July 5, 2018

Karl Knutson
Wisconsin Department of Natural Resources
South Central Region
3911 Fish Hatchery Rd.
Fitchburg, WI 53711

Subject: Discharge Monitoring Report - Groundwater Extraction and Treatment System, Madison-Kipp Corporation, 201 Waubesa Street, Madison, Wisconsin

Dear Mr. Knutson,

The Groundwater Extraction and Treatment System (GETS) ran for the month of June with the exception of maintenance activities. This letter summarizes the activities completed in June 2018 as part of the GETS at the Madison-Kipp Corporation (MKC) site under the Wisconsin Pollution Discharge Elimination System (WPDES) Permit WI-0046566-6.

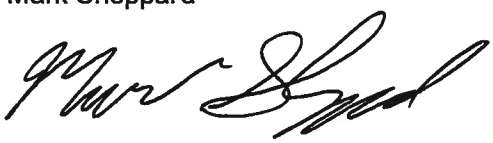
The GETS flow rate was operated at 40 gallons per minute (gpm) between June 1 and June 20, 2018 due to transfer pump issues. The GETS was shut down between June 21 and June 24 to allow for new transfer pumps to be installed. The GETS was restarted on June 25, 2018 and operated at a flow rate of 45 gpm from June 25 to June 30.

Compliance samples were collected for oil and grease, biological oxygen demand, total suspended solids, chloride, select polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds, and visual monitoring for sodium permanganate on June 6, 2018. Based on the June 6, 2018 results, a second sample was collected on June 15, 2018 for the PAH group of 10 parameters and a monthly average was calculated per Section 3.5 of the State of Wisconsin Department of Natural Resources General Permit to Discharge Under the Wisconsin Pollutant Discharge Limitation System. The June 6, 2018 compliance sample results for the PAHs Group of 10 was reported at 0.20 µg/L and the June 15, 2018 compliance sample results were below the limit of detection. The monthly average for this parameter was 0.10 µg/L, which is equal to the WPDES discharge limit, indicating compliance. All other parameters were below the WPDES discharge limits. The Discharge Monitoring Report for June 2018 is included as Attachment A and laboratory reports are included as Attachment B.

In addition, during transfer pump replacement, the air stripper was cleaned. An additional sample was collected on June 25, 2018 for total suspended solids following the cleaning process and results were below the WPDES discharge limit.

If you have any questions or need additional information, please contact me at msheppard@madison-kipp.com or (608) 242-5207.

Mark Sheppard



Madison-Kipp Corporation

Attachment A Discharge Monitoring Report Form
Attachment B Laboratory Reports

Copies:
Andrew Stehn - TRC (electronic)
Mike Schmoller - WDNR (electronic)
Wendy Weihemuller - WDNR (electronic)
George Parrino - Madison Department of Health (electronic)

Attachment A
Discharge Monitoring Report Form

**DISCHARGE MONITORING REPORT FORM** **Year:____2018_____**
**Contaminated Groundwater from Remedial Action Operations - Surface Water Discharge**
**Permit No. WI-0046566-6** Rev. December16, 2013

**Facility Name and Location**
Madison Kipp Corporation
201 Waubesa St
Madison, WI 53704
Consultant Managing Project: TRC
FIN#:

| Outfall # and Description | | Flow (gal/day) | Oil & Grease (mg/L) | $BOD_5$ (mg/L) | Total BETX (µg/L) | PAHs group of 10 (µg/L) | Benzo(a) pyrene (µg/L) | Naphthalene (µg/L) | Sodium Permanganate (mg/L) | Benzene (µg/L) | TSS (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Effluent | Month: June 6, 2018 | 57,600 - 64,800 | 2.5 J B | <2.0 | <0.40 | 0.20 | <0.022 | 0.067 J | Absent | <0.15 | 3.5 J |
| | June 15, 2018 | 57,600 – 64,800 | -- | -- | -- | <0.046 | <0.023 | <0.046 | Absent | -- | -- |
| | June 25, 2018 | 57,600 – 64,800 | -- | -- | -- | -- | -- | -- | Absent | -- | 2.5 J |
| | | | | | | | | | | | |
| See Footnotes | | (4) (8) | (5) (6) | | (1) | (2)(9) | | (6) | (3) | | (6) |
| Effluent Limits (refer to sec. 4 of the permit) | | -- | 10 mg/l | 20 mg/L | 750 µg/L | 0.1 µg/l | 0.1 µg/l | 70 µg/l | -- | 50 µg/l | 40 mg/L |
| Sample Frequency: Pre-treatment | | Monthly | Quarterly | Quarterly | Monthly | Quarterly | Quarterly | Quarterly | Monthly | Monthly | Quarterly |
| Sample Frequency: Post-treatment | | Monthly | Quarterly | Quarterly | Monthly | Quarterly | Quarterly | Quarterly | Monthly | Monthly | Quarterly |
| Sample Type | | Estimate | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab |
| Impaired or TMDL surface waters | | | Does this facility discharge a pollutant of concern to an impaired surface water or to a surface water with a TMDL allocation? ○ No ⊘ Yes | | | | | | | | |

| Outfall # and Description | | VOCs (µg/L) | Vinyl Chloride (µg/L) | trans-1,2-Dichloroethene (µg/L) | 1,1-Dichloroethene (µg/L) | Tetrachloroethene (µg/L) | Chloride (mg/L) | cis-1,2-Dichloroethene (µg/L) | Trichloroethene (µg/L) | |
|---|---|---|---|---|---|---|---|---|---|---|
| Effluent | Month: June 6, 2018 | 30.2 | <0.20 | <0.35 | <0.39 | 15 | 120 | 11 | 4.2 | |
| | June 15, 2018 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | June 25, 2018 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | | | | | | | | | |
| See Footnotes | | (4) | | (4) | | | | (4) | | |
| Effluent Limits (refer to sec. 4 of the permit) | | -- | 10 µg/L | -- | 50 µg/L | 50 µg/L | 395 mg/L | -- | 50 µg/L | |
| Sample Frequency: Pre-treatment | | Monthly | Monthly | Monthly | Monthly | Monthly | Quarterly | Monthly | Monthly | |
| Sample Frequency: Post-treatment | | Monthly | Monthly | Monthly | Monthly | Monthly | Quarterly | Monthly | Monthly | |
| Sample Type | | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | |

FOOTNOTES:

(1) Total BETX is the sum of the benzene, ethylbenzene, toluene and xylene concentrations. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the BTEX compounds was noted.
(2) PAH group of 10 (Polynuclear Aromatic Hydrocarbons) include the sum of the following individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the PAH group compounds was noted.
(3) Madison-Kipp/TRC will conduct visual monitoring for this compound.
(4) No effluent limit is established, refer to section 4 of the permit.
(5) B = Compound was found in the blank and in the sample.
(6) J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.
(7) M = Matrix Spike and/or Matrix Spike Duplicate Recovery is outside acceptance limits.
(8) GETS operated at 40 gpm between June 1 and June 20, 2018, and was adjusted to 45 GPM on June 25, 2018 following pump repairs that were completed June 21 to 24, 2018.
(9) Two samples were collected during the month of June for the PAH group of 10 and a monthly average was calculated per Section 3.5 of the State of Wisconsin Department of Natural Resources General Permit to Discharge Under the Wisconsin Pollutant Discharge Limitation System. The monthly average was equal to 0.1 µg/L.

DIRECTIONS:

- For "Outfall # and Description" enter the number of the outfall you are reporting (001 or 002, etc.) and the source of wastewater, (petroleum contact, tank bottom water, scrap and waste storage area oily water, or secondary containment). Copy and use a new form for each outfall.
- Monitoring for a given parameter depends on if the discharge is to surface water or groundwater, and petroleum category.
- The value entered must be the highest value of all samples analyzed for that day.
- For each quarter, indicate the month monitoring occurred next to "Month"
- Include as separate attachments to this form the annual reports for (a)waste oil and solids removed, and (b) tank bottom water disposal.

RETURN REPORT BY: **July 15, of the year following completion of monitoring**

RETURN TO: **ATTN: Nicholas Bertolas**
**Department of Natural Resources**
**3911 Fish Hatchery Rd.**
**Fitchburg, WI 53711**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment, (40 CFR 122.5). I also certify that the values being submitted are the actual values found in the samples; no values have been modified or changed in any manner. Wherever I believe a value being reported is inaccurate, I have added an explanation indicating the reasons why the value is inaccurate.

Andrew M. Stelzer — 7-5-2018
Signature of Person Completing Form — Date

7-5-2018
Signature of Principal Exec. or Authorized Agent — Date

Attachment B
Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-146536-1
Client Project/Site: MadisonKipp - GETS 292257

For:
TRC Environmental Corporation.
708 Heartland Trail
Suite 3000
Madison, Wisconsin 53717

Attn: Andrew Stehn

Sandie Fredrick

*Authorized for release by:*
*6/14/2018 5:38:03 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

## Job ID: 500-146536-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-146536-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/7/2018 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1º C.

