



TETRA TECH EC, INC.

8 March 2006  
RAC II-2006-044

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Ms. Sharon Trocher

Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
DECEMBER 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the December 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

**A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated for the entire month of December. A summary of the operation and maintenance activities performed during December is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Removed snow and de-iced sidewalk; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
[www.tteci.com](http://www.tteci.com)

## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter%	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
May	31	*	*	*
June	30	*	*	*
July	29	*	*	*
August	29	*	*	*
September	30	*	*	*
October	31	*	*	*
November	30	*	*	*
December	31	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the QU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement is being sought.

gpm - gallons per minute

mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of December 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) December
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1	3.7	3.5	3.3	4.5	4.2	3.8	3.0	0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59	0.54	0.55	0.5U	0.5U	0.5U	0.51	0.5U	0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12	9.5	9.4	8.3	8.7	8.6	8.3	7.4	0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6	2.9	2.9	2.4	2.8	2.7	2.7	2.7	0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U	1.0 U	1.0U	5.0U	1.0U	1.0U	10U	1.0U	1.8
Methylene Chloride		U	U	U	U	U	U	U	U	U	U	U	0.5U	13
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2	3.9	4.2	3.7	3.6	4.0	3.0	3.4	1.7
1,1-Dichloroethane	5	18	17	17	24	17	17	17	18	18	18	16	14	1.7
Cis-1,2-Dichloroethene*	5	50	46	46	54	47	45	44	41	44	42	40	37	5.1
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140	110	120	110	100	110	100	110	110	4.6
Trichloroethene*	5	43	40	40	47	39	38	36	35	36	35	35	34	2.4
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49	240.54	227.55	211.7	227.6	214.5	219.31	211.5	17.3

Note:

ug/L = micrograms per liter

U = Below Reporting Limit

\* = Site Contaminant of Concern

NS = Not Sampled

**D. Next Month's Activities**

The following activities are planned for January 2006:

- Repair flow meter valve; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8197 if you should have any questions.

Sincerely,



Heidemarie Roldan  
Project Manager

Attachment

cc: P. Long (NYSDEC)

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## **ATTACHMENT 1**



**Case Narrative:**

**Vestal 1-1. #05120015**

The National Environmental Laboratory Accreditation Conference (NELAC) is a voluntary environmental laboratory accreditation association of State and Federal agencies. NELAC established and promoted a national accreditation program that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAC accredited. The Laboratory tests that are accredited have met all the requirements established under the NELAC Standards.

**Comment(s):**

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None

**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested except for the following analyte(s):

Volatile Organic Compounds: The CRQL for 1,2-Dibromo-3-chloropropane in water is 0.5 ug/L (OLC03.2). The Laboratory's Reporting Limit was raised to 5 ug/L due to problems associated with the initial calibration curve.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method)

Approval: J R. Lee Date: 1-31-06



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [12/05]

Project Number: 05120015

\*Sorted By Sample ID

AG08940

Field/Station ID: INFLUENT

Date Received: 12/6/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	3.0		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	7.4		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.7		ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	3.4		ug/L
000075343	1,1-DICHLOROETHANE	14		ug/L
000156592	CIS-1,2-DICHLOROETHENE	37		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	110		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	34		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 1/20/2006 4:57PM

Page 2 of 5



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [12/05]

Project Number: 05120015

\*Sorted By Sample ID

AG08941

Field/Station ID: EFFLUENT

Date Received: 12/6/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Codes	Units	Remark
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L	
000074873	CHLOROMETHANE	---	0.50U	ug/L	
000075014	VINYL CHLORIDE	---	0.50U	ug/L	
000074839	BROMOMETHANE	---	0.50U	ug/L	
000075003	CHLOROETHANE	---	0.50U	ug/L	
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L	
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L	
000075150	CARBON DISULFIDE	---	0.50U	ug/L	
000067641	ACETONE	1.8		ug/L	
79-20-9	METHYL ACETATE	---	0.50U	ug/L	
000075092	METHYLENE CHLORIDE	13		ug/L	
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L	
001634044	METHYL TERT-BUTYL ETHER	1.7		ug/L	
000075343	1,1-DICHLOROETHANE	1.7		ug/L	
000156592	CIS-1,2-DICHLOROETHENE	5.1		ug/L	
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L	
000078933	2-BUTANONE	---	1.0U	ug/L	
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L	
000067663	CHLOROFORM	---	0.50U	ug/L	
71-55-6	1,1,1-TRICHLOROETHANE	4.6		ug/L	
110-82-7	CYCLOHEXANE	---	0.50U	ug/L	
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L	
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L	
000071432	BENZENE	---	0.50U	ug/L	
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L	
025323891	TRICHLOROETHENE	2.4		ug/L	
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L	
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L	
000074953	DIBROMOMETHANE	---	0.50U	ug/L	
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L	
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L	
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L	
000108883	TOLUENE	---	0.50U	ug/L	
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L	
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L	
000127184	TETRACHLOROETHENE	---	0.50U	ug/L	
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L	





**TETRA TECH EC, INC.**

15 February 2006  
RAC II-2006-018

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
NOVEMBER 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the November 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated for the entire month of November. A summary of the operation and maintenance activities performed during November is as follows:

- Restored telephone service to the facility;
- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- De-iced sidewalk; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
[www.tteci.com](http://www.tteci.com)



## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
May	31	*	*	*
June	30	*	*	*
July	29	*	*	*
August	29	*	*	*
September	30	*	*	*
October	31	*	*	*
November	30	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the OU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement is being sought.

gpm - gallons per minute  
mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of November 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) November
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1	3.7	3.5	3.3	4.5	4.2	3.8		0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59	0.54	0.55	0.5U	0.5U	0.5U	0.51		0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12	9.5	9.4	8.3	8.7	8.6	8.3		0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6	2.9	2.9	2.4	2.8	2.7	2.7		0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U	1.0 U	1.0U	5.0U	1.0U	1.0U	10U		10U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U	0.5U	0.5U		0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2	3.9	4.2	3.7	3.6	4.0	3.0		1.7
1,1-Dichloroethane	5	18	17	17	24	17	17	17	18	18	18	16		1.8
Cis-1,2-Dichloroethene*	5	50	46	46	54	47	45	44	41	44	42	40		5.3
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U	0.5U	0.5U		0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140	110	120	110	100	110	100	110		4.8
Trichloroethene*	5	43	40	40	47	39	38	36	35	36	35	35		2.5
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49	240.54	227.55	211.7	227.6	214.5	219.31		16.1

Note:

ug/L = micrograms per liter  
\* = Site Contaminant of Concern

U = Below Reporting Limit  
NS = Not Sampled





**D. Next Month's Activities**

The following activities are planned for December 2005:

- Repair flow meter valve; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8197 if you should have any questions.

Sincerely,

A handwritten signature in cursive script, reading "Heidemarie Roldan".

Heidemarie Roldan  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)



## **ATTACHMENT 1**



**Case Narrative:**

**Vestal Well 1-1 #05110026**

The National Environmental Laboratory Accreditation Conference (NELAC) is a voluntary environmental laboratory accreditation association of State and Federal agencies. NELAC established and promoted a national accreditation program that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAC accredited. The Laboratory tests that are accredited have met all the requirements established under the NELAC Standards.

**Comment(s):**

None

**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested except for the following analyte(s):

Volatile Organic Compounds: The CRQL for 1,2-Dibromo-3-chloropropane in water is 0.5 ug/L (OLC03.2). The Laboratory's Reporting Limit was raised to 5 ug/L due to problems associated with the initial calibration curve. The CRQL for Acetone in water is 5 ug/L (OLC03.2). The Laboratory's Reporting Limit was raised to 10 ug/L due to blank contamination.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: \_\_\_\_\_

*J. B. Shea*

Date: \_\_\_\_\_

*1-10-06*



U.S. Environmental Protection Agency  
Region 2 Laboratory  
2890 Woodbridge Avenue  
Edison, NJ 08837

**Data Report: Vestal Well 1-1 [11/05]**

**Project Number: 05110026**

Program: Y206E

Project Leader: L. Arabia

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [11/05]

Project Number: 05110026

\*Sorted By Sample ID

AG08414

Field/Station ID: INFLUENT

Date Received: 11/8/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	3.8		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	0.51		ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	8.3		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.7		ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	3.0		ug/L
000075343	1,1-DICHLOROETHANE	16		ug/L
000156592	CIS-1,2-DICHLOROETHENE	40		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	110		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	35		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 12/23/2005 9:35AM



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [11/05]

Project Number: 05110026

\*Sorted By Sample ID

AG08414

Field/Station ID: INFLUENT

Date Received: 11/8/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L

AG08415

Field/Station ID: EFFLUENT

Date Received: 11/8/2005

Matrix: Aqueous

Sample Description:





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [11/05]

Project Number: 05110026

\*Sorted By Sample ID

AG08415

Field/Station ID: EFFLUENT

Date Received: 11/8/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	1.7		ug/L
000075343	1,1-DICHLOROETHANE	1.8		ug/L
000156592	CIS-1,2-DICHLOROETHENE	5.3		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	4.8		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	2.5		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [11/05]

Project Number: 05110026

\*Sorted By Sample ID

AG08415

Field/Station ID: EFFLUENT

Date Received: 11/8/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L

Project Approval: 

Date: 1-10-06

Refer to Page 1 for an explanation of Remark Codes

Report Date: 12/23/2005 9:35AM



TETRA TECH EC, INC.

