspected anomalous data.** Data from Burrell site were compared to historical minimum and maximum values.

A SAR was produced with the Canonsburg (CAN01) data. Values listed in the SAR were considered valid if: (1) identified low concentrations were the result of low detection limits; (2) the concentration detected was within 50 percent of the concentration range during the previous sampling events; or (3) there were less than 5 historical samples for comparison.

Results from this sampling event that were greater than 150 percent of the historical maximum value or less than 50 percent of the historical minimum value (excluding results with less than 5 historical data points) are listed on the Anomalous Data Review Checksheet and will be compared to results of the next sampling round to make a final determination of validity.

SUMMARY

All analytical quality control criteria were met except as qualified on the Ground Water Quality Data by Parameter, Surface Water Quality Data by Parameter and equipment blank printouts. The meaning of data qualifiers is as defined on the UMTRA database printout or as defined in the USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, Multi-Media Multi-Concentration, Document Number ILMO2.0, 1991.

A disk copy of the Ground Water Quality Data by Parameter, Surface Water Quality by Parameter, and equipment blank database printouts with the qualifiers incorporated is included in this package. All data in this package are considered validated and may be treated as final results.

J. E. Price 3/26/02

Jeff Price Date
Data Validation Lead

26 Mar 02

Dick Heydenburg Date
Site Hydrologist

WATER QUALITY DATA

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Calcium	mg/L	0410	10/30/2001	0001	UM	U	49.700		L	#	0.0653	-
	mg/L	0412	10/30/2001	0001	UM	O	363.000		L	#	0.0653	-
	mg/L	0413	10/30/2001	0001	UM	O	114.000		L	#	0.0653	-
	mg/L	0414A	10/30/2001	0001	UM		103.000		L	#	0.0653	-
	mg/L	0424	10/30/2001	0001	UM	C	100.000		L	#	0.0653	-
	mg/L	0424	10/30/2001	0002	UM	C	100.000		L	#	0.0653	-
	mg/L	0504	10/30/2001	0001	SL	U	212.000			#	0.0653	-
	mg/L	0505	10/30/2001	0001	SL	N	2.700			#	0.0653	-
Chloride	mg/L	0410	10/30/2001	0001	UM	U	182.000		L	#	0.1865	-
	mg/L	0412	10/30/2001	0001	UM	O	26.800		L	#	0.746	-
	mg/L	0413	10/30/2001	0001	UM	O	22.300		L	#	0.1865	-
	mg/L	0414A	10/30/2001	0001	UM		17.700		L	#	0.1865	-
	mg/L	0424	10/30/2001	0001	UM	C	106.000		L	#	0.373	-
	mg/L	0424	10/30/2001	0002	UM	C	109.000		L	#	0.373	-
	mg/L	0504	10/30/2001	0001	SL	U	313.000			#	0.373	-
	mg/L	0505	10/30/2001	0001	SL	N	259.000			#	0.373	-
Magnesium	mg/L	0410	10/30/2001	0001	UM	U	20.400		L	#	0.0041	-
	mg/L	0412	10/30/2001	0001	UM	O	70.500		L	#	0.0041	-
	mg/L	0413	10/30/2001	0001	UM	O	16.300		L	#	0.0041	-
	mg/L	0414A	10/30/2001	0001	UM		19.300		L	#	0.0041	-
	mg/L	0424	10/30/2001	0001	UM	C	24.300		L	#	0.0041	-
	mg/L	0424	10/30/2001	0002	UM	C	24.000		L	#	0.0041	-
	mg/L	0504	10/30/2001	0001	SL	U	25.900			#	0.0041	-
	mg/L	0505	10/30/2001	0001	SL	N	0.758			#	0.0041	-
Manganese	mg/L	0410	10/30/2001	0001	UM	U	3.160		L	#	0.0001	-
	mg/L	0412	10/30/2001	0001	UM	O	22.300		L	#	0.001	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Manganese	mg/L	0413	10/30/2001	0001	UM	O	2.610		L	#	0.0001	-
	mg/L	0414A	10/30/2001	0001	UM		7.010		L	#	0.0001	-
	mg/L	0424	10/30/2001	0001	UM	C	6.120		L	#	0.0001	-
	mg/L	0424	10/30/2001	0002	UM	C	6.110		L	#	0.0001	-
	mg/L	0504	10/30/2001	0001	SL	U	1.390			#	0.0001	-
	mg/L	0505	10/30/2001	0001	SL	N	0.0059	B		#	0.0001	-
Molybdenum	mg/L	0410	10/30/2001	0001	UM	U	0.0019	U	L	#	0.0019	-
	mg/L	0412	10/30/2001	0001	UM	O	0.0019	U	L	#	0.0019	-
	mg/L	0413	10/30/2001	0001	UM	O	0.0019	U	L	#	0.0019	-
	mg/L	0414A	10/30/2001	0001	UM		0.0019	U	L	#	0.0019	-
	mg/L	0424	10/30/2001	0001	UM	C	0.0019	U	L	#	0.0019	-
	mg/L	0424	10/30/2001	0002	UM	C	0.0019	U	L	#	0.0019	-
	mg/L	0504	10/30/2001	0001	SL	U	0.0019	U		#	0.0019	-
	mg/L	0505	10/30/2001	0001	SL	N	0.004	B		#	0.0019	-
ORP of Zobell Solution	mV	0410	10/30/2001	N001	UM	U	237		L	#	-	-
	mV	0412	10/30/2001	N001	UM	O	239		L	#	-	-
	mV	0413	10/30/2001	N001	UM	O	239		L	#	-	-
	mV	0414A	10/30/2001	N001	UM		243		L	#	-	-
	mV	0424	10/30/2001	N001	UM	C	240		L	#	-	-
	mV	0504	10/30/2001	N001	SL	U	237			#	-	-
	mV	0505	10/30/2001	N001	SL	N	236			#	-	-
Oxidation Reduction Potent	mV	0410	10/30/2001	N001	UM	U	33		L	#	-	-
	mV	0412	10/30/2001	N001	UM	O	3		L	#	-	-
	mV	0413	10/30/2001	N001	UM	O	-84		L	#	-	-
	mV	0414A	10/30/2001	N001	UM		-40		L	#	-	-
	mV	0424	10/30/2001	N001	UM	C	-110		L	#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Oxidation Reduction Potent	mV	0504	10/30/2001	N001	SL	U	-67			#	-	-
	mV	0505	10/30/2001	N001	SL	N	-235			#	-	-
pH	s.u.	0410	10/30/2001	N001	UM	U	5.61		L	#	-	-
	s.u.	0412	10/30/2001	N001	UM	O	6.13		L	#	-	-
	s.u.	0413	10/30/2001	N001	UM	O	6.73		L	#	-	-
	s.u.	0414A	10/30/2001	N001	UM		6.58		L	#	-	-
	s.u.	0424	10/30/2001	N001	UM	C	6.52		L	#	-	-
	s.u.	0504	10/30/2001	N001	SL	U	6.79			#	-	-
	s.u.	0505	10/30/2001	N001	SL	N	8.38			#	-	-
Potassium	mg/L	0410	10/30/2001	0001	UM	U	1.090	E	JL	#	0.0151	-
	mg/L	0412	10/30/2001	0001	UM	O	2.330	E	JL	#	0.0151	-
	mg/L	0413	10/30/2001	0001	UM	O	3.670	E	JL	#	0.0151	-
	mg/L	0414A	10/30/2001	0001	UM		1.490	E	JL	#	0.0151	-
	mg/L	0424	10/30/2001	0001	UM	C	2.970	E	JL	#	0.0151	-
	mg/L	0424	10/30/2001	0002	UM	C	2.960	E	JL	#	0.0151	-
	mg/L	0504	10/30/2001	0001	SL	U	1.600	E	J	#	0.0151	-
	mg/L	0505	10/30/2001	0001	SL	N	0.802	E	J	#	0.0151	-
Sodium	mg/L	0410	10/30/2001	0001	UM	U	52.400		L	#	0.0074	-
	mg/L	0412	10/30/2001	0001	UM	O	70.500		L	#	0.0074	-
	mg/L	0413	10/30/2001	0001	UM	O	28.400		L	#	0.0074	-
	mg/L	0414A	10/30/2001	0001	UM		10.200		L	#	0.0074	-
	mg/L	0424	10/30/2001	0001	UM	C	123.000		L	#	0.0074	-
	mg/L	0424	10/30/2001	0002	UM	C	125.000		L	#	0.0074	-
	mg/L	0504	10/30/2001	0001	SL	U	55.100			#	0.0074	-
	mg/L	0505	10/30/2001	0001	SL	N	381.000			#	0.074	-
Specific Conductance	umhos/cm	0410	10/30/2001	N001	UM	U	764		L	#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Specific Conductance	umhos/cm	0412	10/30/2001	N001	UM	O	2190		L	#	-	-
	umhos/cm	0413	10/30/2001	N001	UM	O	798		L	#	-	-
	umhos/cm	0414A	10/30/2001	N001	UM		715		L	#	-	-
	umhos/cm	0424	10/30/2001	N001	UM	C	1280		L	#	-	-
	umhos/cm	0504	10/30/2001	N001	SL	U	1415			#	-	-
	umhos/cm	0505	10/30/2001	N001	SL	N	1742			#	-	-
Sulfate	mg/L	0410	10/30/2001	0001	UM	U	95.400		L	#	0.2045	-
	mg/L	0412	10/30/2001	0001	UM	O	1030.000		L	#	0.818	-
	mg/L	0413	10/30/2001	0001	UM	O	79.900		L	#	0.2045	-
	mg/L	0414A	10/30/2001	0001	UM		124.000		L	#	0.2045	-
	mg/L	0424	10/30/2001	0001	UM	C	162.000		L	#	0.409	-
	mg/L	0424	10/30/2001	0002	UM	C	156.000		L	#	0.409	-
	mg/L	0504	10/30/2001	0001	SL	U	153.000			#	0.409	-
	mg/L	0505	10/30/2001	0001	SL	N	38.200			#	0.409	-
Temperature	C	0410	10/30/2001	N001	UM	U	8.5		L	#	-	-
	C	0412	10/30/2001	N001	UM	O	12.8		L	#	-	-
	C	0413	10/30/2001	N001	UM	O	14.4		L	#	-	-
	C	0414A	10/30/2001	N001	UM		13.5		L	#	-	-
	C	0424	10/30/2001	N001	UM	C	15.4		L	#	-	-
	C	0504	10/30/2001	N001	SL	U	7.3			#	-	-
	C	0505	10/30/2001	N001	SL	N	13.4			#	-	-
Temperature of Zobell Solu	C	0410	10/30/2001	N001	UM	U	8.5		L	#	-	-
	C	0412	10/30/2001	N001	UM	O	13.1		L	#	-	-
	C	0413	10/30/2001	N001	UM	O	15.9		L	#	-	-
	C	0414A	10/30/2001	N001	UM		10.6		L	#	-	-
	C	0424	10/30/2001	N001	UM	C	11.6		L	#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Temperature of Zobell Solu	C	0504	10/30/2001	N001	SL	U	8.5			#	-	-
	C	0505	10/30/2001	N001	SL	N	16			#	-	-
Turbidity	NTU	0410	10/30/2001	N001	UM	U	58		L	#	-	-
	NTU	0412	10/30/2001	N001	UM	O	4.84		L	#	-	-
	NTU	0413	10/30/2001	N001	UM	O	29.9		L	#	-	-
	NTU	0414A	10/30/2001	N001	UM		1000	>	L	#	-	-
	NTU	0424	10/30/2001	N001	UM	C	1.81		L	#	-	-
	NTU	0504	10/30/2001	N001	SL	U	3.37			#	-	-
	NTU	0505	10/30/2001	N001	SL	N	9.9			#	-	-
Uranium	mg/L	0410	10/30/2001	0001	UM	U	0.0006	B	UL	#	0.0001	-
	mg/L	0412	10/30/2001	0001	UM	O	0.0536		L	#	0.0001	-
	mg/L	0413	10/30/2001	0001	UM	O	0.0914		L	#	0.0001	-
	mg/L	0414A	10/30/2001	0001	UM		0.0019		UL	#	0.0001	-
	mg/L	0424	10/30/2001	0001	UM	C	0.00058	B	UL	#	0.0001	-
	mg/L	0424	10/30/2001	0002	UM	C	0.0006	B	UL	#	0.0001	-
	mg/L	0504	10/30/2001	0001	SL	U	0.0069			#	0.0001	-
	mg/L	0505	10/30/2001	0001	SL	N	0.00069	B	U	#	0.0001	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY

RECORDS: SELECTED FROM USEE200 WHERE site_code='CAN01' AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE '*R*' OR data_validation_qualifiers LIKE '*X*') OR IsNull(data_validation_qualifiers)) AND DATE_SAMPLED between #10/15/2001# and #11/30/2001#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- J Estimated value.
- L Less than 3 bore volumes purged prior to sampling.
- U Parameter analyzed for but was not detected.
- F Low flow sampling method used.
- R Unusable result.
- G Possible grout contamination, pH > 9.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:06 am

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Calcium	mg/L	0601	10/30/2001	0001	115.000			#	0.0653	-
	mg/L	0602	10/30/2001	0001	121.000			#	0.0653	-
	mg/L	0603	10/30/2001	0001	118.000			#	0.0653	-
	mg/L	0603	10/30/2001	0002	121.000			#	0.0653	-
Chloride	mg/L	0601	10/30/2001	0001	134.000			#	0.373	-
	mg/L	0602	10/30/2001	0001	133.000			#	0.373	-
	mg/L	0603	10/30/2001	0001	133.000			#	0.373	-
	mg/L	0603	10/30/2001	0002	133.000			#	0.373	-
Magnesium	mg/L	0601	10/30/2001	0001	29.300			#	0.0041	-
	mg/L	0602	10/30/2001	0001	30.400			#	0.0041	-
	mg/L	0603	10/30/2001	0001	30.100			#	0.0041	-
	mg/L	0603	10/30/2001	0002	30.800			#	0.0041	-
Manganese	mg/L	0601	10/30/2001	0001	0.095			#	0.0001	-
	mg/L	0602	10/30/2001	0001	0.003	B		#	0.0001	-
	mg/L	0603	10/30/2001	0001	0.092			#	0.0001	-
	mg/L	0603	10/30/2001	0002	0.094			#	0.0001	-
Molybdenum	mg/L	0601	10/30/2001	0001	0.046			#	0.0019	-
	mg/L	0602	10/30/2001	0001	0.039			#	0.0019	-
	mg/L	0603	10/30/2001	0001	0.039			#	0.0019	-
	mg/L	0603	10/30/2001	0002	0.041			#	0.0019	-
ORP of Zobell Solution	mV	0601	10/30/2001	N001	237			#	-	-
	mV	0602	10/30/2001	N001	240			#	-	-
	mV	0603	10/30/2001	N001	243			#	-	-
Oxidation Reduction Potent	mV	0601	10/30/2001	N001	49			#	-	-
	mV	0602	10/30/2001	N001	130			#	-	-
	mV	0603	10/30/2001	N001	-52			#	-	-
pH	s.u.	0601	10/30/2001	N001	8.54			#	-	-
	s.u.	0602	10/30/2001	N001	7.92			#	-	-
	s.u.	0603	10/30/2001	N001	8.03			#	-	-
Potassium	mg/L	0601	10/30/2001	0001	8.550	E	J	#	0.0151	-
	mg/L	0602	10/30/2001	0001	8.280	E	J	#	0.0151	-
	mg/L	0603	10/30/2001	0001	8.090	E	J	#	0.0151	-
	mg/L	0603	10/30/2001	0002	8.260	E	J	#	0.0151	-
Sodium	mg/L	0601	10/30/2001	0001	173.000			#	0.0074	-
	mg/L	0602	10/30/2001	0001	182.000			#	0.0074	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:06 am

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Sodium	mg/L	0603	10/30/2001	0001	182.000			#	0.0074	-
	mg/L	0603	10/30/2001	0002	185.000			#	0.0074	-
Specific Conductance	umhos/cm	0601	10/30/2001	N001	1865			#	-	-
	umhos/cm	0602	10/30/2001	N001	1650			#	-	-
	umhos/cm	0603	10/30/2001	N001	1700			#	-	-
Sulfate	mg/L	0601	10/30/2001	0001	494.000			#	0.409	-
	mg/L	0602	10/30/2001	0001	514.000			#	0.409	-
	mg/L	0603	10/30/2001	0001	516.000			#	0.409	-
	mg/L	0603	10/30/2001	0002	522.000			#	0.409	-
Temperature	C	0601	10/30/2001	N001	5.4			#	-	-
	C	0602	10/30/2001	N001	9.6			#	-	-
	C	0603	10/30/2001	N001	9.2			#	-	-
Temperature of Zobell Solu	C	0601	10/30/2001	N001	8.5			#	-	-
	C	0602	10/30/2001	N001	11.6			#	-	-
	C	0603	10/30/2001	N001	10.6			#	-	-
Uranium	mg/L	0601	10/30/2001	0001	0.000	B	U	#	0.0001	-
	mg/L	0602	10/30/2001	0001	0.001		U	#	0.0001	-
	mg/L	0603	10/30/2001	0001	0.001		U	#	0.0001	-
	mg/L	0603	10/30/2001	0002	0.001		U	#	0.0001	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:06 am