**GC/MS VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**
Method(s) 625 SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-520787 and analytical batch 490-520954.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
Method(s) 300.0: The IC8 continuing calibration verification (CCV) associated with batch 500-436508 recovered above the upper control limit for Chloride. The samples associated with this CCV were batch QC which met acceptance criteria for the affected analyte; therefore, the data have been reported. The following samples are impacted: (LCS 500-436508/34) and (MB 500-436508/23).

Method(s) 300.0: The IC8 continuing calibration blank (CCB) for analytical batch 500-436508 contained Chloride above the reporting limit (RL). The samples associated with this CCB were batch QC which met acceptance criteria for the target compound; therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Organic Prep**
Method(s) 3510C, 625: The following samples formed emulsions during the extraction procedure: Influent (500-146536-1) and Effluent (500-146536-2). The emulsions were broken up using centrifugation

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-146536-1

## Client Sample ID: Influent — Lab Sample ID: 500-146536-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 120 | | 5.0 | 2.0 | ug/L | 5 | | 624 | Total/NA |
| Trichloroethene | 170 | | 2.5 | 0.82 | ug/L | 5 | | 624 | Total/NA |
| Tetrachloroethene - DL | 1700 | | 50 | 19 | ug/L | 50 | | 624 | Total/NA |
| Naphthalene | 0.045 | J | 0.086 | 0.043 | ug/L | 1 | | 625 SIM | Total/NA |
| Phenanthrene | 0.12 | | 0.086 | 0.043 | ug/L | 1 | | 625 SIM | Total/NA |
| Chloride | 130 | | 5.0 | 4.3 | mg/L | 25 | | 300.0 | Total/NA |
| Total Suspended Solids | 2.0 | J | 5.0 | 1.9 | mg/L | 1 | | SM 2540D | Total/NA |

## Client Sample ID: Effluent — Lab Sample ID: 500-146536-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 11 | | 1.0 | 0.41 | ug/L | 1 | | 624 | Total/NA |
| Tetrachloroethene | 15 | | 1.0 | 0.37 | ug/L | 1 | | 624 | Total/NA |
| Trichloroethene | 4.2 | | 0.50 | 0.16 | ug/L | 1 | | 624 | Total/NA |
| Naphthalene | 0.067 | J | 0.086 | 0.043 | ug/L | 1 | | 625 SIM | Total/NA |
| Phenanthrene | 0.20 | | 0.086 | 0.043 | ug/L | 1 | | 625 SIM | Total/NA |
| HEM (Oil & Grease) | 2.5 | J B | 4.8 | 1.3 | mg/L | 1 | | 1664B | Total/NA |
| Chloride | 120 | | 5.0 | 4.3 | mg/L | 25 | | 300.0 | Total/NA |
| Total Suspended Solids | 3.5 | J | 5.0 | 1.9 | mg/L | 1 | | SM 2540D | Total/NA |

## Client Sample ID: Trip Blank — Lab Sample ID: 500-146536-3

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-146536-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 624 | Volatile Organic Compounds (GC/MS) | 40CFR136A | TAL CHI |
| 625 SIM | Semivolatile Organic Compounds GC/MS (SIM) | 40CFR136A | TAL NSH |
| 1664B | HEM and SGT-HEM | 1664B | TAL CHI |
| 300.0 | Anions, Ion Chromatography | MCAWW | TAL CHI |
| SM 2540D | Solids, Total Suspended (TSS) | SM | TAL CHI |
| SM 5210B | BOD, 5-Day | SM | TAL CHI |
| 1664B | HEM and SGT-HEM (SPE) | 1664B | TAL CHI |
| 625 | Liquid-Liquid Extraction | 40CFR136A | TAL NSH |

**Protocol References:**

1664B = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# Sample Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-146536-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-146536-1 | Influent | Water | 06/06/18 11:35 | 06/07/18 09:10 |
| 500-146536-2 | Effluent | Water | 06/06/18 11:50 | 06/07/18 09:10 |
| 500-146536-3 | Trip Blank | Water | 06/06/18 00:00 | 06/07/18 09:10 |

## Client Sample ID: Influent

**Date Collected: 06/06/18 11:35**
**Date Received: 06/07/18 09:10**

## Lab Sample ID: 500-146536-1

**Matrix: Water**

### Method: 624 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.73 | | 2.5 | 0.73 | ug/L | | | 06/14/18 04:06 | 5 |
| Bromoform | <2.2 | | 5.0 | 2.2 | ug/L | | | 06/14/18 04:06 | 5 |
| Carbon tetrachloride | <1.9 | | 5.0 | 1.9 | ug/L | | | 06/14/18 04:06 | 5 |
| Chloroform | <1.9 | | 10 | 1.9 | ug/L | | | 06/14/18 04:06 | 5 |
| **cis-1,2-Dichloroethene** | **120** | | 5.0 | 2.0 | ug/L | | | 06/14/18 04:06 | 5 |
| Dichlorobromomethane | <1.9 | | 5.0 | 1.9 | ug/L | | | 06/14/18 04:06 | 5 |
| 1,2-Dichloroethane | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/14/18 04:06 | 5 |
| 1,1-Dichloroethene | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/14/18 04:06 | 5 |
| Ethylbenzene | <0.92 | | 2.5 | 0.92 | ug/L | | | 06/14/18 04:06 | 5 |
| Methyl bromide | <3.2 | | 10 | 3.2 | ug/L | | | 06/14/18 04:06 | 5 |
| Methyl chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 06/14/18 04:06 | 5 |
| Methyl tert-butyl ether | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/14/18 04:06 | 5 |
| 1,1,2,2-Tetrachloroethane | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/14/18 04:06 | 5 |
| Toluene | <0.76 | | 2.5 | 0.76 | ug/L | | | 06/14/18 04:06 | 5 |
| trans-1,2-Dichloroethene | <1.7 | | 5.0 | 1.7 | ug/L | | | 06/14/18 04:06 | 5 |
| 1,1,1-Trichloroethane | <1.9 | | 5.0 | 1.9 | ug/L | | | 06/14/18 04:06 | 5 |
| 1,1,2-Trichloroethane | <1.8 | | 5.0 | 1.8 | ug/L | | | 06/14/18 04:06 | 5 |
| **Trichloroethene** | **170** | | 2.5 | 0.82 | ug/L | | | 06/14/18 04:06 | 5 |
| Vinyl chloride | <1.0 | | 5.0 | 1.0 | ug/L | | | 06/14/18 04:06 | 5 |
| Xylenes, Total | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/14/18 04:06 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *71 - 120* | | *06/14/18 04:06* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *88* | | *71 - 127* | | *06/14/18 04:06* | *5* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* | | *06/14/18 04:06* | *5* |

### Method: 624 - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Tetrachloroethene** | **1700** | | 50 | 19 | ug/L | | | 06/14/18 04:31 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *71 - 120* | | *06/14/18 04:31* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *71 - 127* | | *06/14/18 04:31* | *50* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 120* | | *06/14/18 04:31* | *50* |

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Benzo[a]pyrene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Benzo[b]fluoranthene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Benzo[g,h,i]perylene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Benzo[k]fluoranthene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Chrysene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Dibenz(a,h)anthracene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Fluoranthene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| **Naphthalene** | **0.045** | **J** | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| **Phenanthrene** | **0.12** | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |
| Pyrene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 18:44 | 1 |

## Client Sample ID: Influent

**Lab Sample ID: 500-146536-1**

**Date Collected: 06/06/18 11:35**

**Matrix: Water**

**Date Received: 06/07/18 09:10**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *63* | | *27 - 120* | *06/10/18 17:28* | *06/11/18 18:44* | *1* |
| *Terphenyl-d14* | *64* | | *13 - 120* | *06/10/18 17:28* | *06/11/18 18:44* | *1* |
| *2-Fluorobiphenyl (Surr)* | *63* | | *10 - 120* | *06/10/18 17:28* | *06/11/18 18:44* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HEM (Oil & Grease) | <1.3 | | 4.9 | 1.3 | mg/L | | 06/11/18 18:22 | 06/11/18 20:10 | 1 |
| **Chloride** | **130** | | 5.0 | 4.3 | mg/L | | | 06/12/18 05:31 | 25 |
| **Total Suspended Solids** | **2.0** | **J** | 5.0 | 1.9 | mg/L | | | 06/13/18 13:03 | 1 |
| Biochemical Oxygen Demand | <2.0 | | 2.0 | 2.0 | mg/L | | | 06/07/18 14:55 | 1 |

