MACTEC

engineering and constructing a better tomorrow

March 15, 2021

Brianna Scharf
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Subject: **Site Management Quarterly Report – Summer 2020**
Saranac Lake Gas Co., Site No. 516008
MACTEC Engineering and Geology, P.C., Project No. 3617207500

Dear Ms. Scharf:

MACTEC Engineering and Geology, P.C., (MACTEC), under contract with the New York State Department of Environmental Conservation (NYSDEC), is submitting this letter report describing the Site Management (SM) activities completed and observations noted at the Saranac Lake Gas Company, OU02 & OU03 NYSDEC Site No. 516008 (Site) in Saranac Lake, New York (NY) (Figure 1).

SITE DESCRIPTION AND HISTORY

The Site is listed in the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program, under Site No. 516008, which is administered by NYSDEC. The Site is comprised of three operable units (OUs): OU01, the former manufactured gas plant (MGP) property where the release of contaminants occurred; OU02, a 0.75 mile stretch of Brandy Brook which is situated adjacent to the northern boundary of OU01 and flows generally northwestward to Pontiac Bay of Lake Flower; and, OU03, the Pontiac Bay portion of Lake Flower. OU02 and OU03 were remediated in accordance with the Records of Decision (RODs) dated March 2016 and March 2015 (NYSDEC, 2016; NYSDEC 2015), respectively. Only OU02 and OU03 are covered by this report. Once remedial activities at OU01 are complete, the existing Interim Site Management Plan (ISMP) will be revised and finalized as a Site-Wide Site Management Plan for the entire site encompassing OU01, OU02, and OU03 (MACTEC, 2019).

The Saranac Lake Gas Company manufactured lighting gas (coal gasification) for the Village of Saranac Lake from the late 1800s to approximately the 1940s. Based on the operational age of this MGP site, the most likely method of gas manufacturing was via the Carbureted Water Gas process. In general, this method involved:

- Coal heated in closed retorts in which the coal was prevented from combusting by limiting the oxygen.
- During the heating process, steam was injected into the retort and a chemical reaction occurred that produced a flammable gas mixture.
- Liquid petroleum hydrocarbons were sprayed into the hot gas mixture creating additional methane.
- The gas was collected, cooled, and purified before being used.
- Condensed tar (coal tar) was produced as a by-product.

While the former MGP was operating, releases of MGP-derived waste to the environment occurred within OU01. It appears direct surface discharge of waste to Brandy Brook (OU02) occurred, and the waste migrated to Pontiac Bay of Lake Flower (OU03). Non-aqueous phase liquids (NAPL) and residual MGP by-product are present within OU01 and impacting groundwater migrating from the Site.

A remedial investigation (RI) completed by MACTEC from August 2013 to October 2014 evaluated the nature and extent of contamination present in the environment related to historical activities at the former MGP. An RI report was completed in January 2015, summarizing the findings of the RI (MACTEC, 2015).

The RI concluded the following:

- OU01 - Soil and groundwater are impacted with MGP waste. Volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) were detected in soils at concentrations exceeding the New York State Part 375 Soil Cleanup Objectives for residential, commercial, and industrial use scenarios (NYS 2006). Groundwater concentrations within and downgradient from OU01 exceed the NYS Part 703 Class GA water quality standards (NYS 1999). The volume of MGP-impacted soil is estimated to be approximately 38,500 cubic yards (cy).
- OU02 - Sediment in Brandy Brook is impacted with MGP waste at concentrations exceeding both NYS Class A and B Sediment Guidance Values (SGVs) and therefore meets the definition of a Class C sediment which has a high potential to be toxic to aquatic life. Contaminants were not detected in surface water at concentrations exceeding applicable NYS Standards, Criteria, and Guidance (SCG) values. The volume of MGP-impacted sediment exceeding Class A SGVs

within the stretch of OU02 is estimated to be approximately 4,800 cy. Impacted sediment was removed during remedial construction activities completed in 2018.

- OU03 - Sediment in Pontiac Bay of Lake Flower was found to be visually impacted with MGP waste at concentrations exceeding both Class A and B SGVs and therefore meets the definition of a Class C sediment which has a high potential to be toxic to aquatic life. Contaminants were not detected in surface water at concentrations exceeding SCGs. The volume of MGP-impacted sediment exceeding Class A SGVs is estimated to be approximately 16,900 cy. Impacted sediment was removed during remedial construction activities completed in 2018.

The by-product coal tar does not readily dissolve in water. Most coal tars are slightly denser than water. Consequently, they can either float or sink when in contact with water. Coal tar is a reddish brown, oily, liquid by-product resulting from manufacturing of coal gas and contains a number of different chemical constituents that are a cause for concern when left untreated in the environment. The contaminants of concern resulting from the by-products in the MGP process include VOCs, SVOCs, benzene, toluene, ethyl benzene, and xylene (BTEX) compounds, and polycyclic aromatic hydrocarbons (PAHs). Naphthalene, a PAH, is present in coal tar in relatively high concentrations and used as an indicator compound for detecting MGP-related waste in media.

SUMMARY OF REMEDIAL ACTIONS

Between May and December 2018, OUs 02 and 03 were remediated in accordance with the RODs dated March 2016 and March 2015 (NYSDEC 2016; NYSDEC 2015), respectively. Remediation of the Site commenced with OU03, Pontiac Bay, which included the removal of contaminated sediments via dredging, solidification/stabilization of contaminated sediments in on-site staging areas, and offsite disposal of contaminated sediment at an approved disposal facility. In areas where the extent of contamination could not be dredged along the shoreline and residual contamination remains, AquaBlok® was placed prior to backfilling. AquaBlok® is an impermeable, patented, composite-aggregate technology typically comprised of a dense aggregate core, clay or clay-sized materials, and polymers. After installation of AquaBlok®, backfill and/or riprap was placed to restore the excavated area.

Remediation of OU02 was conducted by isolating and dewatering Brandy Brook, excavating contaminated sediment via a long reach excavator, and backfilling with certified clean material. In select areas, visual and/or olfactory evidence identified potential areas of inaccessible contamination. In these areas, reactive core mat (RCM) was installed. RCM is a permeable material that absorbs NAPL but

allows water to pass through. Confirmation sampling later indicated that some of these areas did not exceed the sediment guidance values. RCM was also used in Brandy Brook near OU01 where seeps with visual contamination were identified flowing into the brook. The contamination in this area will be removed during the OU01 remedial construction activities. Multiple layers of RCM were installed in this area, and clean backfill and monitoring points were installed between them. These monitoring points allow for visual/olfactory inspection of mid-RCM-layer water for potential RCM breakthrough.

SUMMARY OF SITE MANAGEMENT ACTIVITIES

Work conducted at the Site in June and July 2020 (the reporting period) included activities at Brandy Brook (OU02) and Pontiac Bay (OU03) which comply with the ISMP (MACTEC, 2019) and additional activities in support of the United States Corps of Engineers (USACOE) Permit dated January 25, 2018. These activities consisted of:

- visual inspection of Brandy Brook, specifically areas where RCM was placed
- visual inspection of Pontiac Bay, specifically areas where AquaBlok® was installed over the banks
- collection of three surface water samples from OU02 and one from OU03
- collection of three sediment samples from OU02
- three groundwater samples, two from OU02 and one from the OU01/OU02 interface
- visual inspections of restoration including inspections identification of plant vigor, planted trees, erosion issues, invasive species, wildlife, overall water quality and flow, and condition of install structures.

Sampling locations for OU02 and OU03 are depicted on Figures 2 and 3, respectively.

VISUAL INSPECTION OF BRANDY BROOK

A visual inspection of Brandy Brook was conducted on June 24, 2020, in accordance with the ISMP (MACTEC, 2019). A completed Site Inspection Form can be found in Attachment 1 of this letter report as well as a photo log in Attachment 2. Additionally, an annual restoration inspection form was completed in support of the USAOCE permit and is included in Attachment 3. The water appeared reasonably clear and small fish were present in the brook. No residual contamination or odors were observed to be emanating from the brook and the brook appeared to be mostly free of debris. Small amounts of debris, leaves and twigs, were noted in front of the grated culverts leading to Pontiac Bay, but did not appear to impede the flow of water from the Brook. Some dead vegetation, mainly grass, was observed along areas of the southern bank between sediment sample locations SD-401 and SD-402,

in front of an abandoned house. The area will be monitored for growth during future inspections. Slight sedimentation was observed near surface water sample location SW-402, which may be due to occasional backup of flow from the Brook to the Bay, as this grated culvert under the roadways is the most restrictive culvert within the restored Brook. The RCM remained covered with backfill and therefore no impacts were observed. Each of the groundwater observation wells installed during construction activities were gauged for the presents of NAPL, and no NAPL was observed. A total of seven trees in the restoration area at the OU02/OU02 interface, planted in 2018 appeared to be dead. These trees were replaced on October 21, 2020 by the OU02/OU03 Remedial Action Contractor, Land Remediation, and their condition will be documented in the next inspection report.

VISUAL INSPECTION OF PONTIAC BAY

A visual inspection of Pontiac Bay was conducted June 24, 2020, in accordance with the ISMP (MACTEC, 2019). A completed Site Inspection Form can be found in Attachment 1 of this letter report as well as a photo log in Attachment 2. Additionally, an annual restoration inspection form was completed in support of the USAOCE permit and is included in Attachment 3. The water appeared clear with little turbidity, and no emanating odors or culvert blockages were observed. Evidence of geese presence was noted in and on the shore surrounding the bay, and fish and aquatic insects were also present. Several inches of sediment have accumulated in front of the southern culvert opening flowing from Brandy Brook into Pontiac Bay. Depth of surface water above the accumulated sediment was as shallow as six inches in some areas. This is an area in which the Village of Saranac Lake periodically conducts maintenance dredging, and its condition will be re-accessed during the next inspection. The AquaBlok® barrier layer installed during 2018 remained beneath backfill and/or riprap and therefore did not contain visible damage. Two trees planted along the fence of the neighboring hotel property, near sediment sample location SD-403 appeared to be dead. Live stakes, dormant willow and dogwood stems planted for bank stability restoration in fall 2017, were also inspected. Nearly half of the live stakes that were planted had sprouted along the shoreline, which is sufficient for shoreline stabilization and it is anticipated that additional stakes will sprout over the next couple years.

SEDIMENT SAMPLING

Sediment samples were collected on July 20, 2020, from three locations as part of long-term monitoring at the Site. Samples were collected from the top 0.5 feet of sediment at each location. Sample locations SD-400 through SD-402 are depicted on Figure 2, and analytical results are presented in Table 1.

Samples were submitted to TestAmerica Buffalo for the analysis of PAHs via USEPA Method 8270. Analytical data indicates that samples did not contain concentrations of PAHs greater than the Class A Sediment Guidance Values. One sample, SD-402 contained detectable concentrations of PAHs, but the concentrations were below the Class A Sediment Guidance Values. The data usability summary report (DUSR) is included in Attachment 4. Please note that the DUSR also includes data associated with final pre-design investigation activities conducted on-site during the week of July 20, 2020.

SURFACE WATER SAMPLING

Surface water samples were collected on July 20 and 21, 2020, from four locations as part of long-term monitoring at the Site. Sample locations SW-400 through SW-403 are depicted on Figures 2 and 3. Water quality parameters were collected at each sample location and recorded on sampling records included in Attachment 5. Samples were submitted to Eurofins TestAmerica Buffalo in Buffalo, NY (TestAmerica Buffalo), for the analysis of PAHs via United States Environmental Protection Agency Method 8270. PAHs were detected in three of the four locations, but the concentrations were below the Class A Surface Water Standards and Guidance Values (NYS 1998). Analytical results are presented in Table 2. The data usability summary report (DUSR) is included in Attachment 4.

GROUNDWATER SAMPLING

Groundwater samples were collected from PZ-301, MW-104, and OBS-BB05 on July 21, 2020 as part of long-term monitoring. Samples were submitted to TestAmerica Buffalo for the analysis of PAHs via USEPA Method 8270. MW-106 was identified in the ISMP for sampling; however, this well was removed accidentally by a subcontractor during well abandonment activities in November 2019. The next nearest well, OBS-BB05, was sampled in its place. OBS-BB05 is a groundwater observation location that was installed upgradient (south) of the Brandy Brook excavation area during construction activities for the purpose of monitoring potential flow of NAPL from OU01 towards the remediated Brook. Replacement of MW-104 is not advised at this time due to the upcoming remedial activities at OU01, which will result in removal of wells (including OBS-BB05) in the area. New wells for long term monitoring of the OU01 remedy will be installed at a later date and associated updates to the SMP will be made.

Analytical results of groundwater samples are presented in Table 3. Groundwater concentrations of several parameters exceeded the GA/GV guidance values at MW-104 and OBS-BB05, but not at PZ-

301. Contaminant concentrations were highest at MW-104, and included naphthalene at 250 µg/l (GA/GV 10 µg/l), phenanthrene at 53 µg/l (GA/GV 5 µg/l) and acenaphthene at 96 µg/l (GA/GV 20 µg/l). The data usability summary report (DUSR) is included in Attachment 4, and low flow groundwater sampling records for each sample location are included in Attachment 5. .

CONCLUSIONS AND RECOMMENDATIONS

Based on activities conducted at the Site from June to July 2020, the following is concluded:

- On-Site engineering controls are performing as designed.
- Nothing has occurred that would impair the ability of the controls to protect the public health and environment.
- Access is available to the Site by NYSDEC and the New York State Department of Health to evaluate continued maintenance of such controls.
- Site use is compliant with the ISMP.

Recommendations regarding SM activities at the Site include:

- Inspect condition of newly planted trees during the next reporting period.
- Continue quarterly inspections of the Site.
- Continue long term sampling to initiate trend analysis at sampling locations.
- Complete full annual inspections in accordance with the USACOE during the 2021 growing season along side the 2021 second quarter SM event.

If you have questions or concerns, please feel free to contact us at (207) 775-5401.

Sincerely,

MACTEC Engineering and Geology, P.C.

Jamie Welch

Jamie Welch
Project Manager

Kaitlyn J Chick

Kaitlyn Chick
Site Management Inspector

Enclosures (10):

Figure 1	Site Location Map
Figure 2	OU02 Engineering Controls and Long-Term Monitoring Locations
Figure 3	OU03 Engineering Controls and Long-Term Monitoring Locations
Table 1	Polycyclic Aromatic Hydrocarbons in Sediment
Table 2	Polycyclic Aromatic Hydrocarbons in Surface Water
Table 3	Polycyclic Aromatic Hydrocarbons in Groundwater
Attachment 1	Site Inspection Form
Attachment 2	Photo Log
Attachment 3	Restoration Checklist
Attachment 4	Data Usability Summary Report
Attachment 5	Sampling Records

REFERENCES

MACTEC Engineering and Geology, P.C (MACTEC), 2015. Remedial Investigation Report. Saranac Lake Gas Company, Inc. Site, Site No. 516008. January 2015.

MACTEC, 2019. Interim Site Management Plan, OU02 & OU03 Saranac Lake Gas Company, Inc. Site # 516008. September 2019.

New York State Department of Environmental Conservation (NYSDEC), 2000. In the Matter of the Development and Implementation of an Interim Corrective Measures Program for an Inactive Hazardous Waste Disposal Site Under Article 27, Title 13, and Article 71, Title 27 of the Environmental Conservation Law of the State of New York by RealCo, Inc., Respondent. Order on Consent Index # A4-0405-9911. February 4, 2000.

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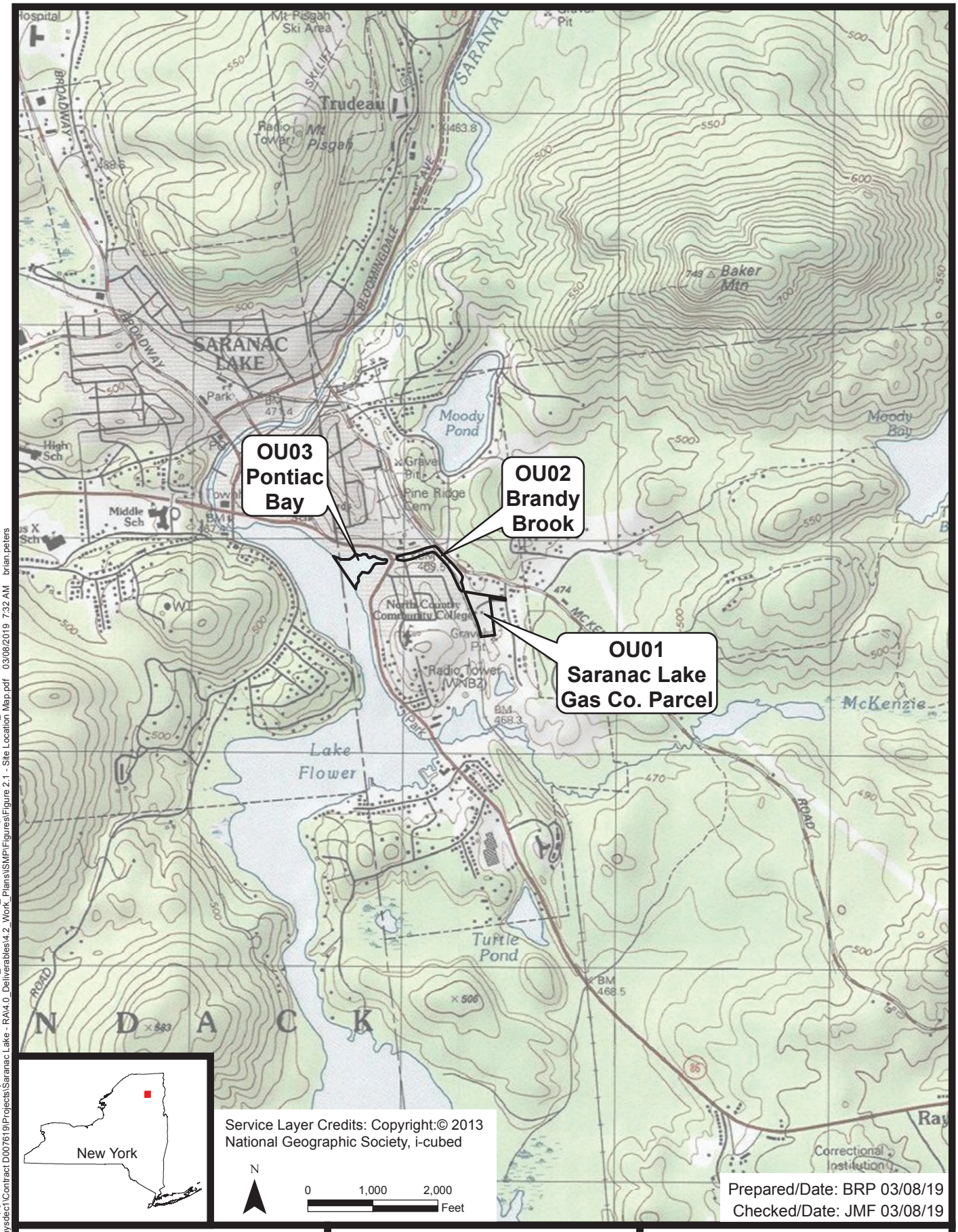
NYSDEC, 2016. Record of Decision, Operable Unit (OU) 02: Brandy Brook. Saranac Lake Gas Company, Inc. Site. Site No. 516008. Saranac Lake, Essex County, New York. March 2016

New York State (NYS), 1998. Technical & Operational Guidance Series 1.1.1.: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (plus Addendums).

NYS, 1999. New York Codes, Rules, and Regulations, Title 6, Part 700-705 Water Quality Regulations Surface Water and Groundwater Classifications and Standards. Amended August 1999.

NYS, 2006. New York Codes, Rules, and Regulations, Title 6, Part 375 Inactive Hazardous Waste Disposal Sites Remedial Program. Amended 2006.

