Tennessee Gas Pipeline Company, L.L.C.
a Kinder Morgan company

November 1, 2019

**Damianos Skaros, Project Manager**
**New York State Department of Environmental Conservation**
**Division of Environmental Remediation - Region 9**
**270 Michigan Avenue**
**Buffalo, NY 14203-2915**

RE: Tennessee Gas Pipeline Station 224
Site No.: 907014
Site Address: Ravlin Hill Road – Clymer, NY 14724

Dear Mr. Skaros,

Enclosed please find the Site Management Periodic Review Report and IC/EC Certification Submittal for Tennessee Gas Pipeline Company's (TGP's) Compressor Station 224 located in Clymer, New York. This report is for the reporting period November 1, 2018 to November 1, 2019.

TGP conducted an annual site inspection with NYSDEC on May 8, 2019 and sediment sampling was completed on May 1, 2019. The reports documenting the inspection and sampling have been included in attachments to this PRR and IC/EC Certification Submittal.

Should you have any questions, please contact me at (724) 662-6436.

Sincerely,

Scott J. Lewis
Specialist – Permitting & Compliance Lead

Attachments: Enclosure 2 Site Management PRR Notice IC/EC Certification Form
Attachment 1 Periodic Review Report
Attachment A O&M Activity Log Form
Attachment 2 Site Layout Map & Sediment Sampling Laboratory Results

Enclosure 2

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**Site Management Periodic Review Report Notice**
**Institutional and Engineering Controls Certification Form**

**Site Details** **Box 1**

**Site No.** 907014

**Site Name Tennessee Gas Pipeline Station 224**

Site Address: Ravlin Hill Road Zip Code: 14724
City/Town: Clymer
County: Chautauqua
Site Acreage: 116.300

Reporting Period: November 01, 2018 to November 01, 2019

| | YES | NO |
|---|---|---|
| 1. Is the information above correct? | ☑ | ☐ |
| If NO, include handwritten above or on a separate sheet. | | |
| 2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? | ☐ | ☑ |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | ☐ | ☑ |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | ☐ | ☑ |
| **If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.** | | |
| 5. Is the site currently undergoing development? | ☐ | ☑ |

**Box 2**

| | YES | NO |
|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Industrial | ☑ | ☐ |
| 7. Are all ICs/ECs in place and functioning as designed? | ☑ | ☐ |

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 907014

Box 3

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| **394.00-1-56** | Tenn. Gas Pipeline,LLC (Kinder Morgan) | O&M Plan |
| | | Landuse Restriction |

In accordance with the Record of Decision issued on March 25, 1997, the Consent Order dated August 1, 1997, and the Declaration of Covenants and Restrictions filed with the Chautauqua County Clerk on September 8, 1997, the following controls are in place at the site and must be certified yearly: restrictions were placed on future maintenance and modification activities at the site; a low permeability cap must be maintained and remain in place.

Box 4

**Description of Engineering Controls**

| Parcel | Engineering Control |
|---|---|
| **394.00-1-56** | Fencing/Access Control |
| | Cover System |

**Box 5**

**Periodic Review Report (PRR) Certification Statements**

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

| YES | NO |
|---|---|
| ☑ | ☐ |

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

| YES | NO |
|---|---|
| ☑ | ☐ |

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

Signature of Owner, Remedial Party or Designated Representative

Date

**IC CERTIFICATIONS**
**SITE NO. 907014**

**Box 6**

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I SCOTT J. LEWIS (print name) at 1211 GREENVILLE MERCER ROAD MERCER, PA 16137 (print business address),

am certifying as DESIGNATED REPRESENTATIVE (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Scott J. Lewis
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

11/01/19
Date

## IC/EC CERTIFICATIONS

**Box 7**

### Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I SCOTT J. LEWIS (print name) at 1211 GREENVILLE-MERCER ROAD MERCER, PA 16137 (print business address),

am certifying as a Qualified Environmental Professional for the OWNER (Owner or Remedial Party)