## Client Sample ID: Effluent

**Lab Sample ID: 500-146536-2**

**Date Collected: 06/06/18 11:50**

**Matrix: Water**

**Date Received: 06/07/18 09:10**

### Method: 624 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/14/18 04:56 | 1 |
| Bromoform | <0.45 | | 1.0 | 0.45 | ug/L | | | 06/14/18 04:56 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/14/18 04:56 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 06/14/18 04:56 | 1 |
| **cis-1,2-Dichloroethene** | **11** | | 1.0 | 0.41 | ug/L | | | 06/14/18 04:56 | 1 |
| Dichlorobromomethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/14/18 04:56 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/14/18 04:56 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/14/18 04:56 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 06/14/18 04:56 | 1 |
| Methyl bromide | <0.65 | | 2.0 | 0.65 | ug/L | | | 06/14/18 04:56 | 1 |
| Methyl chloride | <0.32 | | 1.0 | 0.32 | ug/L | | | 06/14/18 04:56 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/14/18 04:56 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/14/18 04:56 | 1 |
| **Tetrachloroethene** | **15** | | 1.0 | 0.37 | ug/L | | | 06/14/18 04:56 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/14/18 04:56 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/14/18 04:56 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/14/18 04:56 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/14/18 04:56 | 1 |
| **Trichloroethene** | **4.2** | | 0.50 | 0.16 | ug/L | | | 06/14/18 04:56 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 06/14/18 04:56 | 1 |
| Xylenes, Total | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/14/18 04:56 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *71 - 120* | | *06/14/18 04:56* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *71 - 127* | | *06/14/18 04:56* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 120* | | *06/14/18 04:56* | *1* |

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Benzo[a]pyrene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Benzo[b]fluoranthene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Benzo[g,h,i]perylene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Benzo[k]fluoranthene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |

## Client Sample ID: Effluent

**Lab Sample ID: 500-146536-2**

**Date Collected: 06/06/18 11:50**

**Matrix: Water**

**Date Received: 06/07/18 09:10**

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chrysene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Dibenz(a,h)anthracene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Fluoranthene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.022 | | 0.043 | 0.022 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| **Naphthalene** | **0.067** | **J** | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| **Phenanthrene** | **0.20** | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |
| Pyrene | <0.043 | | 0.086 | 0.043 | ug/L | | 06/10/18 17:28 | 06/11/18 19:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *68* | | *27 - 120* | *06/10/18 17:28* | *06/11/18 19:05* | *1* |
| *Terphenyl-d14* | *75* | | *13 - 120* | *06/10/18 17:28* | *06/11/18 19:05* | *1* |
| *2-Fluorobiphenyl (Surr)* | *70* | | *10 - 120* | *06/10/18 17:28* | *06/11/18 19:05* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **HEM (Oil & Grease)** | **2.5** | **J B** | 4.8 | 1.3 | mg/L | | 06/11/18 18:34 | 06/11/18 20:10 | 1 |
| **Chloride** | **120** | | 5.0 | 4.3 | mg/L | | | 06/12/18 05:44 | 25 |
| **Total Suspended Solids** | **3.5** | **J** | 5.0 | 1.9 | mg/L | | | 06/13/18 13:04 | 1 |
| Biochemical Oxygen Demand | <2.0 | | 2.0 | 2.0 | mg/L | | | 06/07/18 15:10 | 1 |

## Client Sample ID: Trip Blank

**Lab Sample ID: 500-146536-3**

**Date Collected: 06/06/18 00:00**

**Matrix: Water**

**Date Received: 06/07/18 09:10**

### Method: 624 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/13/18 22:42 | 1 |
| Bromoform | <0.45 | | 1.0 | 0.45 | ug/L | | | 06/13/18 22:42 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/13/18 22:42 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 06/13/18 22:42 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/13/18 22:42 | 1 |
| Dichlorobromomethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/13/18 22:42 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/13/18 22:42 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/13/18 22:42 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 06/13/18 22:42 | 1 |
| Methyl bromide | <0.65 | | 2.0 | 0.65 | ug/L | | | 06/13/18 22:42 | 1 |
| Methyl chloride | <0.32 | | 1.0 | 0.32 | ug/L | | | 06/13/18 22:42 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/13/18 22:42 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/13/18 22:42 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/13/18 22:42 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/13/18 22:42 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/13/18 22:42 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/13/18 22:42 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/13/18 22:42 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 06/13/18 22:42 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 06/13/18 22:42 | 1 |
| Xylenes, Total | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/13/18 22:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *107* | | *71 - 120* | | *06/13/18 22:42* | *1* |

**Client Sample ID: Trip Blank**
**Date Collected: 06/06/18 00:00**
**Date Received: 06/07/18 09:10**

**Lab Sample ID: 500-146536-3**
**Matrix: Water**

### Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 97 | | 71 - 127 | | 06/13/18 22:42 | 1 |
| Toluene-d8 (Surr) | 93 | | 75 - 120 | | 06/13/18 22:42 | 1 |

## Qualifiers

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| B | Compound was found in the blank and sample. |
| F5 | Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## GC/MS VOA

### Analysis Batch: 436668

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | 624 | |
| 500-146536-1 - DL | Influent | Total/NA | Water | 624 | |
| 500-146536-2 | Effluent | Total/NA | Water | 624 | |
| 500-146536-3 | Trip Blank | Total/NA | Water | 624 | |
| MB 500-436668/31 | Method Blank | Total/NA | Water | 624 | |
| LCS 500-436668/29 | Lab Control Sample | Total/NA | Water | 624 | |

## GC/MS Semi VOA

### Prep Batch: 520787

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | 625 | |
| 500-146536-2 | Effluent | Total/NA | Water | 625 | |
| MB 490-520787/1-A | Method Blank | Total/NA | Water | 625 | |
| LCS 490-520787/2-A | Lab Control Sample | Total/NA | Water | 625 | |
| LCSD 490-520787/3-A | Lab Control Sample Dup | Total/NA | Water | 625 | |

### Analysis Batch: 520954

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | 625 SIM | 520787 |
| 500-146536-2 | Effluent | Total/NA | Water | 625 SIM | 520787 |
| MB 490-520787/1-A | Method Blank | Total/NA | Water | 625 SIM | 520787 |
| LCS 490-520787/2-A | Lab Control Sample | Total/NA | Water | 625 SIM | 520787 |
| LCSD 490-520787/3-A | Lab Control Sample Dup | Total/NA | Water | 625 SIM | 520787 |

## General Chemistry

### Analysis Batch: 435852

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | SM 5210B | |
| 500-146536-2 | Effluent | Total/NA | Water | SM 5210B | |
| USB 500-435852/1 | Method Blank | Total/NA | Water | SM 5210B | |
| LCS 500-435852/2 | Lab Control Sample | Total/NA | Water | SM 5210B | |
| LCSD 500-435852/3 | Lab Control Sample Dup | Total/NA | Water | SM 5210B | |

### Prep Batch: 436354

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | 1664B | |
| 500-146536-2 | Effluent | Total/NA | Water | 1664B | |
| MB 500-436354/1-A | Method Blank | Total/NA | Water | 1664B | |
| LCS 500-436354/2-A | Lab Control Sample | Total/NA | Water | 1664B | |

### Analysis Batch: 436384

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | 1664B | 436354 |
| 500-146536-2 | Effluent | Total/NA | Water | 1664B | 436354 |
| MB 500-436354/1-A | Method Blank | Total/NA | Water | 1664B | 436354 |
| LCS 500-436354/2-A | Lab Control Sample | Total/NA | Water | 1664B | 436354 |

## General Chemistry (Continued)

### Analysis Batch: 436508

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | 300.0 | |
| 500-146536-2 | Effluent | Total/NA | Water | 300.0 | |
| MB 500-436508/23 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 500-436508/34 | Lab Control Sample | Total/NA | Water | 300.0 | |

### Analysis Batch: 436742

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-146536-1 | Influent | Total/NA | Water | SM 2540D | |
| 500-146536-2 | Effluent | Total/NA | Water | SM 2540D | |
| MB 500-436742/1 | Method Blank | Total/NA | Water | SM 2540D | |
| LCS 500-436742/2 | Lab Control Sample | Total/NA | Water | SM 2540D | |
| 500-146536-2 DU | Effluent | Total/NA | Water | SM 2540D | |

# Surrogate Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-146536-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | BFB | DCA | TOL |
| Lab Sample ID | Client Sample ID | (71-120) | (71-127) | (75-120) |
| 500-146536-1 | Influent | 111 | 88 | 96 |
| 500-146536-1 - DL | Influent | 111 | 97 | 97 |
| 500-146536-2 | Effluent | 111 | 93 | 97 |
| 500-146536-3 | Trip Blank | 107 | 97 | 93 |
| LCS 500-436668/29 | Lab Control Sample | 98 | 93 | 95 |
| MB 500-436668/31 | Method Blank | 108 | 93 | 90 |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | NBZ | TPHL | FBP |
| Lab Sample ID | Client Sample ID | (27-120) | (13-120) | (10-120) |
| 500-146536-1 | Influent | 63 | 64 | 63 |
| 500-146536-2 | Effluent | 68 | 75 | 70 |
| LCS 490-520787/2-A | Lab Control Sample | 64 | 60 | 61 |
| LCSD 490-520787/3-A | Lab Control Sample Dup | 66 | 67 | 66 |
| MB 490-520787/1-A | Method Blank | 63 | 64 | 64 |