FIGURES



NYSDEC Site # 516008
Saranac Lake Gas Co., Inc.
Saranac Lake, New York

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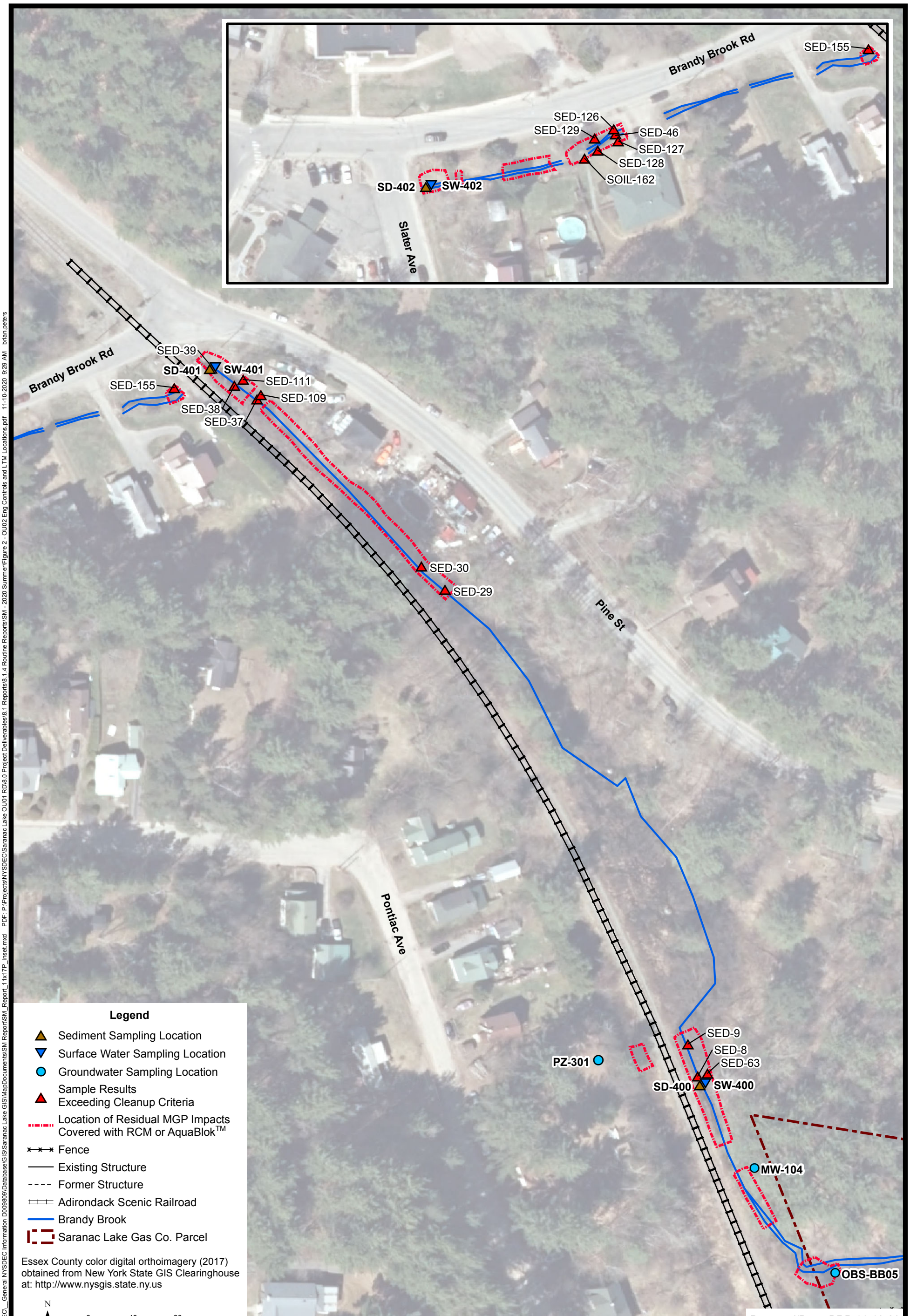
Site Location Map

Project 3611181219 Figure 1



NYSDEC Site # 516008
Saranac Lake Gas Co., Inc.
Saranac Lake, New York

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OU02 Engineering Controls and
Long Term Monitoring Locations
Project 3617207500 Figure 2

Document: P:\Projects\NYSDEC_General NYSDEC Information D009809\Database\GIS\Saranac Lake GIS\MapDocuments\SM Report\SM_Report_11x17P_Inset.mxd PDF: P:\Projects\NYSDEC\Saranac Lake OU01 RD\8.0 Project Deliverables\8.1 Reports\8.1.4 Routine Reports\SM - 2020 Summer\Figure 2 - OU02 Eng Controls and LTM Locations.pdf 11-10-2020 9:29 AM brian.peters

River St (Rt 86)

Boat Launch

Brandy Brook Rd

Lake Flower

Pontiac Bay

SED-13

SED-14

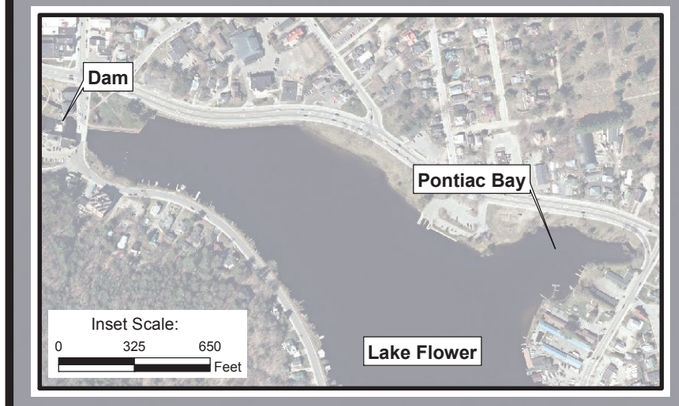
SED-16

SW-403

Lake Flower Ave

Pontiac St

Winona Ave



Legend

- Proposed Surface Water Sampling Location
- Sample Results Exceeding Cleanup Criteria
- Approximate Location of AquaBlok™
- Approximate location of In-Situ Stabilization

N

0 45 90
Feet

Essex County color digital orthoimagery (2017) obtained from New York State GIS Clearinghouse at: gis.ny.gov

Prepared/Date: BRP 08/23/19
Checked/Date: JDW 08/23/19

NYSDEC Site # 516008
Saranac Lake Gas Co., Inc.
Saranac Lake, New York

MACTEC

OU03 Engineering Controls and
Long Term Monitoring Locations
Project 3611181219 Figure 3

TABLES

Table 1 - Polycyclic Aromatic Hydrocarbons in Sediment

		Location	SD-400		SD-401		SD-401		SD-402	
		Sample Date	7/20/2020		7/20/2020		7/20/2020		7/20/2020	
		Sample Depth (ft bgs)	0-0.5		0-0.5		0-0.5		0-0.5	
		Sample ID	SD-400		SD-401		SD-401D		SD-402	
		Qc Code	FS		FS		FD		FS	
Parameter	**Class A Sediment Criteria**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acenaphthene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Acenaphthylene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Anthracene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Benzo(a)anthracene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Benzo(a)pyrene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Benzo(b)fluoranthene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Benzo(ghi)perylene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Benzo(k)fluoranthene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Chrysene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Dibenz(a,h)anthracene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Fluoranthene	4	mg/kg	2.6	U	1.8	U	0.92	U	**0.17**	**J**
Fluorene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Indeno(1,2,3-cd)pyrene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Naphthalene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Phenanthrene	4	mg/kg	2.6	U	1.8	U	0.92	U	0.96	U
Pyrene	4	mg/kg	2.6	U	1.8	U	0.92	U	**0.15**	**J**

General Notes:
ft bgs - feet below ground surface
FS - field sample
FD - field duplicate
mg/kg - milligram per kilogram (ppm)
Bold = Detected in sample below criteria value

Qualifiers:
U - analyzed but not detected
J - estimated value

Table 2 - Polycyclic Aromatic Hydrocarbons in Surface Water

		Location	SW-400		SW-401		SW-401		SW-402		SW-403	
		Lab SDG	480-172858-1		480-172858-1		480-172858-1		480-172858-1		480-172858-1	
		Sample Date	7/20/2020 11:10		7/21/2020 10:20		7/21/2020 10:20		7/21/2020 9:15		7/21/2020 8:45	
		Sample ID	SW-400		SW-401		SW-401D		SW-402		SW-403	
		Qc Code	FS		FS		FD		FS		FS	
Parameter	**AWQC**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acenaphthene	5.3	µg/l	0.05	U	**0.026**	J	**0.018**	J	**0.016**	J	0.05	U
Acenaphthylene	NS	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Anthracene	3.8	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Benzo(a)anthracene	0.002	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Benzo(a)pyrene	0.002	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Benzo(b)fluoranthene	0.002	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Benzo(ghi)perylene	NS	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Benzo(k)fluoranthene	0.002	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Chrysene	0.002	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Dibenz(a,h)anthracene	NS	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Fluoranthene	50	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Fluorene	0.54	µg/l	0.05	U	**0.017**	J	0.05	U	0.05	U	0.05	U
Indeno(1,2,3-cd)pyrene	0.002	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Naphthalene	10	µg/l	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Phenanthrene	5	µg/l	0.05	U	**0.037**	J	**0.023**	J	0.05	U	**0.022**	J
Pyrene	4.6	µg/l	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U

General Notes:
FS - field sample
FD - field duplicate
NS - No Standard Specified
µg/L - micrograms per liter (ppb)
Bold = Detected in sample below criteria value
AWQC = Ambient Water Quality Criteria

Qualifiers:
U - analyzed but not detected
J - estimated value

Table 3 - Polycyclic Aromatic Hydrocarbons in Groundwater

		Location	MW-104		OBS-BB05		OBS-BB05		PZ-301	
		Lab SDG	480-172858-1		480-172858-1		480-172858-1		480-172858-1	
		Sample Date	7/20/2020		7/20/2020		7/20/2020		7/20/2020	
		Sample ID	MW-104		OBS-BB05		OBS-BB05D		PZ-301	
		Qc Code	FS		FS		FD		FS	
Parameter	**GA/GV**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acenaphthene	20	µg/l	**96**		**18**		**15**		0.05	U
Acenaphthylene	NS	µg/l	**110**		**2**		**1.8**		0.05	U
Anthracene	50	µg/l	**12**		**3**		**2.8**		0.05	U
Benzo(a)anthracene	0.002	µg/l	**3.1**	**J+**	**0.81**	**J+**	**0.49**	**J**	0.05	U
Benzo(a)pyrene	NS	µg/l	5	U	1	U	1	U	0.05	U
Benzo(b)fluoranthene	0.002	µg/l	5	U	**0.6**	**J+**	1	U	0.05	U
Benzo(ghi)perylene	NS	µg/l	5	U	1	U	1	U	0.05	U
Benzo(k)fluoranthene	0.002	µg/l	5	U	1	U	1	U	0.05	U
Chrysene	0.002	µg/l	**3.5**	**J+**	**0.93**	**J+**	1	U	0.05	U
Dibenz(a,h)anthracene	NS	µg/l	5	U	1	U	1	U	0.05	U
Fluoranthene	50	µg/l	**6.2**	**J+**	**1.7**	**J+**	**1.4**		0.05	U
Fluorene	50	µg/l	**58**		**11**		**7.2**		0.05	U
Indeno(1,2,3-cd)pyrene	0.002	µg/l	5	U	1	U	1	U	0.05	U
Naphthalene	10	µg/l	**250**		**57**		**38**		0.2	U
Phenanthrene	5	µg/l	**53**		**8.1**		**6.2**		**0.024**	**J**
Pyrene	50	µg/l	**7.8**	**J+**	**2.4**	**J+**	**1.4**	**J-**	0.05	U

General Notes:
FS - field sample
FD - field duplicate
µg/L - micrograms per liter (ppb)
Bold = Detected in sample below criteria value

Qualifiers:
U - analyzed but not detected
J - estimated value
J+ - estimated value, biased high

ATTACHMENT 1

Site Inspection Form

Attachment 1
Saranac Lake Gas Co., OU02 & OU03
Site Inspection Form

A. General Information

Inspector Name: **Kaitlyn Chick**
Inspection Date: **6/24/20 (Inspection), 7/20/20 (Sampling)**
Weather (AM/PM): **Sunny / Cloudy**
Purpose for Inspection: **First Quarer Site Managmeent Inspection**

Comments:

B. Brandy Brook (OU02)

OU02, Brandy Brook, extends from Pontiac Bay (culverted under Lake Flower Ave. and Slater Ave.) to OU01, or approximately 0.75 miles.

	No	Yes
1. Is there an increase in turbidity causing a visible contrast to natural conditions?	X	
2. Is there residue from oil and/or floating substances, visible oil film, or globules or grease?	X	
3. Are there any odors eminating from the brook?	X	
4. Are culverts free of debris/blockages?		X
5. Are there bare, dead or damaged vegetated areas along bank?		X
6. Is there any erosional damage to the banks?	X	
7. Has backfill (construction) sediment accumulated in any locations? If yes, photograph.	X	
8. Is there any evidence of damage to the RCM?	X	
9. Are monitoring points in the proper, upright position?		X
10. Insert the oil-water interface probe into each RCM monitoring stickup; is an interface observed? If yes, explain.	X	
11. Is any wildlife (terrestrial or aquatic) observed?		
12. Were any soil/sediment/water samples collected?		X
If so, what is the sample ID(s)?	SW-400 to 402, SD-400 to 402, PZ-301 MW-104, OBS-BB05	

Comments: (Please comment for each question answered "yes")
See photolog for damaged vegetated areas and sediment buildup. Seven trees require replanting.
No measurable DNAPL in observation points, one (OBS-BB05) had a slight sheen and odor.

C. Pontiac Bay (OU03)

Pontiac Bay is located in the northeastern portion of Lake Flower and encompasses the area east of the Lake Flower Boat Launch to the Brandy Brook culvert and south of the Lake Flower Boat Launch to the Fogarty's Lake Flower Marina.

	No	Yes
1. Is there an increase in turbidity causing a visible contrast to natural conditions?	X	
2. Is there residue from oil and/or floating substances, visible oil film, or globules or grease?	X	
3. Are there any odors eminating from the bay?	X	
4. Are there bare, dead or damaged vegetated areas along bank?		X
5. Is there any erosional damage to the banks?	X	
6. Is there any damage to structural retaining walls along banks?	X	
7. Is there visible damage to the Aquablok® barrier layer?	X	
8. Has any wildlife (terrestrial or aquatic) been observed?		X

Comments: (Please comment for each question answered "yes")
About 50% of live stakes sprouted. Fish and geese spotted in water. Sedimentation occuring at downstream end of culvert into Pontiac Bay, likely from winter road sand and other surface runnoff, does not appear to be backfill. Two trees along the southeastern bank of the Bay were dead.

D. Site Management Activities

Upon completion of the inspection the following should be checked for compliance with the SMP.

	No	Yes
1. Was confimation sampling conducted during this inspection?		X
2. Was a Health and Safety Inspection Conducted?		X
3. Are there any known missing site records?	X	

Comments: (Please comment for each question answered "yes")

Sediment, surface water and groundwater samples were collected on 7/20/20. No health and safety issues were observed.

	No	Yes
4. Are Engineering controls performing as designed?		X
5. Do EC/ICs continue to be protective of human health and the environment?		X
6. Is the remedial performance criteria being achieved?		X
7. Is the site in compliance with the requirements of the SMP?		X

Comments: (Please comment for each question answered "no")

Notes from last inspection: (Please review and comment)

NA - This is the first inspection

Kaitlyn J Chick — Inspector

6/24/20, revised 7/21/20 — Date

Jamie D Welch — Reviewer

11/6/2020 — Date

ATTACHMENT 2

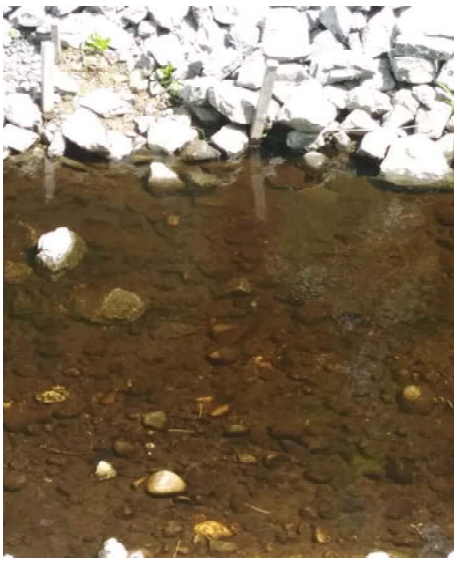
Photo Log

Attachment 2 Photo Log

Project Name **Saranac Lake Gas Co. OU02 OU03** 6/24/2020

Project Number **3617207500**

Brandy Brook near SD-400. Facing Southeast



Sediment at SD-401. Difficult to see fish

Dead tree in restoration area behind MW-104

Downstream end of railroad culvert

Dead vegetation along banks. Facing east

Brandy Brook at SD-402

Sheen and faint odor coming from well OBS-BB05

Debris at upsteam end of culvert entering Pontiac Bay

Sedimentation at downstream end of culvert entering Pontic Bay

Pontiac Bay. Several sprouted and unsprouted live stakes

Dying trees covered in christmas lights near hotel

Groundwater sampling at MW-104 on 7/20/20

ATTACHMENT 3

Restoration Checklist

Saranac Lake Gas Co., OU02 & OU03
Remedial Action Restoration and Inspection
ACOE Permt NAN-2017-00440-UDE

Restoration Completion

Backfill materials, plantings and installed features conform to specifications and plan details:
◆ Yes ❑ No
Notes: Backfill completed in 2018, plantings completed in 2019

Placement of subgrade backfill complete: ♦ Yes ❑ No
Notes: Complete in 2018

Placement of backfill complete: ♦ Yes ❑ No
Notes: Complete in 2018

Placement of stream bed complete: ♦ Yes ❑ No
Notes: Complete in 2018

Installation of fiber Roll complete: ♦ Yes ❑ No
Notes: Installed in 2018

Instream Structures:

- Two-Log Drop Structure: ♦ Yes ❑ No
  Location(s): Brandy Brook - See Record Drawings
- Fish Cribs: ♦ Yes ❑ No
  Location(s): Pontiac Bay – See Record Drawings
- Rock Piles: ♦ Yes ❑ No
  Location(s): Brandy Brook – See Record Drawings
- Log Deflector: ♦ Yes ❑ No
  Location(s): Brandy Brook - See Record Drawings
- Soil Choked Rip/Rap: ♦ Yes ❑ No
  Location(s): Banks of Pontiac Bay – See Record Drawings
- Tree Plantings: ♦ Yes ❑ No
  Notes/Locations: Brandy Brook Upland Area and Pontiac Bay Bank - See Record Drawings
- Shrub Plantings: ♦ Yes ❑ No
  Notes/Locations: Brandy Brook - See Record Drawings
- Driveway Culverts: ♦ Yes ❑ No
  Notes/Locations: Brandy Brook Road – See Record Drawings

Shore Treatment:

- Rock with soil and veg.: ♦ Yes ❑ No
  Length/Location: See Record Drawings
- Rip/Rap apron: ♦ Yes ❑ No
  Length/Location: See Record Drawings

- Bank Restoration: ♦ Yes❑ No
    - Soil Choked Rip/Rap: ♦ Yes ❑ No
    - Tree and Shrub Plantings: ♦ Yes ❑ No

  Notes:_____
  _____

Restoration Monitoring (Year 1):

The first-year monitoring event will occur after the Site has been through a full growing season following completion of the construction and planting. A growing season starts no later than May 31.

Information collected in each restored area will include the following:

- Condition of planted stock (i.e., number alive versus number dead),
- Number of planted stock and naturally-colonized (i.e., volunteer) woody plants,
- Plant vigor,
- Shrub and tree height range, and
- The presence of invasive species within the area or plot.

Observations of the type, quality, and integrity of the soil will be made in each of the restored riparian areas during each year of monitoring.

At least 95% of the tree and shrub species planted in the riparian zone are healthy and vigorous and showing signs of growth. ♦ Yes ❑ No
Notes: __9 trees (two on northwest bank of Pontiac bay, and 7 in OU02 tree planting area) were dead during the June Inspection. They were replaced in the remediation contractor in October 2020.

In the riparian area, the required number of non-exotic species including planted and volunteer species should be observed by Year 5. To count species as a volunteer, it must be well represented on the Site (i.e., greater than 50 individuals per acre). Volunteer species should support functions consistent with the design goals. ❑ Yes ♦ No
Notes: __Some signs of natural vegetation growth in riparian areas, no specifics species count has been conducted_____

Common reed (*Phragmites australis*), Purple loosestrife *(Lythrum salicaria*), Russian and Autumn olive (*Elaeagnus* spp.), Buckthorn (*Rhamnus* spp.), Japanese knotweed (*Polygonum cuspidatum*), and/or Multiflora rose (*Rosa multiflora*) plants at the restoration site are being controlled. ♦ Yes ❑ No
Notes: ___No specific controls in place to control invasive species, however they were not observed in restored areas_____

All slopes, soils, substrates, and constructed features within and adjacent to the restored Brook and Bay are stable. ♦ Yes ❑ No
Notes: ____No areas of concern noted_____

The horizontal brook channel location and associated banks are exhibiting a change of less than 0.5 feet per year in restored locations as measured from known fixed points. ♦ Yes ❑ No
Notes: ____No change noted, fiber rolls were still visible during the inspection which clearly mark the channel location_____

Meander survey conducted during site visits to assess the overall vegetative and hydrologic conditions in the restored brook and bordering wetland. The meander surveys will provide an opportunity to identify and implement needed corrective actions during the growing season. These surveys will involve walking random routes throughout the restoration areas to identify problems such as significant plant mortality, erosion, and insufficient hydrology: ♦ Yes ❑ No
Notes: ___No problems noted_____

Data on general wildlife use collected during each site visit during meander surveys. Actual wildlife sightings and observed signs will be recorded by species and presented in a list for general year-to-year comparisons. ♦ Yes ❑ No
Notes: _____fish (both in the brook and bay) and geese (bay and on shore) observed during the inspection_____

Representative photographs of the restored areas taken from established points to allow yearly comparisons of vegetative cover and hydrologic conditions. ♦ Yes ❑ No
Notes: _____

Annual Monitoring Reports:

An Annual Monitoring Report shall be prepared following each year of monitoring. The purpose of this report will be to document the results of monitoring, document progress of the tributary and riparian area habitat development and identify any corrective actions that may be needed to obtain the performance standards.

Recommended remedial measures to achieve or maintain achievement of the success standards and otherwise improve the extent to which the restoration sites replace the functions and values lost because of project impacts.