Scott J. Lewis — Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

11/01/19 — Date

## ATTACHMENT 1

## Periodic Review Report - TGP Compressor Station 224
## NYSDEC Site # 907014
## Town of Clymer, New York

### I. Executive Summary

Tennessee Gas Pipeline (TGP) Compressor Station 224 is located near the town of Clymer, Chautauqua County, New York. Remedial activities were conducted at the Site between July and October 1997 to address contamination in soils and sediments. The remediation program was performed in accordance with an Order on Consent (#A9-0359-9706, dated August 1, 1997) between TGP and the New York State Department of Environmental Conservation (NYSDEC), and consistent with the procedures established in the document entitled Remedial Design Work Plan (the "Work Plan"; Blasland, Bouck & Lee, Inc. [BBL], July 1997 [revised]). The Work Plan discusses the five primary remediation components to be performed, which include: 1) the excavation and off-site disposal of certain polychlorinated biphenyl-(PCB-) containing soils and sediments; 2) the closure of various drain lines and related appurtenances; 3) abandonment of several groundwater monitoring wells; 4) installation of one groundwater monitoring well; and 5) installation of two, discrete soil caps.

Soil/sediment remediation was performed in the following seven areas of the site:

- Compressor Building Area;
- Auxiliary Building Area;
- Air Receiver Tank (ART) Area;
- Separator Pond Area;
- Tributary of French Creek (on-site) (Areas "A" and "B");
- Retired Burn Pit Area; and
- Scrap Yard Area.

Soil/sediment remediation primarily involved the excavation and off-site disposal of PCB-containing soils and sediments above the specified-action level of 25 parts per million (ppm). However, in two areas (i.e., Retired Burn Pit and Scrap Yard areas) the remedy selected included isolation of soil with slightly elevated levels of other constituents via the installation of a 12-inch soil cover. In addition, Areas "A" and "B" along the tributary of French Creek were subject to remediation due to concerns regarding potential erosion of PCB-containing soils/sediments, which during prior sampling were determined to be below the 25 ppm action level. For the remaining four soil/sediment remediation areas of the site, the remedy involved the excavation and off-site disposal of soils/sediments exceeding the PCB action level. The estimated volume of PCB-containing soils/sediment removed from the site is approximately 1,095 in-place cubic yards (cy). This material was disposed at the CWM Chemical Services, Inc. (CWM) landfill in Model City, New York as Toxic Substance Control Act-(TSCA-) Regulated materials. In addition, due to subsurface limitations adjacent to a concrete tank foundation in the ART Area, a sub-grade low-permeability cap was installed in a portion of the excavation where residual PCBs above the action level remain. Excavation areas were subsequently backfilled, re-graded, and restored similar to original conditions.

As part of soil and sediment remediation activities, liquid treatment was performed on site utilizing a dual carbon treatment unit. In total, approximately 85,646 gallons of liquid were treated and discharged on site. Due to limited treatment system effectiveness, on-site liquid

treatment was discontinued during remediation with approximately 22,641 gallons of liquid remaining to be treated. Following subsequent discussions with the NYSDEC, it was determined that the remaining liquid would be disposed offsite as non-hazardous material at the High Acres facility in Fairport, New York. In addition, other liquids generated during drainline remediation (approximately 1,250 gallons) were disposed as TSCA-regulated materials at CWM's Model City facility.

Drainline remediation was performed for one on-site drain line system, Drainline B. Approximately 1,085 linear feet of drainage piping, manholes MH 3, MH 4, and MH 5, and an oil/water separator were closed via filling with grout. Sediments removed from drain line appurtenances were disposed at CWM's landfill in Model City, New York as TSCA-regulated materials prior to filling the drainage piping and appurtenances with grout. In addition, as noted above, approximately 1,250 gallons of liquid materials were collected-from this drain line system and disposed as TSCA-regulated material at the CWM facility in Model City, New York.

Additional remediation activities included the installation of one monitoring well (MW-6) and the abandonment off our existing monitoring wells (MW-l, MW-3, MW-4 and MW-5).

Certain post-remediation activities also have been-or will be implemented at Station 224 to provide for the long-term operation, maintenance, and monitoring of the remediated site. These activities include long-term site management activities such as operations, maintenance, and monitoring of the area subject to capping, groundwater monitoring, and the management of data collected as part of remediation activities.