**Surrogate Legend**

NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl (Surr)

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-436668/31**
**Matrix: Water**
**Analysis Batch: 436668**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/13/18 22:17 | 1 |
| Bromoform | <0.45 | | 1.0 | 0.45 | ug/L | | | 06/13/18 22:17 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/13/18 22:17 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 06/13/18 22:17 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/13/18 22:17 | 1 |
| Dichlorobromomethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/13/18 22:17 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/13/18 22:17 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/13/18 22:17 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 06/13/18 22:17 | 1 |
| Methyl bromide | <0.65 | | 2.0 | 0.65 | ug/L | | | 06/13/18 22:17 | 1 |
| Methyl chloride | <0.32 | | 1.0 | 0.32 | ug/L | | | 06/13/18 22:17 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/13/18 22:17 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/13/18 22:17 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/13/18 22:17 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/13/18 22:17 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/13/18 22:17 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/13/18 22:17 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/13/18 22:17 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 06/13/18 22:17 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 06/13/18 22:17 | 1 |
| Xylenes, Total | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/13/18 22:17 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *71 - 120* | | *06/13/18 22:17* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *71 - 127* | | *06/13/18 22:17* | *1* |
| *Toluene-d8 (Surr)* | *90* | | *75 - 120* | | *06/13/18 22:17* | *1* |

**Lab Sample ID: LCS 500-436668/29**
**Matrix: Water**
**Analysis Batch: 436668**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 50.0 | 46.5 | | ug/L | | 93 | 37 - 151 |
| Bromoform | 50.0 | 50.2 | | ug/L | | 100 | 45 - 169 |
| Carbon tetrachloride | 50.0 | 42.7 | | ug/L | | 85 | 70 - 140 |
| Chloroform | 50.0 | 44.0 | | ug/L | | 88 | 51 - 138 |
| cis-1,2-Dichloroethene | 50.0 | 46.6 | | ug/L | | 93 | 70 - 130 |
| Dichlorobromomethane | 50.0 | 47.3 | | ug/L | | 95 | 35 - 155 |
| 1,2-Dichloroethane | 50.0 | 47.7 | | ug/L | | 95 | 49 - 155 |
| 1,1-Dichloroethene | 50.0 | 43.5 | | ug/L | | 87 | 10 - 234 |
| Ethylbenzene | 50.0 | 42.9 | | ug/L | | 86 | 37 - 162 |
| Methyl bromide | 50.0 | 39.1 | | ug/L | | 78 | 10 - 242 |
| Methyl chloride | 50.0 | 54.8 | | ug/L | | 110 | 10 - 273 |
| m&p-Xylene | 50.0 | 41.9 | | ug/L | | 84 | |
| o-Xylene | 50.0 | 43.8 | | ug/L | | 88 | |
| 1,1,2,2-Tetrachloroethane | 50.0 | 49.5 | | ug/L | | 99 | 46 - 157 |
| Tetrachloroethene | 50.0 | 51.9 | | ug/L | | 104 | 64 - 148 |
| Toluene | 50.0 | 46.4 | | ug/L | | 93 | 47 - 150 |

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-436668/29**
**Matrix: Water**
**Analysis Batch: 436668**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 50.0 | 45.1 | | ug/L | | 90 | 54 - 156 |
| 1,1,1-Trichloroethane | 50.0 | 42.7 | | ug/L | | 85 | 52 - 162 |
| 1,1,2-Trichloroethane | 50.0 | 50.9 | | ug/L | | 102 | 52 - 150 |
| Trichloroethene | 50.0 | 51.2 | | ug/L | | 102 | 71 - 157 |
| Vinyl chloride | 50.0 | 47.3 | | ug/L | | 95 | 10 - 251 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *71 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *71 - 127* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* |

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

**Lab Sample ID: MB 490-520787/1-A**
**Matrix: Water**
**Analysis Batch: 520954**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 520787**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Benzo[a]pyrene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Benzo[b]fluoranthene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Benzo[g,h,i]perylene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Benzo[k]fluoranthene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Chrysene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Dibenz(a,h)anthracene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Fluoranthene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Naphthalene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Phenanthrene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |
| Pyrene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/10/18 17:28 | 06/11/18 16:21 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *63* | | *27 - 120* | *06/10/18 17:28* | *06/11/18 16:21* | *1* |
| *Terphenyl-d14* | *64* | | *13 - 120* | *06/10/18 17:28* | *06/11/18 16:21* | *1* |
| *2-Fluorobiphenyl (Surr)* | *64* | | *10 - 120* | *06/10/18 17:28* | *06/11/18 16:21* | *1* |

**Lab Sample ID: LCS 490-520787/2-A**
**Matrix: Water**
**Analysis Batch: 520954**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 520787**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 40.0 | 29.5 | | ug/L | | 74 | 33 - 143 |
| Benzo[a]pyrene | 40.0 | 30.8 | | ug/L | | 77 | 17 - 163 |
| Benzo[b]fluoranthene | 40.0 | 29.6 | | ug/L | | 74 | 24 - 159 |
| Benzo[g,h,i]perylene | 40.0 | 30.1 | | ug/L | | 75 | 10 - 219 |
| Benzo[k]fluoranthene | 40.0 | 30.0 | | ug/L | | 75 | 11 - 162 |
| Chrysene | 40.0 | 29.5 | | ug/L | | 74 | 17 - 168 |

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: LCS 490-520787/2-A**
**Matrix: Water**
**Analysis Batch: 520954**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 520787**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Dibenz(a,h)anthracene | 40.0 | 30.7 | | ug/L | | 77 | 10 - 227 |
| Fluoranthene | 40.0 | 29.2 | | ug/L | | 73 | 26 - 137 |
| Indeno[1,2,3-cd]pyrene | 40.0 | 30.1 | | ug/L | | 75 | 10 - 171 |
| Naphthalene | 40.0 | 27.6 | | ug/L | | 69 | 21 - 133 |
| Phenanthrene | 40.0 | 29.5 | | ug/L | | 74 | 54 - 120 |
| Pyrene | 40.0 | 29.4 | | ug/L | | 73 | 52 - 115 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Nitrobenzene-d5* | *64* | | *27 - 120* |
| *Terphenyl-d14* | *60* | | *13 - 120* |
| *2-Fluorobiphenyl (Surr)* | *61* | | *10 - 120* |

**Lab Sample ID: LCSD 490-520787/3-A**
**Matrix: Water**
**Analysis Batch: 520954**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 520787**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 40.0 | 32.8 | | ug/L | | 82 | 33 - 143 | 11 | 30 |
| Benzo[a]pyrene | 40.0 | 34.3 | | ug/L | | 86 | 17 - 163 | 11 | 30 |
| Benzo[b]fluoranthene | 40.0 | 33.7 | | ug/L | | 84 | 24 - 159 | 13 | 30 |
| Benzo[g,h,i]perylene | 40.0 | 33.7 | | ug/L | | 84 | 10 - 219 | 11 | 30 |
| Benzo[k]fluoranthene | 40.0 | 33.7 | | ug/L | | 84 | 11 - 162 | 12 | 30 |
| Chrysene | 40.0 | 32.9 | | ug/L | | 82 | 17 - 168 | 11 | 30 |
| Dibenz(a,h)anthracene | 40.0 | 35.0 | | ug/L | | 87 | 10 - 227 | 13 | 30 |
| Fluoranthene | 40.0 | 32.2 | | ug/L | | 80 | 26 - 137 | 10 | 30 |
| Indeno[1,2,3-cd]pyrene | 40.0 | 33.9 | | ug/L | | 85 | 10 - 171 | 12 | 30 |
| Naphthalene | 40.0 | 29.7 | | ug/L | | 74 | 21 - 133 | 8 | 30 |
| Phenanthrene | 40.0 | 32.5 | | ug/L | | 81 | 54 - 120 | 10 | 30 |
| Pyrene | 40.0 | 32.5 | | ug/L | | 81 | 52 - 115 | 10 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Nitrobenzene-d5* | *66* | | *27 - 120* |
| *Terphenyl-d14* | *67* | | *13 - 120* |
| *2-Fluorobiphenyl (Surr)* | *66* | | *10 - 120* |