Annual Monitoring Report prepared: ♦ Yes ❑ No
Notes: ____This form is an attachment to the annual report_____ _____

Recommendations for corrective action or remedial steps, such as replacing dead plantings, fertilizing plants to increase growth rate, re-seeding small areas or changes needed to hydrology or grading:
♦ Yes ❑ No
Notes: _____Replaced 9 dead trees in October 2020

General Notes/Observations: _____All excavation and backfilling activities were complete by December 2018. Final restoration activities including planting trees, plants, seeding, and residential driveway restorations were completed in May and June 2019. This annual inspection was completed one year after the planting of trees and shrubs. See Letter Report for additional information. ____
_____

ATTACHMENT 4

Sampling Records

FIELD INSTRUMENTATION CALIBRATION RECORD

PROJECT NAME: Saranac Lake OU1 RD
PROJECT NUMBER: 3611171237
PROJECT LOCATION: Saranac Lake, NY
WEATHER CONDITIONS (AM): Mostly cloudy, 71
WEATHER CONDITIONS (PM): Mostly cloudy, 81

TASK NO: .02 DATE: 7/20/2020
MACTEC CREW: Nate Vogan / Kaitlyn Chick
SAMPLER NAME: Nate Vogan
SAMPLER SIGNATURE: Kaitlyn J Chick
CHECKED BY: NWV DATE: 8/6/2020

MULTI-PARAMETER WATER QUALITY METER

METER TYPE: YSI
MODEL NO.: 556
UNIT ID NO.: M015-03

AM CALIBRATION Start Time 0800 /End Time 0830

POST CALIBRATION CHECK Start Time 1546 /End Time 1555

	Units	Standard Value	Meter Value	*Acceptance Criteria (AM)	Standard Value	Meter Value	*Acceptance Criteria (PM)
pH (4)	SU	4.0	4.20	+/- 0.1 pH Units			
pH (7)	SU	7.0	695	+/- 0.1 pH Units	7.0	6.96	+/- 0.3 pH Units
pH (10)	SU	10.0	NA	+/- 0.1 pH Units			
Redox	+/- mV	240	232.1	+/- 10 mV	240	237.9	+/- 10 mV
Conductivity	mS/cm	1.413	1.414	+/- 0.5 % of standard	1.413	1.419	+/- 5% of standard
DO (saturated)	%	100	NA	+/- 2% of standard			
DO (saturated)	mg/L[1] (see Chart 1)	NA	NA	+/- 0.2 mg/L	NA	NA	+/- 0.5 mg/L of standard
DO (<0.1)	mg/L	<0.1	NA	< 0.5 mg/L			
Temperature	°C		NA			NA	
Baro. Press.	mmHg		NA			NA	

TURBIDITY METER

METER TYPE: Hach
MODEL NO.: 2100Q
UNIT ID NO.: M024-26

	Units	Standard Value	Meter Value	Standard Value	Meter Value	*Acceptance Criteria (PM)
10 Standard	NTU	10	9.7	10	9.79	+/- 0.3 NTU of stan.
20 Standard	NTU	20	19.4	20	20.3	+/- 5% of standard
100 Standard	NTU	100	98.4	100	99.0	+/- 5% of standard
800 Standard	NTU	800	787	800	801	+/- 5% of standard

PHOTOIONIZATION DETECTOR

METER TYPE: MiniRae
MODEL NO.: 2000
UNIT ID NO.: M001-61

Background	ppmv	<0.1	0.0	<0.1	0.0	within 5 ppmv of BG
Span Gas	ppmv	100	100	100	99.2	+/- 10% of standard

O_2-LEL 4 GAS METER

METER TYPE:
MODEL NO.:
UNIT ID NO.:

Methane	%	50		50		+/- 10% of standard
O_2	%	20.9		20.9		+/- 10% of standard
H_2S	ppmv	25		25		+/- 10% of standard
CO	ppmv	50		50		+/- 10% of standard

OTHER METER

METER TYPE	PID	Background	ppmv	<0.1	0.0	<0.1	0.1	See Notes Below for Additional Information
MODEL NO.	MiniRae	Span Gas	ppmv	100	100	100	102	
UNIT ID NO.	2000							
	M001-59							

[X] Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.
[ ] Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above**.

MATERIALS RECORD

Deionized Water Source: Portland FOS
Lot#/Date Produced:
Trip Blank Source: Lab Provided
Sample Preservatives Source: Pre-preserved by Lab
Disposable Filter Type: 0.45µm cellulose
Calibration Fluids / Standard Source:
- DO Calibration Fluid (<0.1 mg/L) Portland FOS
- Other
- Other
- Other

	Cal. Standard Lot Number	Exp. Date
pH (4)		
pH (7)		
pH (10)	NA	NA
ORP		
Conductivity		
10 Turb. Stan.		
20 Turb. Stan.		
100 Turb. Stan.		
800 Turb. Stan.		
PID Span Gas		
O_2-LEL Span Gas	NA	NA
Other		

NOTES:

* = Unless otherwise noted, calibration procedures and acceptance criteria are in general accordance with USEPA Region 1 SOPs for Field Instrument Calibration (EQASOP-FieldCalibrat) and Low Stress Purging and Sampling (EQASOP-GW001), each dated 1/19/2010. Additonal acceptance criteria obtained from instrument specific manufacturer recommendations.
** = If meter reading is not within acceptance criteria, clean/replace probe and re-calibrate, or use calibrated back-up meter if available. If project requirements necessitate use of the instrument, clearly document any deviations from acceptance criteria on all data sheets and log book entries.
1 = DO Saturated standard value is calculated based on Oxygen Solubility at Indicated Pressure Chart from the USEPA Region 1 SOP for Field Instrument Calibration (EQASOP-FieldCalibrat), dated 1/19/2010.

MACTEC
511 Congress Street, Portland Maine 04101

FIGURE 6.1
FIELD INSTRUMENT CALIBRATION RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

SURFACE WATER AND SEDIMENT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Saranac Lake OU1 RD		SAMPLE LOCATION: SW/SD-400	DATE: 7/20/2020
PROJECT NUMBER: 3611171237		START TIME: 1100	END TIME: 1120
SAMPLE ID: SW-400 / SD-400	SAMPLE TIME: 11:10	SITE NAME/NUMBER: 516008	PAGE: 1 OF 1

SURFACE WATER DATA

WATER DEPTH AT SAMPLE LOCATION: 1.1 FT.
DEPTH OF SAMPLE BELOW WATER SURFACE: 0.55 FT.
FLOW RATE: 250 ML/MIN

WATER QUALITY PARAMETERS:

TEMPERATURE	21.57	°C
SPEC. COND.	0.126	mS/cm
PH	7.36	pH Units
ORP	-2.8	mV
TURBIDITY	5.54	NTUs
DO	6.36	mg/L

- [ ] WINKLER METHOD
- [X] DO PROBE

EQUIPMENT USED:
- [ ] BEAKER
- [ ] BOTTLE
- [ ] PACS BOMB
- [X] PUMP S008-35
- [ ] FILTER No. ____ Type: ____

- [ ] FIELD DUPLICATE COLLECTED
DUP. ID ____

TYPE OF SURFACE WATER:
- [X] STREAM
- [ ] RIVER
- [ ] LAKE
- [ ] POND
- [ ] SEEP
- [ ] ____

FIELD SKETCH SHOWN/ATTACHED
- [X] YES
- [ ] NO

DECON FLUIDS USED
- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL
- [ ] ____

SAMPLING EQUIPMENT

WATER QUALITY METER	MODEL NO.	556 MPS	UNIT ID NO.	M015-03
TURBIDITY METER	MODEL NO.	2100Q	UNIT ID NO.	M024-26

SEDIMENT AMPLE INFORMATION

TYPE OF SAMPLE
- [ ] DISCRETE
- [X] COMPOSITE

SAMPLE INTERVAL:
TOP 0
BOTTOM 0.2

QC SAMPLES
- [ ] DUPLICATE ____
- [ ] EQ BLK ____

MS/MSD:
- [ ] YES
- [X] NO

TYPE OF MATERIAL:
- [X] ORGANIC
- [X] SAND
- [ ] GRAVEL
- [ ] CLAY
- [ ] FILL
- [ ] OTHER____

COLLECTION EQUIPMENT
- [ ] HAND AUGER/CORER
- [ ] S.S. SPLIT BARREL
- [ ] ALUMINIUM PAN
- [ ] S.S. SHOVEL
- [X] HAND SPOON/SPATULA
- [ ] S.S. BUCKET
- [ ] OTHER ____

SAMPLE OBSERVATIONS

ODOR	None
COLOR	Brown
OTHER	
PID	

DECON FLUIDS USED
- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [X] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL

FIELD SKETCH SHOWN/ATTACHED
- [X] YES
- [ ] NO

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	PAHs	8270D	Ice	4oz	Y	N	SD-400
X	PAHs	8270D	Ice	500ML	Y	N	SW-400

NOTES/SKETCH

Sampler Signature: Kaitlyn J Chick
Print Name: Kaitlyn Chick
Checked By: NWV
Date: 8/7/2020

FIGURE 4.14
SURFACE WATER AND SEDIMENT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

SURFACE WATER AND SEDIMENT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Saranac Lake OU1 RD	
PROJECT NUMBER: 3611171237	
SAMPLE ID: SW-401 / SD-401	SAMPLE TIME: 1020

SAMPLE LOCATION: SW/SD-401	DATE: 7/20/2020
START TIME: 1010	END TIME: 1030
SITE NAME/NUMBER: 516008	PAGE: 1 OF 1

SURFACE WATER DATA

WATER DEPTH AT SAMPLE LOCATION: 0.5 FT.
DEPTH OF SAMPLE BELOW WATER SURFACE: 0.25 FT.
FLOW RATE: 250 ML/MIN

WATER QUALITY PARAMETERS:

TEMPERATURE	20.46	°C
SPEC. COND.	0.146	mS/cm
PH	7.28	pH Units
ORP	76.6	mV
TURBIDITY	3.41	NTUs
DO	6.50	mg/L

- [ ] WINKLER METHOD
- [X] DO PROBE

EQUIPMENT USED:

- [ ] BEAKER
- [ ] BOTTLE
- [ ] PACS BOMB
- [X] PUMP S008-35
- [ ] FILTER No. ____ Type: ____

- [X] FIELD DUPLICATE COLLECTED
DUP. ID: SW-401D

TYPE OF SURFACE WATER:

- [X] STREAM
- [ ] RIVER
- [ ] LAKE
- [ ] POND
- [ ] SEEP
- [ ] ____

FIELD SKETCH SHOWN/ATTACHED

- [X] YES
- [ ] NO

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL
- [ ] ____

SAMPLING EQUIPMENT

WATER QUALITY METER	MODEL NO.	556 MPS	UNIT ID NO.	M015-03
TURBIDITY METER	MODEL NO.	2100Q	UNIT ID NO.	M024-26

SEDIMENT AMPLE INFORMATION

TYPE OF SAMPLE

- [ ] DISCRETE
- [X] COMPOSITE

SAMPLE INTERVAL:
TOP 0
BOTTOM 0.2

QC SAMPLES

- [X] DUPLICATE SD-401D
- [ ] EQ BLK ____

MS/MSD:

- [ ] YES
- [X] NO

TYPE OF MATERIAL:

- [X] ORGANIC
- [X] SAND
- [ ] GRAVEL
- [ ] CLAY
- [ ] FILL
- [ ] OTHER____

COLLECTION EQUIPMENT

- [ ] HAND AUGER/CORER
- [ ] S.S. SPLIT BARREL
- [ ] ALUMINIUM PAN
- [ ] S.S. SHOVEL
- [X] HAND SPOON/SPATULA
- [ ] S.S. BUCKET
- [ ] OTHER ____

SAMPLE OBSERVATIONS

ODOR	None
COLOR	Brown
OTHER	
PID	

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [X] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL

FIELD SKETCH SHOWN/ATTACHED

- [X] YES
- [ ] NO

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	PAHs	8270D	Ice	4oz	Y	Dup	SD-401 / SD-401D
X	PAHs	8270D	Ice	500mL	Y	Dup	SW-401 / SW-401D

NOTES/SKETCH

Sampler Signature: Kaitlyn J Chick
Print Name: Kaitlyn Chick
Checked By: NWV
Date: 8/7/2020

FIGURE 4.14
SURFACE WATER AND SEDIMENT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

SURFACE WATER AND SEDIMENT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Saranac Lake OU1 RD		SAMPLE LOCATION: SW/SD-402	DATE: 7/20/2020
PROJECT NUMBER: 3611171237		START TIME: 0910	END TIME: 0925
SAMPLE ID: SW-402 / SD-402	SAMPLE TIME: 0915	SITE NAME/NUMBER: 516008	PAGE: 1 OF 1

SURFACE WATER DATA

WATER DEPTH AT SAMPLE LOCATION: 0.9 FT.
DEPTH OF SAMPLE BELOW WATER SURFACE: 0.5 FT.
FLOW RATE: 250 ML/MIN

WATER QUALITY PARAMETERS:

TEMPERATURE	20.96	°C
SPEC. COND.	0.152	mS/cm
PH	7.33	pH Units
ORP	60.6	mV
TURBIDITY	3.06	NTUs
DO	7.53	mg/L

- [ ] WINKLER METHOD
- [X] DO PROBE

EQUIPMENT USED:

- [ ] BEAKER
- [ ] BOTTLE
- [ ] PACS BOMB
- [X] PUMP S008-35
- [ ] FILTER No. ____ Type: ____

- [ ] FIELD DUPLICATE COLLECTED
DUP. ID ____

TYPE OF SURFACE WATER:

- [X] STREAM
- [ ] RIVER
- [ ] LAKE
- [ ] POND
- [ ] SEEP
- [ ] ____

FIELD SKETCH SHOWN/ATTACHED
- [X] YES
- [ ] NO

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL
- [ ] ____

SAMPLING EQUIPMENT

WATER QUALITY METER	MODEL NO.	556 MPS	UNIT ID NO.	M015-03
TURBIDITY METER	MODEL NO.	2100Q	UNIT ID NO.	M024-26

SEDIMENT AMPLE INFORMATION

TYPE OF SAMPLE

- [ ] DISCRETE
- [X] COMPOSITE

SAMPLE INTERVAL:
TOP 0
BOTTOM 0.2

QC SAMPLES

- [ ] DUPLICATE ____
- [ ] EQ BLK ____

MS/MSD:
- [ ] YES
- [X] NO

TYPE OF MATERIAL:

- [X] ORGANIC
- [X] SAND
- [ ] GRAVEL
- [ ] CLAY
- [ ] FILL
- [ ] OTHER____

COLLECTION EQUIPMENT

- [ ] HAND AUGER/CORER
- [ ] S.S. SPLIT BARREL
- [ ] ALUMINIUM PAN
- [ ] S.S. SHOVEL
- [X] HAND SPOON/SPATULA
- [ ] S.S. BUCKET
- [ ] OTHER ____

SAMPLE OBSERVATIONS

ODOR	None
COLOR	Brown
OTHER	
PID	

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [X] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL

FIELD SKETCH SHOWN/ATTACHED
- [X] YES
- [ ] NO

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	PAHs	8270D	Ice	4oz	Y	N	SD-402
X	PAHs	8270D	Ice	500mL	Y	N	SW-401

NOTES/SKETCH

Sampler Signature: Kaitlyn J Chick
Print Name: Kaitlyn Chick
Checked By: NWV
Date: 8/7/2020

FIGURE 4.14
SURFACE WATER AND SEDIMENT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

SURFACE WATER AND SEDIMENT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Saranac Lake OU1 RD	
PROJECT NUMBER: 3611171237	
SAMPLE ID: SW-403	SAMPLE TIME: 0845

SAMPLE LOCATION: SW-403	DATE: 7/20/2020
START TIME: 0840	END TIME: 0900
SITE NAME/NUMBER: 516008	PAGE: 1 OF 1

SURFACE WATER DATA

WATER DEPTH AT SAMPLE LOCATION: 1.2 FT.
DEPTH OF SAMPLE BELOW WATER SURFACE: 0.6 FT.
FLOW RATE: 250 ML/MIN

WATER QUALITY PARAMETERS:

TEMPERATURE	25.27	°C
SPEC. COND.	0.085	mS/cm
PH	7.16	pH Units
ORP	9.1	mV
TURBIDITY	2.29	NTUs
DO	6.15	mg/L

- [ ] WINKLER METHOD
- [X] DO PROBE

EQUIPMENT USED:

- [ ] BEAKER
- [ ] BOTTLE
- [ ] PACS BOMB
- [X] PUMP S008-35
- [ ] FILTER No. ____ Type: ____

- [ ] FIELD DUPLICATE COLLECTED
DUP. ID ____

TYPE OF SURFACE WATER:

- [X] STREAM
- [ ] RIVER
- [ ] LAKE
- [ ] POND
- [ ] SEEP
- [ ] ____

FIELD SKETCH SHOWN/ATTACHED

- [X] YES
- [ ] NO

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL
- [ ] ____

SAMPLING EQUIPMENT

WATER QUALITY METER	MODEL NO.	556 MPS	UNIT ID NO.	M015-03
TURBIDITY METER	MODEL NO.	2100Q	UNIT ID NO.	M024-26

SEDIMENT AMPLE INFORMATION

TYPE OF SAMPLE

- [ ] DISCRETE
- [ ] COMPOSITE

SAMPLE INTERVAL:
TOP ____
BOTTOM ____

COLLECTION EQUIPMENT

- [ ] HAND AUGER/CORER
- [ ] S.S. SPLIT BARREL
- [ ] ALUMINIUM PAN
- [ ] S.S. SHOVEL
- [ ] HAND SPOON/SPATULA
- [ ] S.S. BUCKET
- [ ] OTHER ____

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL

QC SAMPLES

- [ ] DUPLICATE ____
- [ ] EQ BLK ____

MS/MSD:

- [ ] YES
- [ ] NO

TYPE OF MATERIAL:

- [ ] ORGANIC
- [ ] SAND
- [ ] GRAVEL
- [ ] CLAY
- [ ] FILL
- [ ] OTHER____

SAMPLE OBSERVATIONS

ODOR ____
COLOR ____
OTHER ____
PID ____

FIELD SKETCH SHOWN/ATTACHED

- [ ] YES
- [ ] NO

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	PAHs	8270D	Ice	500mL	Y	N	SW-403

NOTES/SKETCH

Sampler Signature: Kaitlyn J Chick
Print Name: Kaitlyn Chick
Checked By: NWV
Date: 8/7/2020

FIGURE 4.14
SURFACE WATER AND SEDIMENT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME		LOCATION ID	DATE
Saranac Lake OU1 RD		MW-104	7/20/20
PROJECT NUMBER		**START TIME**	**END TIME**
3611171237		1210	1320
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
MW-104	1325	516008	1 OF 1

WELL DIAMETER (INCHES) 1

TUBING ID (INCHES) ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP) ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			✓
CASING	✓		
LOCKED		✓	
COLLAR	✓		

INITIAL DTW (BMP)	FT	**FINAL DTW (BMP)**	FT	**PROT. CASING STICKUP (AGS)**	FT	**TOC/TOR DIFFERENCE**	FT
WELL DEPTH (BMP)	FT	**SCREEN LENGTH**	5 FT	**PID AMBIENT AIR**	NA PPM	**REFILL TIMER SETTING**	NA SEC
WATER COLUMN	0.00 FT	**DRAWDOWN VOLUME** (initial DTW- final DTW X well diam. squared X 0.041)	0.00 GAL	**PID WELL MOUTH**	NA PPM	**DISCHARGE TIMER SETTING**	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.00 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	2.5 GAL	**DRAWDOWN/ TOTAL PURGED**	0.00	**PRESSURE TO PUMP**	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
FDR	readings	from	1210 - 1310	lost due to	deletion	of the first	FDR			
1310	6.93	150	12.66	5.70	5.70	1.11	3.77	-20.5		
1315	6.95	150	12.31	5.73	5.73	0.92	3.70	-20.9		
1320	6.95	150	12.28	5.76	5.76	0.78	3.91	-22.4		
1325	6.95	150	12.55	5.74	5.74	0.65	3.65	-22.2		
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])			13	5.74	5.7	0.7	3.7	-22		

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
✓ PERISTALTIC	✓ LIQUINOX	✓ SILICON TUBING	☐ S. STEEL PUMP MATERIAL	✓ WL METER
☐ SUBMERSIBLE	✓ DEIONIZED WATER	☐ TEFLON TUBING	☐ PVC PUMP MATERIAL	☐ PID
☐ BLADDER	✓ POTABLE WATER	☐ TEFLON LINED TUBING	☐ GEOPROBE SCREEN	✓ WQ METER N015-03
	☐ NITRIC ACID	☐ HDPE TUBING	☐ TEFLON BLADDER	✓ TURB. METER MO24-26
☐ WATTERA	☐ HEXANE	✓ LDPE TUBING	☐ OTHER	✓ PUMP
☐ OTHER	☐ METHANOL	☐ OTHER	☐ OTHER	☐ OTHER
☐ OTHER	☐ OTHER	☐ OTHER	☐ OTHER	☐ FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	PAHs - SVOCs	8270D	No	4C	500mL	y	n	MW-104

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	✓	
NO-PURGE METHOD UTILIZED		✓

NUMBER OF GALLONS GENERATED: 2.5

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: Kaitlyn J Chick Print Name: Kaitlyn Chick

Checked By: Nate Vogan Date: 8/5/20

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME		LOCATION ID	DATE
Saranac Lake OU1 RD		OBS-BB05	7/20/20
PROJECT NUMBER		**START TIME**	**END TIME**
3611171237		1535	1735
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
OBS-BB05	1735	516008	2 OF 2

WELL DIAMETER (INCHES) 4

TUBING ID (INCHES) ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP) ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING			✓
LOCKED			✓
COLLAR			✓

INITIAL DTW (BMP)	2.37 FT	**FINAL DTW (BMP)**	4.56 FT	**PROT. CASING STICKUP (AGS)**	NM FT	**TOC/TOR DIFFERENCE**	NA FT
WELL DEPTH (BMP)	6.69 FT	**SCREEN LENGTH**	5 FT	**PID AMBIENT AIR**	NM PPM	**REFILL TIMER SETTING**	NA SEC
WATER COLUMN	4.32 FT	**DRAWDOWN VOLUME** (initial DTW- final DTW X well diam. squared X 0.041)	-1.44 GAL	**PID WELL MOUTH**	NM PPM	**DISCHARGE TIMER SETTING**	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	2.83 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	6.2 GAL	**DRAWDOWN/ TOTAL PURGED**	-0.23	**PRESSURE TO PUMP**	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
16:45	4.52	200	16.81	0.374	6.24	1.87	14.6	-26.5	6.5	
16:50	4.57	200	16.71	0.390	6.25	1.60	12.1	-25.4	6.5	
16:55	4.58	200	16.68	0.406	6.23	1.98	12.9	-25.7	6.5	
17:00	4.60	200	16.52	0.427	6.19	1.25	13.5	-28.9	6.5	
17:05	4.62	200	16.40	0.450	6.23	1.09	12.3	-33.5	6.5	
17:10	4.58	200	16.45	0.475	6.18	1.05	11.4	-32.4	6.5	
17:15	4.55	200	16.51	0.494	6.20	1.01	11.5	-35.0	6.5	
17:20	4.53	200	16.39	0.507	6.20	0.98	9.49	-35.8	6.5	
17:25	4.59	200	16.39	0.516	6.21	0.91	11.3	-38.1	6.5	
17:30	4.56	200	16.33	0.527	6.25	0.80	10.8	-42.6	6.5	
17:35	4.56	200	16.42	0.537	6.36	0.75	7.89	-45.2	6.5	
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])			16	0.537	6.4	0.8	7.9	-45		

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☑ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☑ SILICON TUBING
- ☐ TEFLON TUBING
- ☐ TEFLON LINED TUBING
- ☐ HDPE TUBING
- ☑ LDPE TUBING
- ☐ OTHER
- ☐ OTHER

- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☑ WL METER
- ☐ PID
- ☑ WQ METER M015-03
- ☑ TURB. METER MO24-26
- ☑ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	PAHs - SVOCs	8270D	No	4C	500mL	Y	DUP	OBS-BB05
								OBS-BB05D

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	☑	☐
NO-PURGE METHOD UTILIZED	☐	☑

NUMBER OF GALLONS GENERATED: 6.2

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

2-Hr purge limit

Slight trends in ORP, PH, SPC. Well is a 4" ID screen that intersects the shallow water table.