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY

RECORDS: SELECTED FROM USEE800 WHERE site_code='CAN01' AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE '*R*' OR data_validation_qualifiers LIKE '*X*') OR IsNull(data_validation_qualifiers)) AND DATE_SAMPLED between #10/15/2001# and #11/30/2001#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- J Estimated value.
- G Possible grout contamination, pH > 9.
- R Unusable result.
- U Parameter analyzed for but was not detected.
- F Low flow sampling method used.
- L Less than 3 bore volumes purged prior to sampling.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Ammonium	mg/L	0420	11/01/2001	0001	AL	U	0.465			#	0.0042	-
	mg/L	0422	11/01/2001	0001	AL	C	0.144			#	0.0042	-
	mg/L	0423	10/31/2001	0001	AL	D	3.780			#	0.0042	-
	mg/L	0424	10/31/2001	0001	AL	D	1.410			#	0.0042	-
	mg/L	0520	11/01/2001	0001	CS	U	0.741			#	0.0042	-
	mg/L	0522	11/01/2001	0001	CS	C	0.345		G	#	0.0042	-
	mg/L	0523	10/31/2001	0001	CS	D	0.301		G	#	0.0042	-
	mg/L	0524	10/31/2001	0001	CS	D	0.473			#	0.0042	-
	mg/L	0524	10/31/2001	0002	CS	D	0.444			#	0.0042	-
Calcium	mg/L	0420	11/01/2001	0001	AL	U	104.000			#	0.0653	-
	mg/L	0422	11/01/2001	0001	AL	C	59.000			#	0.0653	-
	mg/L	0423	10/31/2001	0001	AL	D	156.000			#	0.0653	-
	mg/L	0424	10/31/2001	0001	AL	D	140.000			#	0.0653	-
	mg/L	0520	11/01/2001	0001	CS	U	31.400			#	0.0653	-
	mg/L	0522	11/01/2001	0001	CS	C	0.722		G	#	0.0653	-
	mg/L	0523	10/31/2001	0001	CS	D	1.170		G	#	0.0653	-
	mg/L	0524	10/31/2001	0001	CS	D	3.290			#	0.0653	-
	mg/L	0524	10/31/2001	0002	CS	D	3.260			#	0.0653	-
Chloride	mg/L	0420	11/01/2001	0001	AL	U	20.900			#	0.187	-
	mg/L	0422	11/01/2001	0001	AL	C	9.690			#	0.0748	-
	mg/L	0423	10/31/2001	0001	AL	D	23.700			#	0.0748	-
	mg/L	0424	10/31/2001	0001	AL	D	25.800			#	0.374	-
	mg/L	0520	11/01/2001	0001	CS	U	14.600			#	0.187	-
	mg/L	0522	11/01/2001	0001	CS	C	6.440		G	#	0.0374	-
	mg/L	0523	10/31/2001	0001	CS	D	7.480		G	#	0.0374	-
	mg/L	0524	10/31/2001	0001	CS	D	15.300			#	0.187	-
	mg/L	0524	10/31/2001	0002	CS	D	15.000			#	0.187	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Gross Alpha	pCi/L	0420	11/01/2001	0001	AL	U	6.46	U	J	#	6.46	± 3.60
	pCi/L	0422	11/01/2001	0001	AL	C	4.74	U	J	#	4.74	± 2.43
	pCi/L	0423	10/31/2001	0001	AL	D	16.02	U	J	#	16.02	± 8.71
	pCi/L	0424	10/31/2001	0001	AL	D	10.11	U	J	#	10.11	± 5.30
	pCi/L	0520	11/01/2001	0001	CS	U	4.21	U	J	#	4.21	± 2.27
	pCi/L	0522	11/01/2001	0001	CS	C	4.66	U	GJ	#	4.66	± 2.32
	pCi/L	0523	10/31/2001	0001	CS	D	6.33	U	GJ	#	6.33	± 3.60
	pCi/L	0524	10/31/2001	0001	CS	D	6.54	U	J	#	6.54	± 3.13
	pCi/L	0524	10/31/2001	0002	CS	D	6.54	U	J	#	6.54	± 3.17
Gross Beta	pCi/L	0420	11/01/2001	0001	AL	U	5.71	U		#	5.71	± 3.45
	pCi/L	0422	11/01/2001	0001	AL	C	3.81	U		#	3.81	± 2.22
	pCi/L	0423	10/31/2001	0001	AL	D	14.26	U		#	14.26	± 8.88
	pCi/L	0424	10/31/2001	0001	AL	D	10.12			#	8.17	± 5.21
	pCi/L	0520	11/01/2001	0001	CS	U	3.8	U		#	3.8	± 2.27
	pCi/L	0522	11/01/2001	0001	CS	C	3.81	U	G	#	3.81	± 2.26
	pCi/L	0523	10/31/2001	0001	CS	D	5.71	U	G	#	5.71	± 3.34
	pCi/L	0524	10/31/2001	0001	CS	D	5.69	U		#	5.69	± 3.32
	pCi/L	0524	10/31/2001	0002	CS	D	5.7	U		#	5.7	± 3.23
Iron	mg/L	0420	11/01/2001	0001	AL	U	30.900			#	0.0007	-
	mg/L	0422	11/01/2001	0001	AL	C	0.305			#	0.0007	-
	mg/L	0423	10/31/2001	0001	AL	D	25.900			#	0.0007	-
	mg/L	0424	10/31/2001	0001	AL	D	0.347			#	0.0007	-
	mg/L	0520	11/01/2001	0001	CS	U	0.197			#	0.0007	-
	mg/L	0522	11/01/2001	0001	CS	C	0.0221	B	G	#	0.0007	-
	mg/L	0523	10/31/2001	0001	CS	D	0.0384		G	#	0.0007	-
	mg/L	0524	10/31/2001	0001	CS	D	0.0597			#	0.0007	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Iron	mg/L	0524	10/31/2001	0002	CS	D	0.056			#	0.0007	-
Lead	mg/L	0420	11/01/2001	0001	AL	U	0.00068	B	U	#	0.0001	-
	mg/L	0422	11/01/2001	0001	AL	C	0.00057	B	U	#	0.0001	-
	mg/L	0423	10/31/2001	0001	AL	D	0.00062	B	U	#	0.0001	-
	mg/L	0424	10/31/2001	0001	AL	D	0.00062	B	U	#	0.0001	-
	mg/L	0520	11/01/2001	0001	CS	U	0.00072	B	U	#	0.0001	-
	mg/L	0522	11/01/2001	0001	CS	C	0.00061	B	UG	#	0.0001	-
	mg/L	0523	10/31/2001	0001	CS	D	0.00063	B	UG	#	0.0001	-
	mg/L	0524	10/31/2001	0001	CS	D	0.00059	B	U	#	0.0001	-
	mg/L	0524	10/31/2001	0002	CS	D	0.0006	B	U	#	0.0001	-
Magnesium	mg/L	0420	11/01/2001	0001	AL	U	27.000			#	0.0041	-
	mg/L	0422	11/01/2001	0001	AL	C	18.100			#	0.0041	-
	mg/L	0423	10/31/2001	0001	AL	D	81.900			#	0.0041	-
	mg/L	0424	10/31/2001	0001	AL	D	60.600			#	0.0041	-
	mg/L	0520	11/01/2001	0001	CS	U	12.000			#	0.0041	-
	mg/L	0522	11/01/2001	0001	CS	C	0.156		G	#	0.0041	-
	mg/L	0523	10/31/2001	0001	CS	D	0.166		G	#	0.0041	-
	mg/L	0524	10/31/2001	0001	CS	D	0.690			#	0.0041	-
	mg/L	0524	10/31/2001	0002	CS	D	0.679			#	0.0041	-
Manganese	mg/L	0420	11/01/2001	0001	AL	U	1.430			#	0.0001	-
	mg/L	0422	11/01/2001	0001	AL	C	0.582			#	0.0001	-
	mg/L	0423	10/31/2001	0001	AL	D	2.060			#	0.0001	-
	mg/L	0424	10/31/2001	0001	AL	D	12.800			#	0.0001	-
	mg/L	0520	11/01/2001	0001	CS	U	0.0515			#	0.0001	-
	mg/L	0522	11/01/2001	0001	CS	C	0.0018	B	G	#	0.0001	-
	mg/L	0523	10/31/2001	0001	CS	D	0.004	B	G	#	0.0001	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Manganese	mg/L	0524	10/31/2001	0001	CS	D	0.0201			#	0.0001	-
	mg/L	0524	10/31/2001	0002	CS	D	0.0203			#	0.0001	-
Molybdenum	mg/L	0420	11/01/2001	0001	AL	U	0.0019	U		#	0.0019	-
	mg/L	0422	11/01/2001	0001	AL	C	0.0019	U		#	0.0019	-
	mg/L	0423	10/31/2001	0001	AL	D	0.0174			#	0.0019	-
	mg/L	0424	10/31/2001	0001	AL	D	0.0056	B		#	0.0019	-
	mg/L	0520	11/01/2001	0001	CS	U	0.0019	U		#	0.0019	-
	mg/L	0522	11/01/2001	0001	CS	C	0.0019	U	G	#	0.0019	-
	mg/L	0523	10/31/2001	0001	CS	D	0.0019	U	G	#	0.0019	-
	mg/L	0524	10/31/2001	0001	CS	D	0.0019	U		#	0.0019	-
	mg/L	0524	10/31/2001	0002	CS	D	0.0019	U		#	0.0019	-
Nitrate as NO3	mg/L	0420	11/01/2001	0001	AL	U	0.0305	U		#	0.0305	-
	mg/L	0422	11/01/2001	0001	AL	C	0.0305	U		#	0.0305	-
	mg/L	0423	10/31/2001	0001	AL	D	0.0305	U		#	0.0305	-
	mg/L	0424	10/31/2001	0001	AL	D	0.0305	U		#	0.0305	-
	mg/L	0520	11/01/2001	0001	CS	U	0.0305	U		#	0.0305	-
	mg/L	0522	11/01/2001	0001	CS	C	0.0305	U	G	#	0.0305	-
	mg/L	0523	10/31/2001	0001	CS	D	0.0856	B	G	#	0.0305	-
	mg/L	0524	10/31/2001	0001	CS	D	0.0305	U		#	0.0305	-
	mg/L	0524	10/31/2001	0002	CS	D	0.0305	U		#	0.0305	-
ORP of Zobell Solution	mV	0420	11/01/2001	N001	AL	U	247			#	-	-
	mV	0422	11/01/2001	N001	AL	C	250			#	-	-
	mV	0423	10/31/2001	N001	AL	D	234			#	-	-
	mV	0424	10/31/2001	N001	AL	D	240			#	-	-
	mV	0520	11/01/2001	N001	CS	U	247			#	-	-
	mV	0522	11/01/2001	N001	CS	C	250		G	#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
ORP of Zobell Solution	mV	0523	10/31/2001	N001	CS	D	234		G	#	-	-
	mV	0524	10/31/2001	N001	CS	D	240			#	-	-
Oxidation Reduction Potent	mV	0420	11/01/2001	N001	AL	U	-123			#	-	-
	mV	0422	11/01/2001	N001	AL	C	-72			#	-	-
