50-390/391

Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

June 1, 2001

Tennessee Department of Health and Environment
Division of Underground Storage Tanks
Chattanooga Field Office
540 McCallie Avenue, Suite 550
Chattanooga, Tennessee 37402

Attention: Karen Ridolfo

WATTS BAR NUCLEAR PLANT (WBN) - FACILITY # 0-610035 SITE STATUS MONITORING REPORT

In accordance with the January 23, 2001 letter regarding the Monitoring Only Program for WBN Facility ID # 0-610035, enclosed is the Site Status Monitoring Report prepared in accordance with Technical Guidance Document (TGD)-007, Section III.

If you have any questions or need additional information, please do not hesitate to phone Lanny Brown at (423) 365-8098, Hank Julian at (865) 632-1834, or me at (423) 365-8005.

Sincerely,

Robert J. Crawford
Environmental Supervisor

Enclosure
cc (Enclosure):
Tennessee Department of Environment and Conservation
Division of Underground Storage Tanks
Fourth Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243-1541

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

IE25

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This Site Status Monitoring Report for Watts Bar Nuclear Plant (WBN), Facility ID No. 0-610035, has been prepared in accordance with Technical Guidance Document (TGD)-007, Section III.

A. Progress

Corrective action at this site involves routine sampling associated with the Monitoring Only Program. Therefore, there is currently no corrective action equipment on site. The Monitoring Only Program has been implemented in accordance with the August 1996 TGD-007, Section IIB. Progress reported for this period includes results of the first scheduled semiannual monitoring and sampling event. Since there are is no operation and maintenance requirement for corrective action equipment and TVA is not eligible for state Trust Funds, the submission of monitoring costs is not applicable and have not been provided.

On May 10, 2001, groundwater and free-product measurements were performed at the four existing site monitoring wells (MW-1 to MW-4) and site groundwater sump. Subsequently, monitoring wells MW-1, MW-3, and MW-4 were sampled for extractable petroleum hydrocarbons (EPH). MW-2 was not sampled due to the presence of diesel fuel oil free-product. James Overton (TVA Environmental Technician) and James L. Brown (TVA Environmental Engineer) conducted monitoring and sampling at the site. Monitoring and sampling activities were conducted within an 8-hour time interval.

Routine visual observations continue at the site storm drain catch basins and the discharge outlet to the site Yard Holding Pond (YHP). A floating boom continues to be maintained at the discharge outlet to the YHP. There have been no visual observations of free-product at these locations since implementation of the Monitoring Only Program.

B. Problems

Measurements using an oil/water interface meter indicated the presence of 1.9 ft of diesel fuel oil in well MW-2. This is the first observation of free-product at the site. After obtaining oil/water measurements, 1.25 L of product was removed from the well using a disposable teflon bailer and placed in a labeled 50-gallon drum being maintained at the site. The TDEC Division of Underground Storage Tanks was immediately contacted to report the observation and a formal letter of notification has been transmitted to the Division.

C. Water Monitoring

1. Potentiometric Data

Table 1 shows the results of groundwater level measurements at site monitoring wells. A soil/water interface meter was used to measure groundwater levels and potential product thickness in site wells. The only occurrence of free product (MW-2) is annotated and described in the footnote of Table 1. Based on a specific gravity of 0.85 for No. 2 diesel fuel oil, the adjusted groundwater elevation at well MW-2 is 711.88 for 5/10/01. This elevation is within the range of previously measured groundwater elevations at this well location. Potentiometric maps of the site for the last two monitoring periods (9/26/00 and 5/10/01) are provided in Figures 1 and 2. As shown in the figures, the direction of groundwater movement is similar for both monitoring periods.