Sampler Signature: Kaitlyn J Chick Print Name: Kaitlyn Chick

Checked By: NWV Date: 8/7/20

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME		LOCATION ID	DATE
Saranac Lake OU1 RD		OBS-BB05	7/20/20
PROJECT NUMBER		**START TIME**	**END TIME**
3611171237		1535	1740
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
OBS-BB05	1735	516008	2 OF 2

WELL DIAMETER (INCHES) 4

TUBING ID (INCHES) ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP) ☑ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING			✓
LOCKED			✓
COLLAR			✓

INITIAL DTW (BMP)	2.37 FT	**FINAL DTW (BMP)**	4.56 FT	**PROT. CASING STICKUP (AGS)**	NM FT	**TOC/TOR DIFFERENCE**	NA FT
WELL DEPTH (BMP)	6.69 FT	**SCREEN LENGTH**	5 FT	**PID AMBIENT AIR**	NM PPM	**REFILL TIMER SETTING**	NA SEC
WATER COLUMN	4.32 FT	**DRAWDOWN VOLUME** (initial DTW- final DTW X well diam. squared X 0.041)	-1.44 GAL	**PID WELL MOUTH**	NM PPM	**DISCHARGE TIMER SETTING**	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	2.83 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	6.2 GAL	**DRAWDOWN/ TOTAL PURGED**	-0.23	**PRESSURE TO PUMP**	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
15:50	2.76	200	16.82	0.169	6.12	8.35	29.3	-7.4	6.5	
15:55	3.18	200	16.50	0.171	6.07	4.27	21.9	-12.3	6.5	
16:00	3.50	200	16.49	0.186	6.10	1.2	16.5	-21.1	6.5	
16:05	3.77	200	16.62	0.194	6.12	2.13	19.1	-21.3	6.5	
16:10	3.96	200	16.81	0.213	6.13	1.31	15.9	-23.3	6.5	
16:15	4.10	200	16.91	0.235	6.16	1.71	15.7	-21.6	6.5	
16:20	4.18	200	17.07	0.245	6.11	1.69	17.4	-18.0	6.5	
16:25	4.30	200	17.34	0.284	6.19	1.82	16.8	-18.3	6.5	
16:30	4.36	200	17.36	0.311	6.19	1.58	17.0	-21.2	6.5	
16:35	4.40	200	17.26	0.330	6.24	1.55	14.1	-22.1	6.5	
16:40	NM	200	17.09	0.354	6.23	1.64	12.6	-23.6	6.5	
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])										
			16	0.537	6.4	0.8	7.9	-45		

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
✓ PERISTALTIC	✓ LIQUINOX	✓ SILICON TUBING	☐ S. STEEL PUMP MATERIAL	✓ WL METER
☐ SUBMERSIBLE	✓ DEIONIZED WATER	☐ TEFLON TUBING	☐ PVC PUMP MATERIAL	☐ PID
☐ BLADDER	✓ POTABLE WATER	☐ TEFLON LINED TUBING	☐ GEOPROBE SCREEN	✓ WQ METER M015-03
	☐ NITRIC ACID	☐ HDPE TUBING	☐ TEFLON BLADDER	✓ TURB. METER M024-26
☐ WATTERA	☐ HEXANE	✓ LDPE TUBING	☐ OTHER	✓ PUMP
☐ OTHER	☐ METHANOL	☐ OTHER	☐ OTHER	☐ OTHER
☐ OTHER	☐ OTHER	☐ OTHER	☐ OTHER	☐ FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
✓	PAHs - SVOCs	8270D	No	4C	500mL	Y	Dup	OBS-BB05
								OBS-BB05D

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES ☑ NO ☐
NO-PURGE METHOD UTILIZED: YES ☐ NO ☑
NUMBER OF GALLONS GENERATED: 6.2
If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

2-Hr purge limit

Slight trends in ORP, PH, SPC. Well is a 4" ID screen that intersects the shallow water table.

Sampler Signature: Kaitlyn J Chick Print Name: Kaitlyn Chick

Checked By: NWV Date: 8/7/20

MACTEC
511 Congress Street, Portland Maine 04101

ATTACHMENT 5

Data Usability Report

DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

1.0 INTRODUCTION

Soil, sediment, surface water, and groundwater samples were collected in July 2020 at the Saranac Lake Site (Site) in Saranac Lake, New York, and shipped to TestAmerica Buffalo Laboratory (TAL) located in Amherst, New York for analysis. Samples were analyzed by one or more of the following United States Environmental Protections Agency (USEPA) methods:

- Volatile Organic Compounds (VOCs) by Method 8260C
- Semivolatile Organic Compounds (SVOCs) by Method 8270D
- Percent Moisture and Percent Solids by Method 2216

Results were reported in the following sample delivery groups (SDGs):

- 480-172858-1
- 480-172916-1

A Data Usability Summary Report (DUSR) review was completed based on the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation guidance (NYSDEC, 2010). Sample event information included in this DUSR is presented in the following Tables:

- Table 1 – Summary of Samples and Analytical Methods
- Table 2 – Summary of Analytical Results
- Table 3 – Summary of Qualification Actions.

A summary of table notes applicable to Tables 1, 2, and 3 is presented just before Table 1.

Laboratory deliverables included:

- Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

The DUSR review included the following evaluations as applicable. A table of the project control limits is presented in Attachment A. Applicable laboratory QC summary forms are included in Attachment B to document QC outliers associated with qualification actions.

- Lab Report Narrative Review
- Data Package Completeness and COC records (Table 1 verification)
- Sample Preservation and Holding Times
- QC Blanks
- Laboratory Control Samples (LCS)
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)

- Surrogates (as applicable)
- Reporting Limits
- Electronic Data Qualification and Verification

Data qualification actions are applied when necessary based on general procedures in USEPA validation guidelines (USEPA, 2010; USEPA, 2014) and the judgment of the project chemist. The following laboratory data qualifiers or data review qualifiers are used in the final data presentation:

U = target analyte is not detected at or above the reporting limit
J = concentration is estimated
J- = concentration is estimated, biased low
J+ = concentration is estimated, biased high

Results are interpreted to be usable as reported by the laboratory or as qualified in the following section.

2.0 POTENTIAL DATA LIMITATIONS

Based on the DUSR review the majority of data meet the data quality objectives; however, the following potential limitations were identified:

SVOCs by 8270D

MS/MSD analyses were requested on the chain of custody for aqueous samples SW-401, SW-401D, OBS-BB05, and OBS-BB05D. Insufficient sample volumes were provided to the laboratory for MS/MSD preparation and the analyses for MS/MSD were not performed on these samples. MS/MSD analyses were performed using solid samples 516008-SB92308 and SD-401 as requested on the chain of custody.

The measured percent differences of fluoranthene, pyrene, benzo[a]anthracene, chrysene, and benzo[b]fluoranthene in the continuing calibration verification (CCV) associated with samples MW-104 and OBS-BB05 were greater than the upper QC acceptance limit of 20. Fluoranthene, pyrene, benzo[a]anthracene, chrysene, and benzo[b]fluoranthene detections in samples MW-104 and/or OBS-BB05 were qualified as estimated (J+) and may represent potential high biases. Benzo[b]fluoranthene was not detected in sample MW-104 and was not qualified. The qualified results are included in Table 3 with reason code CCV%D.

The measured percent difference for pyrene in the continuing calibration verification (CCV) associated with sample OBS-BB05D was below the lower QC acceptance limit of 20. The pyrene detection in sample OBS-BB05D was qualified as estimated (J-) and may represent a potential low bias. The qualified result is included in Table 3 with reason code CCV%D.

3.0 ADDITIONAL QC EXCEEDANCES AND OBSERVATIONS

Sample SW-400 was erroneously not listed on the COC. The laboratory logged in sample SW-400 upon receiving the sample bottles and the correct analysis was performed.

The following samples were analyzed at dilutions due to high concentrations of target analytes and/or sample matrix, affecting reporting limits for non-detect results. Elevated reporting limits were reported for:

VOCs – 516008-SB92404 (4X)
516008-SB92505 (4X)
516008-SB92505 DUP (4X)
516008-SB93006 (4X)
516008-SB93106 (4X)

SVOCs – SD-400 (10X)
SD-401 (5X)
SD-401D (5X)
SD-402 (5X)
MW-104 (100X)
OBS-BB05 (20X)
OBS-BB05D (20X)

There were no additional observations or quality control exceedances not specifically addressed above (Section 2.0) or included in Table 3. Unless presented in Table 3, sample results are interpreted to be usable as reported by the laboratory.

Reference:

NYSDEC, 2005. "Analytical Services Protocols"; July 2005.

USEPA, 2010. "Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D"; HW-22, Revision 5; USEPA Region II Hazardous Waste Support Branch; December 2010.

United States Environmental Protection Agency (USEPA), 2014. "Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B and 8260C"; HW-24, Revision 4; USEPA Region II Hazardous Waste Support Section; September 2014.

Data Validator: Madison Dinsmore

Date: 09/22/2020

Reviewed by: Julie Ricardi

Date: 09/25/2020

Standard Table Notes:

Sample Type (QC Code)

FS – field sample

FD – field duplicate

TB – trip blank

EB – equipment blank

FB – field blank

Matrix

GW – ground water

BW – blank water

TW – tap water

SV – soil vapor

SED - sediment

Units

mg/L – milligrams per liter

ng/L – nanograms per liter

µg/L – micrograms per liter

mg/kg – milligrams per kilogram

µg/kg – micrograms per kilogram

µg/m^3 – micrograms per cubic meter

Qualifiers

U – not detected above quantitation limit

J – estimated quantity

J+ - estimated quantity, biased high

J- - estimated quantity, biased low

R – data unusable

Fraction

T – total

D – dissolved

N – normal

Qualification Reason Codes

BL1 – method blank qualifier

BL2 – field or trip blank qualifier

CCV – continuing calibration verification recovery outside limits

CCV%D – continuing calibration verification percent difference exceeds goal

CCVRRF – continuing calibration relative response factor low

CI – chromatographic interference present

DCPD – dual column percent difference exceeds limit

E – result exceeds calibration range

FD – field duplicate precision goal exceeded

FP – false positive interference

HT – holding time for prep or analysis exceeded

HTG – holding time for prep or analysis grossly exceeded

ICV – initial calibration verification recovery outside limit

ICVRRF – initial calibration verification relative response factor low

ICVRSD – initial calibration verification % relative standard deviation exceeds goal

ISH – internal standard response greater than limit

ISL – internal standard response less than limit

LCSH – laboratory control sample recovery high

LCSL – laboratory control sample recovery low

LCSRPD – laboratory control sample/duplicate relative % difference precision goal exceeded

LD – lab duplicate precision goal exceeded

MSH – matrix spike and/or MS duplicate recovery high

MSL – matrix spike and/or MS duplicate recovery low

MSRPD – matrix spike/duplicate relative % difference precision goal exceeded

N – analyte identification is not certain

PEM – performance evaluation mixture exceeds limit

PM – sample percent moisture exceeds EPA guideline

SD – serial dilution result exceeds percent difference limit

SP – sample preservation/collection does not meet method requirement

SSH – surrogate recovery high

SSL – surrogate recovery low

TD – dissolved concentration exceeds total

TABLE 1 - SUMMARY OF SAMPLES AND ANALYTICAL METHODS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

					Analysis Method	SW8270D	D2216	SW8260C
					Method Class	SVOC	Moisture	VOC
					Fraction	N	N	N
Lab SDG	**Location**	**Sample ID**	**Sample Date**	**Media**	**Qc Code**	Param Count	Param Count	Param Count
480-172916-1	QC	TRIP BLANK-01	7/21/2020	BW	TB			7
480-172916-1	QC	TRIP BLANK-02	7/24/2020	BW	TB			7
480-172916-1	SB-901	516008-SB90105	7/21/2020	SOIL	FS	16	2	7
480-172916-1	SB-903	516008-SB90304	7/21/2020	SOIL	FS	16	2	7
480-172916-1	SB-905	516008-SB90506	7/21/2020	SOIL	FS	16	2	7
480-172916-1	SB-906	516008-SB90605	7/21/2020	SOIL	FS	16	2	7
480-172916-1	SB-909	516008-SB90907	7/21/2020	SOIL	FS	16	2	7
480-172916-1	SB-910	516008-SB91006	7/21/2020	SOIL	FS	16	2	7
480-172916-1	SB-911	516008-SB91105	7/21/2020	SOIL	FS	16	2	7
480-172916-1	SB-912	516008-SB91207	7/22/2020	SOIL	FS	16	2	7
480-172916-1	SB-915	516008-SB91509	7/22/2020	SOIL	FS	16	2	7
480-172916-1	SB-916	516008-SB91610	7/22/2020	SOIL	FS	16	2	7
480-172916-1	SB-917	516008-SB91710	7/22/2020	SOIL	FS	16	2	7
480-172916-1	SB-919	516008-SB91910	7/22/2020	SOIL	FS	16	2	7
480-172916-1	SB-920	516008-SB92011	7/23/2020	SOIL	FS	16	2	7
480-172916-1	SB-923	516008-SB92308	7/23/2020	SOIL	FS	16	2	7
480-172916-1	SB-924	516008-SB92404	7/23/2020	SOIL	FS	16	2	7
480-172916-1	SB-925	516008-SB92505	7/23/2020	SOIL	FS	16	2	7
480-172916-1	SB-925	516008-SB92505 DUP	7/23/2020	SOIL	FD	16	2	7
480-172916-1	SB-926	516008-SB92605	7/23/2020	SOIL	FS	16	2	7
480-172916-1	SB-929	516008-SB92906	7/24/2020	SOIL	FS	16	2	7
480-172916-1	SB-930	516008-SB93006	7/24/2020	SOIL	FS	16	2	7
480-172916-1	SB-931	516008-SB93106	7/24/2020	SOIL	FS	16	2	7
480-172916-1	SD-400	SD-400	7/20/2020	SED	FS	16	2	
480-172916-1	SD-401	SD-401	7/20/2020	SED	FS	16	2	
480-172916-1	SD-401D	SD-401D	7/20/2020	SED	FD	16	2	
480-172916-1	SD-402	SD-402	7/20/2020	SED	FS	16	2	

Created by: KMS 8/28/2020
Checked by: MAD 9/22/2020

TABLE 1 - SUMMARY OF SAMPLES AND ANALYTICAL METHODS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

					Analysis Method	SW8270D-SIM
					Method Class	SVOCs
					Fraction	N
Lab SDG	**Location**	**Sample ID**	**Sample Date**	**Media**	**Qc Code**	Param Count
480-172858-1	MW-104	MW-104	7/21/2020	GW	FS	16
480-172858-1	OBS-BB05	OBS-BB05	7/21/2020	GW	FS	16
480-172858-1	OBS-BB05D	OBS-BB05D	7/21/2020	GW	FD	16
480-172858-1	PZ-301	PZ-301	7/21/2020	GW	FS	16
480-172858-1	SW-400	SW-400	7/20/2020	SW	FS	16
480-172858-1	SW-401	SW-401	7/21/2020	SW	FS	16
480-172858-1	SW-401D	SW-401D	7/21/2020	SW	FD	16
480-172858-1	SW-402	SW-402	7/21/2020	SW	FS	16
480-172858-1	SW-403	SW-403	7/21/2020	SW	FS	16

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	MW-104		OBS-BB05		OBS-BB05		PZ-301	
			Lab SDG	480-172858-1		480-172858-1		480-172858-1		480-172858-1	
			Sample Date	7/21/2020 13:25		7/21/2020 17:35		7/21/2020 17:35		7/21/2020 15:15	
			Sample ID	MW-104		OBS-BB05		OBS-BB05D		PZ-301	
			Qc Code	FS		FS		FD		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D-SIM	N	Acenaphthene	ug/l	96		18		15		0.05	U
SW8270D-SIM	N	Acenaphthylene	ug/l	110		2		1.8		0.05	U
SW8270D-SIM	N	Anthracene	ug/l	12		3		2.8		0.05	U
SW8270D-SIM	N	Benzo(a)anthracene	ug/l	3.1	J+	0.81	J+	0.49	J	0.05	U
SW8270D-SIM	N	Benzo(a)pyrene	ug/l	5	U	1	U	1	U	0.05	U
SW8270D-SIM	N	Benzo(b)fluoranthene	ug/l	5	U	0.6	J+	1	U	0.05	U
SW8270D-SIM	N	Benzo(ghi)perylene	ug/l	5	U	1	U	1	U	0.05	U
SW8270D-SIM	N	Benzo(k)fluoranthene	ug/l	5	U	1	U	1	U	0.05	U
SW8270D-SIM	N	Chrysene	ug/l	3.5	J+	0.93	J+	1	U	0.05	U
SW8270D-SIM	N	Dibenz(a,h)anthracene	ug/l	5	U	1	U	1	U	0.05	U
SW8270D-SIM	N	Fluoranthene	ug/l	6.2	J+	1.7	J+	1.4		0.05	U
SW8270D-SIM	N	Fluorene	ug/l	58		11		7.2		0.05	U
SW8270D-SIM	N	Indeno(1,2,3-cd)pyrene	ug/l	5	U	1	U	1	U	0.05	U
SW8270D-SIM	N	Naphthalene	ug/l	250		57		38		0.2	U
SW8270D-SIM	N	Phenanthrene	ug/l	53		8.1		6.2		0.024	J
SW8270D-SIM	N	Pyrene	ug/l	7.8	J+	2.4	J+	1.4	J-	0.05	U