The Final Documentation Report summarized the remediation activities performed at Compressor Station 224, demonstrated that the completed activities satisfied the requirements established in the Work Plan, and provides documentation of any variances from the Plan, in accordance with the requirements of the Order on Consent. To this end, the Final Documentation Report provides a summary of the pertinent background information, area-specific summaries of soil/sediment and drainline remediation activities, quality assurance/quality control (QA/QC) information, and a description of post-remediation activities.

## II. Site Overview

TGP owns and operates a natural gas pipeline system that extends from Texas to New England. Compressor stations are located at various points along the pipeline to pressurize the natural gas in the pipeline to facilitate its transmission. Several of these compressor stations are located throughout New York State. Station 224 is located near the town of Clymer in Chautauqua County, New York. This station occupies approximately 206 acres along Ravlin Hill Road (approximately 1 mile south of the hamlet of French Creek) and is bordered on the east and west by farm land and fields; woods lie to the north and south of the site.

The primary operational facilities at Compressor Station 224 consist of the following: a Compressor Building, which contains four, reciprocal-type natural gas compressor engines; the Auxiliary Building, which contains the starting air compressors used to start the compressor engines; three air receiver tanks (ARTs); and associated piping. In addition, an administrative office, pipeline warehouse, meter building, combination office/garage, and a water treatment building are present at the station.

Drainage systems have been utilized at Compressor Station 224 for the conveyance and discharge of sanitary wastes, storm water, and floor, foundation, and roof drainage for several buildings. Components of these systems (depending on the specific system) include drain pipes, holding tanks, manholes, and other drainline appurtenances.

## III. Remedy Performance, Effectiveness and Protectiveness

Results of post-remediation activities have demonstrated compliance with remedial goals and action levels.

## IV. IC/EC Plan Compliance Report – Not Applicable

## V. Monitoring Plan Compliance Report

On May 1, 2019, a sediment sample was taken north of the site, near the drainage ditch that runs adjacent to the property (Attachment 2). Sampling procedures were performed in accordance with the NYSDEC sediment sampling procedures. The sample was delivered to Test America Laboratories, Inc., and analyzed in accordance with EPA SW-846 Method 8082A. A brief detection summary is provided below with results indicated in mg/Kg. For complete laboratory results, please see Attachment 2.

| Location | ID | Aroclor 1016 | Aroclor 1221 | Aroclor 1232 | Aroclor 1242 | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 |
|---|---|---|---|---|---|---|---|---|
| Drainage | 224SEDIMENT -050119 | U | U | U | U | U | 0.49 | U |

## VI. Operation & Maintenance (O&M) Plan Compliance Report

Operation and maintenance activities at Compressor Station 224 have included implementation of institutional controls and engineering controls including monitoring of erosion controls, and sediment and groundwater monitoring.

a. Institutional Controls

Prior to performing excavation activities in the vicinity of any drainline, or capped areas, site figures (and any other available information) will be reviewed by station personnel to determine if the subject drainline or capped area may be encountered. In the event that excavation in the immediate vicinity is necessary, the NYSDEC and TGP Northern Division Environmental Representative will be notified prior to excavation (unless there is an emergency). Notification includes the scope, nature, status and location of the proposed work.

In accordance with the Declaration of Covenants and Restrictions filed with the Chautauqua County Clerk, the following controls are in place at the site and must be

certified yearly: restrictions were placed on future maintenance and modification activities at the site; a low permeability cap must be maintained and remain in place.

b. Engineering Controls

A low permeability cap was installed at the ART area to isolate PCBs above action levels.

Restricted access fencing in maintained for the site.

## VII. Overall PRR Conclusions and Recommendations

Results of post-remediation activities have demonstrated compliance with remedial goals and action levels. As a result, remedial activities conducted at the Site are performing effectively and functioning as designed.

TGP believes that annual submittal of the PRR report and IC/EC certifications are adequate and appropriate at this time.