	mV	0423	10/31/2001	N001	AL	D	-160			#	-	-
	mV	0424	10/31/2001	N001	AL	D	-16			#	-	-
	mV	0520	11/01/2001	N001	CS	U	-186			#	-	-
	mV	0522	11/01/2001	N001	CS	C	-274		G	#	-	-
	mV	0523	10/31/2001	N001	CS	D	-288		G	#	-	-
	mV	0524	10/31/2001	N001	CS	D	-210			#	-	-
pH	s.u.	0420	11/01/2001	N001	AL	U	7.44			#	-	-
	s.u.	0422	11/01/2001	N001	AL	C	6.43			#	-	-
	s.u.	0423	10/31/2001	N001	AL	D	6.72			#	-	-
	s.u.	0424	10/31/2001	N001	AL	D	6.3			#	-	-
	s.u.	0520	11/01/2001	N001	CS	U	7.64			#	-	-
	s.u.	0522	11/01/2001	N001	CS	C	9.96		G	#	-	-
	s.u.	0523	10/31/2001	N001	CS	D	9.09		G	#	-	-
	s.u.	0524	10/31/2001	N001	CS	D	8.11			#	-	-
Potassium	mg/L	0420	11/01/2001	0001	AL	U	1.090			#	0.0151	-
	mg/L	0422	11/01/2001	0001	AL	C	1.340			#	0.0151	-
	mg/L	0423	10/31/2001	0001	AL	D	22.700			#	0.0151	-
	mg/L	0424	10/31/2001	0001	AL	D	13.000			#	0.0151	-
	mg/L	0520	11/01/2001	0001	CS	U	0.975			#	0.0151	-
	mg/L	0522	11/01/2001	0001	CS	C	0.200		G	#	0.0151	-
	mg/L	0523	10/31/2001	0001	CS	D	0.272		G	#	0.0151	-
	mg/L	0524	10/31/2001	0001	CS	D	0.412			#	0.0151	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Potassium	mg/L	0524	10/31/2001	0002	CS	D	0.413			#	0.0151	-
Radium-226	pCi/L	0420	11/01/2001	0001	AL	U	0.19			#	0.11	± 0.08
	pCi/L	0422	11/01/2001	0001	AL	C	0.11	U		#	0.11	± 0.07
	pCi/L	0423	10/31/2001	0001	AL	D	0.48			#	0.11	± 0.10
	pCi/L	0424	10/31/2001	0001	AL	D	0.1	U		#	0.1	± 0.06
	pCi/L	0520	11/01/2001	0001	CS	U	0.1	U		#	0.1	± 0.06
	pCi/L	0522	11/01/2001	0001	CS	C	0.11	U	G	#	0.11	± 0.06
	pCi/L	0523	10/31/2001	0001	CS	D	0.11	U	G	#	0.11	± 0.06
	pCi/L	0524	10/31/2001	0001	CS	D	0.11	U		#	0.11	± 0.07
	pCi/L	0524	10/31/2001	0002	CS	D	0.1	U		#	0.1	± 0.06
Radium-228	pCi/L	0420	11/01/2001	0001	AL	U	0.71	U		#	0.71	± 0.42
	pCi/L	0422	11/01/2001	0001	AL	C	0.75	U		#	0.75	± 0.44
	pCi/L	0423	10/31/2001	0001	AL	D	0.68	U		#	0.68	± 0.40
	pCi/L	0424	10/31/2001	0001	AL	D	0.63	U		#	0.63	± 0.37
	pCi/L	0520	11/01/2001	0001	CS	U	0.73	U		#	0.73	± 0.43
	pCi/L	0522	11/01/2001	0001	CS	C	0.74	U	G	#	0.74	± 0.44
	pCi/L	0523	10/31/2001	0001	CS	D	0.69	U	G	#	0.69	± 0.41
	pCi/L	0524	10/31/2001	0001	CS	D	0.71	U		#	0.71	± 0.42
	pCi/L	0524	10/31/2001	0002	CS	D	0.64	U		#	0.64	± 0.38
Selenium	mg/L	0420	11/01/2001	0001	AL	U	0.0003	U		#	0.0003	-
	mg/L	0422	11/01/2001	0001	AL	C	0.0003	U		#	0.0003	-
	mg/L	0423	10/31/2001	0001	AL	D	0.0003	U		#	0.0003	-
	mg/L	0424	10/31/2001	0001	AL	D	0.0003	U		#	0.0003	-
	mg/L	0520	11/01/2001	0001	CS	U	0.0003	U		#	0.0003	-
	mg/L	0522	11/01/2001	0001	CS	C	0.0003	U	G	#	0.0003	-
	mg/L	0523	10/31/2001	0001	CS	D	0.0003	U	G	#	0.0003	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Selenium	mg/L	0524	10/31/2001	0001	CS	D	0.0003	U		#	0.0003	-
	mg/L	0524	10/31/2001	0002	CS	D	0.0003	U		#	0.0003	-
Sodium	mg/L	0420	11/01/2001	0001	AL	U	19.800			#	0.0074	-
	mg/L	0422	11/01/2001	0001	AL	C	58.000			#	0.0074	-
	mg/L	0423	10/31/2001	0001	AL	D	44.200			#	0.0074	-
	mg/L	0424	10/31/2001	0001	AL	D	61.100			#	0.0074	-
	mg/L	0520	11/01/2001	0001	CS	U	55.600			#	0.0074	-
	mg/L	0522	11/01/2001	0001	CS	C	144.000		G	#	0.0074	-
	mg/L	0523	10/31/2001	0001	CS	D	176.000		G	#	0.0074	-
	mg/L	0524	10/31/2001	0001	CS	D	199.000			#	0.0074	-
	mg/L	0524	10/31/2001	0002	CS	D	195.000			#	0.0074	-
Specific Conductance	umhos/cm	0420	11/01/2001	N001	AL	U	858			#	-	-
	umhos/cm	0422	11/01/2001	N001	AL	C	679			#	-	-
	umhos/cm	0423	10/31/2001	N001	AL	D	1325			#	-	-
	umhos/cm	0424	10/31/2001	N001	AL	D	1343			#	-	-
	umhos/cm	0520	11/01/2001	N001	CS	U	497			#	-	-
	umhos/cm	0522	11/01/2001	N001	CS	C	652		G	#	-	-
	umhos/cm	0523	10/31/2001	N001	CS	D	732		G	#	-	-
	umhos/cm	0524	10/31/2001	N001	CS	D	914			#	-	-
Sulfate	mg/L	0420	11/01/2001	0001	AL	U	282.000			#	0.205	-
	mg/L	0422	11/01/2001	0001	AL	C	130.000			#	0.082	-
	mg/L	0423	10/31/2001	0001	AL	D	58.900			#	0.082	-
	mg/L	0424	10/31/2001	0001	AL	D	372.000			#	0.41	-
	mg/L	0520	11/01/2001	0001	CS	U	54.300			#	0.205	-
	mg/L	0522	11/01/2001	0001	CS	C	5.000		G	#	0.041	-
	mg/L	0523	10/31/2001	0001	CS	D	7.220		G	#	0.041	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Sulfate	mg/L	0524	10/31/2001	0001	CS	D	155.000			#	0.205	-
	mg/L	0524	10/31/2001	0002	CS	D	155.000			#	0.205	-
Temperature	C	0420	11/01/2001	N001	AL	U	12.1			#	-	-
	C	0422	11/01/2001	N001	AL	C	11.5			#	-	-
	C	0423	10/31/2001	N001	AL	D	14			#	-	-
	C	0424	10/31/2001	N001	AL	D	14.6			#	-	-
	C	0520	11/01/2001	N001	CS	U	13.4			#	-	-
	C	0522	11/01/2001	N001	CS	C	13.6		G	#	-	-
	C	0523	10/31/2001	N001	CS	D	15.2		G	#	-	-
	C	0524	10/31/2001	N001	CS	D	14.4			#	-	-
Temperature of Zobell Solu	C	0420	11/01/2001	N001	AL	U	9.6			#	-	-
	C	0422	11/01/2001	N001	AL	C	9.3			#	-	-
	C	0423	10/31/2001	N001	AL	D	17.5			#	-	-
	C	0424	10/31/2001	N001	AL	D	14.7			#	-	-
	C	0520	11/01/2001	N001	CS	U	9.6			#	-	-
	C	0522	11/01/2001	N001	CS	C	9.3		G	#	-	-
	C	0523	10/31/2001	N001	CS	D	17.4		G	#	-	-
	C	0524	10/31/2001	N001	CS	D	14.7			#	-	-
Total Dissolved Solids	mg/L	0420	11/01/2001	0001	AL	U	575			#	10	-
	mg/L	0422	11/01/2001	0001	AL	C	430			#	10	-
	mg/L	0423	10/31/2001	0001	AL	D	933			#	10	-
	mg/L	0424	10/31/2001	0001	AL	D	953			#	10	-
	mg/L	0520	11/01/2001	0001	CS	U	303			#	10	-
	mg/L	0522	11/01/2001	0001	CS	C	377		G	#	10	-
	mg/L	0523	10/31/2001	0001	CS	D	488		G	#	10	-
	mg/L	0524	10/31/2001	0001	CS	D	568			#	10	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Total Dissolved Solids	mg/L	0524	10/31/2001	0002	CS	D	575			#	10	-
Turbidity	NTU	0420	11/01/2001	N001	AL	U	1.41			#	-	-
	NTU	0422	11/01/2001	N001	AL	C	2.82			#	-	-
	NTU	0423	10/31/2001	N001	AL	D	1			#	-	-
	NTU	0424	10/31/2001	N001	AL	D	32.1			#	-	-
	NTU	0520	11/01/2001	N001	CS	U	1.1			#	-	-
	NTU	0522	11/01/2001	N001	CS	C	9.72		G	#	-	-
	NTU	0523	10/31/2001	N001	CS	D	9.98		G	#	-	-
	NTU	0524	10/31/2001	N001	CS	D	1.88			#	-	-
Uranium	mg/L	0420	11/01/2001	0001	AL	U	0.00015	B	U	#	0.0001	-
	mg/L	0422	11/01/2001	0001	AL	C	0.0013		U	#	0.0001	-
	mg/L	0423	10/31/2001	0001	AL	D	0.0133			#	0.0001	-
	mg/L	0424	10/31/2001	0001	AL	D	0.0029		U	#	0.0001	-
	mg/L	0520	11/01/2001	0001	CS	U	0.00013	B	U	#	0.0001	-
	mg/L	0522	11/01/2001	0001	CS	C	0.0006	B	UG	#	0.0001	-
	mg/L	0523	10/31/2001	0001	CS	D	0.0011		UG	#	0.0001	-
	mg/L	0524	10/31/2001	0001	CS	D	0.00064	B	U	#	0.0001	-
	mg/L	0524	10/31/2001	0002	CS	D	0.0006	B	U	#	0.0001	-
Vanadium	mg/L	0420	11/01/2001	0001	AL	U	0.0003	U		#	0.0003	-
	mg/L	0422	11/01/2001	0001	AL	C	0.0003	U		#	0.0003	-
	mg/L	0423	10/31/2001	0001	AL	D	0.00032	B		#	0.0003	-
	mg/L	0424	10/31/2001	0001	AL	D	0.0003	U		#	0.0003	-
	mg/L	0520	11/01/2001	0001	CS	U	0.0003	U		#	0.0003	-
	mg/L	0522	11/01/2001	0001	CS	C	0.0003	U	G	#	0.0003	-
	mg/L	0523	10/31/2001	0001	CS	D	0.0003	U	G	#	0.0003	-
	mg/L	0524	10/31/2001	0001	CS	D	0.0003	U		#	0.0003	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:05 a