Created By: KMS 09/21/2020
Checked By: MAD 09/22/2020

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	SW-400		SW-401		SW-401		SW-402	
			Lab SDG	480-172858-1		480-172858-1		480-172858-1		480-172858-1	
			Sample Date	7/20/2020 11:10		7/21/2020 10:20		7/21/2020 10:20		7/21/2020 9:15	
			Sample ID	SW-400		SW-401		SW-401D		SW-402	
			Qc Code	FS		FS		FD		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D-SIM	N	Acenaphthene	ug/l	0.05	U	0.026	J	0.018	J	0.016	J
SW8270D-SIM	N	Acenaphthylene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Anthracene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Benzo(a)anthracene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Benzo(a)pyrene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Benzo(b)fluoranthene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Benzo(ghi)perylene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Benzo(k)fluoranthene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Chrysene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Dibenz(a,h)anthracene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Fluoranthene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Fluorene	ug/l	0.05	U	0.017	J	0.05	U	0.05	U
SW8270D-SIM	N	Indeno(1,2,3-cd)pyrene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
SW8270D-SIM	N	Naphthalene	ug/l	0.2	U	0.2	U	0.2	U	0.2	U
SW8270D-SIM	N	Phenanthrene	ug/l	0.05	U	0.037	J	0.023	J	0.05	U
SW8270D-SIM	N	Pyrene	ug/l	0.05	U	0.05	U	0.05	U	0.05	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	SW-403	
			Lab SDG	480-172858-1	
			Sample Date	7/21/2020 8:45	
			Sample ID	SW-403	
			Qc Code	FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier
SW8270D-SIM	N	Acenaphthene	ug/l	0.05	U
SW8270D-SIM	N	Acenaphthylene	ug/l	0.05	U
SW8270D-SIM	N	Anthracene	ug/l	0.05	U
SW8270D-SIM	N	Benzo(a)anthracene	ug/l	0.05	U
SW8270D-SIM	N	Benzo(a)pyrene	ug/l	0.05	U
SW8270D-SIM	N	Benzo(b)fluoranthene	ug/l	0.05	U
SW8270D-SIM	N	Benzo(ghi)perylene	ug/l	0.05	U
SW8270D-SIM	N	Benzo(k)fluoranthene	ug/l	0.05	U
SW8270D-SIM	N	Chrysene	ug/l	0.05	U
SW8270D-SIM	N	Dibenz(a,h)anthracene	ug/l	0.05	U
SW8270D-SIM	N	Fluoranthene	ug/l	0.05	U
SW8270D-SIM	N	Fluorene	ug/l	0.05	U
SW8270D-SIM	N	Indeno(1,2,3-cd)pyrene	ug/l	0.05	U
SW8270D-SIM	N	Naphthalene	ug/l	0.2	U
SW8270D-SIM	N	Phenanthrene	ug/l	0.022	J
SW8270D-SIM	N	Pyrene	ug/l	0.05	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	QC		QC		SB-901		SB-903	
			Lab SDG	480-172916-1		480-172916-1		480-172916-1		480-172916-1	
			Sample Date	7/21/2020 15:30		7/24/2020 12:30		7/21/2020 10:30		7/21/2020 11:00	
			Sample ID	TRIP BLANK-01		TRIP BLANK-02		516008-SB90105		516008-SB90304	
			Qc Code	TB		TB		FS		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	N	Benzene	ug/kg	50	U	50	U	51	U	85	U
SW8260C	N	Ethylbenzene	ug/kg	50	U	50	U	51	U	85	U
SW8260C	N	Toluene	ug/kg	50	U	50	U	51	U	85	U
SW8260C	N	Total BTEX	ug/kg	100	U	100	U	100	U	170	U
SW8260C	N	Xylene, o	ug/kg	50	U	50	U	51	U	85	U
SW8260C	N	Xylenes (m&p)	ug/kg	100	U	100	U	100	U	170	U
SW8260C	N	Xylenes, Total	ug/kg	100	U	100	U	100	U	170	U
SW8270D	N	Acenaphthene	ug/kg					200	U	260	U
SW8270D	N	Acenaphthylene	ug/kg					59	J	93	J
SW8270D	N	Anthracene	ug/kg					200	U	260	U
SW8270D	N	Benzo(a)anthracene	ug/kg					62	J	260	U
SW8270D	N	Benzo(a)pyrene	ug/kg					140	J	46	J
SW8270D	N	Benzo(b)fluoranthene	ug/kg					200		61	J
SW8270D	N	Benzo(ghi)perylene	ug/kg					220		89	J
SW8270D	N	Benzo(k)fluoranthene	ug/kg					67	J	260	U
SW8270D	N	Chrysene	ug/kg					100	J	260	U
SW8270D	N	Dibenz(a,h)anthracene	ug/kg					39	J	260	U
SW8270D	N	Fluoranthene	ug/kg					200	U	41	J
SW8270D	N	Fluorene	ug/kg					200	U	260	U
SW8270D	N	Indeno(1,2,3-cd)pyrene	ug/kg					160	J	49	J
SW8270D	N	Naphthalene	ug/kg					200	U	260	U
SW8270D	N	Phenanthrene	ug/kg					200	U	42	J
SW8270D	N	Pyrene	ug/kg					69	J	57	J
D2216	N	Percent Moisture	Percent					14		36.1	
D2216	N	Percent Solids	Percent					86		63.9	

Created By: KMS 09/21/2020
Checked By: MAD 09/22/2020

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	SB-905		SB-906		SB-909		SB-910	
			Lab SDG	480-172916-1		480-172916-1		480-172916-1		480-172916-1	
			Sample Date	7/21/2020 12:05		7/21/2020 13:05		7/21/2020 14:15		7/21/2020 14:45	
			Sample ID	516008-SB90506		516008-SB90605		516008-SB90907		516008-SB91006	
			Qc Code	FS		FS		FS		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	N	Benzene	ug/kg	75	U	74	U	230	U	57	U
SW8260C	N	Ethylbenzene	ug/kg	75	U	74	U	230	U	57	U
SW8260C	N	Toluene	ug/kg	75	U	74	U	230	U	57	U
SW8260C	N	Total BTEX	ug/kg	150	U	150	U	470	U	110	U
SW8260C	N	Xylene, o	ug/kg	75	U	74	U	230	U	57	U
SW8260C	N	Xylenes (m&p)	ug/kg	150	U	150	U	470	U	110	U
SW8260C	N	Xylenes, Total	ug/kg	150	U	150	U	470	U	110	U
SW8270D	N	Acenaphthene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Acenaphthylene	ug/kg	250	U	32	J	550	U	200	U
SW8270D	N	Anthracene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Benzo(a)anthracene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Benzo(a)pyrene	ug/kg	250	U	44	J	100	J	32	J
SW8270D	N	Benzo(b)fluoranthene	ug/kg	250	U	110	J	98	J	200	U
SW8270D	N	Benzo(ghi)perylene	ug/kg	250	U	140	J	95	J	66	J
SW8270D	N	Benzo(k)fluoranthene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Chrysene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Dibenz(a,h)anthracene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Fluoranthene	ug/kg	250	U	28	J	550	U	200	U
SW8270D	N	Fluorene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Indeno(1,2,3-cd)pyrene	ug/kg	250	U	85	J	68	J	41	J
SW8270D	N	Naphthalene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Phenanthrene	ug/kg	250	U	250	U	550	U	200	U
SW8270D	N	Pyrene	ug/kg	250	U	62	J	74	J	31	J
D2216	N	Percent Moisture	Percent	31.8		31.5		69.5		18.5	
D2216	N	Percent Solids	Percent	68.2		68.5		30.5		81.5	

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	SB-911		SB-912		SB-915		SB-916	
			Lab SDG	480-172916-1		480-172916-1		480-172916-1		480-172916-1	
			Sample Date	7/21/2020 15:00		7/22/2020 9:15		7/22/2020 11:30		7/22/2020 12:25	
			Sample ID	516008-SB91105		516008-SB91207		516008-SB91509		516008-SB91610	
			Qc Code	FS		FS		FS		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	N	Benzene	ug/kg	65	U	68	U	60	U	57	U
SW8260C	N	Ethylbenzene	ug/kg	65	U	68	U	60	U	57	U
SW8260C	N	Toluene	ug/kg	65	U	68	U	60	U	57	U
SW8260C	N	Total BTEX	ug/kg	130	U	140	U	120	U	110	U
SW8260C	N	Xylene, o	ug/kg	65	U	68	U	60	U	57	U
SW8260C	N	Xylenes (m&p)	ug/kg	130	U	140	U	120	U	110	U
SW8260C	N	Xylenes, Total	ug/kg	130	U	140	U	120	U	110	U
SW8270D	N	Acenaphthene	ug/kg	220	U	210	U	200	U	200	U
SW8270D	N	Acenaphthylene	ug/kg	220	U	210	U	49	J	580	
SW8270D	N	Anthracene	ug/kg	220	U	210	U	200	U	140	J
SW8270D	N	Benzo(a)anthracene	ug/kg	220	U	210	U	51	J	580	
SW8270D	N	Benzo(a)pyrene	ug/kg	220	U	210	U	82	J	1200	
SW8270D	N	Benzo(b)fluoranthene	ug/kg	220	U	210	U	72	J	1100	
SW8270D	N	Benzo(ghi)perylene	ug/kg	220	U	210	U	130	J	1500	
SW8270D	N	Benzo(k)fluoranthene	ug/kg	220	U	210	U	38	J	480	
SW8270D	N	Chrysene	ug/kg	220	U	210	U	63	J	870	
SW8270D	N	Dibenz(a,h)anthracene	ug/kg	220	U	210	U	200	U	270	
SW8270D	N	Fluoranthene	ug/kg	220	U	210	U	65	J	720	
SW8270D	N	Fluorene	ug/kg	220	U	210	U	200	U	45	J
SW8270D	N	Indeno(1,2,3-cd)pyrene	ug/kg	220	U	210	U	79	J	980	
SW8270D	N	Naphthalene	ug/kg	220	U	210	U	200	U	200	U
SW8270D	N	Phenanthrene	ug/kg	220	U	210	U	42	J	250	
SW8270D	N	Pyrene	ug/kg	220	U	210	U	120	J	1600	
D2216	N	Percent Moisture	Percent	23.4		18		17		15.3	
D2216	N	Percent Solids	Percent	76.6		82		83		84.7	

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	SB-917		SB-919		SB-920		SB-923	
			Lab SDG	480-172916-1		480-172916-1		480-172916-1		480-172916-1	
			Sample Date	7/22/2020 14:20		7/22/2020 16:05		7/23/2020 9:45		7/23/2020 11:40	
			Sample ID	516008-SB91710		516008-SB91910		516008-SB92011		516008-SB92308	
			Qc Code	FS		FS		FS		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	N	Benzene	ug/kg	62	U	44	U	53	U	55	U
SW8260C	N	Ethylbenzene	ug/kg	62	U	44	U	53	U	55	U
SW8260C	N	Toluene	ug/kg	62	U	44	U	53	U	55	U
SW8260C	N	Total BTEX	ug/kg	120	U	88	U	110	U	110	U
SW8260C	N	Xylene, o	ug/kg	62	U	44	U	53	U	55	U
SW8260C	N	Xylenes (m&p)	ug/kg	120	U	88	U	110	U	110	U
SW8260C	N	Xylenes, Total	ug/kg	120	U	88	U	110	U	110	U
SW8270D	N	Acenaphthene	ug/kg	200	U	180	U	190	U	190	U
SW8270D	N	Acenaphthylene	ug/kg	200	U	120	J	190	U	190	U
SW8270D	N	Anthracene	ug/kg	200	U	100	J	190	U	190	U
SW8270D	N	Benzo(a)anthracene	ug/kg	200	U	260		190	U	190	U
SW8270D	N	Benzo(a)pyrene	ug/kg	200	U	270		190	U	190	U
SW8270D	N	Benzo(b)fluoranthene	ug/kg	200	U	240		190	U	190	U
SW8270D	N	Benzo(ghi)perylene	ug/kg	200	U	270		190	U	190	U
SW8270D	N	Benzo(k)fluoranthene	ug/kg	200	U	110	J	190	U	190	U
SW8270D	N	Chrysene	ug/kg	200	U	280		190	U	190	U
SW8270D	N	Dibenz(a,h)anthracene	ug/kg	200	U	53	J	190	U	190	U
SW8270D	N	Fluoranthene	ug/kg	22	J	480		190	U	190	U
SW8270D	N	Fluorene	ug/kg	200	U	78	J	190	U	190	U
SW8270D	N	Indeno(1,2,3-cd)pyrene	ug/kg	200	U	180		190	U	190	U
SW8270D	N	Naphthalene	ug/kg	200	U	180	U	190	U	190	U
SW8270D	N	Phenanthrene	ug/kg	200	U	260		190	U	190	U
SW8270D	N	Pyrene	ug/kg	200	U	780		190	U	190	U
D2216	N	Percent Moisture	Percent	16.3		5		9.3		11.5	
D2216	N	Percent Solids	Percent	83.7		95		90.7		88.5	

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	SB-924		SB-925		SB-925		SB-926	
			Lab SDG	480-172916-1		480-172916-1		480-172916-1		480-172916-1	
			Sample Date	7/23/2020 13:00		7/23/2020 13:40		7/23/2020 13:40		7/23/2020 14:50	
			Sample ID	516008-SB92404		516008-SB92505		516008-SB92505 DUP		516008-SB92605	
			Qc Code	FS		FS		FD		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	N	Benzene	ug/kg	160	U	200	U	260	U	52	U
SW8260C	N	Ethylbenzene	ug/kg	72	J	120	J	260	U	52	U
SW8260C	N	Toluene	ug/kg	900		200	U	260	U	15	J
SW8260C	N	Total BTEX	ug/kg	1000		390	U	510	U	100	U
SW8260C	N	Xylene, o	ug/kg	27	J	28	J	260	U	52	U
SW8260C	N	Xylenes (m&p)	ug/kg	330	U	390	U	510	U	100	U
SW8260C	N	Xylenes, Total	ug/kg	330	U	390	U	510	U	100	U
SW8270D	N	Acenaphthene	ug/kg	180	U	170	U	200	U	190	U
SW8270D	N	Acenaphthylene	ug/kg	34	J	170	U	200	U	190	U
SW8270D	N	Anthracene	ug/kg	180	U	170	U	200	U	190	U
SW8270D	N	Benzo(a)anthracene	ug/kg	180	U	170	U	200	U	190	U
SW8270D	N	Benzo(a)pyrene	ug/kg	42	J	170	U	200	U	190	U
SW8270D	N	Benzo(b)fluoranthene	ug/kg	70	J	170	U	200	U	190	U
SW8270D	N	Benzo(ghi)perylene	ug/kg	77	J	170	U	200	U	190	U
SW8270D	N	Benzo(k)fluoranthene	ug/kg	34	J	170	U	200	U	190	U
SW8270D	N	Chrysene	ug/kg	180	U	170	U	200	U	190	U
SW8270D	N	Dibenz(a,h)anthracene	ug/kg	180	U	170	U	200	U	190	U
SW8270D	N	Fluoranthene	ug/kg	52	J	170	U	200	U	190	U
SW8270D	N	Fluorene	ug/kg	180	U	170	U	200	U	190	U
SW8270D	N	Indeno(1,2,3-cd)pyrene	ug/kg	53	J	170	U	200	U	190	U
SW8270D	N	Naphthalene	ug/kg	180	U	330		240		190	U
SW8270D	N	Phenanthrene	ug/kg	28	J	170	U	200	U	190	U
SW8270D	N	Pyrene	ug/kg	58	J	170	U	200	U	190	U
D2216	N	Percent Moisture	Percent	3.2		3.2		15.2		13.6	
D2216	N	Percent Solids	Percent	96.8		96.8		84.8		86.4	

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

		Location	SB-929		SB-930		SB-931		SD-400	
		Lab SDG	480-172916-1		480-172916-1		480-172916-1		480-172916-1	
		Sample Date	7/24/2020 9:00		7/24/2020 9:55		7/24/2020 11:00		7/20/2020 11:10	
		Sample ID	516008-SB92906		516008-SB93006		516008-SB93106		SD-400	
		Qc Code	FS		FS		FS		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	N	Benzene	ug/kg	58	U	300	U	380	U		
SW8260C	N	Ethylbenzene	ug/kg	58	U	300	U	380	U		
SW8260C	N	Toluene	ug/kg	58	U	300	U	380	U		
SW8260C	N	Total BTEX	ug/kg	120	U	610	U	760	U		
SW8260C	N	Xylene, o	ug/kg	58	U	300	U	380	U		
SW8260C	N	Xylenes (m&p)	ug/kg	120	U	610	U	760	U		
SW8260C	N	Xylenes, Total	ug/kg	120	U	610	U	760	U		
SW8270D	N	Acenaphthene	ug/kg	200	U	230	U	150	J	2600	U
SW8270D	N	Acenaphthylene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Anthracene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Benzo(a)anthracene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Benzo(a)pyrene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Benzo(b)fluoranthene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Benzo(ghi)perylene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Benzo(k)fluoranthene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Chrysene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Dibenz(a,h)anthracene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Fluoranthene	ug/kg	26	J	230	U	34	J	2600	U
SW8270D	N	Fluorene	ug/kg	200	U	230	U	130	J	2600	U
SW8270D	N	Indeno(1,2,3-cd)pyrene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Naphthalene	ug/kg	200	U	230	U	260	U	2600	U
SW8270D	N	Phenanthrene	ug/kg	200	U	230	U	220	J	2600	U
SW8270D	N	Pyrene	ug/kg	30	J	230	U	40	J	2600	U
D2216	N	Percent Moisture	Percent	17.2		28.6		35.5		35.5	
D2216	N	Percent Solids	Percent	82.8		71.4		64.5		64.5	

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

			Location	SD-401		SD-401		SD-402	
			Lab SDG	480-172916-1		480-172916-1		480-172916-1	
			Sample Date	7/20/2020 10:20		7/20/2020 10:20		7/20/2020 9:15	
			Sample ID	SD-401		SD-401D		SD-402	
			Qc Code	FS		FD		FS	
Analysis Method	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	N	Benzene	ug/kg						
SW8260C	N	Ethylbenzene	ug/kg						
SW8260C	N	Toluene	ug/kg						
SW8260C	N	Total BTEX	ug/kg						
SW8260C	N	Xylene, o	ug/kg						
SW8260C	N	Xylenes (m&p)	ug/kg						
SW8260C	N	Xylenes, Total	ug/kg						
SW8270D	N	Acenaphthene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Acenaphthylene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Anthracene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Benzo(a)anthracene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Benzo(a)pyrene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Benzo(b)fluoranthene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Benzo(ghi)perylene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Benzo(k)fluoranthene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Chrysene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Dibenz(a,h)anthracene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Fluoranthene	ug/kg	1800	U	920	U	170	J
SW8270D	N	Fluorene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Indeno(1,2,3-cd)pyrene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Naphthalene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Phenanthrene	ug/kg	1800	U	920	U	960	U
SW8270D	N	Pyrene	ug/kg	1800	U	920	U	150	J
D2216	N	Percent Moisture	Percent	8.7		9.3		11.8	
D2216	N	Percent Solids	Percent	91.3		90.7		88.2	

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

Lab SDG	Analysis Method	Location	Lab Sample ID	Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-172858-1	SW8270D-SIM	MW-104	480-172858-5	MW-104	Benzo(a)anthracene	3.1	J	3.1	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	MW-104	480-172858-5	MW-104	Chrysene	3.5	J	3.5	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	MW-104	480-172858-5	MW-104	Fluoranthene	6.2		6.2	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	MW-104	480-172858-5	MW-104	Pyrene	7.8		7.8	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	OBS-BB05	480-172858-7	OBS-BB05D	Pyrene	1.4		1.4	J-	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	OBS-BB05	480-172858-8	OBS-BB05	Benzo(a)anthracene	0.81	J	0.81	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	OBS-BB05	480-172858-8	OBS-BB05	Benzo(b)fluoranthene	0.6	J	0.6	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	OBS-BB05	480-172858-8	OBS-BB05	Chrysene	0.93	J	0.93	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	OBS-BB05	480-172858-8	OBS-BB05	Fluoranthene	1.7		1.7	J+	CCV%D	ug/l	TA-ED
480-172858-1	SW8270D-SIM	OBS-BB05	480-172858-8	OBS-BB05	Pyrene	2.4		2.4	J+	CCV%D	ug/l	TA-ED

Created By: KMS 09/21/2020
Checked By: MAD 09/22/2020

ATTACHMENT A
SUMMARY OF VALIDATION QC LIMITS FOR SURROGATES, SPIKES, AND DUPLICATES
BASED ON THE REGION 2 VALIDATION GUIDELINES

PARAMETER	QC TEST	ANALYTE	Soil (%R)	Soil (RPD)	WATER (%R)	Water (RPD)
Volatiles	Surrogate	All Surrogate Compounds	70 - 130		80 - 120	
	LCS	All Target Compounds	70 - 130		70 - 130	
	MS/MSD	All Target Compounds	70 - 130	35	70 - 130	20
	Field Duplicate	All Target Compounds		100		50
Semivolatiles	Surrogate	All BN Compounds	50 - 140		50 - 140	
		All Acid Compounds	30 - 140		30 - 140	
	LCS	All BN Compounds	50 - 140		50 - 140	
		All Acid Compounds	30 - 140		30 - 140	
	MS/MSD	All BN Compounds	50 - 140	35	50 - 140	20
		All Acid Compounds	30 - 140	35	30 - 140	20
	Field Duplicate	All Target Compounds		100		50

Notes:
LCS - Laboratory Control Sample
MS/MSD - Matrix spike/ Matrix Spike Duplicate
RPD = Relative percent difference
%R = percent recovery
QC Limits are based on USEPA Region II Data Validation Guidelines and Project QA/QC Objectives

DATA USABILITY SUMMARY REPORT
JULY 2020 SAMPLING EVENT
SARANAC LAKE SITE
SARANAC LAKE, NEW YORK

ATTACHMENT B

SVOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD

Project: Saranac Lake

Method: 8270D

Laboratory: TAL BUF **SDG(s):** 480-172916-1, 480-172858-1

Date: 8/28/20

Reviewer: Madison Dinsmore

Review Level [X] NYSDEC DUSR [ ] USEPA Region II Guideline

Check if Reviewed

1. [✓] **Case Narrative Review and COC/Data Package Completeness**
   Were problems noted? YES [✓] NO [ ]

   Are Field Sample IDs and Locations assigned correctly? YES [✓] NO [ ]

   Were all the samples on the COC analyzed for the requested analyses? YES [ ] NO [✓]

   Requested GW MS/MSDs no performed due to low sample volume. SW-400 not listed on COC - sample logged in and analyzed

2. [✓] **Holding time and Sample Collection**
   All samples were analyzed within the holding time. YES [✓] NO [ ]
   Soil: 14 days to extraction; 40 days to analysis. Water: 7 days to extraction, 40 days to analysis.