7 December 2005  
RAC II-2005-222

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
OCTOBER 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the October 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated for the entire month of October. A summary of the operation and maintenance activities performed during October is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Grass was mowed; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
[www.tteci.com](http://www.tteci.com)



**B. Operational Data**

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
May	31	*	*	*
June	30	*	*	*
July	29	*	*	*
August	29	*	*	*
September	30	*	*	*
October	31	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the OU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement is being sought.

gpm - gallons per minute

mg - millions of gallons

**C. Comparison of Influent and Effluent Concentrations with Discharge Criteria**

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of October 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) October
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1	3.7	3.5	3.3	4.5	4.2			0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59	0.54	0.55	0.5U	0.5U	0.5U			0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12	9.5	9.4	8.3	8.7	8.6			0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6	2.9	2.9	2.4	2.8	2.7			0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U	1.0 U	1.0U	5.0U	1.0U	1.0U			1.0 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U	0.5U			0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2	3.9	4.2	3.7	3.6	4.0			1.8
1,1-Dichloroethane	5	18	17	17	24	17	17	17	18	18	18			2.0
Cis-1,2-Dichloroethene*	5	50	46	46	54	47	45	44	41	44	42			5.5
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U	0.5U			0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140	110	120	110	100	110	100			4.9
Trichloroethene*	5	43	40	40	47	39	38	36	35	36	35			2.7
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49	240.54	227.55	211.7	227.6	214.5			16.9

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled



**D. Next Month's Activities**

The following activities are planned for November 2005:

- Repair flow meter valve;
- Restore phone service; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8197 if you should have any questions.

Sincerely,

A handwritten signature in cursive script, reading "Heidemarie Roldan".

Heidemarie Roldan  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)





## **ATTACHMENT 1**



**Case Narrative:**

**Vestal 1-1. #05100010**

The National Environmental Laboratory Accreditation Conference (NELAC) is a voluntary environmental laboratory accreditation association of State and Federal agencies. NELAC established and promoted a national accreditation program that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAC accredited. The Laboratory tests that are accredited have met all the requirements established under the NELAC Standards.

**Comment(s):**

None

**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested except for the following analyte(s):

Volatile Organic Compounds: The CRQL for Methyl Acetate in water is 0.5 ug/L (OLC03.2). The Laboratory's Reporting Limit was raised to 1.0 ug/L due to problems associated with the initial calibration curve.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: \_\_\_\_\_

*J R. The*

Date: \_\_\_\_\_

*12-2-05*



U.S. Environmental Protection Agency  
Region 2 Laboratory  
2890 Woodbridge Avenue  
Edison, NJ 08837

**Data Report: Vestal Well 1-1 [10/05]**

**Project Number: 05100010**

**Program: Y206E**

**Project Leader: L. Arabia**

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [10/05]

Project Number: 05100010

\*Sorted By Sample ID

AG07694

Field/Station ID: Influent

Date Received: 10/7/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000074873	CHLOROMETHANE	—	0.50U	ug/L
000075014	VINYL CHLORIDE	—	0.50U	ug/L
000074839	BROMOMETHANE	—	0.50U	ug/L
000075008	CHLOROETHANE	—	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	—	0.50U	ug/L
000075854	1,1-DICHLOROETHENE	—	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	217	—	ug/L
000067641	ACETONE	—	1.0U	ug/L
000075092	METHYLENE CHLORIDE	—	0.50U	ug/L
000156603	TRANS-1,2-DICHLOROETHENE	—	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	4.0	—	ug/L
000075343	1,1-DICHLOROPROPANE	—	0.50U	ug/L
000156592	CIS-1,2-DICHLOROETHENE	42	—	ug/L
000078933	2-BUTANONE	—	1.0U	ug/L
000067663	CHLOROFORM	—	0.50U	ug/L
000156576	1,1,1-TRICHLOROETHANE	—	0.50U	ug/L
110-82-7	CYCLOHEXANE	—	0.50U	ug/L
000075823	CARBON TETRACHLORIDE	—	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	—	0.50U	ug/L
000071482	BENZENE	—	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	—	0.50U	ug/L
000102389	TRICHLOROETHENE	—	0.50U	ug/L
108-87-2	METHYLCYCLOHEXANE	—	0.50U	ug/L
000074953	DIBROMOMETHANE	—	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	—	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000108883	TOLUENE	—	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	—	0.50U	ug/L
000127184	1,1,1,2-TETRACHLOROETHANE	—	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	—	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	—	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	—	0.50U	ug/L
000591786	2-HEXANONE	—	0.50U	ug/L
000108907	CHLOROBENZENE	—	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 11/22/2005 4:40PM



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [10/05]

Project Number: 05100010

\*Sorted By Sample ID

AG07694

Field/Station ID: Influent  
Matrix: Aqueous

Date Received: 10/7/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1-DICHLOROETHANE	—	0.50U	ug/L
100-41-4	ETHYLBENZENE	—	0.50U	ug/L
001330207	M-XYLENE	—	0.50U	ug/L
000095476	O-XYLENE	—	0.50U	ug/L
0001000-2	STYRENE	—	0.50U	ug/L
000075252	BROMOFORM	—	0.50U	ug/L
000098829	1,1,1-TRICHLOROETHANE	—	0.50U	ug/L
000108861	BROMOBENZENE	—	0.50U	ug/L
000096184	1,1,1-TRICHLOROETHYLENE	—	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	—	0.50U	ug/L
000103651	1,3-DICHLOROBENZENE	—	0.50U	ug/L
000095498	2-CHLOROTOLUENE	—	0.50U	ug/L
006-43-3	1,1-DICHLOROETHYLENE	—	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	—	0.50U	ug/L
000098086	1,2-DICHLOROBENZENE	—	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	—	0.50U	ug/L
000098086	1,2-DICHLOROBENZENE	—	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	—	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	—	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	—	0.50U	ug/L
000099875	1,1-DICHLOROETHYLENE	—	0.50U	ug/L
000104518	N-BUTYLBENZENE	—	0.50U	ug/L
000096128	1,1-DIBROMOETHYLENE	—	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	—	0.50U	ug/L
000091203	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
000091203	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
1330-20-7	TOTAL XYLENES	—	0.50U	ug/L

AG07695

Field/Station ID: Effluent  
Matrix: Aqueous

Date Received: 10/7/2005

Sample Description:





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [10/05]

Project Number: 05100010

\*Sorted By Sample ID

AG07695

Field/Station ID: Effluent  
Matrix: Aqueous

Date Received: 10/7/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	—	0.50U	ug/L
00007487	CHLOROMETHANE	—	0.50U	ug/L
000075014	VINYL CHLORIDE	—	0.50U	ug/L
00007483	BROMODIFLUOROMETHANE	—	0.50U	ug/L
000075003	CHLOROETHANE	—	0.50U	ug/L
00007569	1,1-DICHLOROETHANE	—	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	—	0.50U	ug/L
76-13-1	1,1,2-TRICHLOROETHANE	—	0.50U	ug/L
000075150	CARBON DISULFIDE	—	0.50U	ug/L
00006764	ACETONE	—	0.50U	ug/L
79-20-9	METHYL ACETATE	—	1.0U	ug/L
000075092	METHYLENE CHLORIDE	—	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	—	0.50U	ug/L
000075092	METHYLENE CHLORIDE	—	0.50U	ug/L
000075343	1,1-DICHLOROETHANE	—	0.50U	ug/L
000075392	1,1-DICHLOROETHANE	—	0.50U	ug/L
594-20-7	2,2-DICHLOROPROPANE	—	0.50U	ug/L
000074975	BROMOCHLOROMETHANE	—	0.50U	ug/L
00007563	CHLOROPROPANE	—	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	4.9	—	ug/L
000056235	CARBON TETRACHLORIDE	—	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	—	0.50U	ug/L
000071432	BENZENE	—	0.50U	ug/L
000075067	1,2-DICHLOROETHANE	—	0.50U	ug/L
025323891	TRICHLOROETHENE	2.7	—	ug/L
000078875	1,2-DICHLOROPROPANE	—	0.50U	ug/L
000074953	DIBROMOMETHANE	—	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	—	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	—	1.0U	ug/L
000108885	TOLUENE	—	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	—	0.50U	ug/L
000127184	TETRACHLOROETHENE	—	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	—	0.50U	ug/L



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [10/05]

Project Number: 05100010

\*Sorted By Sample ID

AG07695

Field/Station ID: Effluent  
Matrix: Aqueous

Date Received: 10/7/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	—	0.50U	ug/L
000106994	1,1-DIBROMOETHANE	—	0.50U	ug/L
000591786	2-HEXANONE	—	1.00U	ug/L
000108969	1-CHLOROBENZENE	—	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	—	0.50U	ug/L
000108969	1,2-DICHLOROBENZENE	—	0.50U	ug/L
001330207	M/P-XYLENE	—	0.50U	ug/L
000095476	O-XYLENE	—	0.50U	ug/L
000100425	STYRENE	—	0.50U	ug/L
000095252	BROMOFORM	—	0.50U	ug/L
000098828	ISOPROPYLBENZENE	—	0.50U	ug/L
000108861	BROMOBENZENE	—	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	—	0.50U	ug/L
000095845	1,1,1,2-TETRACHLOROETHANE	—	0.50U	ug/L
000103651	N-PROPYLBENZENE	—	0.50U	ug/L
000095498	2-CHLOROTOLUENE	—	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	—	0.50U	ug/L
000108673	2,3-DICHLOROBENZENE	—	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	—	0.50U	ug/L
000095636	1,2-DICHLOROBENZENE	—	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	—	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	—	0.50U	ug/L
000095501	1,3-DICHLOROBENZENE	—	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	—	0.50U	ug/L
000104518	N-ETHYLBENZENE	—	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	—	0.50U	ug/L
000108969	1,2-DICHLOROBENZENE	—	0.50U	ug/L
87-68-3	HEXACHLOROBTADIENE	—	0.50U	ug/L
000091203	NAPHTHALENE	—	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
1380-20-7	TOTAL XYLENES	—	0.50U	ug/L

Project Approval:

*J.R. [Signature]*

Date: 12-2-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 11/22/2005 4:40PM





TETRA TECH EC, INC.