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Vanadium	mg/L	0524	10/31/2001	0002	CS	D	0.0003	U		#	0.0003	-

RECORDS: SELECTED FROM USEE200 WHERE site_code='CAN03' AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE '*R*' OR data_validation_qualifiers LIKE '*X*') OR IsNull(data_validation_qualifiers)) AND DATE_SAMPLED between #10/15/2001# and #11/30/2001#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- J Estimated value.
- L Less than 3 bore volumes purged prior to sampling.
- U Parameter analyzed for but was not detected.
- F Low flow sampling method used.
- R Unusable result.
- G Possible grout contamination, pH > 9.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

ANALYTE	SITE_CODE	LOCATION_CODE	DATE	SAMPLE_ID	UNIT	RESULT	LAB_QUAL	DATA_VAL_QUAL	DETECT_LIMIT	UNCERTAINTY	SAMPLE_TYPE
Ammonium	CAN03	0999	11/09/2001	0001	mg/L	0.0048	B		0.0042		E
Calcium	CAN03	0999	11/09/2001	0001	mg/L	0.126	B		0.0653		E
Chloride	CAN03	0999	11/09/2001	0001	mg/L	0.107	B		0.0374		E
Gross Alpha	CAN03	0999	11/09/2001	0001	pCi/L	2.37	U	J	2.37	1.13	E
Gross Beta	CAN03	0999	11/09/2001	0001	pCi/L	3.74	U		3.74	2.19	E
Iron	CAN03	0999	11/09/2001	0001	mg/L	0.0063	B		0.0007		E
Lead	CAN03	0999	11/09/2001	0001	mg/L	0.00066	B	U	0.0001		E
Magnesium	CAN03	0999	11/09/2001	0001	mg/L	0.0134	B		0.0041		E
Manganese	CAN03	0999	11/09/2001	0001	mg/L	0.00025	B		0.0001		E
Molybdenum	CAN03	0999	11/09/2001	0001	mg/L	0.0019	U		0.0019		E
Nitrate as NO3	CAN03	0999	11/09/2001	0001	mg/L	0.213	B		0.0305		E
Potassium	CAN03	0999	11/09/2001	0001	mg/L	0.0151	U		0.0151		E
Radium-226	CAN03	0999	11/09/2001	0001	pCi/L	0.12	U		0.12	0.07	E
Radium-228	CAN03	0999	11/09/2001	0001	pCi/L	0.73	U		0.73	0.43	E
Selenium	CAN03	0999	11/09/2001	0001	mg/L	0.0003	U		0.0003		E
Sodium	CAN03	0999	11/09/2001	0001	mg/L	0.0236	B		0.0074		E
Sulfate	CAN03	0999	11/09/2001	0001	mg/L	0.086	B	U	0.041		E
Total Dissolved Solids	CAN03	0999	11/09/2001	0001	mg/L	10	U		10		E
Uranium	CAN03	0999	11/09/2001	0001	mg/L	0.0001	B	U	0.0001		E
Vanadium	CAN03	0999	11/09/2001	0001	mg/L	0.0003	U		0.0003		E

SAR

SUSPECTED ANOMALIES REPORT

REPORT DATE: 3/20/2002 TIME: 1:17:29 PM

Site : CAN01 CANONSBURG | Test Data Date Range : 10/1/2001 to 12/1/2001 | Older Data Only Used for Baseline Data | 139 Chemical Records | 1908 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DET LIM
0410	6	Ca	10/30/2001	0001	49.7000	23	38.400	39.400	40.0090	10/3/2000	0001	48.0000	9/25/1999	0001	41.7000	10/10/1998	0001	45.9000
	OK	mg/L			0.0653	0	52.100	56.500	48.9602			0.0481						
	6	Chloride	10/30/2001	0001	182.0000	23	36.000	37.000	104.1385	10/3/2000	0001	163.0000	9/25/1999	0001	99.3000	10/10/1998	0001	92.3000
	OK	mg/L			0.1865	0	99.600	163.000	132.2984			0.0239						
	6	Mg	10/30/2001	0001	20.4000	23	13.200	13.800	17.5576	10/3/2000	0001	19.5000	9/25/1999	0001	16.7000	10/10/1998	0001	18.0000
	OK	mg/L			0.0041	0	18.200	19.500	19.9087			0.0352						
	6	Na	10/30/2001	0001	52.4000	23	32.100	38.000	41.5376	10/3/2000	0001	50.5000	9/25/1999	0001	43.3000	10/10/1998	0001	46.1000
	OK	mg/L			0.0074	0	50.200	50.500	49.3286			0.302						
	6	SO4	10/30/2001	0001	95.4000	23	72.700	83.200	60.4107	10/3/2000	0001	83.2000	9/25/1999	0001	72.7000	10/10/1998	0001	86.5000
	OK	mg/L			0.2045	0	163.000	171.000	83.5886			0.0589						
	5	TMP	10/30/2001	N001	8.5000	23	9.000	11.800	14.9064	10/3/2000	N001	15.9000	9/25/1999	N001	16.2000	10/10/1998	N001	16.1000
	OK	C				0	17.000	17.200	17.7323									
	6	TURBIDI	10/30/2001	N001	58.0000	8	14.700	15.100	7.0824	10/3/2000	N001	18.9000	9/25/1999	N001	34.4000	10/10/1998	N001	15.1000
	OK	NTU				0	30.000	34.400	33.1525									
	6	U	10/30/2001	0001	0.0006	24	0.000	0.000	0.0000	10/3/2000	0001	0.0002	9/25/1999	0001	0.0002	10/10/1998	0001	0.0010
	OK	mg/L	B		0.0001	83.333	0.001	0.003	0.0004	B		0.0001	U		0.0002	U		0.001
	3	Zobell T	10/30/2001	N001	8.5000	1	19.000	19.000	9.5000	10/3/2000	N001	19.0000	10/3/2000	N001	19.0000	10/3/2000	N001	19.0000
	OK	C				0	19.000	19.000	38.0000									
0412	5	Ca	10/30/2001	0001	363.0000	22	166.000	203.000	365.0775	10/4/2000	0001	360.0000	9/26/1999	0001	356.0000	10/11/1998	0001	399.0000
	OK	mg/L			0.0653	0	410.000	465.000	469.2238			0.0481						
	5	EC	10/30/2001	N001	2190.0000	22	790.000	950.000	2280.1138	10/4/2000	N001	2280.0000	9/26/1999	N001	2210.0000	10/11/1998	N001	2310.0000
	OK	umhos/c				0	2310.000	2460.000	2711.3163									
	5	Mg	10/30/2001	0001	70.5000	22	43.400	43.500	73.1578	10/4/2000	0001	72.2000	9/26/1999	0001	74.6000	10/11/1998	0001	79.3000
	OK	mg/L			0.0041	0	84.000	84.000	91.9325			0.0352						
	6	ORP	10/30/2001	N001	3.0000	9	-69.000	-58.000	0.0000	10/4/2000	N001	-25.0000	9/26/1999	N001	-69.0000	10/11/1998	N001	-58.0000
	OK	mV				0	303.000	350.000	-9.2151									

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Flags :
I - Increased detection limit due to required dilution.
L - Less than three bore volumes removed before sampling.
J - Estimated value.
H - Hold time expired, value suspect.