Table 1
Results of Groundwater and Product Level Measurements at Site Monitoring Wells

Well ID	Total Depth (ft)	Top of Ground (ft-msl)	Top of Casing (ft-msl)	7/28/00	7/28/00	8/02/00	8/02/00	9/26/00	9/26/00	5/10/01	5/10/01
				Depth (ft)	Ele (ft-msl)	Depth (ft)	Ele (ft-msl)	Depth (ft)	Ele (ft-msl)	Depth (ft)	Ele (ft-msl)
MW-1	24.2	728.61	726.99	10.17	716.82	8.82	718.17	9.90	717.09	9.30	717.69
MW-2	23.4	730.56	727.86	15.99	711.87	15.50	712.36	15.90	711.96	17.60	710.26* 711.88**
MW-3	24.4	729.08	727.34	13.27	714.07	12.20	715.14	14.50	712.84	13.52	713.82
MW-4	24.8	729.23	727.86	13.20	714.66	12.27	715.59	13.30	714.56	12.94	714.92

* Product detected at depth of 15.70 ft (712.16 ft-msl) in MW-2

** Adjusted groundwater elevation assuming No.2 diesel fuel specific gravity of 0.85

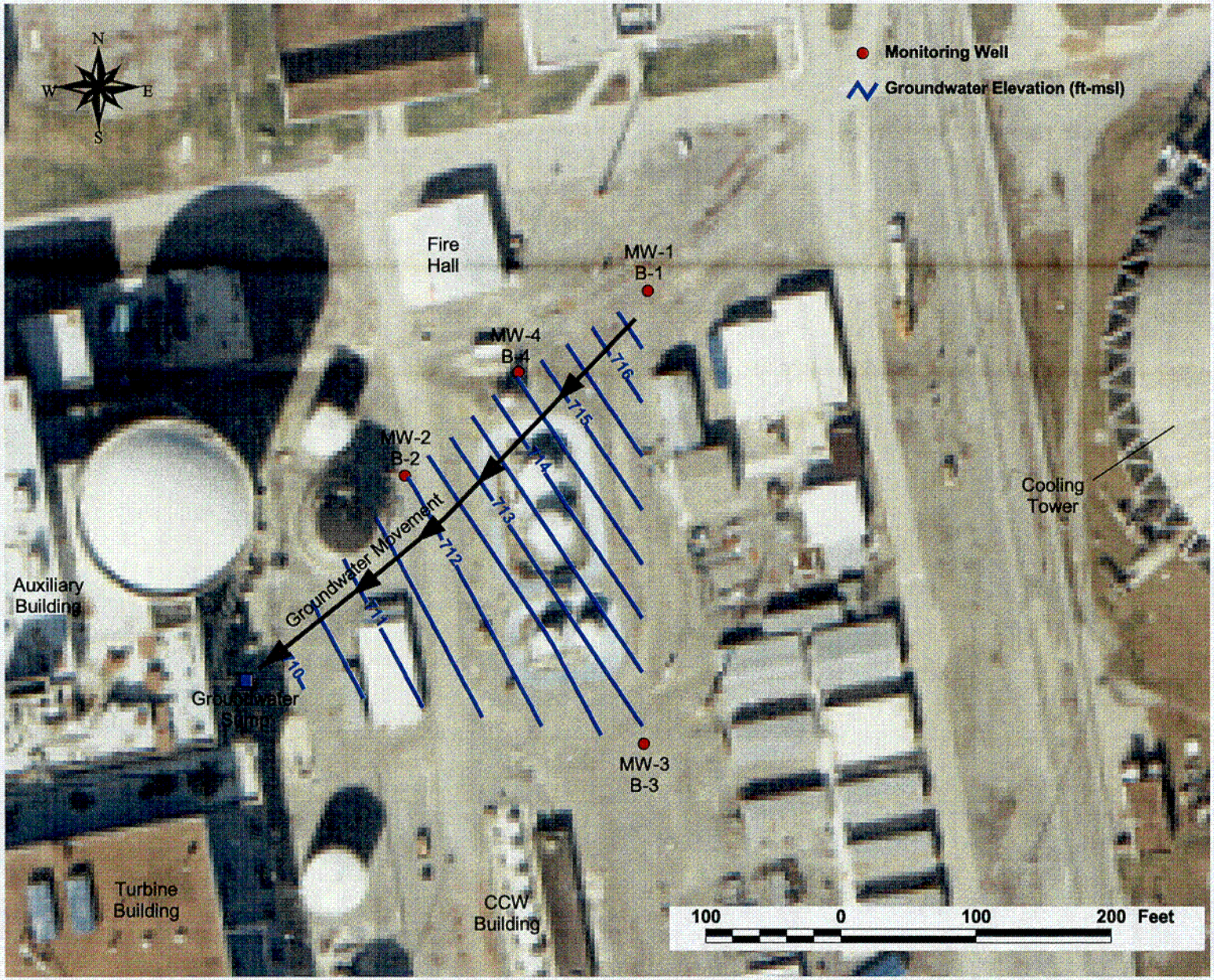

Figure 1. Potentiometric Surface Based on 9/26/2000 Groundwater Level Measurements

C01

Figure 2. Potentiometric Surface Based on 5/10/2001 Groundwater Level Measurements

C02

2. Analytical Data

Table 2 lists analytical results from TVA's Environmental Chemistry Laboratory for all groundwater samples collected during all sampling events at the site. Laboratory analysis and chain of custody sheets are provided in Appendix A. Laboratory analysis for EPH utilized EPA method 8015B; analysis for total iron and manganese