3. [✓] **QC Blanks**
   Are method blanks free of contamination? YES [✓] NO [ ]

   Are Rinse blanks free of contamination? YES [ ] NO [ ] NA [✓]

4. [✓] **Instrument Tuning – Data Package Narrative Review**
   Did the laboratory narrative identify any results that were not within method criteria?
   YES [ ] NO [✓]

   If yes, use professional judgment to evaluate data and qualify results if needed

5. [✓] **Instrument Calibration – Data Package Narrative Review**
   Did the laboratory narrative identify compounds that were not within criteria in the initial and/or continuing calibration standards? YES [✓] NO [ ]

   Initial Calibration %RSD = 15%
   Initial Avg RRF and Continuing RRF should be ≥ 0.05
   Continuing Calibration %D = 20%

   Did the laboratory qualify results based on initial or continuing calibration exceedances?
   YES [ ] NO [✓]

If yes to above, use professional judgment to evaluate data and qualify results if needed

Subset GW J-, J+, UJ CCV%D

6. ☑ **Internal Standards – Data Package Narrative Review**
(Area Limits = -50% to +100%, RTs within 30 seconds of daily CCAL standard (or ICAL mid-point if samples follow ICAL)

Did the laboratory narrative identify any sample internal standards that were not within criteria?
YES ☐ NO ☑

Did the laboratory qualify results based on internal standard exceedances? YES ☐ NO ☑
If yes to above, use professional judgment to evaluate data and qualify results if needed

7. ☑ **Surrogate Recovery** - Region II limits (water and soil limits: Base/Neutral 50-140%, Acid 30-140%).

Were all results within Region II limits? YES ☑ NO ☐
Were any recoveries <10% (Reject fraction compounds) YES ☐ NO ☑

127916 - no quals, see attached

8. ☑ **Matrix Spike** - Region II limits (water & soil: B/N 50-140%, Acid 30-140%, water RPD 20, soil RPD 35)
Were MS/MSDs submitted/analyzed? YES ☑ NO ☐

Were all results within the Region II limits? YES ☑ NO ☐ NA ☐

SD-401 - OK, SB92308 - OK Requested MS/MSDs on SDG 172858 not performed due to low sample volume - memo

9. ☑ **Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
Were Field Duplicates submitted/analyzed? YES ☑ NO ☐

Were all results within Region II limits? (soil RPD<100, water RPD<50) YES ☑ NO ☐ NA ☐

10. ☑ **Laboratory Control Sample Results** - Region II (Water & soil: B/N 50-140%, Acid 30-140%)
Were all results within Region II control limits? YES ☑ NO ☐

11. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES ☑ NO ☐

subset elevated RLs

12. ☑ **Raw Data Review and Calculation Checks**

13. ☑ **Electronic Data Review and Edits**
Does the EDD match the Form Is? YES ☑ NO ☐

14. ☑ **Tables and TIC Review**
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? YES ☑ NO ☐

Table 4 (TICs) Did lab report TICs? YES ☐ NO ☑

Surrogate Summary

Client: New York State D.E.C.
Job ID: 480-172916-1
Project/Site: Saranac Lake Gas Co. #516008

Method: 8260C - Volatile Organic Compounds by GC/MS

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

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(50-149)	(53-146)	(49-148)	(60-140)
480-172916-5	516008-SB90105	102	100	96	93
480-172916-6	516008-SB90304	103	97	96	92
480-172916-7	516008-SB90506	99	101	96	93
480-172916-8	516008-SB90605	101	103	96	92
480-172916-9	516008-SB90907	99	96	95	87
480-172916-10	516008-SB91006	102	99	96	88
480-172916-11	516008-SB91105	101	98	92	91
480-172916-12	TRIP BLANK-01	101	101	96	94
480-172916-13	516008-SB91207	104	101	95	93
480-172916-14	516008-SB91509	101	98	94	88
480-172916-15	516008-SB91610	100	98	93	90
480-172916-16	516008-SB91710	102	96	97	89
480-172916-17	516008-SB91910	102	98	95	89
480-172916-18	516008-SB92011	101	97	92	88
480-172916-19	516008-SB92308	103	100	96	89
480-172916-19 MS	516008-SB92308	100	98	94	92
480-172916-19 MSD	516008-SB92308	99	97	94	93
480-172916-20	516008-SB92404	103	96	96	90
480-172916-21	516008-SB92505	101	101	93	92
480-172916-22	516008-SB92505 DUP	100	102	93	97
480-172916-23	516008-SB92605	103	96	96	90
480-172916-24	516008-SB92906	103	100	95	93
480-172916-25	516008-SB93006	101	101	94	98
480-172916-26	516008-SB93106	101	98	98	95
480-172916-27	TRIP BLANK-02	100	96	94	89
LCS 480-542342/1-A	Lab Control Sample	100	96	97	96
LCS 480-542346/1-A	Lab Control Sample	100	99	97	100
MB 480-542342/2-A	Method Blank	101	97	96	93
MB 480-542346/2-A	Method Blank	100	98	95	93

Surrogate Legend

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

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

Region 2 Limits : B/N 50-140%, acid 30-140%

all recoveries inside region 2 limits

		Percent Surrogate Recovery (Acceptance Limits)					
		a TBP	bn FBP	a 2FP	a PHL	bn TPHd14	bn NBZ
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(54-120)	(79-130)	(53-120)
480-172916-1	SD-402	105	89	81	88	97	75
480-172916-2	SD-401	OK 47 X	75	63	71	86	79
480-172916-2 MS	SD-401	110	80	73	77	88	76
480-172916-2 MSD	SD-401	113	83	79	80	96	85
480-172916-3	SD-401D	90	85	74	86	98	81
480-172916-4	SD-400	86	82	58	76	94	69
480-172916-5	516008-SB90105	119	95	89	94	107	89
480-172916-6	516008-SB90304	OK 135 X	99	97	100	111	101

Surrogate Summary

Client: New York State D.E.C. Job ID: 480-172916-1
Project/Site: Saranac Lake Gas Co. #516008

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

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

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TBP (54-120)	FBP (60-120)	2FP (52-120)	PHL (54-120)	TPHd14 (79-130)	NBZ (53-120)		
480-172916-7	516008-SB90506	OK 121 X	94	99	98	107	95		
480-172916-8	516008-SB90605	96	74	69	73	87	73		
480-172916-9	516008-SB90907	ok 121 X	104	93	98	111	99		
480-172916-10	516008-SB91006	102	87	79	87	96	84		
480-172916-11	516008-SB91105	ok 122 X	97	89	92	117	94		
480-172916-13	516008-SB91207	119	94	92	95	112	96		
480-172916-14	516008-SB91509	110	82	86	91	99	81		
480-172916-15	516008-SB91610	115	94	88	96	102	90		
480-172916-16	516008-SB91710	ok 127 X	91	88	95	110	92		
480-172916-17	516008-SB91910	112	91	83	90	104	89		
480-172916-18	516008-SB92011	ok 122 X	84	81	85	109	87		
480-172916-19	516008-SB92308	95	85	76	82	100	77		
480-172916-19 MS	516008-SB92308	107	96	93	100	111	93		
480-172916-19 MSD	516008-SB92308	100	83	92	98	94	82		
480-172916-20	516008-SB92404	94	91	85	86	94	80		
480-172916-21	516008-SB92505	92	85	77	82	80	80		
480-172916-22	516008-SB92505 DUP	104	85	86	87	85	79		
480-172916-23	516008-SB92605	83	77	72	79	OK78 X	77		
480-172916-24	516008-SB92906	91	82	89	90	84	82		
480-172916-25	516008-SB93006	90	89	94	89	82	89		
480-172916-26	516008-SB93106	92	87	88	87	82	86		
LCS 480-543239/2-A	Lab Control Sample	ok 132 X	99	96	100	113	96		
LCS 480-543241/2-A	Lab Control Sample	106	96	94	101	107	96		
MB 480-543239/1-A	Method Blank	109	100	93	106	118	98		
MB 480-543241/1-A	Method Blank	66	75	72	76	87	73		

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
NBZ = Nitrobenzene-d5 (Surr)

Sample Summary

Client: New York State D.E.C.
Project/Site: Saranac Lake Gas Co. #516008

Job ID: 480-172858-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-172858-1	SW-403	Water	07/21/20 08:45	07/23/20 10:00	
480-172858-2	SW-402	Water	07/21/20 09:15	07/23/20 10:00	
480-172858-3	SW-401 MS/MSD	Water	07/21/20 10:20	07/23/20 10:00	
480-172858-4	SW-401D MS/MSD	Water	07/21/20 10:20	07/23/20 10:00	
480-172858-5	MW-104	Water	07/21/20 13:25	07/23/20 10:00	
480-172858-6	PZ-301	Water	07/21/20 15:15	07/23/20 10:00	
480-172858-7	OBS-BB05D	Water	07/21/20 17:35	07/23/20 10:00	
480-172858-8	OBS-BB05 MS/MSD	Water	07/21/20 17:35	07/23/20 10:00	
480-172858-9	SW-400	Water	07/20/20 11:10	07/23/20 10:00	

SW-400 not listed on COC - only listed on sublab COC

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-172858-1

Login Number: 172858 **List Source: Eurofins TestAmerica, Buffalo**
List Number: 1
Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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 sample IDs on the containers and the COC.	True	No: Received extra samples not listed on COC. SW-400 not listed on COC
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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	WOOD
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Job Narrative
480-172858-1

Comments
No additional comments.

Receipt
The samples were received on 7/23/2020 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7º C.

Receipt Exceptions
mem The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): SW-400 (480-172858-9)

GC/MS Semi VOA
Method 8270D SIM: The continuing calibration verification (CCV) analyzed in batch 460-711740 was outside the method criteria for the following analyte(s): Benzo[a]anthracene, Benzo[b]fluoranthene, Pyrene, Fluoranthene, Chrysene and Benzo[k]fluoranthene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.
see summary form
Method 8270D SIM: The continuing calibration verification (CCV) analyzed in batch 460-711601 was outside the method criteria for the following analyte(s): Benzo[g,h,i]perylene, Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. see summary form

mem Method 8270D SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (480-172858-5) and OBS-BB05 (480-172858-8). Elevated reporting limits (RLs) are provided.

Method 8270D SIM: The continuing calibration verification (CCV) analyzed in batch 460-711950 was outside the method criteria for the following analyte(s): Benzo[g,h,i]perylene, Dibenz(a,h)anthracene, Indeno[1,2,3-cd]pyrene and Pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. see summary form

mem Method 8270D SIM: The following sample was diluted to bring the concentration of target analytes within the calibration range: OBS-BB05D (480-172858-7). Elevated reporting limits (RLs) are provided.

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.

Surrogate Summary

Client: New York State D.E.C.
Project/Site: Saranac Lake Gas Co. #516008

Job ID: 480-172858-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	bn NBZ (41-144)	a TBP (40-140)	bn FBP (25-124)	
480-172858-1	SW-403	142	91	105	only one BN surr out - OK, no quals
480-172858-2	SW-402	83	48	63	
480-172858-3	SW-401	99	55	75	
480-172858-4	SW-401D	97	53	75	
480-172858-5	MW-104	124	83	103	
480-172858-6	PZ-301	114	65	84	
480-172858-7	OBS-BB05D	96	133	66	
480-172858-8	OBS-BB05	118	81	84	
480-172858-9	SW-400	85	51	63	
LCS 460-711518/2-A	Lab Control Sample	103	75	77	
LCSD 460-711518/3-A	Lab Control Sample Dup	104	55	80	
MB 460-711518/1-A	Method Blank	118	61	87	

Region II limits
BN 50-140%
Acid 30-140%

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-172858-1

SDG No.: associated with samples 1-4, 6, 9

Lab Sample ID: CCVIS 460-711601/2 Calibration Date: 07/26/2020 18:06

Instrument ID: CBNAMS13 Calib Start Date: 04/27/2020 11:46

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 04/27/2020 13:31

Lab File ID: C0107.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4448	0.5235		235	200	17.7	20.0
N-Nitrosodimethylamine	Ave	0.5662	0.6607		117	100	16.7	20.0
Bis(2-chloroethyl)ether	Ave	1.122	1.234	0.7000	22.0	20.0	9.9	20.0
Naphthalene	Ave	1.101	1.105	0.7000	20.1	20.0	0.4	20.0
Acenaphthylene	Ave	2.368	2.185	0.9000	18.5	20.0	-7.7	20.0
Acenaphthene	Ave	1.479	1.444	0.9000	19.5	20.0	-2.4	20.0
Fluorene	Ave	1.560	1.433	0.9000	18.4	20.0	-8.2	20.0
4,6-Dinitro-2-methylphenol	Qua		0.0320	0.0100	106	200	-47.1*	20.0
Hexachlorobenzene	Ave	0.3377	0.3306	0.1000	19.6	20.0	-2.1	20.0
Pentachlorophenol	Qua		0.1110	0.0500	78.7	100	-21.3*	20.0
Phenanthrene	Ave	1.278	1.222	0.7000	19.1	20.0	-4.4	20.0
Anthracene	Ave	1.155	1.090	0.7000	18.9	20.0	-5.6	20.0
Fluoranthene	Ave	1.317	1.084	0.6000	16.5	20.0	-17.7	20.0
Pyrene	Ave	1.987	1.985	0.6000	20.0	20.0	-0.0	20.0
Benzo[a]anthracene	Ave	1.460	1.370	0.8000	18.8	20.0	-6.2	20.0
Chrysene	Ave	1.596	1.545	0.7000	19.4	20.0	-3.2	20.0
Benzo[b]fluoranthene	Ave	1.549	1.302		16.8	20.0	-15.9	20.0
Benzo[k]fluoranthene	Ave	1.710	1.511	0.7000	17.7	20.0	-11.7	20.0
Benzo[a]pyrene	Ave	1.349	1.220	0.7000	18.1	20.0	-9.5	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.159	1.507	0.5000	26.0	20.0	30.0*	20.0
Dibenz(a,h)anthracene	Ave	1.199	1.452	0.4000	24.2	20.0	21.1*	20.0
Benzo[g,h,i]perylene	Ave	1.266	1.593	0.5000	25.2	20.0	25.9*	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3412	0.3724		437	400	9.1	20.0
2-Fluorobiphenyl	Ave	1.926	2.090		434	400	8.5	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2955	0.1628		220	400	-44.9*	20.0
Terphenyl-d14	Ave	0.9481	1.010		426	400	6.5	20.0

high bias in CCV - ND in field samples
no impat - no qual

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-172858-1

SDG No.: associated with samples 5, 8

Lab Sample ID: CCVIS 460-711740/2 Calibration Date: 07/27/2020 12:47

Instrument ID: CBNAMS13 Calib Start Date: 04/27/2020 11:46

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 04/27/2020 13:31

Lab File ID: C0140.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4448	0.4936		222	200	11.0	20.0
N-Nitrosodimethylamine	Ave	0.5662	0.6242		110	100	10.2	20.0
Bis(2-chloroethyl)ether	Ave	1.122	1.167	0.7000	20.8	20.0	4.0	20.0
Naphthalene	Ave	1.101	1.102	0.7000	20.0	20.0	0.0	20.0
Acenaphthylene	Ave	2.368	2.262	0.9000	19.1	20.0	-4.5	20.0
Acenaphthene	Ave	1.479	1.438	0.9000	19.5	20.0	-2.7	20.0
Fluorene	Ave	1.560	1.575	0.9000	20.2	20.0	1.0	20.0
4,6-Dinitro-2-methylphenol	Qua		0.0532	0.0100	162	200	-18.9	20.0
Hexachlorobenzene	Ave	0.3377	0.2594	0.1000	15.4	20.0	-23.2*	20.0
Pentachlorophenol	Qua		0.1092	0.0500	77.5	100	-22.5*	20.0
Phenanthrene	Ave	1.278	1.515	0.7000	23.7	20.0	18.5	20.0
Anthracene	Ave	1.155	1.289	0.7000	22.3	20.0	11.6	20.0
Fluoranthene J+ CCV%D	Ave	1.317	2.732	0.6000	41.5	20.0	107.4*	20.0
Pyrene J+ CCV%D	Ave	1.987	3.132	0.6000	31.5	20.0	57.6*	20.0
Benzo[a]anthracene J+ CCV%D	Ave	1.460	2.306	0.8000	31.6	20.0	57.9*	20.0
Chrysene J+ CCV%D	Ave	1.596	2.723	0.7000	34.1	20.0	70.6*	20.0
Benzo[b]fluoranthene MW-104 OK OBS-BB05 J+	Ave	1.549	2.406		31.1	20.0	55.3*	20.0
Benzo[k]fluoranthene ALL nd OK	Ave	1.710	2.243	0.7000	26.2	20.0	31.2*	20.0
Benzo[a]pyrene	Ave	1.349	1.609	0.7000	23.8	20.0	19.2	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.159	1.261	0.5000	21.8	20.0	8.8	20.0
Dibenz(a,h)anthracene	Ave	1.199	1.220	0.4000	20.4	20.0	1.8	20.0
Benzo[g,h,i]perylene	Ave	1.266	1.518	0.5000	24.0	20.0	19.9	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3412	0.3719		436	400	9.0	20.0
2-Fluorobiphenyl	Ave	1.926	1.879		390	400	-2.4	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2955	0.2630		356	400	-11.0	20.0
Terphenyl-d14	Ave	0.9481	0.6957		294	400	-26.6*	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-172858-1

SDG No.: associated withsample 7

Lab Sample ID: CCVIS 460-711950/2 Calibration Date: 07/28/2020 06:25

Instrument ID: CBNAMS9 Calib Start Date: 07/15/2020 13:49

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 07/15/2020 15:36

Lab File ID: h258128.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4321	0.4121		191	200	-4.6	20.0
N-Nitrosodimethylamine	Ave	0.5716	0.5835		102	100	2.1	20.0
Bis(2-chloroethyl)ether	Ave	1.031	1.062	0.7000	20.6	20.0	3.0	20.0
Naphthalene	Ave	1.224	1.196	0.7000	19.5	20.0	-2.3	20.0
Acenaphthylene	Ave	2.952	2.760	0.9000	18.7	20.0	-6.5	20.0
Acenaphthene	Ave	1.939	1.883	0.9000	19.4	20.0	-2.9	20.0
Fluorene	Ave	2.080	2.042	0.9000	19.6	20.0	-1.9	20.0
4,6-Dinitro-2-methylphenol	Qua2		0.0161	0.0100	45.6	200	-77.2*	20.0
Hexachlorobenzene	Ave	0.5890	0.6228	0.1000	21.1	20.0	5.7	20.0
Pentachlorophenol	Qua2		0.1800	0.0500	262	100	162.2*	20.0
Phenanthrene	Ave	1.727	1.554	0.7000	18.0	20.0	-10.0	20.0
Anthracene	Ave	1.680	1.568	0.7000	18.7	20.0	-6.6	20.0
Fluoranthene	Ave	1.543	1.577	0.6000	20.4	20.0	2.2	20.0
Pyrene J- CCV%D	Ave	2.127	1.612	0.6000	15.2	20.0	-24.2*	20.0
Benzo[a]anthracene	Ave	1.764	1.741	0.8000	19.7	20.0	-1.3	20.0
Chrysene	Ave	1.833	1.694	0.7000	18.5	20.0	-7.6	20.0
Benzo[b]fluoranthene	Ave	1.662	1.530		18.4	20.0	-8.0	20.0
Benzo[k]fluoranthene	Ave	1.785	1.667	0.7000	18.7	20.0	-6.6	20.0
Benzo[a]pyrene	Ave	1.547	1.389	0.7000	18.0	20.0	-10.2	20.0
Indeno[1,2,3-cd]pyrene ND - RL checked	Ave	1.960	0.997	0.5000	10.2	20.0	-49.1*	20.0
Dibenz(a,h)anthracene - no qual	Ave	1.912	0.8835	0.4000	9.24	20.0	-53.8*	20.0
Benzo[g,h,i]perylene see memo	Ave	2.144	0.9441	0.5000	8.81	20.0	-56.0*	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3755	0.3896		415	400	3.7	20.0
2-Fluorobiphenyl	Ave	2.807	2.720		388	400	-3.1	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2721	0.3225		474	400	18.5	20.0
Terphenyl-d14	Ave	0.7468	0.5897		316	400	-21.0*	20.0

VOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD

Project: Saranac Lake

Method: 8260

Laboratory: TAL BUF **SDG(s):** 480-172916-1, 480-172858-1

Date: 8/28/20

Reviewer: Madison Dinsmore

Review Level [X] NYSDEC DUSR [ ] USEPA Region II Guideline

Check if Reviewed

1. [✓] **Case Narrative Review and COC/Data Package Completeness**
   Were problems noted? YES [ ] NO [✓]

   Are Field Sample IDs and Locations assigned correctly? YES [✓] NO [ ]

   Were all the samples on the COC analyzed for the requested analyses? YES [✓] NO [ ]

2. [✓] **Holding time and Sample Collection**
   All samples were analyzed within the 14-day holding time. YES [✓] NO [ ]

   Case narrative noted that samples were outside of 48 hr hold time - samples preserved w/ meOH - 48 hr hold doesn't apply - OK, no qual

3. [✓] **QC Blanks**
   Are method blanks free of contamination? YES [✓] NO [ ]

   Are Trip blanks free of contamination? YES [✓] NO [ ]

   Are Rinse blanks free of contamination? YES [ ] NO [ ] NA [✓]

4. [✓] **Instrument Tuning – Data Package Narrative Review**
   Did the laboratory narrative identify any results that were not within method criteria?
   YES [ ] NO [✓]

   If yes, use professional judgment to evaluate data and qualify results if needed

5. [✓] **Instrument Calibration – Data Package Narrative Review**
   Did the laboratory narrative identify compounds that were not within criteria in the initial and/or continuing calibration standards? YES [ ] NO [✓]