Approved by [signature] Date 3/20/02

Hydrologist "Ok" indicates insignificant variation

SUSPECTED ANOMALIES REPORT

REPORT DATE: 3/20/2002 TIME: 1:17:32 PM

Site : CAN01 CANONSBURG | Test Data Date Range : 10/1/2001 to 12/1/2001 | Older Data Only Used for Baseline Data | 139 Chemical Records | 1908 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DET LIM
0413	6	Chloride	10/30/2001	0001	22.3000	22	8.610	9.210	0.0000	10/4/2000	0001	22.7000	9/25/1999	0001	17.6000	10/11/1998	0001	14.3000
	OK	mg/L			0.1865	0	120.000	120.000	20.3070			0.0239						
	5	ORP	10/30/2001	N001	-84.0000	9	-124.000	-111.000	0.0000	10/4/2000	N001	-92.0000	9/25/1999	N001	-111.0000	10/11/1998	N001	-124.0000
	OK	mV				0	306.000	409.000	-67.1739									
	6	SO4	10/30/2001	0001	79.9000	22	73.300	74.100	7.7653	10/4/2000	0001	105.0000	9/25/1999	0001	73.3000	10/11/1998	0001	93.3000
	OK	mg/L			0.2045	0	356.000	356.000	72.4823			0.0589						
	5	U	10/30/2001	0001	0.0914	22	0.045	0.049	0.1060	10/4/2000	0001	0.1390	9/25/1999	0001	0.1640	10/11/1998	0001	0.1400
	OK	mg/L			0.0001	0	0.339	0.382	0.2076			0.0001						
0424	5	EC	10/30/2001	N001	1280.0000	8	1167.000	1170.000	1347.6321	10/3/2000	N001	1378.0000	9/25/1999	N001	1407.0000	10/10/1998	N001	1456.0000
	OK	umhos/c				0	1456.000	1492.000	1627.7920									
	5	Na	10/30/2001	0001	123.0000	8	140.000	141.000	132.1846	10/3/2000	0001	140.0000	9/25/1999	0001	141.0000	10/10/1998	0001	151.0000
	OK	mg/L			0.0074	0	157.000	160.000	143.5408			0.302						
	5	ORP	10/30/2001	N001	-110.0000	8	-94.000	-79.000	0.0000	10/3/2000	N001	2.0000	9/25/1999	N001	-67.0000	10/10/1998	N001	-79.0000
	OK	mV				0	178.000	463.000	18.2036									
	6	SO4	10/30/2001	0001	162.0000	8	150.000	165.000	124.4405	10/3/2000	0001	166.0000	9/25/1999	0001	150.0000	10/10/1998	0001	165.0000
	OK	mg/L			0.409	0	210.000	230.000	159.9047			0.0589						
	6	TMP	10/30/2001	N001	15.4000	8	12.500	12.700	13.4192	10/3/2000	N001	14.1000	9/25/1999	N001	13.8000	10/10/1998	N001	13.9000
	OK	C				0	13.900	14.100	14.8535									
0504	6	Ca	10/30/2001	0001	212.0000	18	142.000	157.000	181.5325	10/3/2000	0001	193.0000	10/29/1994	0001	190.0000	11/2/1993	0001	157.0000
	OK	mg/L			0.0653	0	200.000	209.000	206.6519			0.0481		0	0.5		0	0.5
	6	Chloride	10/30/2001	0001	313.0000	18	59.000	119.000	223.1639	10/3/2000	0001	242.0000	10/29/1994	0001	170.0000	11/2/1993	0001	119.0000
	OK	mg/L			0.373	0	180.000	242.000	267.6718			0.0239		0	0.5		0	0.5
	6	Mg	10/30/2001	0001	25.9000	18	17.500	18.400	22.1227	10/3/2000	0001	23.3000	10/29/1994	0001	22.0000	11/2/1993	0001	19.9000
	OK	mg/L			0.0041	0	23.300	23.700	24.9678			0.0352		0	0.1		0	0.1
	6	Mn	10/30/2001	0001	1.3900	18	0.690	0.730	1.1559	10/3/2000	0001	1.1800	10/29/1994	0001	1.1000	11/2/1993	0001	1.0700
	OK	mg/L			0.0001	0	1.100	1.180	1.2855			0.002		0	0.01		0	0.01

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Approved by _____ Date _____

Hydrologist "Ok" indicates insignificant variation

SUSPECTED ANOMALIES REPORT

REPORT DATE: 3/20/2002 TIME: 1:17:33 PM

Site : CAN01 CANONSBURG | Test Data Date Range : 10/1/2001 to 12/1/2001 | Older Data Only Used for Baseline Data | 139 Chemical Records | 1908 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DET LIM
0504	6	Na	10/30/2001	0001	55.1000	18	33.300	34.600	33.4297	10/3/2000	0001	40.7000	10/29/1994	0001	43.0000	11/2/1993	0001	49.0000
	OK	mg/L			0.0074	0	75.200	179.000	47.7316			0.302	E	0	1		0	1
	5	ORP	10/30/2001	N001	-67.0000	4	-140.000	-36.000	0.0000	10/3/2000	N001	-36.0000	10/27/1994	N001	220.0000	11/2/1993	N001	233.0000
	OK	mV				0	220.000	233.000	68.3492					0	0		0	0
	5	TMP	10/30/2001	N001	7.3000	18	11.900	12.000	13.1335	10/3/2000	N001	13.7000	10/27/1994	N001	13.7000	11/2/1993	N001	13.0000
	OK	C				0	13.900	14.000	14.2973					0	0		0	0
	3	Zobell T	10/30/2001	N001	8.5000	1	19.000	19.000	9.5000	10/3/2000	N001	19.0000	10/3/2000	N001	19.0000	10/3/2000	N001	19.0000
	OK	C				0	19.000	19.000	38.0000									
0505	6	Ca	10/30/2001	0001	2.7000	17	2.700	2.900	0.8122	10/30/1994	0001	3.2000	11/2/1993	0001	2.7000	7/20/1993	0001	2.9000
	OK	mg/L			0.0653	0	5.170	11.000	2.4891		0	0.5		0	0.5		0	0.5
	6	Chloride	10/30/2001	0001	259.0000	17	188.000	197.000	125.0862	10/30/1994	0001	220.0000	11/2/1993	0001	215.0000	7/20/1993	0001	197.0000
	OK	mg/L			0.373	0	440.000	440.000	209.0494		0	0.5		0	0.5		0	0.5
	6	EC	10/30/2001	N001	1742.0000	17	1000.000	1150.000	1051.9121	10/30/1994	N001	1320.0000	11/2/1993	N001	1310.0000	7/20/1993	N001	1323.0000
	OK	umhos/c				0	1650.000	1775.000	1507.1542		0	0		0	0		0	0
	6	Mg	10/30/2001	0001	0.7580	17	0.800	0.830	0.3084	10/30/1994	0001	0.8300	11/2/1993	0001	0.8000	7/20/1993	0001	0.8000
	OK	mg/L			0.0041	0	1.300	2.210	0.6656		0	0.1		0	0.1		0	0.1
	6	Mn	10/30/2001	0001	0.0059	17	0.008	0.010	0.0000	10/30/1994	0001	0.0100	11/2/1993	0001	0.0100	7/20/1993	0001	0.0100
	OK	mg/L	B		0.0001	47.059	0.020	0.020	0.0018	U	0	0.01	U	0	0.01	U	0	0.01
	6	Mo	10/30/2001	0001	0.0040	17	0.008	0.010	0.0000	10/30/1994	0001	0.0100	11/2/1993	0001	0.0100	7/20/1993	0001	0.0100
	OK	mg/L	B		0.0019	70.588	0.120	0.120	0.0032	U	0	0.01	U	0	0.01	U	0	0.01
	3	ORP	10/30/2001	N001	-235.0000	3	-41.000	27.000	-20.5000	10/30/1994	N001	51.0000	11/2/1993	N001	27.0000	7/20/1993	N001	-41.0000
	OK	mV				0	27.000	51.000	102.0000		0	0		0	0		0	0
	6	SO4	10/30/2001	0001	38.2000	17	54.000	67.000	0.0000	10/30/1994	0001	54.0000	11/2/1993	0001	68.0000	7/20/1993	0001	67.0000
	OK	mg/L			0.409	0	150.000	157.000	-4.9798		0	1		0	1		0	1
	4	TURBIDI	10/30/2001	N001	9.9000	1	0.000	0.000	0.0000	11/2/1993	N001	0.0000	11/2/1993	N001	0.0000	11/2/1993	N001	0.0000
	OK	NTU				0	0.000	0.000	0.0000		0	0		0	0		0	0

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Flags :
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H - Hold time expired, value suspect.