30 November 2005  
RAC II-2005-215

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
SEPTEMBER 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the September 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated for the entire month of September. A summary of the operation and maintenance activities performed during September is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Grass was mowed; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
www.tteci.com



## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter%	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
May	31	*	*	*
June	30	*	*	*
July	29	*	*	*
August	29	*	*	*
September	30	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the OU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement is being sought.

gpm - gallons per minute

mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of September 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) September
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1	3.7	3.5	3.3	4.5				0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59	0.54	0.55	0.5U	0.5U				0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12	9.5	9.4	8.3	8.7				0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6	2.9	2.9	2.4	2.8				0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U	1.0 U	1.0U	5.0U	1.0U				1.0 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U				0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2	3.9	4.2	3.7	3.6				1.8
1,1-Dichloroethane	5	18	17	17	24	17	17	17	18	18				2.3
Cis-1,2-Dichloroethene*	5	50	46	46	54	47	45	44	41	44				6.3
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U	0.5U				0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140	110	120	110	100	110				5.7
Trichloroethene*	5	43	40	40	47	39	38	36	35	36				3.0
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49	240.54	227.55	211.7	227.6				19.1

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled



**D. Next Month's Activities**

The following activities are planned for October 2005:

- Repair flow meter valve;
- Restore phone service; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8197 if you should have any questions.

Sincerely,

A handwritten signature in cursive script, reading "Heidemarie Roldan".

Heidemarie Roldan  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)



## **ATTACHMENT A**





**Case Narrative:**

**Vestal 1-1. #05090011**

The National Environmental Laboratory Accreditation Conference (NELAC) is a voluntary environmental laboratory accreditation association of State and Federal agencies. NELAC established and promoted a national accreditation program that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAC accredited. The Laboratory tests that are accredited have met all the requirements established under the NELAC Standards.

**Comment(s):**

None

**Reporting Limit(s):**

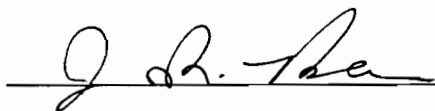
The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested except for the following analyte(s):

Volatile Organic Compounds: The CRQL for Methyl Acetate in water is 0.5 ug/L (OLC03.2). The Laboratory's Reporting Limit was raised to 1.0 ug/L due to problems associated with the initial calibration curve.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: \_\_\_\_\_



Date: \_\_\_\_\_

11-7-05



U.S. Environmental Protection Agency  
Region 2 Laboratory  
2890 Woodbridge Avenue  
Edison, NJ 08837

**Data Report: Vestal Well 1-1 [09/05]**

**Project Number: 05090011**

**Program: Y206E**

**Project Leader: L. Arabia**

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [09/05]

Project Number: 05090011

\*Sorted By Sample ID

AG04090

Field/Station ID: INFLUENT

Date Received: 9/9/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	—	0.50U	ug/L
000074873	CHLOROMETHANE	—	0.50U	ug/L
000075014	VINYL CHLORIDE	4.5		ug/L
000074839	BROMOMETHANE	—	0.50U	ug/L
000075003	CHLOROETHANE	—	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	—	0.50U	ug/L
000075354	1,1-DICHLOROETHANE	—		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.8		ug/L
000075150	CARBON DISULFIDE	—	0.50U	ug/L
000067641	ACETONE	—	1.0U	ug/L
79-20-9	METHYL ACETATE	—	1.0U	ug/L
000075092	METHYLENE CHLORIDE	—	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	—	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	3.6		ug/L
000075343	1,1-DICHLOROETHANE	18		ug/L
000156592	CIS-1,2-DICHLOROETHENE	44		ug/L
594-20-7	2,2-DICHLOROPROPANE	—	0.50U	ug/L
000078933	2-BUTANONE	—	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	—	0.50U	ug/L
000067663	CHLOROFORM	—	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	10		ug/L
110-82-7	CYCLOHEXANE	—	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	—	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	—	0.50U	ug/L
000071432	BENZENE	—	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	—	0.50U	ug/L
025323891	TRICHLOROETHENE	36		ug/L
108-87-2	METHYLCYCLOHEXANE	—	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	—	0.50U	ug/L
000074953	DIBROMOMETHANE	—	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	—	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	—	1.0U	ug/L
000108883	TOLUENE	—	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	—	0.50U	ug/L
000127184	TETRACHLOROETHENE	—	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	—	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	—	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	—	0.50U	ug/L
000591786	2-HEXANONE	—	1.0U	ug/L
000108907	CHLOROBENZENE	—	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/31/2005 3:19PM



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [09/05]

Project Number: 05090011

\*Sorted By Sample ID

AG04090

Field/Station ID: INFLUENT

Date Received: 9/9/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
0000630206	1,1,1,2-TETRACHLOROETHANE	—	0.50U	ug/L
100-41-4	ETHYLBENZENE	—	0.50U	ug/L
0001230207	METHYLBENZENE	—	0.50U	ug/L
000095476	O-XYLENE	—	0.50U	ug/L
000100425	STYRENE	—	0.50U	ug/L
000075252	BROMOFORM	—	0.50U	ug/L
000098828	ISOPROPYLBENZENE	—	0.50U	ug/L
000108861	BROMOBENZENE	—	0.50U	ug/L
000096184	1,2-DIBROMOETHANE	—	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	—	0.50U	ug/L
000103651	N-PROPYLBENZENE	—	0.50U	ug/L
000095498	2-CHLOROTOLUENE	—	0.50U	ug/L
106-48-4	4-CHLOROTOLUENE	—	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	—	0.50U	ug/L
000098086	1,3,5-TRIMETHYLBENZENE	—	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	—	0.50U	ug/L
133-98-8	SEC-BUTYLBENZENE	—	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	—	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	—	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	—	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	—	0.50U	ug/L
000104518	N-BUTYLBENZENE	—	0.50U	ug/L
000096128	1,2-DIBROMOETHANE	—	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	—	0.50U	ug/L
87-68-3	HEXYLCHLOROCYCLOPENTANE	—	0.50U	ug/L
000091203	NAPHTHALENE	—	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
1330-20-7	TOTAL XYLENES	—	0.50U	ug/L
000096128	1,2-DIBROMOETHANE	—	0.50U	ug/L

AG04091

Field/Station ID: EFFLUENT

Date Received: 9/9/2005

Matrix: Aqueous

Sample Description:





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [09/05]

Project Number: 05090011

\*Sorted By Sample ID

AG04091

Field/Station ID: EFFLUENT

Date Received: 9/9/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	—	0.50U	ug/L
000074873	CHLOROMETHANE	—	0.50U	ug/L
000075014	VINYL CHLORIDE	—	0.50U	ug/L
000074839	BROMOMETHANE	—	0.50U	ug/L
000075003	CHLOROETHANE	—	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	—	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	—	0.50U	ug/L
75-43-4	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	—	0.50U	ug/L
000075150	CARBON DISULFIDE	—	0.50U	ug/L
000067641	ACETONE	—	1.0U	ug/L
79-20-9	METHYL ACETATE	—	1.0U	ug/L
000075092	METHYLENE CHLORIDE	—	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	—	0.50U	ug/L
001634044	METHYLBENZENE (TOLUENE)	—	0.50U	ug/L
000075343	1,1-DICHLOROETHANE	2.3	—	ug/L
000156592	CIS-1,2-DICHLOROETHENE	—	0.50U	ug/L
594-20-7	2,2-DICHLOROPROPANE	—	0.50U	ug/L
000078935	2-BUTANONE	—	0.50U	ug/L
000074975	BROMOCHLOROMETHANE	—	0.50U	ug/L
000067863	CHLOROPYRIM	—	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	5.7	—	ug/L
010-82-7	CYCLOHEXANE	—	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	—	0.50U	ug/L
0000563586	1,1-DICHLOROPROPENE	—	0.50U	ug/L
000071432	BENZENE	—	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	—	0.50U	ug/L
025323891	TRICHLOROETHENE	3.0	—	ug/L
108-87-2	METHYLCYCLOHEXANE	—	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	—	0.50U	ug/L
000074953	DIBROMOMETHANE	—	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	—	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	—	1.0U	ug/L
000108883	TOLUENE	—	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	—	0.50U	ug/L
000127184	TETRACHLOROETHENE	—	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	—	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/31/2005 3:19PM



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [09/05]

Project Number: 05090011

\*Sorted By Sample ID

AG04091

Field/Station ID: EFFLUENT

Date Received: 9/9/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	—	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	—	0.50U	ug/L
000591786	2-HEXANONE	—	1.0U	ug/L
000108907	CHLOROBENZENE	—	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	—	0.50U	ug/L
0001114	BROMOBENZENE	—	0.50U	ug/L
001330207	M/P-XYLENE	—	0.50U	ug/L
000095476	CHLOROBENZENE	—	0.50U	ug/L
000100425	STYRENE	—	0.50U	ug/L
000075252	BROMOFORM	—	0.50U	ug/L
000098828	ISOPROPYLBENZENE	—	0.50U	ug/L
00010886	BROMOBENZENE	—	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	—	0.50U	ug/L
000079345	1,2,3,4-TETRACHLOROBUTANE	—	0.50U	ug/L
000103651	N-PROPYLBENZENE	—	0.50U	ug/L
000095498	2-CHLOROTOLUENE	—	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	—	0.50U	ug/L
000108678	1,3-DIMETHYLBENZENE	—	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	—	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	—	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	—	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	—	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	—	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	—	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	—	0.50U	ug/L
000104518	N-BUTYLBENZENE	—	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	—	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	—	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	—	0.50U	ug/L
000091203	NAPHTHALENE	—	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
1330-20-7	TOTAL COCLENES	—	0.50U	mg/L

Project Approval:

*J. D. Ben*

Date:

11-7-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/31/2005 3:19PM



**TETRA TECH EC, INC.**

2 November 2005  
RAC II-2005-190

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
AUGUST 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the August 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated in auto mode for the entire month, with the exception of two days. On 25 August, the treatment system was taken offline due to sporadic well pump pressure. On 27 August, the treatment system was restarted and operated normally. A summary of the operation and maintenance activities performed during August is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Grass was mowed; and
- The monthly influent and effluent samples were collected.