## Method: 1664B - HEM and SGT-HEM

**Lab Sample ID: MB 500-436354/1-A**
**Matrix: Water**
**Analysis Batch: 436384**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 436354**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HEM (Oil & Grease) | 1.30 | J | 5.0 | 1.3 | mg/L | | 06/11/18 15:20 | 06/11/18 20:10 | 1 |

## Method: 1664B - HEM and SGT-HEM (Continued)

**Lab Sample ID: LCS 500-436354/2-A**
**Matrix: Water**
**Analysis Batch: 436384**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 436354**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| HEM (Oil & Grease) | 40.0 | 37.40 | | mg/L | | 93 | 78 - 114 |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 500-436508/23**
**Matrix: Water**
**Analysis Batch: 436508**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <0.17 | | 0.20 | 0.17 | mg/L | | | 06/11/18 21:55 | 1 |

**Lab Sample ID: LCS 500-436508/34**
**Matrix: Water**
**Analysis Batch: 436508**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 3.00 | 2.95 | | mg/L | | 98 | 90 - 110 |

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID: MB 500-436742/1**
**Matrix: Water**
**Analysis Batch: 436742**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | <1.9 | | 5.0 | 1.9 | mg/L | | | 06/13/18 12:55 | 1 |

**Lab Sample ID: LCS 500-436742/2**
**Matrix: Water**
**Analysis Batch: 436742**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 200 | 185 | | mg/L | | 93 | 80 - 120 |

**Lab Sample ID: 500-146536-2 DU**
**Matrix: Water**
**Analysis Batch: 436742**

**Client Sample ID: Effluent**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 3.5 | J | 4.00 | J F5 | mg/L | | 13 | 5 |

# QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-146536-1

## Method: SM 5210B - BOD, 5-Day

**Lab Sample ID: USB 500-435852/1**
**Matrix: Water**
**Analysis Batch: 435852**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | USB Result | USB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | <2.0 | | 2.0 | 2.0 | mg/L | | | 06/07/18 13:13 | 1 |

**Lab Sample ID: LCS 500-435852/2**
**Matrix: Water**
**Analysis Batch: 435852**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 198 | 212 | | mg/L | | 107 | 85 - 115 |

**Lab Sample ID: LCSD 500-435852/3**
**Matrix: Water**
**Analysis Batch: 435852**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 198 | 206 | | mg/L | | 104 | 85 - 115 | 3 | 20 |

# Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-146536-1

## Client Sample ID: Influent

**Lab Sample ID: 500-146536-1**

**Date Collected: 06/06/18 11:35**

**Matrix: Water**

**Date Received: 06/07/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 624 | | 5 | 436668 | 06/14/18 04:06 | PMF | TAL CHI |
| Total/NA | Analysis | 624 | DL | 50 | 436668 | 06/14/18 04:31 | PMF | TAL CHI |
| Total/NA | Prep | 625 | | | 520787 | 06/10/18 17:28 | JKG | TAL NSH |
| Total/NA | Analysis | 625 SIM | | 1 | 520954 | 06/11/18 18:44 | RP | TAL NSH |
| Total/NA | Prep | 1664B | | | 436354 | 06/11/18 18:22 | SA | TAL CHI |
| Total/NA | Analysis | 1664B | | 1 | 436384 | 06/11/18 20:10 | SA | TAL CHI |
| Total/NA | Analysis | 300.0 | | 25 | 436508 | 06/12/18 05:31 | EAT | TAL CHI |
| Total/NA | Analysis | SM 2540D | | 1 | 436742 | | SMO | TAL CHI |
| | | | | | (Start) | 06/13/18 13:03 | | |
| | | | | | (End) | 06/13/18 13:04 | | |
| Total/NA | Analysis | SM 5210B | | 1 | 435852 | | SSN | TAL CHI |
| | | | | | (Start) | 06/07/18 14:55 | | |
| | | | | | (End) | 06/07/18 15:10 | | |

## Client Sample ID: Effluent

**Lab Sample ID: 500-146536-2**

**Date Collected: 06/06/18 11:50**

**Matrix: Water**

**Date Received: 06/07/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 624 | | 1 | 436668 | 06/14/18 04:56 | PMF | TAL CHI |
| Total/NA | Prep | 625 | | | 520787 | 06/10/18 17:28 | JKG | TAL NSH |
| Total/NA | Analysis | 625 SIM | | 1 | 520954 | 06/11/18 19:05 | RP | TAL NSH |
| Total/NA | Prep | 1664B | | | 436354 | 06/11/18 18:34 | SA | TAL CHI |
| Total/NA | Analysis | 1664B | | 1 | 436384 | 06/11/18 20:10 | SA | TAL CHI |
| Total/NA | Analysis | 300.0 | | 25 | 436508 | 06/12/18 05:44 | EAT | TAL CHI |
| Total/NA | Analysis | SM 2540D | | 1 | 436742 | | SMO | TAL CHI |
| | | | | | (Start) | 06/13/18 13:04 | | |
| | | | | | (End) | 06/13/18 13:06 | | |
| Total/NA | Analysis | SM 5210B | | 1 | 435852 | | SSN | TAL CHI |
| | | | | | (Start) | 06/07/18 15:10 | | |
| | | | | | (End) | 06/07/18 15:25 | | |

## Client Sample ID: Trip Blank

**Lab Sample ID: 500-146536-3**

**Date Collected: 06/06/18 00:00**

**Matrix: Water**

**Date Received: 06/07/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 624 | | 1 | 436668 | 06/13/18 22:42 | PMF | TAL CHI |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# Accreditation/Certification Summary

Client: TRC Environmental Corporation. TestAmerica Job ID: 500-146536-1
Project/Site: MadisonKipp - GETS 292257

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-18 |

## Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 998020430 | 08-31-18 |

# Chain of Custody Record

267268

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: Andy Stehn | Site Contact: Andy Stehn | Date: 6/6/18 | COC No: 267268 |
|---|---|---|---|---|
| Company Name: TRC | Tel/Fax: (608) 826-3665 | Lab Contact: Sandy Fredrick | Carrier: Fed Ex | ___ of 1 COCs |
| Address: 708 Heartland Tr. | Analysis Turnaround Time | | | Sampler: J. Roelke |
| City/State/Zip: Madison WI 53717 | ☒ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: (608) 826-3665 | TAT if different from Below ____ | | | Walk-in Client: |
| Fax: | ~~2 weeks~~ | | | Lab Sampling: |
| Project Name: Madison Kipp Corp. | ☒ 1 week EDD-6/6/18 | | | |
| Site: Madison WI | ☐ 2 days | | | Job / SDG No.: 500-146536 |
| PO # 117375 | ☐ 1 day | | | |

500-146536 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | VOCs | PAHs | BOD/TSS, Chloride | Oil & Grease | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Influent | 6/6/18 | 1135 | G | W | 8 | N | N | 3 | 2 | 1 | 2 | |
| 2 Effluent | 6/6/18 | 1150 | G | W | 8 | N | N | 3 | 2 | 1 | 2 | |
| 3 Trip Blank | 4/24/18 | — | G | W | 1 | | | 1 | | | | |

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other ____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

**Special Instructions/QC Requirements & Comments:**

| Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: 228605 | Cooler Temp. (°C): Obs'd: 0.6 | Corr'd: 0.1 | Therm ID No.: |
|---|---|---|---|---|

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| | TRC | 6/6/18 1505 | | | |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |
| | | | | TA-CHI | 6/7/18 0910 |

| Parameter | Method |
|---|---|
| **VOCs** | |
| Bromoform | 624 |
| Carbon Tetrachloride | 624 |
| Dichlorobromomethane | 624 |
| 1,2-Dichloroethane | 624 |
| 1,1-Dichloroethylene | 624 |
| Methyl Bromide | 624 |
| Methyl Chloride | 624 |
| 1,1,2,2-Tetrachloroethane | 624 |
| Tetrachloroethylene | 624 |
| 1,1,2-Trichloroethane | 624 |
| 1,1,1-Trichloroethane | 624 |
| Trichloroethylene | 624 |
| Vinyl Chloride | 624 |
| Cis-1,2-Dichloroethene | 624 |
| Trans-1,2-Dichloroethene | 624 |
| **TSS** | |
| Suspended Solids, Total | 2540D |
| **BTEX** | |
| Benzene | 624 |
| Toluene | |
| Ethylbenzene | |
| Xylenes | |

| | |
|---|---|
| **PAHs (Group of 10)** | |
| Benzo(a)anthracene | 625 SIM |
| Benzo(b)fluoranthene | |
| Benzo(g,h,i)perylene | |
| Benzo(k)fluoranthene | |
| Chrysene | |
| Dibenzo(a,h)anthracene | |
| Fluoranthene | |
| Indeno(1,2,3-cd)pyrene | |
| Phenanthrene | |
| Pyrene | |
| **PAHs** | |
| Benzo(a)pyrene | 625 SIM |
| Naphthalene | |
| **Oil and Grease** | |
| Oil and Grease | 1664 |
| **$BOD_5$** | |
| $BOD_5$ | 5210B |
| **Anions** | |
| Chloride | 300 |