relied on EPA method 200.7. As shown in Table 6, EPH was detected above the MDL of 0.5 mg/L at well MW-2 only during the 08/02/00 sampling event. Figure 3 shows EPH and groundwater elevations versus time for each monitoring well.

Table 2
Laboratory Analytical Results for Groundwater Samples (mg/L)

Well ID	Collection Date	Lab ID	Parameter	Results (mg/L)	Groundwater Clean-up Level (mg/L)
MW-1	08/02/2000	AA08561	EPH	< 0.5	
MW-1 (Duplicate)	08/02/2000	AA08562	EPH	< 0.5	
MW-2	08/02/2000	AA08564	EPH	1.9	1.0
MW-3	08/02/2000	AA08565	EPH	< 0.5	
MW-4	08/02/2000	AA08563	EPH	< 0.5	
MW-1	08/25/2000	AA09874	Iron (total)	0.022	
MW-1	08/25/2000	AA09874	Manganese (total)	0.13	
MW-1	05/10/2001	AB04489	EPH	< 0.5	
MW-3	05/10/2001	AB04490	EPH	< 0.5	
MW-3 (Duplicate)	05/10/2001	AB04492	EPH	< 0.5	
MW-4	05/10/2001	AB04491	EPH	< 0.5	

* Groundwater clean-up level of 1.0 mg/L TPH based on non-drinking water aquifer.

C. Vapor Monitoring Results

No vapor monitoring was required for the facility Monitoring Only Program.

D. Emissions Monitoring Results

No emissions monitoring was required for the facility Monitoring Only Program.

E. Soil Monitoring Results

No additional soil monitoring was required for the facility Monitoring Only Program.

F. Additional Information

No additional information was required for the facility Monitoring Only Program.