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Tel 973.630.8000 Fax 973.630.8025  
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## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
May	31	*	*	*
June	30	*	*	*
July	29	*	*	*
August	29	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the OU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement is being sought.

gpm - gallons per minute

mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of August 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) August
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1	3.7	3.5	3.3					0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59	0.54	0.55	0.5U					0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12	9.5	9.4	8.3					0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6	2.9	2.9	2.4					0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U	1.0 U	1.0U	5.0U					0.5 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U					0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2	3.9	4.2	3.7					0.5 U
1,1-Dichloroethane	5	18	17	17	24	17	17	17	18					0.5 U
Cis-1,2-Dichloroethene*	5	50	46	46	54	47	45	44	41					0.5 U
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U	0.5U					0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140	110	120	110	100					0.5 U
Trichloroethene*	5	43	40	40	47	39	38	36	35					0.5 U
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49	240.54	227.55	211.7					ND

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled



**D. Next Month's Activities**

The following activities are planned for September 2005:

- Repair flow meter valve;
- Restore phone service; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8197 if you should have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Heidemarie Roldan".

Heidemarie Roldan  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)



## **ATTACHMENT A**



**Case Narrative:**

**Vestal 1-1. #05080016**

The Laboratory has met all data quality objectives, e.g., Target Reporting Limits, Accuracy and Precision, established for this project except were noted below.

**Comment(s):**

None

**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested except for the following analyte(s):

Volatile Organic Compounds: The CRQL for Methylene Chloride in water is 0.5 ug/L (OLC03.2). The Laboratory's Reporting Limit was raised to 1.0 ug/L due to problems associated with the initial calibration curve.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: J.R. He Date: 9-23-05



U.S. Environmental Protection Agency  
Region 2 Laboratory

**Data Report Vestal Well 1-1 [08/05]**

**Project Number: 05080016**

**Program: Y206E**

**Project Leader: L. Arabia**

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [08/05]

Project Number: 05080016

\*Sorted By Sample ID

AG03607

Field/Station ID: INFLUENT

Date Received: 8/9/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	3.3		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	8.3		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.4		ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	5.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	1.0U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	3.7		ug/L
000075343	1,1-DICHLOROETHANE	18		ug/L
000156592	CIS-1,2-DICHLOROETHENE	41		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	100		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	35		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 9/19/2005 1:04PM

Page 2 of 5



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [08/05]

Project Number: 05080016

\*Sorted By Sample ID

AG03607

Field/Station ID: INFLUENT  
Matrix: Aqueous

Date Received: 8/9/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	1.0U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L
	ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-4,5,5	0.56	NP	ug/L

AG03608

Field/Station ID: EFFLUENT  
Matrix: Aqueous

Date Received: 8/9/2005

Sample Description:



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [08/05]

Project Number: 05080016

\*Sorted By Sample ID

AG03608

Field/Station ID: EFFLUENT

Date Received: 8/9/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	1.0U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L

Project Approval:

Date:

9-23-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 9/19/2005 1:04PM





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [08/05]

Project Number: 05080016

\*Sorted By Sample ID

AG03608

Field/Station ID: EFFLUENT

Date Received: 8/9/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	0.50U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	1.0U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	1.7		ug/L
000075343	1,1-DICHLOROETHANE	1.7		ug/L
000156592	CIS-1,2-DICHLOROETHENE	4.9		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	3.7		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	2.1		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L



TETRA TECH EC, INC.

13 September 2005  
RAC II-2005-154

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
JULY 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the July 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated in auto mode for the entire month. Thunderstorms during the weekend of 30 and 31 July took the system off-line, but it was restarted without a problem on 1 August. A summary of the operation and maintenance activities performed during July is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Grass was mowed; and
- The monthly influent and effluent samples were collected.



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www.tteci.com

## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	4.7	541	24.2
February	28	4.6	529	21.3
March	31	4.5	517.5	22.4
April	17	4.8	552	13.5
May	31	*	*	*
June	30	*	*	*
July	29	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the QU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement is being sought.

gpm - gallons per minute

mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of July 2005 are included in Attachment I. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) January
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1	3.7	3.5						0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59	0.54	0.55						0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12	9.5	9.4						0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6	2.9	2.9						0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U	1.0 U	1.0U						1.2
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U						0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2	3.9	4.2						2.2
1,1-Dichloroethane	5	18	17	17	24	17	17	17						1.8
Cis-1,2-Dichloroethene*	5	50	46	46	54	47	45	44						5.5
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U	0.5U						0.5 U
1,1,1-Trichloroethane*	5	110	20	110	140	110	120	110						4.4
Trichloroethene*	5	43	40	40	47	39	38	36						2.4
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49	240.54	227.55						17.5

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled

**D. Next Month's Activities**

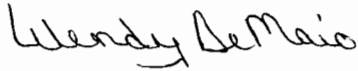
The following activities are planned for August 2005:

- Repair flow meter valve;
- Restore phone service; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8412 if you should have any questions.

Sincerely,



Wendy DeMaio  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)

## **ATTACHMENT A**



**Case Narrative:**

**Vestal 1-1. #05060020**

The Laboratory has met all data quality objectives, e.g., Target Reporting Limits, Accuracy and Precision, established for this project except were noted below.

**Comment(s):**

None

**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested except for the following analyte(s):

Volatile Organic Compounds: The Laboratory's Reporting Limit for Methylene Chloride was raised to 1 ug/L due to problems associated with the initial calibration curve

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: J. R. Pa Date: 8-3-05



U.S. Environmental Protection Agency  
Region 2 Laboratory

**Data Report: Vestal Well 1-1 [06/05]**

**Project Number: 05060020**

Program: Y206E

Project Leader: L. Arabia

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [06/05]

Project Number: 05060020

\*Sorted By Sample ID

AG01732

Field/Station ID: INFLUENT

Date Received: 6/10/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	3.7		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	0.54		ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	9.5	L	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.9		ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	1.0U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	3.9		ug/L
000075343	1,1-DICHLOROETHANE	17		ug/L
000156592	CIS-1,2-DICHLOROETHENE	45		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	120		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	38		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 8/1/2005 2:14PM



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [06/05]

Project Number: 05060020

\*Sorted By Sample ID

AG01732

Field/Station ID: INFLUENT

Date Received: 6/10/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L
	ETHANE,1,2-DICHLORO,1,1,2-TRIFLU,RT=4.56	0.67	NI	ug/L

AG01733

Field/Station ID: EFFLUENT

Date Received: 6/10/2005

Matrix: Aqueous

Sample Description:





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [06/05]

Project Number: 05060020

\*Sorted By Sample ID

AG01733

Field/Station ID: EFFLUENT

Date Received: 6/10/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L

Project Approval:

Date:

8-3-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 8/1/2005 2:14PM



U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [06/05]

Project Number: 05060020

\*Sorted By Sample ID

AG01733

Field/Station ID: EFFLUENT

Date Received: 6/10/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	2.2		ug/L
000075343	1,1-DICHLOROETHANE	1.9		ug/L
000156592	CIS-1,2-DICHLOROETHENE	5.9		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	4.7		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	2.6		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 8/1/2005 2:14PM



**TETRA TECH EC, INC.**

13 September 2005  
RAC II-2005-153

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
JUNE 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the June 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated in auto mode for the entire month. A summary of the operation and maintenance activities performed during June is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Grass was mowed;
- The pump house vent cap was replaced;
- The pump house was painted; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
[www.tteci.com](http://www.tteci.com)

**B. Operational Data**

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
May	31	*	*	*
June	30	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the OU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement is being sought.

gpm - gallons per minute

mg - millions of gallons

**C. Comparison of Influent and Effluent Concentrations with Discharge Criteria**

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of June 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) January
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1	3.7							0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59	0.54							0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12	9.5							0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6	2.9							0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U	1.0 U							1.0 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U							0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2	3.9							2.2
1,1-Dichloroethane	5	18	17	17	24	17	17							1.9
Cis-1,2-Dichloroethene*	5	50	46	46	54	47	45							5.9
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U	0.5 U							0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140	110	120							4.7
Trichloroethene*	5	43	40	40	47	39	38							2.6
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49	240.54							17.3

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled



**D. Next Month's Activities**

The following activities are planned for July 2005:

- Repair flow meter valve;
- Restore phone service; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8412 if you should have any questions.

Sincerely,

*Wendy DeMaio*

Wendy DeMaio  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)

**ATTACHMENT A**



**Data Report: Vestal Well 1-1 [07/05]**  
**Project Number: 05070016**  
**Program: Y206E**  
**Project Leader: L. Arabia**

Remark	Codes	Explanation
	U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
	J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
	UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
	N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
	NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
	R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
	K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
	L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
	NV	NOT VALIDATED
	INC	RESULT NOT ENTERED

Case Narrative:  
Vestal 1-1. #05070016

The Laboratory has met all data quality objectives, e.g., Target, Reporting Limits, Accuracy and Precision, established for this project except where noted below.

Comment(s):

None

Reporting Limit(s):

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRLs) for each analyte requested except for the following analyte(s):

Volatile Organic Compounds: The CRL for Methylene Chloride in water is 0.5 ug/L (OLC03.2). The Laboratory's Reporting Limit was raised to 1.0 ug/L due to problems associated with the initial calibration curve.

Method(s):

Low Level Volatile Organic Analysis, ESAT-SOP.132 (GC/MS Method).