Approved by J. Price Date 3/20/02

Hydrologist "Ok" indicates insignificant variation

SUSPECTED ANOMALIES REPORT

REPORT DATE: 3/20/2002 TIME: 1:17:34 PM

Site : CAN01 CANONSBURG | Test Data Date Range : 10/1/2001 to 12/1/2001 | Older Data Only Used for Baseline Data | 139 Chemical Records | 1908 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DET LIM
0505	5	U	10/30/2001	0001	0.0007	17	0.000	0.001	0.0012	10/30/1994	0001	0.0010	11/2/1993	N001	0.0010	11/2/1993	0001	0.0020
	OK	mg/L	B		0.0001	76.471	0.002	0.003	0.0024	U	0	0.001	U	0	0.001		0	0.001
0601	6	Ca	10/30/2001	0001	115.0000	16	74.800	79.700	75.0777	10/3/2000	0001	85.1000	9/25/1999	0001	118.0000	10/11/1998	0001	81.3000
	OK	mg/L			0.0653	0	112.000	118.000	91.6037			0.0481						
	6	Chloride	10/30/2001	0001	134.0000	15	31.000	33.600	38.6676	10/3/2000	0001	72.2000	9/25/1999	0001	82.3000	10/11/1998	0001	62.8000
	OK	mg/L			0.373	0	99.000	124.000	104.0691			0.0239						
	6	EC	10/30/2001	N001	1865.0000	15	468.000	495.000	865.9541	10/3/2000	N001	1103.0000	9/25/1999	N001	1571.0000	10/11/1998	N001	842.0000
	OK	umhos/c				0	1277.000	1571.000	1344.5641									
	6	Mg	10/30/2001	0001	29.3000	16	15.100	16.000	15.3248	10/3/2000	0001	21.8000	9/25/1999	0001	32.2000	10/11/1998	0001	17.4000
	OK	mg/L			0.0041	0	29.200	32.200	25.3981			0.0352						
	6	Na	10/30/2001	0001	173.0000	16	32.000	36.700	53.3721	10/3/2000	0001	104.0000	9/25/1999	0001	170.0000	10/11/1998	0001	68.0000
	OK	mg/L			0.0074	0	132.000	170.000	144.9802			0.302						
	5	ORP	10/30/2001	N001	49.0000	6	61.000	124.000	62.0632	10/3/2000	N001	176.0000	9/25/1999	N001	61.0000	10/11/1998	N001	167.0000
	OK	mV				0	176.000	186.000	211.0084									
	6	PH	10/30/2001	N001	8.5400	15	6.930	7.150	7.6328	10/3/2000	N001	8.2400	9/25/1999	N001	7.7200	10/11/1998	N001	7.8000
	OK	s.u.				0	8.240	8.270	8.2761									
	6	SO4	10/30/2001	0001	494.0000	16	104.000	111.000	108.9412	10/3/2000	0001	238.0000	9/25/1999	0001	460.0000	10/11/1998	0001	146.0000
	OK	mg/L			0.409	0	383.000	460.000	332.7869			0.0589						
	5	TMP	10/30/2001	N001	5.4000	15	3.000	5.500	5.8326	10/3/2000	N001	19.7000	9/25/1999	N001	15.2000	10/11/1998	N001	13.1000
	OK	C				0	23.600	24.400	23.4231									
	3	Zobell T	10/30/2001	N001	8.5000	1	19.000	19.000	9.5000	10/3/2000	N001	19.0000	10/3/2000	N001	19.0000	10/3/2000	N001	19.0000
	OK	C				0	19.000	19.000	38.0000									
0602	6	Ca	10/30/2001	0001	121.0000	16	67.000	78.300	74.8767	10/3/2000	0001	83.6000	9/25/1999	0001	117.0000	10/11/1998	0001	82.5000
	OK	mg/L			0.0653	0	116.000	117.000	91.3226			0.0481						
	6	Chloride	10/30/2001	0001	133.0000	15	31.000	32.800	45.4653	10/3/2000	0001	79.8000	9/25/1999	0001	84.1000	10/11/1998	0001	61.8000
	OK	mg/L			0.373	0	101.000	119.000	107.1368			0.0239						

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Flags :
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L - Less than three bore volumes removed before sampling.
J - Estimated value.
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Approved by J. Pine Date 3/20/02

Hydrologist "Ok" indicates insignificant variation

SUSPECTED ANOMALIES REPORT

REPORT DATE: 3/20/2002 TIME: 1:17:35 PM

Site : CAN01 CANONSBURG | Test Data Date Range : 10/1/2001 to 12/1/2001 | Older Data Only Used for Baseline Data | 139 Chemical Records | 1908 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DET LIM
0602	6	EC	10/30/2001	N001	1650.0000	15	459.000	480.000	872.9561	10/3/2000	N001	1031.0000	9/25/1999	N001	1548.0000	10/11/1998	N001	868.0000
	OK	umhos/c				0	1272.000	1548.000	1266.8121									
	6	Mg	10/30/2001	0001	30.4000	16	14.000	15.800	15.0632	10/3/2000	0001	20.9000	9/25/1999	0001	31.7000	10/11/1998	0001	17.6000
	OK	mg/L			0.0041	0	29.500	31.700	24.8570			0.0352						
	5	Mn	10/30/2001	0001	0.0038	17	0.070	0.074	0.0242	10/3/2000	0001	0.0736	9/25/1999	0001	0.0991	10/11/1998	0001	0.0803
	OK	mg/L	B		0.0001	0	0.220	0.440	0.1093			0.002						
	5	Mo	10/30/2001	0001	0.0398	17	0.040	0.050	0.0684	10/3/2000	0001	0.0953	9/25/1999	0001	0.0959	10/11/1998	0001	0.1120
	OK	mg/L			0.0019	0	0.112	0.170	0.1314			0.0004						
	6	Na	10/30/2001	0001	182.0000	16	31.400	36.000	57.5741	10/3/2000	0001	93.0000	9/25/1999	0001	168.0000	10/11/1998	0001	69.7000
	OK	mg/L			0.0074	0	135.000	168.000	125.6190			0.302						
	6	SO4	10/30/2001	0001	514.0000	16	112.000	120.000	117.1800	10/3/2000	0001	234.0000	9/25/1999	0001	456.0000	10/11/1998	0001	149.0000
	OK	mg/L			0.409	0	412.000	456.000	316.4299			0.0589						
0603	6	Chloride	10/30/2001	0001	133.0000	7	39.000	43.600	42.8497	10/3/2000	0001	80.5000	9/25/1999	0001	83.7000	10/11/1998	0001	62.9000
	OK	mg/L			0.373	0	83.700	115.000	110.9336			0.0239						
	6	Mn	10/30/2001	0001	0.0928	9	0.074	0.077	0.0488	10/3/2000	0001	0.0773	9/25/1999	0001	0.0847	10/11/1998	0001	0.0743
	OK	mg/L			0.0001	0	0.120	0.130	0.0823			0.002						
	5	Mo	10/30/2001	0001	0.0395	9	0.049	0.060	0.0518	10/3/2000	0001	0.0680	9/25/1999	0001	0.0898	10/11/1998	0001	0.1040
	OK	mg/L			0.0019	0	0.100	0.104	0.1107			0.0004						
	6	Na	10/30/2001	0001	182.0000	8	41.300	53.000	54.9697	10/3/2000	0001	96.7000	9/25/1999	0001	162.0000	10/11/1998	0001	69.6000
	OK	mg/L			0.0074	0	110.000	162.000	180.6602			0.302						
	5	ORP	10/30/2001	N001	-52.0000	6	30.000	132.000	6.9359	10/3/2000	N001	220.0000	9/25/1999	N001	30.0000	10/11/1998	N001	167.0000
	OK	mV				0	279.000	279.000	240.0194									
	6	SO4	10/30/2001	0001	516.0000	8	121.000	124.000	77.3293	10/3/2000	0001	240.0000	9/25/1999	0001	438.0000	10/11/1998	0001	153.0000
	OK	mg/L			0.409	0	380.000	438.000	506.4585			0.0589						
	5	TMP	10/30/2001	N001	9.2000	7	5.700	6.400	16.0939	10/3/2000	N001	18.1000	9/25/1999	N001	17.0000	10/11/1998	N001	12.1000
	OK	C				0	17.000	18.100	23.8291									

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5 - Too low (trend approach)
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Flags :
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J - Estimated value.
H - Hold time expired, value suspect.

Approved by J. Pina Date 3/20/02

Hydrologist "Ok" indicates insignificant variation

SUSPECTED ANOMALIES REPORT

REPORT DATE: 3/20/2002 TIME: 1:17:36 PM

Site : CAN01 CANONSBURG | Test Data Date Range : 10/1/2001 to 12/1/2001 | Older Data Only Used for Baseline Data | 139 Chemical Records | 1908 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DET LIM
0603	3	Zobell T	10/30/2001	N001	10.6000	1	22.200	22.200	11.1000	10/3/2000	N001	22.2000	10/3/2000	N001	22.2000	10/3/2000	N001	22.2000
	OK	C				0	22.200	22.200	44.4000									

Error Type Flags :
2 - All time high detection limit
3 - Too low (non-trend approach)
4 - Too high (non-trend approach)
5 - Too low (trend approach)
6 - Too high (trend approach)

Flags :
I - Increased detection limit due to required dilution.
L - Less than three bore volumes removed before sampling.
J - Estimated value.
H - Hold time expired, value suspect.