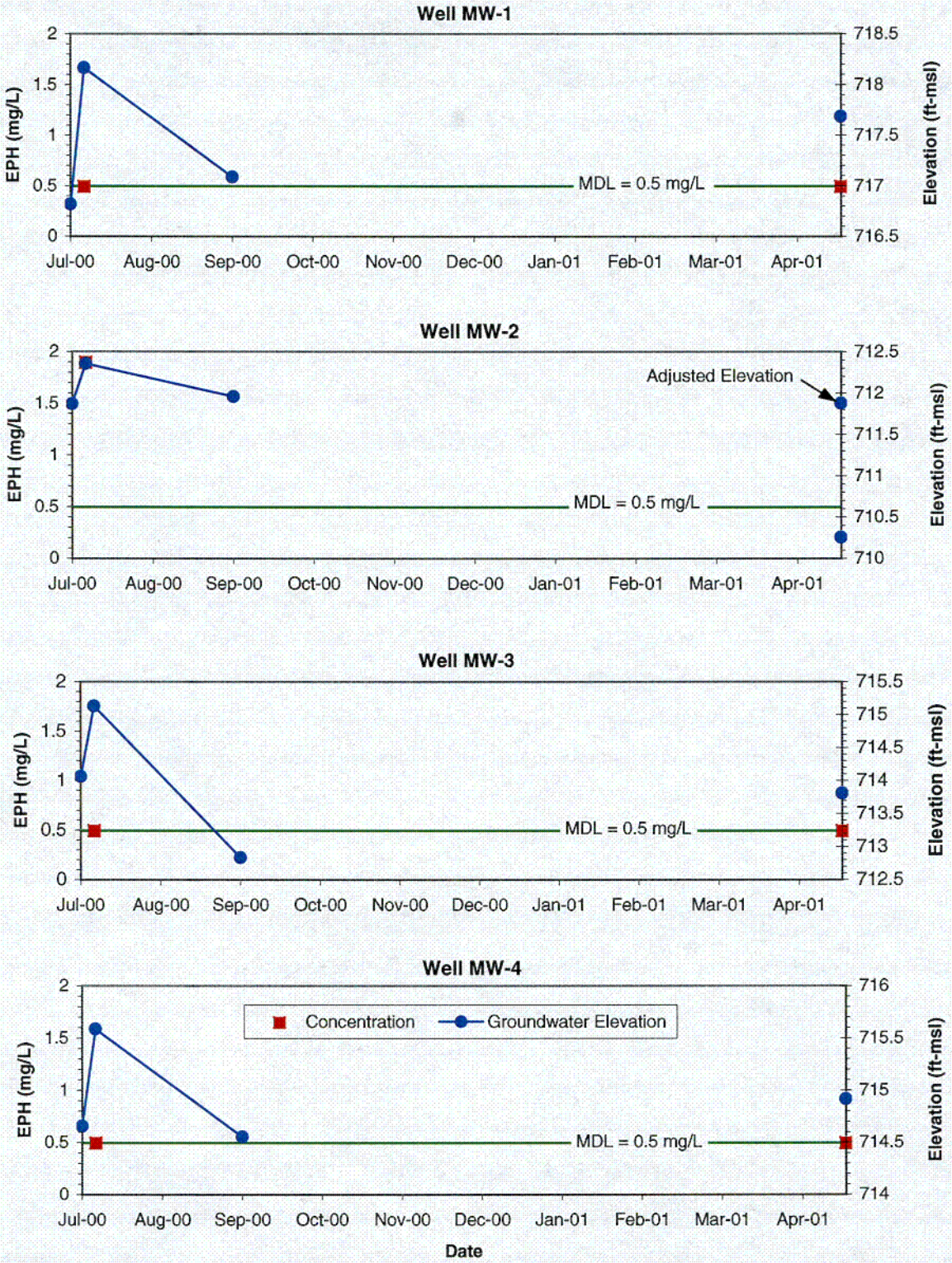

Figure 3. EPH Concentrations and Groundwater Elevations Versus Time for Site Monitoring Wells

C03

H. Signature Page

We, the undersigned, certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report form and on any attachments, is true, accurate and complete to the best of our knowledge, information, and belief. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Edward R. Robinson — Owner/Operator (Print name)
Signature
6/1/01 — Date

RADWASTE/ENVIRONMENTAL SUPERINTENDENT
Title (Print)

Note: Each of the above signatures shall be notarized separately with the following statement.

STATE OF Tennessee COUNTY OF Rhea

Sworn to and subscribed before me by Edward Robinson on this date

June 1, 2001. My commission expires May 21, 2005

E. Jeannette Long — Notary Public (Print name)
Signature
June 1, 2001 — Date

Stamp/Seal

H. Signature Page

We, the undersigned, certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report form and on any attachments, is true, accurate and complete to the best of our knowledge, information, and belief. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Henry E. Julian, P.E., P.G. — P.E. or P.G. (Print name)

Signature

5/25/01 — Date

PE: 021114 PG: TN3790
Tennessee Registration #

Note: Each of the above signatures shall be notarized separately with the following statement.

STATE OF TENNESSEE COUNTY OF ANDERSON

Sworn to and subscribed before me by HENRY E. JULIAN on this date

5-25-01. My commission expires 1-23-02.