Approval:  Date: 9-2-05

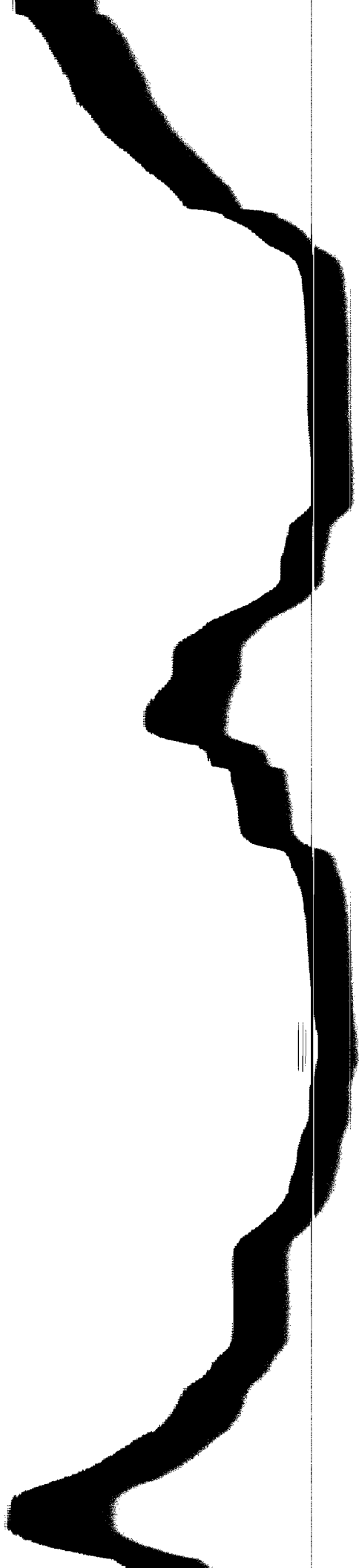
U.S. EPA Region 2 Laboratory  
Data Report

11/15/85

11/15/85

11/15/85

11/15/85





Survey Name: Vestal Well 1-1 [07/05]  
Project Number: 05070016

\*Sorted By Sample ID

Date Received: 7/8/2005

Field/Station ID: INFLUENT

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark	Units
75-43-4	DICHLORODIFLUOROMETHANE	---		0.50U ug/L
000074873	CHLOROMETHANE	---		0.50U ug/L
000075014	VINYL CHLORIDE	---		0.50U ug/L
000074839	BROMOMETHANE	3.5		0.50U ug/L
000075003	CHLOROETHANE	---		0.50U ug/L
000075694	TRICHLOROFLUOROMETHANE	0.55		0.50U ug/L
000075354	1,1-DICHLOROETHENE	9.4		0.50U ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.9		0.50U ug/L
000075150	CARBON DISULFIDE	---		0.50U ug/L
000067641	ACETONE	---		1.0U ug/L
79-20-9	METHYL ACETATE	---		1.0U ug/L
000075092	METHYLENE CHLORIDE	---		1.0U ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---		0.50U ug/L
001634044	METHYL TERT-BUTYL ETHER	4.2		0.50U ug/L
000075343	1,1-DICHLOROETHANE	17		0.50U ug/L
000156592	CIS-1,2-DICHLOROETHENE	44		0.50U ug/L
594-20-7	2,2-DICHLOROPROPANE	---		0.50U ug/L
000078933	2-BUTANONE	---		1.0U ug/L
000074975	BROMOCHLOROMETHANE	---		0.50U ug/L
000067663	CHLOROFORM	---		0.50U ug/L
71-55-6	1,1,1-TRICHLOROETHANE	610		0.50U ug/L
110-82-7	CYCLOHEXANE	---		0.50U ug/L
000056235	CARBON TETRACHLORIDE	---		0.50U ug/L
000563586	1,1-DICHLOROPROPENE	---		0.50U ug/L
000071432	BENZENE	---		0.50U ug/L
000107062	1,2-DICHLOROETHANE	---		0.50U ug/L
025323891	TRICHLOROETHENE	36		0.50U ug/L
108-87-2	METHYLCYCLOHEXANE	---		0.50U ug/L
000078875	1,2-DICHLOROPROPANE	---		0.50U ug/L
000074953	DIBROMOMETHANE	---		0.50U ug/L
000075274	BROMODICHLOROMETHANE	---		0.50U ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---		0.50U ug/L
000108101	4-METHYL-2-PENTANONE	---		1.0U ug/L
000108883	TOLUENE	---		0.50U ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---		0.50U ug/L
000079005	1,1,2-TRICHLOROETHANE	---		0.50U ug/L
000127184	TETRACHLOROETHENE	---		0.50U ug/L
000142289	1,3-DICHLOROPROPANE	---		0.50U ug/L
000124481	DIBROMOCHLOROMETHANE	---		0.50U ug/L
000106934	1,2-DIBROMOETHANE	---		0.50U ug/L
000591786	2-HEXANONE	---		1.0U ug/L
000108907	CHLOROBENZENE	---		0.50U ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 8/29/2005 11:33AM



Survey Name: Vesta Well 1-1 [07/05]  
Project Number: 05C70016

\*Sorted By Sample ID

Date Received: 7/8/2005

Sample Description:

Matrix: Aqueous

Field/Station ID: INFLUENT

AC02658

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Codes	Units	Remark
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L	
100-41-4	ETHYLBENZENE	---	0.50U	ug/L	
001330207	M/P-XYLENE	---	0.50U	ug/L	
000095476	O-XYLENE	---	0.50U	ug/L	
000100425	STYRENE	---	0.50U	ug/L	
000075252	BROMOFORM	---	0.50U	ug/L	
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L	
000108861	BROMOBENZENE	---	0.50U	ug/L	
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L	
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L	
000103651	N-PROPYLBENZENE	---	0.50U	ug/L	
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L	
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L	
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L	
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L	
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L	
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L	
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L	
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L	
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L	
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L	
000104518	N-BUTYLBENZENE	---	0.50U	ug/L	
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L	
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L	
87-68-3	HEXACHLOROCYCLOPENTADIENE	---	0.50U	ug/L	
000091203	NAPHTHALENE	---	0.50U	ug/L	
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L	
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L	
	ETHANE,1,2-DICHLORO-1,1,2-TRIFLUORO,RT=4.55	0.65	NJ	ug/L	

Date Received: 7/8/2005

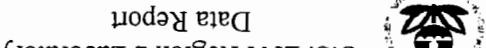
Matrix: Aqueous

Field/Station ID: EFFLUENT

AC02659

Sample Description:





Data Report

Survey Name: Vestal Well 1-1 [07/05]

Project Number: 05070016

\*Sorted By Sample ID

Date Received: 7/8/2005

Field/Station ID: EFFLUENT

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Codes	Units	Remark
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L	
000074873	CHLOROMETHANE	---	0.50U	ug/L	
000075014	VINYL CHLORIDE	---	0.50U	ug/L	
000074839	BROMOMETHANE	---	0.50U	ug/L	
000075003	CHLOROETHANE	---	0.50U	ug/L	
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L	
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L	
000075150	CARBON DISULFIDE	---	0.50U	ug/L	
000067641	ACETONE	1.2	K	ug/L	
79-20-9	METHYL ACETATE	---	0.50U	ug/L	
000075092	METHYLENE CHLORIDE	---	1.0U	ug/L	
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L	
001634044	METHYL TERT-BUTYL ETHER	2.2	---	ug/L	
000075343	1,1-DICHLOROETHANE	1.8	---	ug/L	
000156592	CIS-1,2-DICHLOROETHENE	5.5	---	ug/L	
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L	
000078933	2-BUTANONE	---	1.0U	ug/L	
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L	
000067663	CHLOROFORM	---	0.50U	ug/L	
71-55-6	1,1,1-TRICHLOROETHANE	4.4	---	ug/L	
110-82-7	CYCLOHEXANE	---	0.50U	ug/L	
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L	
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L	
000071432	BENZENE	---	0.50U	ug/L	
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L	
025323891	TRICHLOROETHENE	2.4	---	ug/L	
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L	
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L	
000074953	DIBROMOMETHANE	---	0.50U	ug/L	
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L	
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L	
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L	
000108883	TOLUENE	---	0.50U	ug/L	
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L	
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L	
000127184	TETRACHLOROETHENE	---	0.50U	ug/L	
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L	

Survey Name: Vestal Well 1-1 (07/05)

Project Number: 05070016

\*Sorted By Sample ID

AG02659

Field/Station ID: EFFLUENT

Date Received: 7/8/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Codes	Remark	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U		ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U		ug/L
000591786	2-HEXANONE	---	1.0U		ug/L
000108907	CHLOROBENZENE	---	0.50U		ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U		ug/L
100-41-4	ETHYLBENZENE	---	0.50U		ug/L
001330207	M/P-XYLENE	---	0.50U		ug/L
000095476	O-XYLENE	---	0.50U		ug/L
000100425	STYRENE	---	0.50U		ug/L
000075252	BROMOFORM	---	0.50U		ug/L
000098828	ISOPROPYLBENZENE	---	0.50U		ug/L
000108861	BROMOBENZENE	---	0.50U		ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U		ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U		ug/L
000103651	N-PROPYLBENZENE	---	0.50U		ug/L
000095498	2-CHLOROTOLUENE	---	0.50U		ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U		ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U		ug/L
000098066	TERP-BUTYLBENZENE	---	0.50U		ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U		ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U		ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U		ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U		ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U		ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U		ug/L
000104518	N-BUTYLBENZENE	---	0.50U		ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U		ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U		ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U		ug/L
000091203	NAPHTHALENE	---	0.50U		ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U		ug/L
1330-20-7	TOTAL XYLENES	---	0.50U		ug/L

Project Approval: *J. J. J.*

Date: 9-2-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 8/29/2005 11:33AM

Page 5 of 5



TETRA TECH EC, INC.

14 July 2005  
RAC II-2005-107

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
MAY 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the May 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

**A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated in auto mode for the entire month. A summary of the operation and maintenance activities performed during May is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Grass was mowed four times;
- The pump house was painted; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
www.tteci.com



**B. Operational Data**

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
May	31	*	*	*
Volume of groundwater treated for 2005				81.4*
Volume of groundwater treated for the OU-1				2684.8*

\*The float control valve is not closing completely, preventing the flow meter from operating correctly. A replacement will be ordered.

gpm - gallons per minute

mg - millions of gallons

**C. Comparison of Influent and Effluent Concentrations with Discharge Criteria**

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of May 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) January
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4	4.1								0.5 U
Chloroethane		0.5	0.6	0.5	0.73	0.59								0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11	12								0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2	2.6								0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U	1.0U								1.0 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U	0.5U								0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9	4.2								2.2
1,1-Dichloroethane	5	18	17	17	24	17								2.0
Cis-1,2-Dichloroethene*	5	50	46	46	54	47								6.6
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U	0.5U								0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140	110								5.3
Trichloroethene*	5	43	40	40	47	39								3.1
Total Volatile Organics*	100	245.8	246.3	232.2	288.23	236.49								19.2

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled



**D. Next Month's Activities**

The following activities are planned for June 2005:

- Repair chlorinator pipe;
- Repair actuator valve;
- Restore phone service (interrupted during flooding); and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8412 if you should have any questions.