ATTACHMENT A

OPERATIONS AND MAINTENANCE PLAN
TENNESSEE GAS PIPELINE COMPANY
COMPRESSOR STATION 224 (Site No. 9-07-014)
CHAUTAUQUA COUNTY, NEW YORK

O&M ACTIVITY LOG FORM

Personnel Performing O&M Activity: Scott Lewis – TGP, Marty Schwanz – TGP, Steve Guertin –TGP, Damianos Skaros – NYSDEC

Date: May 8, 2019

Drainline B Excavation – Provide Description of Activity (include sketch as attachment)
No drain line "B" excavations during the reporting year.

Drainline Component Removed? (Yes/(No))
Drainline Component Disposed? (Yes/(No))
Repairs Made to Exposed Drainlines? (Yes/(No))
Describe:
No drain line components removed, disposed, or exposed for repairs during the reporting year.

Air Tank Receiver Area Excavation – Provide Description of Activity (include sketch as attachment)

No excavations in the air tank receiver area during the reporting year.

Excavation Below Geo-Textile Fabric Layer of Low-Permeability Cap Performed? (Yes/(No))
Excavated Materials Disposed Off-Site (Yes/(No)) (Attach Manifest)
Cap restored to Original Conditions (Yes/(No))
Describe:
No excavations performed during the reporting year.

Permanent Erosion Control Area Inspection (Tributary of French Creek Areas "A" and "B")-Monitor Stabilized Areas for Integrity
Repairs necessary? (Yes/(No))
Describe:
Areas "A" & "B" were inspected to confirm the integrity and the effectiveness of the geo-textile and rip-rap stabilization. No areas of concern were noted.

Sediment Monitoring – Sediment Sampling Performed? ((Yes)/No) (See Attached Analytical Results)

ATTACHMENT A

OPERATIONS AND MAINTENANCE PLAN
TENNESSEE GAS PIPELINE COMPANY
COMPRESSOR STATION 224 (Site No. 9-07-014)
CHAUTAUQUA COUNTY, NEW YORK

O&M ACTIVITY LOG FORM

Retired Burn Pit or Scrap Yard Cap Excavation – Provide Description of Activity (include sketch as attachment)

Excavation Below 12-inch Soil Cover (Cap) Performed? (Yes/(No))
Excavated Materials Disposed Off-Site? (Yes/(No)) (Attach Manifest)
Cap(s) Restored to Original Condition? (Yes/(No))

Describe:
No retired burn pit or scrap yard cap excavations during the reporting year.

Retired Burn Pit and Scrap Yard Cap Inspection and Maintenance – Inspect Cap for Excessive Erosion and Vegetative Establishment.

Brush-Cutting Performed? ((Yes)/No)
Repairs Necessary to Cap(s)? (Yes/(No))

Describe:
The retired burn pit and scrap yard capped areas were both inspected to confirm the integrity of the soil caps. Both areas were mowed according to schedule to prevent the growth of woody plants. No problems were noted and no repairs are necessary.

Separator Pond Inspection – Monitoring Pond for Natural Re-vegetation for Up to Two Years or Until Vegetation is Established.