   Initial Calibration %RSD = 20% **(30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, VC)**
   Initial Avg RRF and Continuing RRF should be ≥ 0.05 and 0.10 for Chloromethane, 1,1-Dichloroethane, Bromoform and 0.30 for Chlorobenzene and 1,1,2,2-Tetrachloroethane

   Continuing Calibration %D = 20%

   Did the laboratory qualify results based on initial or continuing calibration exceedances?
   YES [ ] NO [✓]

If yes to above, use professional judgment to evaluate data and qualify results if needed

6. **Internal Standards – Data Package Narrative Review**
(Area Limits = -50% to +100%, RTs within 30 seconds of daily CCAL standard (or ICAL mid-point if samples follow ICAL)

Did the laboratory narrative identify any sample internal standards that were not within criteria? YES ☐ NO ☑

Did the laboratory qualify results based on internal standard exceedances? YES ☐ NO ☑
If yes to above, use professional judgment to evaluate data and qualify results if needed

7. ☑ **Surrogate Recovery** - Region II limits (water 80-120%, soil 70-130%)
Were all results within Region II limits? YES ☑ NO ☐

8. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
Were MS/MSDs submitted/analyzed? YES ☑ NO ☐

Were all results within the Region II limits? YES ☐ NO ☑ NA ☐

SB92308- no qual, see attached

9. ☑ **Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
Were Field Duplicates submitted/analyzed? YES ☑ NO ☐

Were all results within Region II limits? (soil RPD<100, water RPD<50) YES ☑ NO ☐ NA ☐

SD-401/SD-401D, 516008-SB92505

10. ☑ **Laboratory Control Sample Results** - Region II (Water and soil 70-130%)
Were all results within Region II control limits? YES ☑ NO ☐

11. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES ☑ NO ☐

12. ☑ **Raw Data Review and Calculation Checks**

13. ☑ **Electronic Data Review and Edits**
Does the EDD match the Form Is? YES ☑ NO ☐

14. ☑ **Tables and TIC Review**
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? YES ☑ NO ☐

Table 4 (TICs) Did lab report TICs? YES ☐ NO ☑

Sample Summary

Client: New York State D.E.C.
Project/Site: Saranac Lake Gas Co. #516008

Job ID: 480-172916-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-172916-1	SD-402	Solid	07/20/20 09:15	07/25/20 12:00	
480-172916-2	SD-401 MS/MSD requested	Solid	07/20/20 10:20	07/25/20 12:00	
480-172916-3	SD-401D	Solid	07/20/20 10:20	07/25/20 12:00	
480-172916-4	SD-400	Solid	07/20/20 11:10	07/25/20 12:00	
480-172916-5	516008-SB90105	Solid	07/21/20 10:30	07/25/20 12:00	
480-172916-6	516008-SB90304	Solid	07/21/20 11:00	07/25/20 12:00	
480-172916-7	516008-SB90506	Solid	07/21/20 12:05	07/25/20 12:00	
480-172916-8	516008-SB90605	Solid	07/21/20 13:05	07/25/20 12:00	
480-172916-9	516008-SB90907	Solid	07/21/20 14:15	07/25/20 12:00	
480-172916-10	516008-SB91006	Solid	07/21/20 14:45	07/25/20 12:00	
480-172916-11	516008-SB91105	Solid	07/21/20 15:00	07/25/20 12:00	
480-172916-12	TRIP BLANK-01	Solid	07/21/20 15:30	07/25/20 12:00	
480-172916-13	516008-SB91207	Solid	07/22/20 09:15	07/25/20 12:00	
480-172916-14	516008-SB91509	Solid	07/22/20 11:30	07/25/20 12:00	
480-172916-15	516008-SB91610	Solid	07/22/20 12:25	07/25/20 12:00	
480-172916-16	516008-SB91710	Solid	07/22/20 14:20	07/25/20 12:00	
480-172916-17	516008-SB91910	Solid	07/22/20 16:05	07/25/20 12:00	
480-172916-18	516008-SB92011	Solid	07/23/20 09:45	07/25/20 12:00	
480-172916-19	516008-SB92308 MS/MSD requested	Solid	07/23/20 11:40	07/25/20 12:00	
480-172916-20	516008-SB92404	Solid	07/23/20 13:00	07/25/20 12:00	
480-172916-21	516008-SB92505	Solid	07/23/20 13:40	07/25/20 12:00	
480-172916-22	516008-SB92505 DUP	Solid	07/23/20 13:40	07/25/20 12:00	
480-172916-23	516008-SB92605	Solid	07/23/20 14:50	07/25/20 12:00	
480-172916-24	516008-SB92906	Solid	07/24/20 09:00	07/25/20 12:00	
480-172916-25	516008-SB93006	Solid	07/24/20 09:55	07/25/20 12:00	
480-172916-26	516008-SB93106	Solid	07/24/20 11:00	07/25/20 12:00	
480-172916-27	TRIP BLANK-02	Solid	07/24/20 12:30	07/25/20 12:00	

Job Narrative
480-172916-1

Revision (1)
The report has been revised to correct the following sample ID: 516008-SB90605 (480-172916-8).

Receipt
The samples were received on 7/25/2020 12:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9º C and 3.3º C.

Receipt Exceptions
The following samples were preserved via freezing on 07/27/20 at 1230: 516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), TRIP BLANK-01 (480-172916-12), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17), 516008-SB92011 (480-172916-18), 516008-SB92308 (480-172916-19), 516008-SB92308 (480-172916-19[MS]), 516008-SB92308 (480-172916-19[MSD]), 516008-SB92404 (480-172916-20), 516008-SB92505 (480-172916-21), 516008-SB92505 DUP (480-172916-22), 516008-SB92605 (480-172916-23), 516008-SB92906 (480-172916-24), 516008-SB93006 (480-172916-25), 516008-SB93106 (480-172916-26) and TRIP BLANK-02 (480-172916-27) . This is outside the 48 hour time frame required by the method. samples vialed with meOH - 48 hr clock doesn't apply

The following samples were received with less than 2 days remaining on the freezing holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less: 516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), TRIP BLANK-01 (480-172916-12), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17), 516008-SB92011 (480-172916-18), 516008-SB92308 (480-172916-19), 516008-SB92308 (480-172916-19[MS]), 516008-SB92308 (480-172916-19[MSD]), 516008-SB92404 (480-172916-20), 516008-SB92505 (480-172916-21), 516008-SB92505 DUP (480-172916-22), 516008-SB92605 (480-172916-23), 516008-SB92906 (480-172916-24), 516008-SB93006 (480-172916-25), 516008-SB93106 (480-172916-26) and TRIP BLANK-02 (480-172916-27).

GC/MS VOA
Method 8260C: The following samples were analyzed using medium level soil analysis: 516008-SB92605 (480-172916-23), 516008-SB92906 (480-172916-24) and TRIP BLANK-02 (480-172916-27). memo RLs

Method 8260C: The following volatiles samples were analyzed using medium level soil analysis and were diluted due to foaming at the time of purging during the original sample analysis: 516008-SB93006 (480-172916-25) and 516008-SB93106 (480-172916-26). Elevated reporting limits (RLs) are provided. memo

Method 8260C: The following volatiles samples were analyzed using medium level soil analysis and diluted due to foaming at the time of purging during the original sample analysis: 516008-SB92404 (480-172916-20), 516008-SB92505 (480-172916-21) and 516008-SB92505 DUP (480-172916-22). Elevated reporting limits (RLs) are provided. memo

Method 8260C: The following samples were analyzed using medium level soil analysis: 516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), TRIP BLANK-01 (480-172916-12), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17), 516008-SB92011 (480-172916-18), 516008-SB92308 (480-172916-19), 516008-SB92308 (480-172916-19[MS]) and 516008-SB92308 (480-172916-19[MSD]). memo RLs

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

GC/MS Semi VOA
Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: 516008-SB92605 (480-172916-23). These results have been reported and qualified. OK

Method 8270D: The following samples were diluted due to color and appearance: SD-402 (480-172916-1), SD-401 (480-172916-2), SD-401 (480-172916-2[MS]), SD-401 (480-172916-2[MSD]), SD-401D (480-172916-3) and SD-400 (480-172916-4). Elevated reporting limits (RL) are provided. memo

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 480-543581 was outside the method criteria for the following analyte: 2,4,6-Tribromophenol (Surr). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. OK

Method 8270D: 2,4,6-Tribromophenol (Surr) recovered above the upper control limit in the LCS. However, acid extractable analytes are non target analytes for the associated samples. Therefore, re-extraction and re-analysis was not performed. The data have been reported and qualified. SD-402 (480-172916-1), SD-401 (480-172916-2), SD-401D (480-172916-3), SD-400 (480-172916-4), OK

516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17) and 516008-SB92011 (480-172916-18)

Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: SD-401 (480-172916-2), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90907 (480-172916-9), 516008-SB91105 (480-172916-11), 516008-SB91710 (480-172916-16) and 516008-SB92011 (480-172916-18). These results have been reported and qualified.

OK

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

Organic Prep

Method 3550C: The following samples were decanted prior to preparation: SD-402 (480-172916-1), SD-401 (480-172916-2), SD-401 (480-172916-2[MS]), SD-401 (480-172916-2[MSD]), SD-401D (480-172916-3), SD-400 (480-172916-4), 516008-SB90304 (480-172916-6) and 516008-SB90907 (480-172916-9).

Method 3550C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 8270D preparation: SD-401 (480-172916-2), SD-401 (480-172916-2[MS]) and SD-401 (480-172916-2[MSD]). memo

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

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-542342/2-A
Matrix: Solid
Analysis Batch: 542596

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 542342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		100	19	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Toluene	ND		100	27	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Ethylbenzene	ND		100	29	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
m-Xylene & p-Xylene	ND		200	55	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
o-Xylene	ND		100	13	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Xylenes, Total	ND		200	55	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Total BTEX	ND		200	100	ug/Kg		07/27/20 15:51	07/29/20 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*50 - 149*	*07/27/20 15:51*	*07/29/20 11:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*53 - 146*	*07/27/20 15:51*	*07/29/20 11:10*	*1*
4-Bromofluorobenzene (Surr)	*96*		*49 - 148*	*07/27/20 15:51*	*07/29/20 11:10*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*	*07/27/20 15:51*	*07/29/20 11:10*	*1*

Lab Sample ID: LCS 480-542342/1-A
Matrix: Solid
Analysis Batch: 542596

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 542342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2500	2480		ug/Kg		99	77 - 125
Toluene	2500	2480		ug/Kg		99	75 - 124
Ethylbenzene	2500	2560		ug/Kg		103	78 - 124
m-Xylene & p-Xylene	2500	2570		ug/Kg		103	77 - 125
o-Xylene	2500	2500		ug/Kg		100	80 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*96*		*53 - 146*
4-Bromofluorobenzene (Surr)	*97*		*49 - 148*
Dibromofluoromethane (Surr)	*96*		*60 - 140*

Lab Sample ID: 480-172916-19 MS
Matrix: Solid
Analysis Batch: 542719

region II limits 70-130

Client Sample ID: 516008-SB92308
Prep Type: Total/NA
Prep Batch: 542342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
Benzene	ND		1300	1760		ug/Kg	☼	135	68 - 137	
Toluene	ND		1300	1750		ug/Kg	☼	134	68 - 137	high recoveries high bias, ND in sample - no impact, no qual
Ethylbenzene	ND	F1	1300	1800	F1	ug/Kg	☼	138	67 - 136	
m-Xylene & p-Xylene	ND		1300	1800		ug/Kg	☼	138	68 - 138	
o-Xylene	ND	F1	1300	1770	F1	ug/Kg	☼	136	67 - 135	

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*
4-Bromofluorobenzene (Surr)	*94*		*49 - 148*
Dibromofluoromethane (Surr)	*92*		*60 - 140*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-172916-19 MSD
Matrix: Solid
Analysis Batch: 542719

Client Sample ID: 516008-SB92308
Prep Type: Total/NA
Prep Batch: 542342

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		1390	1830		ug/Kg	☼	132	68 - 137	4	20
Toluene	ND		1390	1820		ug/Kg	☼	131	68 - 137	4	20
Ethylbenzene	ND	F1	1390	1850		ug/Kg	☼	133	67 - 136	3	20
m-Xylene & p-Xylene	ND		1390	1840		ug/Kg	☼	132	68 - 138	2	20
o-Xylene	ND	F1	1390	1820		ug/Kg	☼	131	67 - 135	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*97*		*53 - 146*
4-Bromofluorobenzene (Surr)	*94*		*49 - 148*
Dibromofluoromethane (Surr)	*93*		*60 - 140*

high recoveries high bias, ND in sample - no impact, no qual

Lab Sample ID: MB 480-542346/2-A
Matrix: Solid
Analysis Batch: 542382

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 542346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		100	19	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Toluene	ND		100	27	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Ethylbenzene	ND		100	29	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
m-Xylene & p-Xylene	ND		200	55	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
o-Xylene	ND		100	13	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Xylenes, Total	ND		200	55	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Total BTEX	ND		200	100	ug/Kg		07/27/20 16:05	07/28/20 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*50 - 149*	*07/27/20 16:05*	*07/28/20 11:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*	*07/27/20 16:05*	*07/28/20 11:25*	*1*
4-Bromofluorobenzene (Surr)	*95*		*49 - 148*	*07/27/20 16:05*	*07/28/20 11:25*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*	*07/27/20 16:05*	*07/28/20 11:25*	*1*

Lab Sample ID: LCS 480-542346/1-A
Matrix: Solid
Analysis Batch: 542382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 542346

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			2500	2780		ug/Kg		111	77 - 125		
Toluene			2500	2750		ug/Kg		110	75 - 124		
Ethylbenzene			2500	2700		ug/Kg		108	78 - 124		
m-Xylene & p-Xylene			2500	2700		ug/Kg		108	77 - 125		
o-Xylene			2500	2680		ug/Kg		107	80 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*99*		*53 - 146*
4-Bromofluorobenzene (Surr)	*97*		*49 - 148*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

SVOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD

Project: Saranac Lake

Method: 8270D

Laboratory: TAL BUF **SDG(s):** 480-172916-1, 480-172858-1

Date: 8/28/20

Reviewer: Madison Dinsmore

Review Level [X] NYSDEC DUSR [ ] USEPA Region II Guideline

Check if Reviewed

1. [✓] **Case Narrative Review and COC/Data Package Completeness**
   Were problems noted? YES [✓] NO [ ]

   Are Field Sample IDs and Locations assigned correctly? YES [✓] NO [ ]

   Were all the samples on the COC analyzed for the requested analyses? YES [ ] NO [✓]

   Requested GW MS/MSDs no performed due to low sample volume. SW-400 not listed on COC - sample logged in and analyzed

2. [✓] **Holding time and Sample Collection**
   All samples were analyzed within the holding time. YES [✓] NO [ ]
   Soil: 14 days to extraction; 40 days to analysis. Water: 7 days to extraction, 40 days to analysis.

3. [✓] **QC Blanks**
   Are method blanks free of contamination? YES [✓] NO [ ]

   Are Rinse blanks free of contamination? YES [ ] NO [ ] NA [✓]

4. [✓] **Instrument Tuning – Data Package Narrative Review**
   Did the laboratory narrative identify any results that were not within method criteria?
   YES [ ] NO [✓]

   If yes, use professional judgment to evaluate data and qualify results if needed

5. [✓] **Instrument Calibration – Data Package Narrative Review**
   Did the laboratory narrative identify compounds that were not within criteria in the initial and/or continuing calibration standards? YES [✓] NO [ ]

   Initial Calibration %RSD = 15%
   Initial Avg RRF and Continuing RRF should be ≥ 0.05
   Continuing Calibration %D = 20%

   Did the laboratory qualify results based on initial or continuing calibration exceedances?
   YES [ ] NO [✓]

If yes to above, use professional judgment to evaluate data and qualify results if needed

Subset GW J-, J+, UJ CCV%D

6. ☑ **Internal Standards – Data Package Narrative Review**
(Area Limits = -50% to +100%, RTs within 30 seconds of daily CCAL standard (or ICAL mid-point if samples follow ICAL)

Did the laboratory narrative identify any sample internal standards that were not within criteria?
YES ☐ NO ☑

Did the laboratory qualify results based on internal standard exceedances? YES ☐ NO ☑
If yes to above, use professional judgment to evaluate data and qualify results if needed

7. ☑ **Surrogate Recovery** - Region II limits (water and soil limits: Base/Neutral 50-140%, Acid 30-140%).

Were all results within Region II limits? YES ☑ NO ☐
Were any recoveries <10% (Reject fraction compounds) YES ☐ NO ☑

127916 - no quals, see attached

8. ☑ **Matrix Spike** - Region II limits (water & soil: B/N 50-140%, Acid 30-140%, water RPD 20, soil RPD 35)
Were MS/MSDs submitted/analyzed? YES ☑ NO ☐

Were all results within the Region II limits? YES ☑ NO ☐ NA ☐

SD-401 - OK, SB92308 - OK Requested MS/MSDs on SDG 172858 not performed due to low sample volume - memo

9. ☑ **Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
Were Field Duplicates submitted/analyzed? YES ☑ NO ☐

Were all results within Region II limits? (soil RPD<100, water RPD<50) YES ☑ NO ☐ NA ☐

10. ☑ **Laboratory Control Sample Results** - Region II (Water & soil: B/N 50-140%, Acid 30-140%)
Were all results within Region II control limits? YES ☑ NO ☐

11. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES ☑ NO ☐

subset elevated RLs

12. ☑ **Raw Data Review and Calculation Checks**

13. ☑ **Electronic Data Review and Edits**
Does the EDD match the Form Is? YES ☑ NO ☐

14. ☑ **Tables and TIC Review**
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? YES ☑ NO ☐

Table 4 (TICs) Did lab report TICs? YES ☐ NO ☑

Surrogate Summary

Client: New York State D.E.C.
Job ID: 480-172916-1
Project/Site: Saranac Lake Gas Co. #516008

Method: 8260C - Volatile Organic Compounds by GC/MS

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

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(50-149)	(53-146)	(49-148)	(60-140)
480-172916-5	516008-SB90105	102	100	96	93
480-172916-6	516008-SB90304	103	97	96	92
480-172916-7	516008-SB90506	99	101	96	93
480-172916-8	516008-SB90605	101	103	96	92
480-172916-9	516008-SB90907	99	96	95	87
480-172916-10	516008-SB91006	102	99	96	88
480-172916-11	516008-SB91105	101	98	92	91
480-172916-12	TRIP BLANK-01	101	101	96	94
480-172916-13	516008-SB91207	104	101	95	93
480-172916-14	516008-SB91509	101	98	94	88
480-172916-15	516008-SB91610	100	98	93	90
480-172916-16	516008-SB91710	102	96	97	89
480-172916-17	516008-SB91910	102	98	95	89
480-172916-18	516008-SB92011	101	97	92	88
480-172916-19	516008-SB92308	103	100	96	89
480-172916-19 MS	516008-SB92308	100	98	94	92
480-172916-19 MSD	516008-SB92308	99	97	94	93
480-172916-20	516008-SB92404	103	96	96	90
480-172916-21	516008-SB92505	101	101	93	92
480-172916-22	516008-SB92505 DUP	100	102	93	97
480-172916-23	516008-SB92605	103	96	96	90
480-172916-24	516008-SB92906	103	100	95	93
480-172916-25	516008-SB93006	101	101	94	98
480-172916-26	516008-SB93106	101	98	98	95
480-172916-27	TRIP BLANK-02	100	96	94	89
LCS 480-542342/1-A	Lab Control Sample	100	96	97	96
LCS 480-542346/1-A	Lab Control Sample	100	99	97	100
MB 480-542342/2-A	Method Blank	101	97	96	93
MB 480-542346/2-A	Method Blank	100	98	95	93

Surrogate Legend

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

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

Region 2 Limits : B/N 50-140%, acid 30-140%

all recoveries inside region 2 limits

		Percent Surrogate Recovery (Acceptance Limits)					
		a TBP	bn FBP	a 2FP	a PHL	bn TPHd14	bn NBZ
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(54-120)	(79-130)	(53-120)
480-172916-1	SD-402	105	89	81	88	97	75
480-172916-2	SD-401	OK 47 X	75	63	71	86	79
480-172916-2 MS	SD-401	110	80	73	77	88	76
480-172916-2 MSD	SD-401	113	83	79	80	96	85
480-172916-3	SD-401D	90	85	74	86	98	81
480-172916-4	SD-400	86	82	58	76	94	69
480-172916-5	516008-SB90105	119	95	89	94	107	89
480-172916-6	516008-SB90304	OK 135 X	99	97	100	111	101

Surrogate Summary

Client: New York State D.E.C. Job ID: 480-172916-1
Project/Site: Saranac Lake Gas Co. #516008

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

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

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TBP (54-120)	FBP (60-120)	2FP (52-120)	PHL (54-120)	TPHd14 (79-130)	NBZ (53-120)		
480-172916-7	516008-SB90506	OK 121 X	94	99	98	107	95		
480-172916-8	516008-SB90605	96	74	69	73	87	73		
480-172916-9	516008-SB90907	ok 121 X	104	93	98	111	99		
480-172916-10	516008-SB91006	102	87	79	87	96	84		
480-172916-11	516008-SB91105	ok 122 X	97	89	92	117	94		
480-172916-13	516008-SB91207	119	94	92	95	112	96		
480-172916-14	516008-SB91509	110	82	86	91	99	81		
480-172916-15	516008-SB91610	115	94	88	96	102	90		
480-172916-16	516008-SB91710	ok 127 X	91	88	95	110	92		
480-172916-17	516008-SB91910	112	91	83	90	104	89		
480-172916-18	516008-SB92011	ok 122 X	84	81	85	109	87		
480-172916-19	516008-SB92308	95	85	76	82	100	77		
480-172916-19 MS	516008-SB92308	107	96	93	100	111	93		
480-172916-19 MSD	516008-SB92308	100	83	92	98	94	82		
480-172916-20	516008-SB92404	94	91	85	86	94	80		
480-172916-21	516008-SB92505	92	85	77	82	80	80		
480-172916-22	516008-SB92505 DUP	104	85	86	87	85	79		
480-172916-23	516008-SB92605	83	77	72	79	OK78 X	77		
480-172916-24	516008-SB92906	91	82	89	90	84	82		
480-172916-25	516008-SB93006	90	89	94	89	82	89		
480-172916-26	516008-SB93106	92	87	88	87	82	86		
LCS 480-543239/2-A	Lab Control Sample	ok 132 X	99	96	100	113	96		
LCS 480-543241/2-A	Lab Control Sample	106	96	94	101	107	96		
MB 480-543239/1-A	Method Blank	109	100	93	106	118	98		
MB 480-543241/1-A	Method Blank	66	75	72	76	87	73		

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
NBZ = Nitrobenzene-d5 (Surr)

Sample Summary

Client: New York State D.E.C.
Project/Site: Saranac Lake Gas Co. #516008

Job ID: 480-172858-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-172858-1	SW-403	Water	07/21/20 08:45	07/23/20 10:00	
480-172858-2	SW-402	Water	07/21/20 09:15	07/23/20 10:00	
480-172858-3	SW-401 MS/MSD	Water	07/21/20 10:20	07/23/20 10:00	
480-172858-4	SW-401D MS/MSD	Water	07/21/20 10:20	07/23/20 10:00	
480-172858-5	MW-104	Water	07/21/20 13:25	07/23/20 10:00	
480-172858-6	PZ-301	Water	07/21/20 15:15	07/23/20 10:00	
480-172858-7	OBS-BB05D	Water	07/21/20 17:35	07/23/20 10:00	
480-172858-8	OBS-BB05 MS/MSD	Water	07/21/20 17:35	07/23/20 10:00	
480-172858-9	SW-400	Water	07/20/20 11:10	07/23/20 10:00	

SW-400 not listed on COC - only listed on sublab COC

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-172858-1

Login Number: 172858 **List Source: Eurofins TestAmerica, Buffalo**
List Number: 1
Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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 sample IDs on the containers and the COC.	True	No: Received extra samples not listed on COC. SW-400 not listed on COC
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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	WOOD
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Job Narrative
480-172858-1

Comments
No additional comments.