Sincerely,



Wendy DeMaio  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)





## **ATTACHMENT A**



**Case Narrative:**

**Vestal 1-1. #05050021**

The Laboratory has met all data quality objectives, e.g., Target Reporting Limits, Accuracy and Precision, established for this project except were noted below.

**Comment(s):**

None

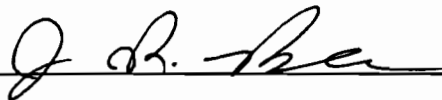
**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: \_\_\_\_\_



Date: \_\_\_\_\_

7-5-05





U.S. Environmental Protection Agency  
Region 2 Laboratory

**Data Report: Vestal Well 1-1 [05/05]**

**Project Number: 05050021**

**Program: Y206E**

**Project Leader: L. Arabia**

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE. THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED





Survey Name: Vestal Well 1-1 [05/05]

Project Number: 05050021

\*Sorted By Sample ID

AG01192 Field/Station ID: INFLUENT  
Matrix: Aqueous

Date Received: 5/13/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000074873	CHLOROMETHANE	—	0.50U	ug/L
000074839	BROMOMETHANE	—	0.50U	ug/L
000075005	CHLOROETHANE	—	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	—	0.50U	ug/L
000075354	1,1-DICHLOROETHYLENE	—	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.6		ug/L
000075150	CARBON DISULFIDE	—	0.50U	ug/L
000067641	ACETONE	—	1.0U	ug/L
79-20-9	METHYLE ACETONE	—	0.50U	ug/L
000075092	METHYLENE CHLORIDE	—	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	—	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	4.2		ug/L
000075343	1,1-DICHLOROETHANE	17		ug/L
000156592	CIS-1,2-DICHLOROETHENE	47		ug/L
594-20-7	2,2-DICHLOROPROPANE	—	0.50U	ug/L
000078933	2-BUTANONE	—	1.0U	ug/L
000075005	CHLOROETHANE	—	0.50U	ug/L
000067663	CHLOROFORM	—	0.50U	ug/L
110-82-7	CYCLOHEXANE	—	0.50U	ug/L
000056358	1,1-DICHLOROPROPENE	—	0.50U	ug/L
000071433	BENZENE	—	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	—	0.50U	ug/L
025373691	TRICHLOROETHENE	—	0.50U	ug/L
108-87-2	METHYLCYCLOHEXANE	—	0.50U	ug/L
000074839	BROMOMETHANE	—	0.50U	ug/L
000074953	DIBROMOMETHANE	—	0.50U	ug/L
000075005	CHLOROETHANE	—	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000108883	TOLUENE	—	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	—	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	—	0.50U	ug/L
000137184	TETRACHLOROETHENE	—	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	—	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	—	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	—	0.50U	ug/L
000591786	2-HEXANONE	—	0.50U	ug/L
000108907	CHLOROBENZENE	—	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes







U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [05/05]

Project Number: 05050021

\*Sorted By Sample ID

AG01192 Field/Station ID: INFLUENT  
Matrix: Aqueous

Date Received: 5/13/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098628	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096128	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	tert-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
105-93-8	3-ETHYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106415	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096129	1,2-DIBROMO-3,3-DICHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L
106-43-4	4-ETHANOL-2-DICHLORO-1,2-TRICHLORO-1,1,1,2,2,2-HEPTACHLOROETHANE	---	0.50U	ug/L

AG01193 Field/Station ID: EFFLUENT  
Matrix: Aqueous

Date Received: 5/13/2005

Sample Description:





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [05/05]

Project Number: 05050021

\*Sorted By Sample ID

AG01193 Field/Station ID: EFFLUENT  
Matrix: Aqueous

Date Received: 5/13/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074889	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	2.2		ug/L
000075343	1,1-DICHLOROETHANE	2.0		ug/L
000156592	CIS-1,2-DICHLOROETHENE	6.6		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	BIPHENYL	---	0.50U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROPROPANE	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	5.3		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000163586	1,1-DICHLOROPROPANE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	3.1		ug/L
109-10-7	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061017	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108893	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000133289	1,3-DICHLOROPROPANE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 6/27/2005 4:05PM





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [05/05]

Project Number: 05050021

\*Sorted By Sample ID

AG01193 Field/Station ID: EFFLUENT  
Matrix: Aqueous

Date Received: 5/13/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106933	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLORO BENZENE	---	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
000108907	ETHYL BENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075322	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYL BENZENE	---	0.50U	ug/L
000108851	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000075322	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000093498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000093636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000530731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000093501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104513	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
0001091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
101-83-2	1,1,1,2,2,2-HEXACHLOROETHANE	---	0.50U	ug/L

Project Approval:

Date:

7-5-15

Refer to Page 1 for an explanation of Remark Codes

Report Date: 6/27/2005 4:05PM





TETRA TECH EC, INC.

14 July 2005  
RAC II-2005-106

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
APRIL 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the April 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well was shut down from 6 April through 11 April due to flooding in the area. Numerous attempts to re-start the system from 12 April through 19 April were not successful due to malfunctions with the clear well pump and blower system. On 20 April, the system was restarted in auto mode. The problem appears to be the result of mice short-circuiting the wiring. A summary of the operation and maintenance activities performed during April is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Water was pumped out of the foundation after flooding;
- The sump pump was replaced;
- The blower malfunction was repaired; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
[www.tteci.com](http://www.tteci.com)





## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
April	17	48	552	13.5
Volume of groundwater treated for 2005				81.4
Volume of groundwater treated for the OU-1				2684.8

gpm - gallons per minute

mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of April 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) January
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4	4.4									0.5 U
Chloroethane		0.5	0.6	0.5	0.73									0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4	11									0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6	3.2									0.5 U
Acetone		1.0 U	2.3	1.0 U	1.0U									1.0 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U	0.5U									0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3	3.9									2.2
1,1-Dichloroethane	5	18	17	17	24									2.7
Cis-1,2-Dichloroethene*	5	50	46	46	54									8.1
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5U									0.5 U
1,1,1-Trichloroethane*	5	110	120	110	140									7.3
Trichloroethene*	5	43	40	40	47									4.0
Total Volatile Organics*	100	245.8	246.3	232.2	288.23									24.3

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled



**D. Next Month's Activities**

The following activities are planned for May 2005:

- Paint pump house, weather permitting;
- Repair chlorinator pipe;
- Repair actuator valve;
- Restore phone service (interrupted during flooding); and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8412 if you should have any questions.

Sincerely,



Wendy DeMaio  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)



## **ATTACHMENT A**



**Case Narrative:**

**Vestal 1-1. #05040039**

The Laboratory has met all data quality objectives, e.g., Target Reporting Limits, Accuracy and Precision, established for this project except were noted below..

**Comment(s):**

None

**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: J. B. [Signature] Date: 7-5-05







U.S. Environmental Protection Agency  
Region 2 Laboratory

**Data Report: Vestal Well 1-1 [04/05]**

**Project Number: 05040039**

Program: Y206E

Project Leader: L. Arabia

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [04/05]

Project Number: 05040039

\*Sorted By Sample ID

AG00872 Field/Station ID: INFLUENT

Date Received: 4/26/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	4.4		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	0.73		ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075854	1,1-DICHLOROETHANE	---		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	3.2		ug/L
000075850	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYLENE CHLORIDE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	3.9		ug/L
000075343	1,1-DICHLOROETHANE	---		ug/L
000156592	CIS-1,2-DICHLOROETHENE	54		ug/L
594-20-7	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074973	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056233	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
001071472	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
005721891	TRICHLOROETHENE	---		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000093875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108107	1,1,1,2-TETRACHLOROETHANE	---		ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,2-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127134	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000124381	DIBROMODIFLUOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---		ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

See Page 1 for an explanation of Remark Codes

Report Date: 6/27/2005 3:44PM





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [04/05]

Project Number: 05040039

\*Sorted By Sample ID

AG00872 Field/Station ID: INFLUENT  
Matrix: Aqueous

Date Received: 4/26/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
000630206	METHYLBENZENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100-2	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
0000988-3	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096189	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103650	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-46-0	2-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098882	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
133-97-8	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106460	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	ISOPROPYLBENZENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096182	1,3-DIBROMO-2,2-DICHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
801-63-9	HEXACHLOROCYCLOHEXENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087618	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L
	ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-4,4,7	0.67	NI	ug/L

AG00873 Field/Station ID: EFFLUENT  
Matrix: Aqueous

Date Received: 4/26/2005

Sample Description:







U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [04/05]

Project Number: 05040039

\*Sorted By Sample ID

**AG00873** Field/Station ID: EFFLUENT  
Matrix: Aqueous  
Sample Description:

Date Received: 4/26/2005

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074889	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075699	TRICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2,2-TETRAFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	0.50U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
00164043	METHYL TERMBUTYL ETHER	---	0.50U	ug/L
000075343	1,1-DICHLOROETHANE	2.7		ug/L
000156622	CIS-1,2-DICHLOROPROPENE	---	0.50U	ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	7.3		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000561586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
00010706	1,2-DICHLORODIFLUOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	4.0		ug/L
108-88-3	METHYL CYCLOPENTANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,2-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 6/27/2005 3:44PM







U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [04/05]