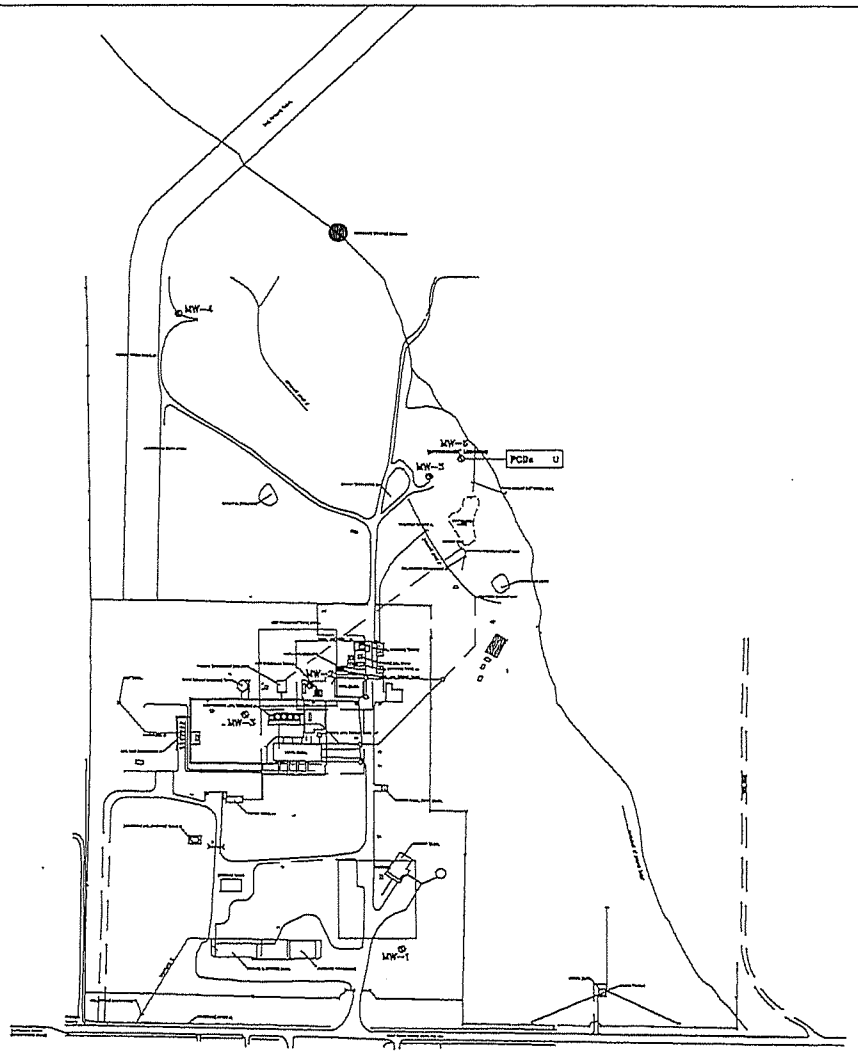
Describe:
The separator pond was inspected for natural re-vegetation. The area has naturally re-vegetated and erosion repairs have been successful at the outfall pipe.

Groundwater Monitoring – Groundwater Sampling Performed (Yes/(No))
(Attach Summary Report and Analytical Results) – Per NYSDEC approval, retirement and abandonment of the groundwater monitoring well was performed in the third quarter of 2016.

Notes:
1. Figure 1 shows the general areas subject to Operation and Maintenance activities.
2. See Operations and Maintenance Plan (O&M Plan) text for additional details regarding inspection/monitoring activities, frequency, and duration. Also, see O&M Plan for additional sampling information.

**Attachment 2**

**Site Layout Map & Sediment Sampling Laboratory Results**




LEGEND

- MW-5 MONITORING WELL LOCATION AND IDENTIFICATION
- MW-2 FORMER LOCATION AND IDENTIFICATION OF ABANDONED MONITORING WELL
- SEDIMENT SAMPLE LOCATION
- DRAINAGE DITCH
- FENCE LINE
- POND

NOTES

1. MONITORING WELL MW-5 LOCATION IS APPROXIMATE (WELL NOT SURVEYED)
2. GROUNDWATER SAMPLES COLLECTED JUNE 19, 2009
3. PCBs = POLYCHLORINATED BIPHENYLS
4. U = NOT DETECTED ABOVE THE REPORTING LIMIT

SCALE

0 150' 300' 600'