DARLENE BUCKNER — Notary Public (Print name)

Signature

5-25-01 — Date

Stamp/Seal

Appendix A
Laboratory Analysis and Chain of Custody Sheets

LDC: WBN
REG: RLKA
Bill: 108

TENNESSEE VALLEY AUTHORITY WATER MANAGEMENT
ENVIRONMENTAL CHEMISTRY ANALYSIS REQUEST AND CUSTODY RECORD

FORM CONTROL # 17476

PROJECT ID Watts Bar NP Monitoring Wells

REFERENCE: ☐ WORKPLAN ☐ OTHER

ACCT NO. 0011 F 3V

DATE REQUIRED

RESULTS TO Hank Julian
ENG LAB Norris
632-1834
Fax 632-1840

LAB USE ONLY

TEST IDC'S #8015W, WDISP

DATE RECEIVED 5-10-01

DAYS DUE 5-22-01

PROJECT LEADER PLW

NO. LABELS 1

LIF=01050087

LAB USE ONLY LAB ID	FIELD ID	SAMPLE DESCRIPTION	SAMPLE MATRIX	DATE/TIME COLLECTED	NO. OF BOTTLES	ADDITIONAL IDC'S
A804489	MW-1	1 liter BR Glass Amber	H_2O	10May01 1442	1	
04490	MW-3			1505	1	
04491	MW-4			1462	1	
04492	MW-3 DUP			1508	1	
04493	Blank					

FIELD COMMENTS

ANALYSIS REQUESTED EPH Method

SUBMITTED BY [signature] DATE/TIME 10May01 1530

LABORATORY COMMENTS

RECEIVED BY DATE/TIME

MAY 10 '01 17:03

DISTRIBUTION OF COPIES
1 - LABORATORY 2 - RETURN TO REQUESTOR 3 - RETAINED BY REQUESTOR

TVA 30488 (RG-WM 3-94)

PAGE 1 OF 1

Facility ID No. 0-610035

Data Report Number: 010521-142300

TENNESSEE VALLEY AUTHORITY
ENVIRONMENTAL CHEMISTRY LABORATORY
1101 Market Street, CC 1A-C
Chattanooga, Tennessee 37402-2801

Customer Address: Hank Julian
LAB 2C-N
Phone: 632-1834
Fax: Not Available
E-Mail: hejulian@tva.gov

Location Code: WBN

Field ID: MW-1

Sample Description: MW-1

Sample ID: AB04489 **LRF ID:** 01050087

Matrix: Water **Reg:** RCRA

Date Collected: 05/10/2001

Time Collected: 14:42 EST

Date Received: 05/10/2001

Time Received: 17:03

Project Manager: Pamela L. Whitt

Analyte	CAS Number[1]	Result	Units	MDL[2]	Analysis Date	Analysis Time	Analyst	Method Reference
EPA 8015B Extract Petrol Hydro		< MDL	mg/L	0.5	05/19/2001	3:26	JBR	EPA 8015B

Sample Comments: None

05/21/2001

[1] Chemical Abstracts Service Registry Number [2] Method Detection Limit

Data Report Number: 010521-142300

TENNESSEE VALLEY AUTHORITY
ENVIRONMENTAL CHEMISTRY LABORATORY
1101 Market Street, CC 1A-C
Chattanooga, Tennessee 37402-2801

Customer Address: Hank Julian
LAB 2C-N
Phone: 632-1834
Fax: Not Available
E-Mail: hejulian@tva.gov

Location Code: WBN

Field ID: MW-3

Sample Description: MW-3

Sample ID: AB04490 **LRF ID:** 01050087
Matrix: Water **Reg:** RCRA
Date Collected: 05/10/2001
Time Collected: 15:05 EST
Date Received: 05/10/2001
Time Received: 17:03
Project Manager: Pamela L. Whitt

Analyte	CAS Number[1]	Result	Units	MDL[2]	Analysis Date	Analysis Time	Analyst	Method Reference
EPA 8015B Extract Petrol Hydro		< MDL	mg/L	0.5	05/19/2001	4:38	JBR	EPA 8015B