500-146536 Waybill


ORIGIN ID:PHDA (330) 966-9677
ANDREW STEHN
TRC ENVIRONMENTAL CORPORATION.
708 HEARTLAND TRAIL
SUITE 3000
MADISON, WI 53717
UNITED STATES US

SHIP DATE: 24MAY18
ACTWGT: 10.00 LB MAN
CAD: 0562065/CAFE3209

TO SAMPLE RECEIVING
TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484
(708) 534-5200
REF: S500-59446

RMA:

FedEx Express

FedEx
TRK# 0221 4433 3389 8049

THU - 07 JUN 10:30A
PRIORITY OVERNIGHT

79 JOTA

60484
IL-US ORD

551C2/782B/104C

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

500-146536 Chain of Custody

# COOLER RECEIPT FORM

Cooler Received/Opened On 6/8/2018 @ 0920

Time Samples Removed From Cooler 1415 Time Samples Placed In Storage 1417 (2 Hour Window)

1. Tracking # 2634 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960358 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 0.7 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) GH

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) GH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) GH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) GH

I certify that I attached a label with the unique LIMS number to each container (intial) GH

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment

Loc: 500
146536

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Fredrick, Sandie J | | COC No: 500-105495.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: sandie.fredrick@testamericainc.com | State of Origin: Wisconsin | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc | | Accreditations Required (See note): State Program - Wisconsin | | Job #: 500-146536-1 |
| Address: 2960 Foster Creighton Drive, | Due Date Requested: 6/13/2018 | | | |
| City: Nashville | TAT Requested (days): | | | |
| State, Zip: TN, 37204 | | | | |
| Phone: 615-726-0177(Tel) 615-726-3404(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: MadisonKipp - GETS 292257 | Project #: 50014136 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 625_SIM/625_Prep_LVI (MOD) Single compound | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| Influent (500-146536-1) | 6/6/18 | 11:35 Central | | Water | | | X | 2 | |
| Effluent (500-146536-2) | 6/6/18 | 11:50 Central | | Water | | | X | 2 | |

Loc: 500
146536

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: | | | | |
|---|---|---|---|---|---|---|---|
| Relinquished by: | Date/Time: 06/07/18 1630 | Company TA | Received by: | Date/Time: 6-8-18/0820 | Company TA-NAS |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.7 |
|---|---|---|

Ver: 09/20/2016



6/14/2018

# Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-146536-1

**Login Number: 146536**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-153954-1
Client Project/Site: MadisonKipp - GETS 292257

For:
TRC Environmental Corporation.
708 Heartland Trail
Suite 3000
Madison, Wisconsin 53717

Attn: Andrew Stehn

*Authorized for release by:*
*6/21/2018 7:35:58 PM*
Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

Designee for

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

# Sample Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 490-153954-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 490-153954-1 | EFFLUENT | Water | 06/15/18 17:25 | 06/16/18 09:00 |
| 490-153954-2 | INFLUENT | Water | 06/15/18 17:35 | 06/16/18 09:00 |

## Job ID: 490-153954-1

### Laboratory: TestAmerica Nashville

**Narrative**

**Job Narrative**
**490-153954-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/16/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6º C.

**GC/MS Semi VOA**
Method(s) 625 SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-522797 and analytical batch 490-522964.

Method(s) 625 SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 490-523185 and analytical batch 490-523602.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Organic Prep**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

## Qualifiers

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 490-153954-1

**Client Sample ID: EFFLUENT**
**Date Collected: 06/15/18 17:25**
**Date Received: 06/16/18 09:00**

**Lab Sample ID: 490-153954-1**
**Matrix: Water**

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Benzo[a]pyrene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Benzo[b]fluoranthene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Benzo[g,h,i]perylene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Benzo[k]fluoranthene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Chrysene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Dibenz(a,h)anthracene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Fluoranthene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Naphthalene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |
| Phenanthrene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/20/18 14:42 | 06/21/18 14:32 | 1 |
| Pyrene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *63* | | *27 - 120* | *06/19/18 07:30* | *06/19/18 16:36* | *1* |
| *Terphenyl-d14* | *75* | | *13 - 120* | *06/19/18 07:30* | *06/19/18 16:36* | *1* |
| *2-Fluorobiphenyl (Surr)* | *66* | | *10 - 120* | *06/19/18 07:30* | *06/19/18 16:36* | *1* |

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 490-153954-1

**Client Sample ID: INFLUENT**
**Date Collected: 06/15/18 17:35**
**Date Received: 06/16/18 09:00**

**Lab Sample ID: 490-153954-2**
**Matrix: Water**

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Benzo[a]pyrene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Benzo[b]fluoranthene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Benzo[g,h,i]perylene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Benzo[k]fluoranthene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Chrysene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Dibenz(a,h)anthracene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Fluoranthene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.023 | | 0.046 | 0.023 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| **Naphthalene** | **0.087** | **J** | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |
| Phenanthrene | <0.045 | | 0.089 | 0.045 | ug/L | | 06/20/18 14:42 | 06/21/18 14:53 | 1 |
| Pyrene | <0.046 | | 0.093 | 0.046 | ug/L | | 06/19/18 07:30 | 06/19/18 16:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *68* | | *27 - 120* | *06/20/18 14:42* | *06/21/18 14:53* | *1* |
| *Terphenyl-d14* | *56* | | *13 - 120* | *06/20/18 14:42* | *06/21/18 14:53* | *1* |
| *2-Fluorobiphenyl (Surr)* | *54* | | *10 - 120* | *06/20/18 14:42* | *06/21/18 14:53* | *1* |

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

**Lab Sample ID: MB 490-522797/1-A**
**Matrix: Water**
**Analysis Batch: 522964**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 522797**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Benzo[a]pyrene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Benzo[b]fluoranthene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Benzo[g,h,i]perylene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Benzo[k]fluoranthene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Chrysene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Dibenz(a,h)anthracene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Fluoranthene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Naphthalene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Phenanthrene | 0.188 | | 0.10 | 0.050 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |
| Pyrene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/19/18 07:30 | 06/19/18 16:15 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *69* | | *27 - 120* | *06/19/18 07:30* | *06/19/18 16:15* | *1* |
| *Terphenyl-d14* | *78* | | *13 - 120* | *06/19/18 07:30* | *06/19/18 16:15* | *1* |
| *2-Fluorobiphenyl (Surr)* | *73* | | *10 - 120* | *06/19/18 07:30* | *06/19/18 16:15* | *1* |

**Lab Sample ID: LCS 490-522797/2-A**
**Matrix: Water**
**Analysis Batch: 522964**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 522797**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 40.0 | 33.7 | | ug/L | | 84 | 33 - 143 |
| Benzo[a]pyrene | 40.0 | 39.6 | | ug/L | | 99 | 17 - 163 |
| Benzo[b]fluoranthene | 40.0 | 39.4 | | ug/L | | 98 | 24 - 159 |
| Benzo[g,h,i]perylene | 40.0 | 37.3 | | ug/L | | 93 | 10 - 219 |
| Benzo[k]fluoranthene | 40.0 | 39.9 | | ug/L | | 100 | 11 - 162 |
| Chrysene | 40.0 | 33.5 | | ug/L | | 84 | 17 - 168 |
| Dibenz(a,h)anthracene | 40.0 | 39.3 | | ug/L | | 98 | 10 - 227 |
| Fluoranthene | 40.0 | 32.7 | | ug/L | | 82 | 26 - 137 |
| Indeno[1,2,3-cd]pyrene | 40.0 | 37.6 | | ug/L | | 94 | 10 - 171 |
| Naphthalene | 40.0 | 30.2 | | ug/L | | 76 | 21 - 133 |
| Phenanthrene | 40.0 | 33.7 | | ug/L | | 84 | 54 - 120 |
| Pyrene | 40.0 | 34.6 | | ug/L | | 86 | 52 - 115 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Nitrobenzene-d5* | *71* | | *27 - 120* |
| *Terphenyl-d14* | *79* | | *13 - 120* |
| *2-Fluorobiphenyl (Surr)* | *72* | | *10 - 120* |

**Lab Sample ID: LCSD 490-522797/3-A**
**Matrix: Water**
**Analysis Batch: 522964**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 522797**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 40.0 | 34.4 | | ug/L | | 86 | 33 - 143 | 2 | 30 |