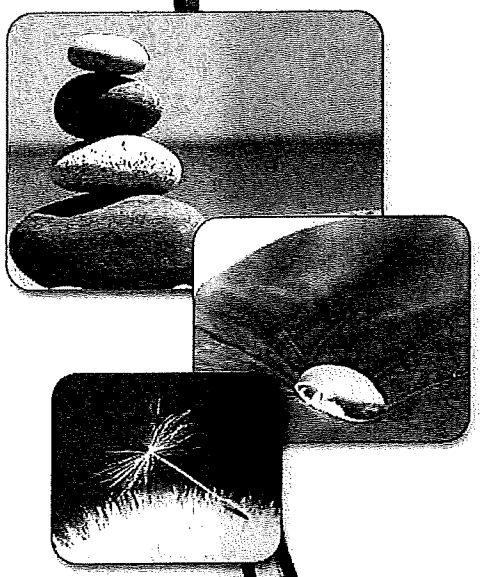
TENNESSEE GAS PIPELINE
COMPRESSOR STATION 224
CLYMER, NEW YORK

ALLEN ENGINEERING AND SCIENCE

| SCALE: | DRAWN BY: N. SISSON | DATE: MM/DD/YY |
|---|---|---|
| 1" = 300' | CHKD. BY: | DATE: |
| PROJECT NO. 16052.01 | CAD FILE 112816 DWG2 LD | |

SITE LAYOUT MAP
JUNE 2009

FIGURE 2



eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

Laboratory Job ID: 460-181168-1
Client Project/Site: 224 Sediment-050119

For:
Tennessee Gas Pipeline
12111 Greenville Mercer Road
Mercer, Pennsylvania 16137

Attn: Mr. Scott Lewis

Patricia Grieco

*Authorized for release by:*
*5/8/2019 2:19:27 PM*

Patricia Grieco, Senior Project Manager
(732)593-2507
patricia.grieco@testamericainc.com

# Definitions/Glossary

Client: Tennessee Gas Pipeline
Project/Site: 224 Sediment-050119

Job ID: 460-181168-1

## Qualifiers

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| U | Indicates the analyte was analyzed for but not detected. |

## 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) |

# Detection Summary

Client: Tennessee Gas Pipeline
Project/Site: 224 Sediment-050119

Job ID: 460-181168-1

## Client Sample ID: 224 SEDIMENT-050119

## Lab Sample ID: 460-181168-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1254 | 0.49 | | 0.10 | 0.014 | mg/Kg | 1 | ☼ | 8082A | Total/NA |
| Polychlorinated biphenyls, Total | 0.49 | | 0.10 | 0.014 | mg/Kg | 1 | ☼ | 8082A | Total/NA |

This Detection Summary does not include radiochemical test results.

# Surrogate Summary

Client: Tennessee Gas Pipeline
Project/Site: 224 Sediment-050119

Job ID: 460-181168-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Solid**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | DCBP1 (53-150) | DCBP2 (53-150) |
| 460-181168-1 | 224 SEDIMENT-050119 | 85 | 90 |
| 460-181185-A-2-C MS | Matrix Spike | 67 | 67 |
| 460-181185-A-2-D MSD | Matrix Spike Duplicate | 70 | 81 |
| LCS 460-607921/2-A | Lab Control Sample | 105 | 105 |
| LCSD 460-607921/3-A | Lab Control Sample Dup | 115 | 112 |
| MB 460-607921/1-A | Method Blank | 76 | 78 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Lab Sample ID: 460-181185-A-2-C MS**
**Matrix: Solid**
**Analysis Batch: 607218**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 607921**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 0.011 | U F1 | 0.427 | 0.261 | F1 | mg/Kg | ☼ | 61 | 76 - 146 |
| Aroclor 1016 | 0.011 | U F1 | 0.427 | 0.288 | F1 | mg/Kg | ☼ | 68 | 76 - 146 |
| Aroclor 1260 | 0.012 | U | 0.427 | 0.325 | | mg/Kg | ☼ | 76 | 74 - 148 |
| Aroclor 1260 | 0.012 | U | 0.427 | 0.321 | | mg/Kg | ☼ | 75 | 74 - 148 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *67* | | *53 - 150* |
| *DCB Decachlorobiphenyl* | *67* | | *53 - 150* |