Sample Comments: None

05/21/2001

[1] Chemical Abstracts Service Registry Number [2] Method Detection Limit

Data Report Number: 010521-142300

TENNESSEE VALLEY AUTHORITY
ENVIRONMENTAL CHEMISTRY LABORATORY
1101 Market Street, CC 1A-C
Chattanooga, Tennessee 37402-2801

Customer Address: Hank Julian
LAB 2C-N
Phone: 632-1834
Fax: Not Available
E-Mail: hejulian@tva.gov

Location Code: WBN

Field ID: MW-4

Sample Description: MW-4

Sample ID: AB04491 **LRF ID:** 01050087

Matrix: Water **Reg:** RCRA

Date Collected: 05/10/2001

Time Collected: 14:52 EST

Date Received: 05/10/2001

Time Received: 17:03

Project Manager: Pamela L. Whitt

Analyte	CAS Number[1]	Result	Units	MDL[2]	Analysis Date	Analysis Time	Analyst	Method Reference
EPA 8015B Extract Petrol Hydro		< MDL	mg/L	0.5	05/19/2001	5:49	JBR	EPA 8015B

Sample Comments: None

[1] Chemical Abstracts Service Registry Number [2] Method Detection Limit

Data Report Number: 010521-142300

TENNESSEE VALLEY AUTHORITY
ENVIRONMENTAL CHEMISTRY LABORATORY
1101 Market Street, CC 1A-C
Chattanooga, Tennessee 37402-2801

Customer Address: Hank Julian
LAB 2C-N
Phone: 632-1834
Fax : Not Available
E-Mail: hejulian@tva.gov

Location Code: WBN
Field ID: MW-3DUP
Sample Description: MW-3DUP

Sample ID: AB04492 **LRF ID:** 01050087
Matrix: Water **Reg:** RCRA
Date Collected: 05/10/2001
Time Collected: 15:08 EST
Date Received: 05/10/2001
Time Received: 17:03
Project Manager: Pamela L. Whitt

Analyte	CAS Number[1]	Result	Units	MDL[2]	Analysis Date	Analysis Time	Analyst	Method Reference
EPA 8015B Extract Petrol Hydro		< MDL	mg/L	0.5	05/19/2001	7:01	JBR	EPA 8015B

Sample Comments: None

05/21/2001

[1] Chemical Abstracts Service Registry Number [2] Method Detection Limit

Data Report Number: 010521-142300

TENNESSEE VALLEY AUTHORITY
ENVIRONMENTAL CHEMISTRY LABORATORY
1101 Market Street, CC 1A-C
Chattanooga, Tennessee 37402-2801

Customer Address: Hank Julian
LAB 2C-N
Phone: 632-1834
Fax: Not Available
E-Mail: hejulian@tva.gov

Location Code: WBN
Field ID: BLANK
Sample Description: BLANK

Sample ID: AB04493 **LRF ID:** 01050087
Matrix: Water **Reg:** RCRA
Date Collected: 05/10/2001
Time Collected: 0:00 EST
Date Received: 05/10/2001
Time Received: 17:03
Project Manager: Pamela L. Whitt

Analyte	CAS Number[1]	Result	Units	MDL[2]	Analysis Date	Analysis Time	Analyst	Method Reference
EPA 8015B Extract Petrol Hydro		< MDL	mg/L	0.5	05/19/2001	8:11	JBR	EPA 8015B

Sample Comments: No collection time documented.

[1] Chemical Abstracts Service Registry Number
[2] Method Detection Limit

Data Report Number: 010521-142300

Report Approved By: Pamela Whitt Report Number: 21-May-01 2:23:01 PM

Vanessa L. Ramey, Lab Director
Pamela L. Whitt, Project Manager
Scott R. McNabb, Project Manager
Lisabeth R. Pearson, Quality Assurance Specialist

This report consists of the following sample(s):

Login Reference File Number: 01050087

AB04489
AB04490
AB04491
AB04492
AB04493

[1] Chemical Abstracts Service Registry Number [2] Method Detection Limit