Project Number: 05040039

\*Sorted By Sample ID

AG00873 Field/Station ID: EFFLUENT  
Matrix: Aqueous

Date Received: 4/26/2005

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	—	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	—	0.50U	ug/L
000591786	2-HEXANONE	—	1.0U	ug/L
000108907	CHLOROBENZENE	—	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	—	0.50U	ug/L
100-41-2	ETHYLBENZENE	—	0.50U	ug/L
001330207	M/P-XYLENE	—	0.50U	ug/L
000095476	O-XYLENE	—	0.50U	ug/L
000100425	STYRENE	—	0.50U	ug/L
000071752	BROMOFORM	—	0.50U	ug/L
000098828	ISOPROPYLBENZENE	—	0.50U	ug/L
000108867	BROMOBENZENE	—	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	—	0.50U	ug/L
000079745	1,1,2,2-TETRACHLOROETHANE	—	0.50U	ug/L
000103651	N-PROPYLBENZENE	—	0.50U	ug/L
000095498	2,4-DICHLOROBENZENE	—	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	—	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	—	1.0U	ug/L
000098066	TERT-BUTYLBENZENE	—	0.50U	ug/L
000097636	1,2,4-TRIMETHYLBENZENE	—	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	—	0.50U	ug/L
000591786	2-HEXANONE	—	1.0U	ug/L
000106467	1,4-DICHLOROBENZENE	—	0.50U	ug/L
000095501	1,3-DICHLOROBENZENE	—	1.0U	ug/L
000099876	4-ISOPROPYLTOLUENE	—	0.50U	ug/L
000104518	NEHEXYLBENZENE	—	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	—	0.50U	ug/L
000120827	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	—	0.50U	ug/L
000091203	NAPHTHALENE	—	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	—	0.50U	ug/L
1330-20-7	TOTAL XYLENES	—	1.50U	ug/L

Project Approval:

Date:

7-5-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 6/27/2005 3:44PM





**TETRA TECH FW, INC.**

13 May 2005  
RAC II-2005-072

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
MARCH 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the March 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated continuously in manual mode for the entire month. A summary of the operation and maintenance activities performed during March is as follows:

- Routine inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Snow removal activities were performed;
- System adjustments were made to restore auto mode of operation (this was not successful); and
- The monthly influent and effluent samples were collected.



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Tel 973.630.8000 Fax 973.630.8025  
[www.ttfwi.com](http://www.ttfwi.com)

## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
March	31	45	517.5	22.4
Volume of groundwater treated for 2005				67.9
Volume of groundwater treated for the OU-1				2671.3

gpm - gallons per minute

mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month March 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) January
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9	3.4										0.5 U
Chloroethane		0.5	0.6	0.5										0.5 U
1,1-Dichloroethene*	5	13	9.3	8.4										0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9	2.6										0.5 U
Acetone		1.0 U	2.3	1.0 U										1.0 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U	0.5 U										0.5 U
Methyl Tert-Butyl Ether		4.7	4.3	4.3										1.8
1,1-Dichloroethane	5	18	17	17										2.5
Cis-1,2-Dichloroethene*	5	50	46	46										7.3
Chloroform	7	0.5 U	0.5 U	0.5 U										0.5 U
1,1,1-Trichloroethane*	5	110	120	110										7.2
Trichloroethene*	5	43	40	40										4.0
Total Volatile Organics*	100	245.8	246.3	232.2										22.8

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled





#### **D. Next Month's Activities**

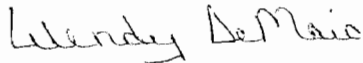
The following activities are planned for April 2005:

- Paint pump house, weather permitting;
- Repair chlorinator pipe;
- Replace sump pump in basement;
- Troubleshoot auto mode system; and
- Perform monthly performance monitoring sampling.

#### **E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8412 if you should have any questions.

Sincerely,



Wendy DeMaio  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)





## **ATTACHMENT A**



**Case Narrative:**

**Vestal 1-1. #05030011**

The Laboratory has met all data quality objectives, e.g., Target Reporting Limits, Accuracy and Precision, established for this project except were noted below.

**Comment(s):**

None

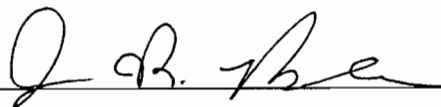
**Reporting Limit(s):**

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested.

**Method(s):**

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: \_\_\_\_\_



Date: 4-23-05





U.S. Environmental Protection Agency  
Region 2 Laboratory

**Data Report: Vestal Well 1-1 [03/05]**

**Project Number: 05030011**

Program: Y206E

Project Leader: L. Arabia

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [03/05]

Project Number: 05030011

\*Sorted By Sample ID

AG00432

Field/Station ID: INFLUENT

Date Received: 3/4/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	3.4		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	0.50		ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	8.4		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.6		ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	4.3		ug/L
000075343	1,1-DICHLOROETHANE	17		ug/L
000156592	CIS-1,2-DICHLOROETHENE	46		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	110		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	40		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 4/7/2005 3:34PM

Page 2 of 5







U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [03/05]

Project Number: 05030011

\*Sorted By Sample ID

**AG00432** Field/Station ID: INFLUENT  
Matrix: Aqueous  
Sample Description:

Date Received: 3/4/2005

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L
	ETHANE,1,2-DICHLORO-1,1,2-TRIFLR,RT=4.56	0.55	NJ	ug/L

**AG00433** Field/Station ID: EFFLUENT  
Matrix: Aqueous  
Sample Description:

Date Received: 3/4/2005





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [03/05]

Project Number: 05030011

\*Sorted By Sample ID

AG00433

Field/Station ID: EFFLUENT

Date Received: 3/4/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	1.8		ug/L
000075343	1,1-DICHLOROETHANE	2.5		ug/L
000156592	CIS-1,2-DICHLOROETHENE	7.3		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	7.2		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	4.0		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 4/7/2005 3:34PM

Page 4 of 5





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: Vestal Well 1-1 [03/05]

Project Number: 05030011

\*Sorted By Sample ID

AG00433

Field/Station ID: EFFLUENT

Date Received: 3/4/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L

Project Approval:

Date: 4-23-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 4/7/2005 3:34PM







TETRA TECH FW, INC.

13 May 2005  
RAC II-2005-071

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
FEBRUARY 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the February 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated continuously until 19 February when the system shut down due to a clearwater pump malfunction. The system could not be restarted in auto mode, so the system operated in manual mode for the remainder of the month. A summary of the operation and maintenance activities performed during February is as follows:

- Routine cleaning and inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were cleaned or replaced;
- Snow removal activities were performed;
- System adjustments were made to restore auto mode of operation (this was not successful); and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
[www.ttfwi.com](http://www.ttfwi.com)





**B. Operational Data**

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
February	28	46	529	21.3
Volume of groundwater treated for 2005				45.5
Volume of groundwater treated for the OU-1				2648.9

gpm - gallons per minute

mg - millions of gallons

**C. Comparison of Influent and Effluent Concentrations with Discharge Criteria**

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of February 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) January
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5	3.9											0.5 U
Chloroethane		0.5	0.6											0.5 U
1,1-Dichloroethene*	5	13	9.3											0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1	2.9											0.5 U
Acetone		1.0 U	2.3											1.0 U
Trans 1,2-Dichloroethene*	5	0.5 U	0.5 U											0.5 U
Methyl Tert-Butyl Ether		4.7	4.3											2.7
1,1-Dichloroethane	5	18	17											2.5
Cis-1,2-Dichloroethene*	5	50	46											7.3
Chloroform	7	0.5 U	0.5 U											0.5 U
1,1,1-Trichloroethane*	5	110	120											6.9
Trichloroethene*	5	43	40											3.8
Total Volatile Organics*	100	245.8	246.3											23.2

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled



**D. Next Month's Activities**

The following activities are planned for March 2005:

- Paint pump house, weather permitting;
- Repair chlorinator pipe;
- Troubleshoot auto mode system; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8412 if you should have any questions.

Sincerely,



Wendy DeMaio  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)



**ATTACHMENT A**



**Case Narrative:**

**Vestal 1-1. #05020030**

The Laboratory has met all data quality objectives, e.g., Target Reporting Limits, Accuracy and Precision, established for this project except were noted below.

Comment(s):

None

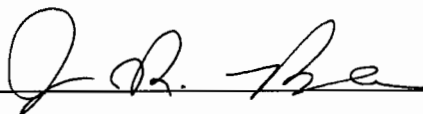
Reporting Limit(s):

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested.

Method(s):

Low-Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: \_\_\_\_\_



Date: \_\_\_\_\_

4-6-05



U.S. Environmental Protection Agency  
Region 2 Laboratory

**Data Report: VESTAL WELL**

**Project Number: 05020030**

Program: Y206E

Project Leader: L. Arabia

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED









U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05020030

\*Sorted By Sample ID

AG00319

Field/Station ID: INFLUENT

Date Received: 2/22/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	3.9		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	0.60		ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	9.3		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.9		ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	2.3		ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	4.3		ug/L
000075343	1,1-DICHLOROETHANE	17		ug/L
000156592	CIS-1,2-DICHLOROETHENE	46		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	120		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	40		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000134481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 3/28/2005 9:36AM





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05020030

\*Sorted By Sample ID

AG00319

Field/Station ID: INFLUENT

Date Received: 2/22/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L
	ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-4,6,6	0.58	NI	ug/L

AG00320

Field/Station ID: EFFLUENT

Date Received: 2/22/2005

Matrix: Aqueous

Sample Description:





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05020030

\*Sorted By Sample ID

AG00320

Field/Station ID: EFFLUENT

Date Received: 2/22/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	2.7		ug/L
000075343	1,1-DICHLOROETHANE	2.5		ug/L
000156592	CIS-1,2-DICHLOROETHENE	7.3		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	6.9		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	3.8		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05020030

\*Sorted By Sample ID

AG00320

Field/Station ID: EFFLUENT

Date Received: 2/22/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L

Project Approval:

Date: 4-6-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 3/28/2005 9:36AM









**TETRA TECH FW, INC.**

13 May 2005  
RAC II-2005-069

Ms. Sharon Trocher  
Work Assignment Manager  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

**SUBJECT: USEPA RAC II CONTRACT NUMBER 68-W-98-214  
WORK ASSIGNMENT NUMBER 109-RALR-0238  
VESTAL WATER SUPPLY WELL, OPERABLE UNIT 1  
JANUARY 2005 PERFORMANCE MONITORING REPORT**

Dear Ms. Trocher:

I am pleased to provide the January 2005 Monthly Performance Monitoring Report for the Vestal Water Supply Well treatment facility.