**Lab Sample ID: 460-181185-A-2-D MSD**
**Matrix: Solid**
**Analysis Batch: 607218**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 607921**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 0.011 | U F1 | 0.426 | 0.288 | F1 | mg/Kg | ☼ | 67 | 76 - 146 | 10 | 30 |
| Aroclor 1016 | 0.011 | U F1 | 0.426 | 0.339 | | mg/Kg | ☼ | 80 | 76 - 146 | 16 | 30 |
| Aroclor 1260 | 0.012 | U | 0.426 | 0.328 | | mg/Kg | ☼ | 77 | 74 - 148 | 2 | 30 |
| Aroclor 1260 | 0.012 | U | 0.426 | 0.373 | | mg/Kg | ☼ | 87 | 74 - 148 | 14 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *70* | | *53 - 150* |
| *DCB Decachlorobiphenyl* | *81* | | *53 - 150* |

## Method: Moisture - Percent Moisture

**Lab Sample ID: 460-181173-A-4 DU**
**Matrix: Solid**
**Analysis Batch: 608142**

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

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 12.3 | | 12.3 | | % | | 0.4 | 20 |
| Percent Solids | 87.7 | | 87.7 | | % | | 0.05 | 20 |

# Lab Chronicle

Client: Tennessee Gas Pipeline
Project/Site: 224 Sediment-050119

Job ID: 460-181168-1

**Client Sample ID: 224 SEDIMENT-050119**
**Date Collected: 05/01/19 09:45**
**Date Received: 05/04/19 11:30**

**Lab Sample ID: 460-181168-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 608142 | 05/07/19 11:33 | MMC | TAL EDI |

**Client Sample ID: 224 SEDIMENT-050119**
**Date Collected: 05/01/19 09:45**
**Date Received: 05/04/19 11:30**

**Lab Sample ID: 460-181168-1**
**Matrix: Solid**
**Percent Solids: 66.1**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3546 | | | 607921 | 05/06/19 17:32 | CPG | TAL EDI |
| Total/NA | Analysis | 8082A | | 1 | 607218 | 05/07/19 10:32 | SXG | TAL EDI |

**Laboratory References:**

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

# Method Summary

Client: Tennessee Gas Pipeline
Project/Site: 224 Sediment-050119

Job ID: 460-181168-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | TAL EDI |
| Moisture | Percent Moisture | EPA | TAL EDI |
| 3546 | Microwave Extraction | SW846 | TAL EDI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

30/2.8

# Chain of Custody Record 321613

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

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

| Client Contact | Project Manager: SCOTT LEWIS | Site Contact: STEVE GUERTIN | Date: 05/01/19 | COC No: 321613 |
|---|---|---|---|---|
| Company Name: TENNESSEE GAS PIPELINE | Tel/Fax: 412-496-0422 | Lab Contact: PATRICIA GRIECO | Carrier: FEDEX | 1 of 1 COCs |
| Address: 9766 RAVLIN HILL ROAD | Analysis Turnaround Time | | | Sampler: SCOTT LEWIS |
| City/State/Zip: CLYMER, NY 14724 | ☐ CALENDAR DAYS ☒ WORKING DAYS | | | For Lab Use Only: |
| Phone: 724-662-6436 | TAT if different from Below _____ | | | Walk-in Client: |
| Fax: 724-662-6484 | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: 224 SEDIMENT-050119 | ☒ 1 week | | | |
| Site: CS 224 CLYMER | ☐ 2 days | | | Job / SDG No.: |
| PO# VERBAL | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | 8082A - PCB's |
|---|---|---|---|---|---|---|---|---|
| 224 SEDIMENT-050119 | 05/01/19 | 945 AM | G | SED | 1 | N | N | X |

5-Day RUSH

181168

Sample Specific Notes:

TEST TO 1 PPM

460-181168 Chain of Custody

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:**
E-MAIL ANALYTICAL TO: SCOTT_LEWIS@KINDERMORGAN.COM

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| SCOTT LEWIS | TGP | 5/1/19 945 AM | | ETA | 5-2-19 830 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| | | 5/3 1030 | | TA Edi | 5/4/19 1130 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |
| | | | via Fedex Sat | | |

3.0°C IR9

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5/2/2019

# Login Sample Receipt Checklist

Client: Tennessee Gas Pipeline

Job Number: 460-181168-1

**Login Number: 181168**
**List Number: 1**
**Creator: Villanueva, Angelica P**

**List Source: Eurofins TestAmerica, Edison**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| 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 | |
| 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 | |