Approved by L. Price Date 3/20/02

Hydrologist "Ok" indicates insignificant variation

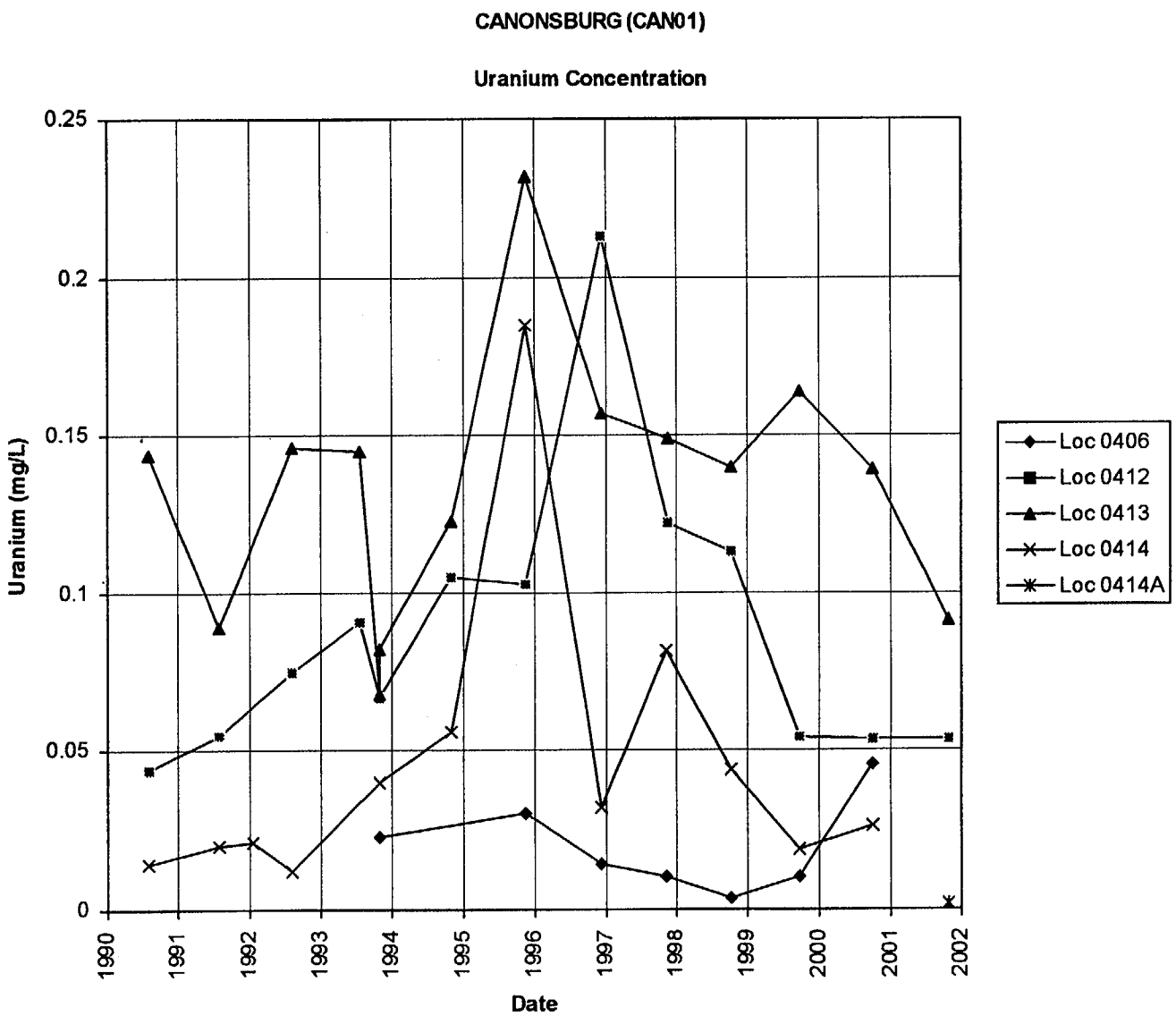
MIN / MAX
TABLE

Burrell LTSM October 2001 Data Validation Minimums and Maximums

SITE_	LOCATION_CODE	SDATE	ANALYTE	RESULT	LAB_Q	DATA_	MAXIMUM	MAX_L	MAX_D	MINIMUM	MIN_L	MIN_D	N	N_BELOW_DE
CAN03	0420	11/01/01	Chloride	20.9			20		RX	14		RX	21	0
CAN03	0420	11/01/01	Turbidity	1.41			91.8			2.44			5	0
CAN03	0422	11/01/01	Sodium	58			82.9		RX	62.4			23	0
CAN03	0422	11/01/01	Turbidity	2.82			15			8.98			5	0
CAN03	0423	10/31/01	Ammonium	3.78			3.7		RX	.412			14	0
CAN03	0423	10/31/01	Iron	25.9			23.9		RX	.04		RX	20	0
CAN03	0423	10/31/01	Turbidity	1			39.3			4.14			5	0
CAN03	0424	10/31/01	Manganese	12.8			12.1			4.42		RX	19	0
CAN03	0424	10/31/01	Molybdenum	.0056	B		.04		RX	.0074	B		19	5
CAN03	0520	11/01/01	Chloride	14.6			14		RX	.51		U	28	1
CAN03	0522	11/01/01	Sodium	144		G	171		RX	147		RX	20	0
CAN03	0524	10/31/01	Calcium	3.29			2.92			1.5		RX	31	0
CAN03	0524	10/31/01	Calcium	3.26			2.92			1.5		RX	31	0
CAN03	0524	10/31/01	Magnesium	.69			.602			.25		RX	31	0
CAN03	0524	10/31/01	Magnesium	.679			.602			.25		RX	31	0
CAN03	0524	10/31/01	Manganese	.0201			.02		RX	.01	U	RX	31	9
CAN03	0524	10/31/01	Manganese	.0203			.02		RX	.01	U	RX	31	9
CAN03	0524	10/31/01	Specific Conductance	914			909			430		RX	31	0

18 rows selected.

TIME VERSUS CONCENTRATION GRAPHS



3/26/2002 10:16 am

WATER LEVELS

STATIC GROUND WATER LEVELS (USEE700) FOR SITE CAN01, CANONSBURG
REPORT DATE: 3/25/2002 9:33 am

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)	WATER LEVEL FLAG
			DATE	TIME			
0410	U	969.16	10/30/2001	15:08	10.27	958.89	
0412	O	949.70	10/30/2001	12:56	15.59	934.11	
0413	O	940.36	10/30/2001	16:00	8.41	931.95	
0414A		942.48	10/30/2001	09:25	9.15	933.33	
0424	C	942.25	10/30/2001	11:04	13.94	928.31	
0504	U	968.94	10/30/2001	14:54	12.00	956.94	
0505	N	940.45	10/30/2001	17:11	10.43	930.02	

RECORDS: SELECTED FROM USEE700 WHERE site_code='CAN01' AND LOG_DATE between #10/15/2001# and #11/30/2001#

FLOW CODES:

C CROSS GRADIENT
N UNKNOWN
O ON-SITE
U UPGRADIENT

WATER LEVEL FLAGS:

STATIC GROUND WATER LEVELS (USEE700) FOR SITE CAN03, BURRELL VICINITY PROPERTY
REPORT DATE: 3/25/2002 9:34 am

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)	WATER LEVEL FLAG
			DATE	TIME			
0420	U	-	11/01/2001	10:33	35.67	-35.67	
0422	C	-	11/01/2001	08:53	34.54	-34.54	
0423	D	-	10/31/2001	17:28	36.60	-36.60	
0424	D	-	10/31/2001	15:07	36.35	-36.35	
0520	U	-	11/01/2001	09:44	39.22	-39.22	
0522	C	-	11/01/2001	08:02	47.52	-47.52	
0523	D	-	10/31/2001	16:31	42.92	-42.92	
0524	D	-	10/31/2001	14:17	41.97	-41.97	

RECORDS: SELECTED FROM USEE700 WHERE site_code='CAN03' AND LOG_DATE between #10/15/2001# and #11/30/2001#

FLOW CODES:
C CROSS GRADIENT D DOWN GRADIENT U UPGRADIENT

WATER LEVEL FLAGS:

SAMPLING WORK ORDER AND TRIP REPORT

MACTEC ENVIRONMENTAL RESTORATION SERVICES, LLC

CONTRACT NO.: DE-AC13-96GJ87335
TASK ORDER NO.: MAC01-06
CONTROL NO.: 3100-N/A

MEMO TO: Carl Jacobson

FROM: Lauren Goodknight

DATE: September 24, 2001

SUBJECT: October 2001 LTSM Sampling at Canonsburg and Burrell, Pennsylvania

Ground water sampling for the LTSM Canonsburg and Burrell, Pennsylvania, sites is scheduled to begin the week of October 29, 2001. The attached tables indicate which monitor wells and surface locations will be sampled as well as which laboratory measurements will be performed.

Normally, for any UMTRA Ground Water Project sites, a letter is sent to DOE one month in advance informing them of upcoming sampling events. However, since there are no UMTRA Ground Water Project samples to be collected, this will not be done for the Canonsburg and Burrell sites.

If you have any additions or deletions to these lists please let me know as soon as possible.

LCG
Attachments

Distribution:
cc/w: C. Bahrke
R. Chessmore
K. Miller
D. Traub
M. Widdop
Project Record File LBUR 6.07 thru A. Garcia
Project Record File LCAN 6.07 thru A. Garcia

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MACTEC ENVIRONMENTAL RESTORATION SERVICES, LLC

CONTRACT NO.: DE-AC13-96GJ87335
TASK ORDER NO.: MAC02-06
CONTROL NO.: 3100-N/A

MEMO TO: Carl Jacobson

FROM: T. Franzone

DATE: January 3, 2002

SUBJECT: LTSM Trip Report

Site: Canonsburg and Burrell, Pennsylvania

Dates of Sampling Event: October 29 through November 3, 2001

Team Members: Tony Franzone and Mike Gardner

Number of Locations Sampled: 15 ground water monitoring wells and 3 surface water locations.

Locations Not Sampled/Reason: Canonsburg well 0406 was not sampled because it was destroyed by a construction crew. Burrell surface locations 0611 and 0612 were not sampled because they were dry.

Field Variance: The following Canonsburg wells went dry prior to removing three casing volumes: 0414A, 0424, 0412, 0410, and 0413.

Well Specific Information: None.

Quality Control Sample Cross Reference: Following are the false identifications assigned to the quality control samples:

False ID	True ID	Sample Type	Associated Matrix	Ticket Number
1100	603	Duplicate	Surface Water	NDM-779
1101	424	Duplicate	Ground Water	NDM-782
1102	524	Duplicate	Ground Water	NDM-791
1300	Equipment Blank	Equipment Blank-Grundfos	Ground Water	NDM-798

Requisition Numbers Assigned: LTSM requisition number17671 (Canonsburg) and 17672 (Burrell).

Water Level Measurements: Water level measurements were taken on all sampled wells.

Well Inspection Summary: Well inspections were conducted on all sampled wells. Sampled wells were in good condition, with the exception of Canonsburg wells 0412 and 0505. Well 0412 has broken concrete around protective casing. Well 0505 has a guard post knocked over.

Data Logger Download: None

Corrective Action: None.

Equipment: An alkalinity titrator was damaged during shipment. As a result, no alkalinity measurements could be taken.

Regulatory: None.

Site Issues: None.

Additional Action Required/Taken: None.

TF/lcg

Distribution:

cc: C. Bahrke
K. Miller
M. Widdop
Project Record File LCAN 6.07 thru A. Garcia
Project Record File LBUR 6.07 thru A. Garcia

DATA REVIEW CHECKSHEET