#### **A. Monthly Operations**

The treatment system at the Vestal Water Supply Well operated continuously for the entire month. A summary of the operation and maintenance activities performed during January is as follows:

- Routine cleaning and inspections of the facility were performed;
- Pumps were checked and lubricated;
- Air filters were replaced;
- Snow removal activities were performed;
- The electric motors in two ceiling-mounted heating units were repaired; and
- The monthly influent and effluent samples were collected.



1000 The American Road, Morris Plains, NJ 07950  
Tel 973.630.8000 Fax 973.630.8025  
[www.ttfwi.com](http://www.ttfwi.com)



## B. Operational Data

The following table presents operational data for the year 2005, arranged by month:

Month	Operating Days	Average flow Meter %	Average flow rate (gpm)	Amount of groundwater treated (mg)
January	31	47	541	24.2
Volume of groundwater treated for 2005				24.2
Volume of groundwater treated for the OU-1				2627.6

gpm - gallons per minute .

mg - millions of gallons

## C. Comparison of Influent and Effluent Concentrations with Discharge Criteria

The treatment plant influent and effluent analytical data received from the EPA-DESA laboratory for the month of January 2005 are included in Attachment 1. A summary of the data for the compounds detected in the plant influent and effluent is as follows:

Compound	Discharge Criteria (ug/L)	Influent Concentration (ug/L)												Effluent Concentration (ug/L) January
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vinyl Chloride	2	3.5												0.5 U
Chloroethane		0.5												0.5 U
1,1-Dichloroethene*	5	13												0.5 U
1,1,2 Trichloro-1,2,2-Trifluoroethane		3.1												0.5 U
Trans 1,2-Dichloroethene*	5	0.5 U												0.5 U
Methyl Tert-Butyl Ether		4.7												2.7
1,1-Dichloroethane	5	18												2.1
Cis-1,2-Dichloroethene*	5	50												7.0
Chloroform	7	0.5 U												0.5 U
1,1,1-Trichloroethane*	5	110												5.1
Trichloroethene*	5	43												3.3
Total Volatile Organics*	100	245.8												20.2

Note:

ug/L = micrograms per liter

\* = Site Contaminant of Concern

U = Below Reporting Limit

NS = Not Sampled

**D. Next Month's Activities**

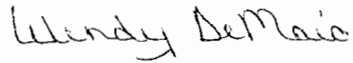
The following activities are planned for February 2005:

- Paint pump house, weather permitting;
- Repair chlorinator pipe; and
- Perform monthly performance monitoring sampling.

**E. Summary and Recommendations**

Based on the treatment plant influent and effluent data summarized above, it can be concluded the treated water continues to meet the discharge limits. Please feel free to contact me at (973) 630-8412 if you should have any questions.

Sincerely,



Wendy DeMaio  
Project Manager

Attachment

cc: M. Dunham (NYSDEC)







## **ATTACHMENT A**



**Case Narrative:**

**Vestal 1-1. #05010027**

The Laboratory has met all data quality objectives, e.g., Target Reporting Limits, Accuracy and Precision, established for this project except were noted below.

Comment(s):

None

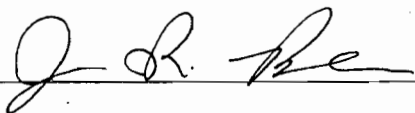
Reporting Limit(s):

The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs) for each analyte requested.

Method(s):

Low Level Volatile Organic Analysis, ESAT-SOP-132 (GC/MS Method).

Approval: \_\_\_\_\_



Date: 3-11-05





U.S. Environmental Protection Agency  
Region 2 Laboratory

**Data Report: VESTAL WELL**

**Project Number: 05010027**

Program: Y206E

Project Leader: L. Arabia

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED







U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05010027

\*Sorted By Sample ID

AG00181

Field/Station ID: INFLUENT

Date Received: 1/28/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	3.5		ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	0.50		ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	13		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	3.1		ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	4.7		ug/L
000075343	1,1-DICHLOROETHANE	18		ug/L
000156592	CIS-1,2-DICHLOROETHENE	50		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	110		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	43		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 3/3/2005 9:48AM

Page 2 of 5







U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05010027

\*Sorted By Sample ID

AG00181

Field/Station ID: INFLUENT

Date Received: 1/28/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L
	ETHANE, 1,2-DICHLOR-1,1,2-TRIFLUOR, RT=4.48	0.54	NJ	ug/L

AG00182

Field/Station ID: EFFLUENT

Date Received: 1/28/2005

Matrix: Aqueous

Sample Description:





U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05010027

\*Sorted By Sample ID

AG00182

Field/Station ID: EFFLUENT

Date Received: 1/28/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
75-43-4	DICHLORODIFLUOROMETHANE	---	0.50U	ug/L
000074873	CHLOROMETHANE	---	0.50U	ug/L
000075014	VINYL CHLORIDE	---	0.50U	ug/L
000074839	BROMOMETHANE	---	0.50U	ug/L
000075003	CHLOROETHANE	---	0.50U	ug/L
000075694	TRICHLOROFLUOROMETHANE	---	0.50U	ug/L
000075354	1,1-DICHLOROETHENE	---	0.50U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	0.50U	ug/L
000075150	CARBON DISULFIDE	---	0.50U	ug/L
000067641	ACETONE	---	1.0U	ug/L
79-20-9	METHYL ACETATE	---	0.50U	ug/L
000075092	METHYLENE CHLORIDE	---	0.50U	ug/L
000156605	TRANS-1,2-DICHLOROETHENE	---	0.50U	ug/L
001634044	METHYL TERT-BUTYL ETHER	2.7		ug/L
000075343	1,1-DICHLOROETHANE	2.1		ug/L
000156592	CIS-1,2-DICHLOROETHENE	7.0		ug/L
594-20-7	2,2-DICHLOROPROPANE	---	0.50U	ug/L
000078933	2-BUTANONE	---	1.0U	ug/L
000074975	BROMOCHLOROMETHANE	---	0.50U	ug/L
000067663	CHLOROFORM	---	0.50U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	5.1		ug/L
110-82-7	CYCLOHEXANE	---	0.50U	ug/L
000056235	CARBON TETRACHLORIDE	---	0.50U	ug/L
000563586	1,1-DICHLOROPROPENE	---	0.50U	ug/L
000071432	BENZENE	---	0.50U	ug/L
000107062	1,2-DICHLOROETHANE	---	0.50U	ug/L
025323891	TRICHLOROETHENE	3.3		ug/L
108-87-2	METHYLCYCLOHEXANE	---	0.50U	ug/L
000078875	1,2-DICHLOROPROPANE	---	0.50U	ug/L
000074953	DIBROMOMETHANE	---	0.50U	ug/L
000075274	BROMODICHLOROMETHANE	---	0.50U	ug/L
010061015	CIS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000108101	4-METHYL-2-PENTANONE	---	1.0U	ug/L
000108883	TOLUENE	---	0.50U	ug/L
010061026	TRANS-1,3-DICHLOROPROPENE	---	0.50U	ug/L
000079005	1,1,2-TRICHLOROETHANE	---	0.50U	ug/L
000127184	TETRACHLOROETHENE	---	0.50U	ug/L
000142289	1,3-DICHLOROPROPANE	---	0.50U	ug/L







U.S. EPA Region 2 Laboratory  
Data Report

Survey Name: VESTAL WELL

Project Number: 05010027

\*Sorted By Sample ID

AG00182

Field/Station ID: EFFLUENT

Date Received: 1/28/2005

Matrix: Aqueous

Sample Description:

Analysis Type: VOA GCMS LOW LEVEL DRINKING WATER

CAS Number	Analyte Name	Result	Remark Codes	Units
000124481	DIBROMOCHLOROMETHANE	---	0.50U	ug/L
000106934	1,2-DIBROMOETHANE	---	0.50U	ug/L
000591786	2-HEXANONE	---	1.0U	ug/L
000108907	CHLOROBENZENE	---	0.50U	ug/L
000630206	1,1,1,2-TETRACHLOROETHANE	---	0.50U	ug/L
100-41-4	ETHYLBENZENE	---	0.50U	ug/L
001330207	M/P-XYLENE	---	0.50U	ug/L
000095476	O-XYLENE	---	0.50U	ug/L
000100425	STYRENE	---	0.50U	ug/L
000075252	BROMOFORM	---	0.50U	ug/L
000098828	ISOPROPYLBENZENE	---	0.50U	ug/L
000108861	BROMOBENZENE	---	0.50U	ug/L
000096184	1,2,3-TRICHLOROPROPANE	---	0.50U	ug/L
000079345	1,1,2,2-TETRACHLOROETHANE	---	0.50U	ug/L
000103651	N-PROPYLBENZENE	---	0.50U	ug/L
000095498	2-CHLOROTOLUENE	---	0.50U	ug/L
106-43-4	4-CHLOROTOLUENE	---	0.50U	ug/L
000108678	1,3,5-TRIMETHYLBENZENE	---	0.50U	ug/L
000098066	TERT-BUTYLBENZENE	---	0.50U	ug/L
000095636	1,2,4-TRIMETHYLBENZENE	---	0.50U	ug/L
135-98-8	SEC-BUTYLBENZENE	---	0.50U	ug/L
000541731	1,3-DICHLOROBENZENE	---	0.50U	ug/L
000106467	1,4-DICHLOROBENZENE	---	0.50U	ug/L
000095501	1,2-DICHLOROBENZENE	---	0.50U	ug/L
000099876	4-ISOPROPYLTOLUENE	---	0.50U	ug/L
000104518	N-BUTYLBENZENE	---	0.50U	ug/L
000096128	1,2-DIBROMO-3-CHLOROPROPANE	---	0.50U	ug/L
000120821	1,2,4-TRICHLOROBENZENE	---	0.50U	ug/L
87-68-3	HEXACHLOROBUTADIENE	---	0.50U	ug/L
000091203	NAPHTHALENE	---	0.50U	ug/L
000087616	1,2,3-TRICHLOROBENZENE	---	0.50U	ug/L
1330-20-7	TOTAL XYLENES	---	0.50U	ug/L

Project Approval:

Date:

3-11-05

Refer to Page 1 for an explanation of Remark Codes

Report Date: 3/3/2005 9:48AM