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: LCSD 490-522797/3-A**
**Matrix: Water**
**Analysis Batch: 522964**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 522797**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]pyrene | | | 40.0 | 40.8 | | ug/L | | 102 | 17 - 163 | 3 | 30 |
| Benzo[b]fluoranthene | | | 40.0 | 39.6 | | ug/L | | 99 | 24 - 159 | 1 | 30 |
| Benzo[g,h,i]perylene | | | 40.0 | 39.1 | | ug/L | | 98 | 10 - 219 | 5 | 30 |
| Benzo[k]fluoranthene | | | 40.0 | 40.6 | | ug/L | | 101 | 11 - 162 | 2 | 30 |
| Chrysene | | | 40.0 | 34.2 | | ug/L | | 86 | 17 - 168 | 2 | 30 |
| Dibenz(a,h)anthracene | | | 40.0 | 40.6 | | ug/L | | 102 | 10 - 227 | 3 | 30 |
| Fluoranthene | | | 40.0 | 34.1 | | ug/L | | 85 | 26 - 137 | 4 | 30 |
| Indeno[1,2,3-cd]pyrene | | | 40.0 | 40.2 | | ug/L | | 101 | 10 - 171 | 7 | 30 |
| Naphthalene | | | 40.0 | 31.0 | | ug/L | | 78 | 21 - 133 | 3 | 30 |
| Phenanthrene | | | 40.0 | 34.5 | | ug/L | | 86 | 54 - 120 | 2 | 30 |
| Pyrene | | | 40.0 | 33.9 | | ug/L | | 85 | 52 - 115 | 2 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Nitrobenzene-d5* | *69* | | *27 - 120* |
| *Terphenyl-d14* | *74* | | *13 - 120* |
| *2-Fluorobiphenyl (Surr)* | *70* | | *10 - 120* |

**Lab Sample ID: MB 490-523185/1-A**
**Matrix: Water**
**Analysis Batch: 523602**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 523185**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Benzo[a]pyrene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Benzo[b]fluoranthene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Benzo[g,h,i]perylene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Benzo[k]fluoranthene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Chrysene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Dibenz(a,h)anthracene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Fluoranthene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.025 | | 0.050 | 0.025 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Naphthalene | 0.253 | | 0.10 | 0.050 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Phenanthrene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |
| Pyrene | <0.050 | | 0.10 | 0.050 | ug/L | | 06/20/18 08:54 | 06/21/18 14:11 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *62* | | *27 - 120* | *06/20/18 08:54* | *06/21/18 14:11* | *1* |
| *Terphenyl-d14* | *53* | | *13 - 120* | *06/20/18 08:54* | *06/21/18 14:11* | *1* |
| *2-Fluorobiphenyl (Surr)* | *49* | | *10 - 120* | *06/20/18 08:54* | *06/21/18 14:11* | *1* |

**Lab Sample ID: LCS 490-523185/2-A**
**Matrix: Water**
**Analysis Batch: 523602**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 523185**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | | | 40.0 | 27.7 | | ug/L | | 69 | 33 - 143 |
| Benzo[a]pyrene | | | 40.0 | 29.3 | | ug/L | | 73 | 17 - 163 |
| Benzo[b]fluoranthene | | | 40.0 | 28.7 | | ug/L | | 72 | 24 - 159 |

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: LCS 490-523185/2-A**
**Matrix: Water**
**Analysis Batch: 523602**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 523185**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzo[g,h,i]perylene | | | 40.0 | 29.4 | | ug/L | | 74 | 10 - 219 | | |
| Benzo[k]fluoranthene | | | 40.0 | 28.6 | | ug/L | | 72 | 11 - 162 | | |
| Chrysene | | | 40.0 | 26.6 | | ug/L | | 66 | 17 - 168 | | |
| Dibenz(a,h)anthracene | | | 40.0 | 30.8 | | ug/L | | 77 | 10 - 227 | | |
| Fluoranthene | | | 40.0 | 27.3 | | ug/L | | 68 | 26 - 137 | | |
| Indeno[1,2,3-cd]pyrene | | | 40.0 | 29.8 | | ug/L | | 75 | 10 - 171 | | |
| Naphthalene | | | 40.0 | 26.6 | | ug/L | | 66 | 21 - 133 | | |
| Phenanthrene | | | 40.0 | 29.0 | | ug/L | | 73 | 54 - 120 | | |
| Pyrene | | | 40.0 | 24.8 | | ug/L | | 62 | 52 - 115 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Nitrobenzene-d5* | *69* | | *27 - 120* |
| *Terphenyl-d14* | *56* | | *13 - 120* |
| *2-Fluorobiphenyl (Surr)* | *58* | | *10 - 120* |

**Lab Sample ID: LCSD 490-523185/3-A**
**Matrix: Water**
**Analysis Batch: 523602**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 523185**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | | | 40.0 | 31.1 | | ug/L | | 78 | 33 - 143 | 11 | 30 |
| Benzo[a]pyrene | | | 40.0 | 32.8 | | ug/L | | 82 | 17 - 163 | 11 | 30 |
| Benzo[b]fluoranthene | | | 40.0 | 31.8 | | ug/L | | 80 | 24 - 159 | 10 | 30 |
| Benzo[g,h,i]perylene | | | 40.0 | 32.6 | | ug/L | | 82 | 10 - 219 | 10 | 30 |
| Benzo[k]fluoranthene | | | 40.0 | 33.3 | | ug/L | | 83 | 11 - 162 | 15 | 30 |
| Chrysene | | | 40.0 | 29.4 | | ug/L | | 74 | 17 - 168 | 10 | 30 |
| Dibenz(a,h)anthracene | | | 40.0 | 34.2 | | ug/L | | 86 | 10 - 227 | 11 | 30 |
| Fluoranthene | | | 40.0 | 30.5 | | ug/L | | 76 | 26 - 137 | 11 | 30 |
| Indeno[1,2,3-cd]pyrene | | | 40.0 | 33.1 | | ug/L | | 83 | 10 - 171 | 10 | 30 |
| Naphthalene | | | 40.0 | 28.5 | | ug/L | | 71 | 21 - 133 | 7 | 30 |
| Phenanthrene | | | 40.0 | 32.2 | | ug/L | | 81 | 54 - 120 | 10 | 30 |
| Pyrene | | | 40.0 | 28.7 | | ug/L | | 72 | 52 - 115 | 15 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Nitrobenzene-d5* | *75* | | *27 - 120* |
| *Terphenyl-d14* | *68* | | *13 - 120* |
| *2-Fluorobiphenyl (Surr)* | *62* | | *10 - 120* |

# QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 490-153954-1

## GC/MS Semi VOA

### Prep Batch: 522797

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 490-153954-1 | EFFLUENT | Total/NA | Water | 625 | |
| 490-153954-2 | INFLUENT | Total/NA | Water | 625 | |
| MB 490-522797/1-A | Method Blank | Total/NA | Water | 625 | |
| LCS 490-522797/2-A | Lab Control Sample | Total/NA | Water | 625 | |
| LCSD 490-522797/3-A | Lab Control Sample Dup | Total/NA | Water | 625 | |

### Analysis Batch: 522964

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 490-153954-1 | EFFLUENT | Total/NA | Water | 625 SIM | 522797 |
| 490-153954-2 | INFLUENT | Total/NA | Water | 625 SIM | 522797 |
| MB 490-522797/1-A | Method Blank | Total/NA | Water | 625 SIM | 522797 |
| LCS 490-522797/2-A | Lab Control Sample | Total/NA | Water | 625 SIM | 522797 |
| LCSD 490-522797/3-A | Lab Control Sample Dup | Total/NA | Water | 625 SIM | 522797 |

### Prep Batch: 523185

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 490-153954-1 | EFFLUENT | Total/NA | Water | 625 | |
| 490-153954-2 | INFLUENT | Total/NA | Water | 625 | |
| MB 490-523185/1-A | Method Blank | Total/NA | Water | 625 | |
| LCS 490-523185/2-A | Lab Control Sample | Total/NA | Water | 625 | |
| LCSD 490-523185/3-A | Lab Control Sample Dup | Total/NA | Water | 625 | |

### Analysis Batch: 523602

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 490-153954-1 | EFFLUENT | Total/NA | Water | 625 SIM | 523185 |
| 490-153954-2 | INFLUENT | Total/NA | Water | 625 SIM | 523185 |
| MB 490-523185/1-A | Method Blank | Total/NA | Water | 625 SIM | 523185 |
| LCS 490-523185/2-A | Lab Control Sample | Total/NA | Water | 625 SIM | 523185 |
| LCSD 490-523185/3-A | Lab Control Sample Dup | Total/NA | Water | 625 SIM | 523185 |

# Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 490-153954-1

## Client Sample ID: EFFLUENT

**Lab Sample ID: 490-153954-1**

**Date Collected: 06/15/18 17:25**

**Matrix: Water**

**Date Received: 06/16/18 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 625 | | | 270 mL | 1 mL | 522797 | 06/19/18 07:30 | CC | TAL NSH |
| Total/NA | Analysis | 625 SIM | | 1 | | | 522964 | 06/19/18 16:36 | JDJ | TAL NSH |
| Total/NA | Prep | 625 | | | 270 mL | 1 mL | 523185 | 06/20/18 14:42 | MCO | TAL NSH |
| Total/NA | Analysis | 625 SIM | | 1 | | | 523602 | 06/21/18 14:32 | MJH | TAL NSH |

## Client Sample ID: INFLUENT

**Lab Sample ID: 490-153954-2**

**Date Collected: 06/15/18 17:35**

**Matrix: Water**

**Date Received: 06/16/18 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 625 | | | 270 mL | 1 mL | 522797 | 06/19/18 07:30 | CC | TAL NSH |
| Total/NA | Analysis | 625 SIM | | 1 | | | 522964 | 06/19/18 16:57 | JDJ | TAL NSH |
| Total/NA | Prep | 625 | | | 280 mL | 1 mL | 523185 | 06/20/18 14:42 | MCO | TAL NSH |
| Total/NA | Analysis | 625 SIM | | 1 | | | 523602 | 06/21/18 14:53 | MJH | TAL NSH |

**Laboratory References:**

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# Method Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 490-153954-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 625 SIM | Semivolatile Organic Compounds GC/MS (SIM) | 40CFR136A | TAL NSH |
| 625 | Liquid-Liquid Extraction | 40CFR136A | TAL NSH |

**Protocol References:**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

**Laboratory References:**

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 490-153954-1

## Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 998020430 | 08-31-18 |

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-18 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

# COOLER RECEIPT FORM

490-153954 Chain of Custody

Cooler Received/Opened On 06-16-2018 @ 09:00

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # 9945 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 31470368 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened 0.0 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JJ

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

● ⬅ Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) EG

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) EG

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) EG

I certify that I attached a label with the unique LIMS number to each container (intial) EG

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

# Chain of Custody Record

267270

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: Andy Stehn | Site Contact: Andy Stehn | Date: 06/15/17 | COC No: |
|---|---|---|---|---|
| Company Name: TRC | Tel/Fax: | Lab Contact: Sandie Fredrick | Carrier: FED EX | 1 of 1 COCs |
| Address: 708 Heartland TRL | Analysis Turnaround Time | | | Sampler: A. STEHN |
| City/State/Zip: Madison, WI 53717 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 608-826-3665 | TAT if different from Below _____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: MKC GETS OMFM | ☐ 1 week | | | |
| Site: Madison, WI | ☐ 2 days | | | Job / SDG No.: |
| PO# 117375 | ☒ 1 day | | | |

Loc: 490
153954

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | PAHs | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|
| EFFLUENT | 6/15/18 | 17:25 | G | W | 2 | N | N | X | See attached PAH |
| INFLUENT | 6/15/18 | 17:35 | G | W | 2 | N | N | X | List |

Page 16 of 16

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**
Provide results as soon as possible - 1 or 2 day turn. See attached PAH List ANS 440565 / 440566

| Custody Seals Intact: | Custody Seal No.: | Cooler Temp. (°C): Obs'd: | Corr'd: | Therm ID No.: |
|---|---|---|---|---|
| ☒ Yes ☐ No | 578672 / 578673 | | | |

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Andrew Stehn 6/15/17 | TRC | 06/15/17 1800 | | | |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TA-NAS | Date/Time: 6/16/18 900 |

0.6

8/21/2018

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-147524-1
Client Project/Site: MadisonKipp - GETS 292257

For:
TRC Environmental Corporation.
708 Heartland Trail
Suite 3000
Madison, Wisconsin 53717

Attn: Andrew Stehn

*Authorized for release by:*
*7/2/2018 1:19:10 PM*
Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

Designee for

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

# Case Narrative

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

## Job ID: 500-147524-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-147524-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/26/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

## Client Sample ID: Influent — Lab Sample ID: 500-147524-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 3.0 | J | 5.0 | 1.9 | mg/L | 1 | | SM 2540D | Total/NA |

## Client Sample ID: Effluent — Lab Sample ID: 500-147524-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 2.5 | J | 5.0 | 1.9 | mg/L | 1 | | SM 2540D | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| SM 2540D | Solids, Total Suspended (TSS) | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-147524-1 | Influent | Water | 06/25/18 09:38 | 06/26/18 09:00 |
| 500-147524-2 | Effluent | Water | 06/25/18 09:35 | 06/26/18 09:00 |

# Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

## Client Sample ID: Influent

**Lab Sample ID: 500-147524-1**
**Date Collected: 06/25/18 09:38**
**Matrix: Water**
**Date Received: 06/26/18 09:00**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 3.0 | J | 5.0 | 1.9 | mg/L | | | 06/30/18 12:34 | 1 |

## Client Sample ID: Effluent

**Lab Sample ID: 500-147524-2**
**Date Collected: 06/25/18 09:35**
**Matrix: Water**
**Date Received: 06/26/18 09:00**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 2.5 | J | 5.0 | 1.9 | mg/L | | | 06/30/18 12:39 | 1 |

# Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

## Qualifiers

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| F5 | Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

## General Chemistry

### Analysis Batch: 439306

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-147524-1 | Influent | Total/NA | Water | SM 2540D | |
| 500-147524-2 | Effluent | Total/NA | Water | SM 2540D | |
| MB 500-439306/1 | Method Blank | Total/NA | Water | SM 2540D | |
| LCS 500-439306/2 | Lab Control Sample | Total/NA | Water | SM 2540D | |
| 500-147524-1 MS | Influent | Total/NA | Water | SM 2540D | |
| 500-147524-1 DU | Influent | Total/NA | Water | SM 2540D | |
| 500-147524-2 DU | Effluent | Total/NA | Water | SM 2540D | |

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID: MB 500-439306/1**
**Matrix: Water**
**Analysis Batch: 439306**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | <1.9 | | 5.0 | 1.9 | mg/L | | | 06/30/18 12:25 | 1 |

**Lab Sample ID: LCS 500-439306/2**
**Matrix: Water**
**Analysis Batch: 439306**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | | | 200 | 181 | | mg/L | | 91 | 80 - 120 | | |

**Lab Sample ID: 500-147524-1 MS**
**Matrix: Water**
**Analysis Batch: 439306**

**Client Sample ID: Influent**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 3.0 | J | 100 | 99.0 | | mg/L | | 96 | 75 - 125 | | |

**Lab Sample ID: 500-147524-1 DU**
**Matrix: Water**
**Analysis Batch: 439306**

**Client Sample ID: Influent**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 3.0 | J | | <1.9 | | mg/L | | | | NC | 5 |

**Lab Sample ID: 500-147524-2 DU**
**Matrix: Water**
**Analysis Batch: 439306**

**Client Sample ID: Effluent**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | 2.5 | J | | 3.00 | J F5 | mg/L | | | | 18 | 5 |

# Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

## Client Sample ID: Influent

**Lab Sample ID: 500-147524-1**

**Date Collected: 06/25/18 09:38**

**Matrix: Water**

**Date Received: 06/26/18 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540D | | 1 | 439306 | | SMO | TAL CHI |
| | | | | | (Start) | 06/30/18 12:34 | | |
| | | | | | (End) | 06/30/18 12:36 | | |

## Client Sample ID: Effluent

**Lab Sample ID: 500-147524-2**

**Date Collected: 06/25/18 09:35**

**Matrix: Water**

**Date Received: 06/26/18 09:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540D | | 1 | 439306 | | SMO | TAL CHI |
| | | | | | (Start) | 06/30/18 12:39 | | |
| | | | | | (End) | 06/30/18 12:40 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-147524-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-18 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)

Report To Contact: Andrew Stehn
Company: TRC Environmental
Address: 708 Heartland Trail Suite 3000
Address: Madison, WI 53717
Phone: 608-826-3665
Fax:
E-Mail: astehn@trcsolutions.com

(optional)

Bill To Contact: Same as reporting
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-147524

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 2.6

| Client | Client Project # | Preservative |
|---|---|---|
| MKC/TRC | 292257 | 8 |
| Project Name: GETS/SVE | | Parameter |
| Project Location/State: WI | Lab Project # | |
| Sampler: Ben Wachholz | Lab PM | TSS |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | TSS | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | | Influent | 6/25/18 | 9:38 | 1 | W | X | |
| 2 | | Effluent | 6/25/18 | 9:35 | 1 | W | X | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days X 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Andrew Stehn | TRC | 6/25/18 | 13:00 | FED EX | | | |
| | | | | | TA | 06/26/18 | 0900 |

Lab Courier ☐
Shipped ✓
Hand Delivered ☐

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

500-147524 COC



TAL-4124-5[illegible] 7/2/2018

# Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-147524-1

**Login Number: 147524**
**List Number: 1**
**Creator: Kelsey, Shawn M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.6c |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | True | |