Receipt
The samples were received on 7/23/2020 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7º C.

Receipt Exceptions
mem The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): SW-400 (480-172858-9)

GC/MS Semi VOA
Method 8270D SIM: The continuing calibration verification (CCV) analyzed in batch 460-711740 was outside the method criteria for the following analyte(s): Benzo[a]anthracene, Benzo[b]fluoranthene, Pyrene, Fluoranthene, Chrysene and Benzo[k]fluoranthene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.
see summary form
Method 8270D SIM: The continuing calibration verification (CCV) analyzed in batch 460-711601 was outside the method criteria for the following analyte(s): Benzo[g,h,i]perylene, Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. see summary form

mem Method 8270D SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (480-172858-5) and OBS-BB05 (480-172858-8). Elevated reporting limits (RLs) are provided.

Method 8270D SIM: The continuing calibration verification (CCV) analyzed in batch 460-711950 was outside the method criteria for the following analyte(s): Benzo[g,h,i]perylene, Dibenz(a,h)anthracene, Indeno[1,2,3-cd]pyrene and Pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. see summary form

mem Method 8270D SIM: The following sample was diluted to bring the concentration of target analytes within the calibration range: OBS-BB05D (480-172858-7). Elevated reporting limits (RLs) are provided.

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.

Surrogate Summary

Client: New York State D.E.C.
Project/Site: Saranac Lake Gas Co. #516008

Job ID: 480-172858-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	bn NBZ (41-144)	a TBP (40-140)	bn FBP (25-124)	
480-172858-1	SW-403	142	91	105	only one BN surr out - OK, no quals
480-172858-2	SW-402	83	48	63	
480-172858-3	SW-401	99	55	75	
480-172858-4	SW-401D	97	53	75	
480-172858-5	MW-104	124	83	103	
480-172858-6	PZ-301	114	65	84	
480-172858-7	OBS-BB05D	96	133	66	
480-172858-8	OBS-BB05	118	81	84	
480-172858-9	SW-400	85	51	63	
LCS 460-711518/2-A	Lab Control Sample	103	75	77	
LCSD 460-711518/3-A	Lab Control Sample Dup	104	55	80	
MB 460-711518/1-A	Method Blank	118	61	87	

Region II limits
BN 50-140%
Acid 30-140%

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-172858-1

SDG No.: associated with samples 1-4, 6, 9

Lab Sample ID: CCVIS 460-711601/2 Calibration Date: 07/26/2020 18:06

Instrument ID: CBNAMS13 Calib Start Date: 04/27/2020 11:46

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 04/27/2020 13:31

Lab File ID: C0107.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4448	0.5235		235	200	17.7	20.0
N-Nitrosodimethylamine	Ave	0.5662	0.6607		117	100	16.7	20.0
Bis(2-chloroethyl)ether	Ave	1.122	1.234	0.7000	22.0	20.0	9.9	20.0
Naphthalene	Ave	1.101	1.105	0.7000	20.1	20.0	0.4	20.0
Acenaphthylene	Ave	2.368	2.185	0.9000	18.5	20.0	-7.7	20.0
Acenaphthene	Ave	1.479	1.444	0.9000	19.5	20.0	-2.4	20.0
Fluorene	Ave	1.560	1.433	0.9000	18.4	20.0	-8.2	20.0
4,6-Dinitro-2-methylphenol	Qua		0.0320	0.0100	106	200	-47.1*	20.0
Hexachlorobenzene	Ave	0.3377	0.3306	0.1000	19.6	20.0	-2.1	20.0
Pentachlorophenol	Qua		0.1110	0.0500	78.7	100	-21.3*	20.0
Phenanthrene	Ave	1.278	1.222	0.7000	19.1	20.0	-4.4	20.0
Anthracene	Ave	1.155	1.090	0.7000	18.9	20.0	-5.6	20.0
Fluoranthene	Ave	1.317	1.084	0.6000	16.5	20.0	-17.7	20.0
Pyrene	Ave	1.987	1.985	0.6000	20.0	20.0	-0.0	20.0
Benzo[a]anthracene	Ave	1.460	1.370	0.8000	18.8	20.0	-6.2	20.0
Chrysene	Ave	1.596	1.545	0.7000	19.4	20.0	-3.2	20.0
Benzo[b]fluoranthene	Ave	1.549	1.302		16.8	20.0	-15.9	20.0
Benzo[k]fluoranthene	Ave	1.710	1.511	0.7000	17.7	20.0	-11.7	20.0
Benzo[a]pyrene	Ave	1.349	1.220	0.7000	18.1	20.0	-9.5	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.159	1.507	0.5000	26.0	20.0	30.0*	20.0
Dibenz(a,h)anthracene	Ave	1.199	1.452	0.4000	24.2	20.0	21.1*	20.0
Benzo[g,h,i]perylene	Ave	1.266	1.593	0.5000	25.2	20.0	25.9*	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3412	0.3724		437	400	9.1	20.0
2-Fluorobiphenyl	Ave	1.926	2.090		434	400	8.5	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2955	0.1628		220	400	-44.9*	20.0
Terphenyl-d14	Ave	0.9481	1.010		426	400	6.5	20.0

high bias in CCV - ND in field samples
no impat - no qual

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-172858-1

SDG No.: associated with samples 5, 8

Lab Sample ID: CCVIS 460-711740/2 Calibration Date: 07/27/2020 12:47

Instrument ID: CBNAMS13 Calib Start Date: 04/27/2020 11:46

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 04/27/2020 13:31

Lab File ID: C0140.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4448	0.4936		222	200	11.0	20.0
N-Nitrosodimethylamine	Ave	0.5662	0.6242		110	100	10.2	20.0
Bis(2-chloroethyl)ether	Ave	1.122	1.167	0.7000	20.8	20.0	4.0	20.0
Naphthalene	Ave	1.101	1.102	0.7000	20.0	20.0	0.0	20.0
Acenaphthylene	Ave	2.368	2.262	0.9000	19.1	20.0	-4.5	20.0
Acenaphthene	Ave	1.479	1.438	0.9000	19.5	20.0	-2.7	20.0
Fluorene	Ave	1.560	1.575	0.9000	20.2	20.0	1.0	20.0
4,6-Dinitro-2-methylphenol	Qua		0.0532	0.0100	162	200	-18.9	20.0
Hexachlorobenzene	Ave	0.3377	0.2594	0.1000	15.4	20.0	-23.2*	20.0
Pentachlorophenol	Qua		0.1092	0.0500	77.5	100	-22.5*	20.0
Phenanthrene	Ave	1.278	1.515	0.7000	23.7	20.0	18.5	20.0
Anthracene	Ave	1.155	1.289	0.7000	22.3	20.0	11.6	20.0
Fluoranthene J+ CCV%D	Ave	1.317	2.732	0.6000	41.5	20.0	107.4*	20.0
Pyrene J+ CCV%D	Ave	1.987	3.132	0.6000	31.5	20.0	57.6*	20.0
Benzo[a]anthracene J+ CCV%D	Ave	1.460	2.306	0.8000	31.6	20.0	57.9*	20.0
Chrysene J+ CCV%D	Ave	1.596	2.723	0.7000	34.1	20.0	70.6*	20.0
Benzo[b]fluoranthene MW-104 OK OBS-BB05 J+	Ave	1.549	2.406		31.1	20.0	55.3*	20.0
Benzo[k]fluoranthene ALL nd OK	Ave	1.710	2.243	0.7000	26.2	20.0	31.2*	20.0
Benzo[a]pyrene	Ave	1.349	1.609	0.7000	23.8	20.0	19.2	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.159	1.261	0.5000	21.8	20.0	8.8	20.0
Dibenz(a,h)anthracene	Ave	1.199	1.220	0.4000	20.4	20.0	1.8	20.0
Benzo[g,h,i]perylene	Ave	1.266	1.518	0.5000	24.0	20.0	19.9	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3412	0.3719		436	400	9.0	20.0
2-Fluorobiphenyl	Ave	1.926	1.879		390	400	-2.4	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2955	0.2630		356	400	-11.0	20.0
Terphenyl-d14	Ave	0.9481	0.6957		294	400	-26.6*	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-172858-1

SDG No.: associated withsample 7

Lab Sample ID: CCVIS 460-711950/2 Calibration Date: 07/28/2020 06:25

Instrument ID: CBNAMS9 Calib Start Date: 07/15/2020 13:49

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 07/15/2020 15:36

Lab File ID: h258128.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4321	0.4121		191	200	-4.6	20.0
N-Nitrosodimethylamine	Ave	0.5716	0.5835		102	100	2.1	20.0
Bis(2-chloroethyl)ether	Ave	1.031	1.062	0.7000	20.6	20.0	3.0	20.0
Naphthalene	Ave	1.224	1.196	0.7000	19.5	20.0	-2.3	20.0
Acenaphthylene	Ave	2.952	2.760	0.9000	18.7	20.0	-6.5	20.0
Acenaphthene	Ave	1.939	1.883	0.9000	19.4	20.0	-2.9	20.0
Fluorene	Ave	2.080	2.042	0.9000	19.6	20.0	-1.9	20.0
4,6-Dinitro-2-methylphenol	Qua2		0.0161	0.0100	45.6	200	-77.2*	20.0
Hexachlorobenzene	Ave	0.5890	0.6228	0.1000	21.1	20.0	5.7	20.0
Pentachlorophenol	Qua2		0.1800	0.0500	262	100	162.2*	20.0
Phenanthrene	Ave	1.727	1.554	0.7000	18.0	20.0	-10.0	20.0
Anthracene	Ave	1.680	1.568	0.7000	18.7	20.0	-6.6	20.0
Fluoranthene	Ave	1.543	1.577	0.6000	20.4	20.0	2.2	20.0
Pyrene J- CCV%D	Ave	2.127	1.612	0.6000	15.2	20.0	-24.2*	20.0
Benzo[a]anthracene	Ave	1.764	1.741	0.8000	19.7	20.0	-1.3	20.0
Chrysene	Ave	1.833	1.694	0.7000	18.5	20.0	-7.6	20.0
Benzo[b]fluoranthene	Ave	1.662	1.530		18.4	20.0	-8.0	20.0
Benzo[k]fluoranthene	Ave	1.785	1.667	0.7000	18.7	20.0	-6.6	20.0
Benzo[a]pyrene	Ave	1.547	1.389	0.7000	18.0	20.0	-10.2	20.0
Indeno[1,2,3-cd]pyrene ND - RL checked	Ave	1.960	0.997	0.5000	10.2	20.0	-49.1*	20.0
Dibenz(a,h)anthracene - no qual	Ave	1.912	0.8835	0.4000	9.24	20.0	-53.8*	20.0
Benzo[g,h,i]perylene see memo	Ave	2.144	0.9441	0.5000	8.81	20.0	-56.0*	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3755	0.3896		415	400	3.7	20.0
2-Fluorobiphenyl	Ave	2.807	2.720		388	400	-3.1	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2721	0.3225		474	400	18.5	20.0
Terphenyl-d14	Ave	0.7468	0.5897		316	400	-21.0*	20.0

VOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD

Project: Saranac Lake

Method: 8260

Laboratory: TAL BUF **SDG(s):** 480-172916-1, 480-172858-1

Date: 8/28/20

Reviewer: Madison Dinsmore

Review Level [X] NYSDEC DUSR [ ] USEPA Region II Guideline

Check if Reviewed

1. [✓] **Case Narrative Review and COC/Data Package Completeness**
   Were problems noted? YES [ ] NO [✓]

   Are Field Sample IDs and Locations assigned correctly? YES [✓] NO [ ]

   Were all the samples on the COC analyzed for the requested analyses? YES [✓] NO [ ]

2. [✓] **Holding time and Sample Collection**
   All samples were analyzed within the 14-day holding time. YES [✓] NO [ ]

   Case narrative noted that samples were outside of 48 hr hold time - samples preserved w/ meOH - 48 hr hold doesn't apply - OK, no qual

3. [✓] **QC Blanks**
   Are method blanks free of contamination? YES [✓] NO [ ]

   Are Trip blanks free of contamination? YES [✓] NO [ ]

   Are Rinse blanks free of contamination? YES [ ] NO [ ] NA [✓]

4. [✓] **Instrument Tuning – Data Package Narrative Review**
   Did the laboratory narrative identify any results that were not within method criteria?
   YES [ ] NO [✓]

   If yes, use professional judgment to evaluate data and qualify results if needed

5. [✓] **Instrument Calibration – Data Package Narrative Review**
   Did the laboratory narrative identify compounds that were not within criteria in the initial and/or continuing calibration standards? YES [ ] NO [✓]

   Initial Calibration %RSD = 20% **(30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, VC)**
   Initial Avg RRF and Continuing RRF should be ≥ 0.05 and 0.10 for Chloromethane, 1,1-Dichloroethane, Bromoform and 0.30 for Chlorobenzene and 1,1,2,2-Tetrachloroethane

   Continuing Calibration %D = 20%

   Did the laboratory qualify results based on initial or continuing calibration exceedances?
   YES [ ] NO [✓]

If yes to above, use professional judgment to evaluate data and qualify results if needed

6. **Internal Standards – Data Package Narrative Review**
(Area Limits = -50% to +100%, RTs within 30 seconds of daily CCAL standard (or ICAL mid-point if samples follow ICAL)

Did the laboratory narrative identify any sample internal standards that were not within criteria? YES ☐ NO ☑

Did the laboratory qualify results based on internal standard exceedances? YES ☐ NO ☑
If yes to above, use professional judgment to evaluate data and qualify results if needed

7. ☑ **Surrogate Recovery** - Region II limits (water 80-120%, soil 70-130%)
Were all results within Region II limits? YES ☑ NO ☐

8. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
Were MS/MSDs submitted/analyzed? YES ☑ NO ☐

Were all results within the Region II limits? YES ☐ NO ☑ NA ☐

SB92308- no qual, see attached

9. ☑ **Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
Were Field Duplicates submitted/analyzed? YES ☑ NO ☐

Were all results within Region II limits? (soil RPD<100, water RPD<50) YES ☑ NO ☐ NA ☐

SD-401/SD-401D, 516008-SB92505

10. ☑ **Laboratory Control Sample Results** - Region II (Water and soil 70-130%)
Were all results within Region II control limits? YES ☑ NO ☐

11. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES ☑ NO ☐

12. ☑ **Raw Data Review and Calculation Checks**

13. ☑ **Electronic Data Review and Edits**
Does the EDD match the Form Is? YES ☑ NO ☐

14. ☑ **Tables and TIC Review**
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? YES ☑ NO ☐

Table 4 (TICs) Did lab report TICs? YES ☐ NO ☑

Sample Summary

Client: New York State D.E.C.
Project/Site: Saranac Lake Gas Co. #516008

Job ID: 480-172916-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-172916-1	SD-402	Solid	07/20/20 09:15	07/25/20 12:00	
480-172916-2	SD-401 MS/MSD requested	Solid	07/20/20 10:20	07/25/20 12:00	
480-172916-3	SD-401D	Solid	07/20/20 10:20	07/25/20 12:00	
480-172916-4	SD-400	Solid	07/20/20 11:10	07/25/20 12:00	
480-172916-5	516008-SB90105	Solid	07/21/20 10:30	07/25/20 12:00	
480-172916-6	516008-SB90304	Solid	07/21/20 11:00	07/25/20 12:00	
480-172916-7	516008-SB90506	Solid	07/21/20 12:05	07/25/20 12:00	
480-172916-8	516008-SB90605	Solid	07/21/20 13:05	07/25/20 12:00	
480-172916-9	516008-SB90907	Solid	07/21/20 14:15	07/25/20 12:00	
480-172916-10	516008-SB91006	Solid	07/21/20 14:45	07/25/20 12:00	
480-172916-11	516008-SB91105	Solid	07/21/20 15:00	07/25/20 12:00	
480-172916-12	TRIP BLANK-01	Solid	07/21/20 15:30	07/25/20 12:00	
480-172916-13	516008-SB91207	Solid	07/22/20 09:15	07/25/20 12:00	
480-172916-14	516008-SB91509	Solid	07/22/20 11:30	07/25/20 12:00	
480-172916-15	516008-SB91610	Solid	07/22/20 12:25	07/25/20 12:00	
480-172916-16	516008-SB91710	Solid	07/22/20 14:20	07/25/20 12:00	
480-172916-17	516008-SB91910	Solid	07/22/20 16:05	07/25/20 12:00	
480-172916-18	516008-SB92011	Solid	07/23/20 09:45	07/25/20 12:00	
480-172916-19	516008-SB92308 MS/MSD requested	Solid	07/23/20 11:40	07/25/20 12:00	
480-172916-20	516008-SB92404	Solid	07/23/20 13:00	07/25/20 12:00	
480-172916-21	516008-SB92505	Solid	07/23/20 13:40	07/25/20 12:00	
480-172916-22	516008-SB92505 DUP	Solid	07/23/20 13:40	07/25/20 12:00	
480-172916-23	516008-SB92605	Solid	07/23/20 14:50	07/25/20 12:00	
480-172916-24	516008-SB92906	Solid	07/24/20 09:00	07/25/20 12:00	
480-172916-25	516008-SB93006	Solid	07/24/20 09:55	07/25/20 12:00	
480-172916-26	516008-SB93106	Solid	07/24/20 11:00	07/25/20 12:00	
480-172916-27	TRIP BLANK-02	Solid	07/24/20 12:30	07/25/20 12:00	

Job Narrative
480-172916-1

Revision (1)
The report has been revised to correct the following sample ID: 516008-SB90605 (480-172916-8).

Receipt
The samples were received on 7/25/2020 12:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9º C and 3.3º C.

Receipt Exceptions
The following samples were preserved via freezing on 07/27/20 at 1230: 516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), TRIP BLANK-01 (480-172916-12), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17), 516008-SB92011 (480-172916-18), 516008-SB92308 (480-172916-19), 516008-SB92308 (480-172916-19[MS]), 516008-SB92308 (480-172916-19[MSD]), 516008-SB92404 (480-172916-20), 516008-SB92505 (480-172916-21), 516008-SB92505 DUP (480-172916-22), 516008-SB92605 (480-172916-23), 516008-SB92906 (480-172916-24), 516008-SB93006 (480-172916-25), 516008-SB93106 (480-172916-26) and TRIP BLANK-02 (480-172916-27) . This is outside the 48 hour time frame required by the method. samples vialed with meOH - 48 hr clock doesn't apply

The following samples were received with less than 2 days remaining on the freezing holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less: 516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), TRIP BLANK-01 (480-172916-12), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17), 516008-SB92011 (480-172916-18), 516008-SB92308 (480-172916-19), 516008-SB92308 (480-172916-19[MS]), 516008-SB92308 (480-172916-19[MSD]), 516008-SB92404 (480-172916-20), 516008-SB92505 (480-172916-21), 516008-SB92505 DUP (480-172916-22), 516008-SB92605 (480-172916-23), 516008-SB92906 (480-172916-24), 516008-SB93006 (480-172916-25), 516008-SB93106 (480-172916-26) and TRIP BLANK-02 (480-172916-27).

GC/MS VOA
Method 8260C: The following samples were analyzed using medium level soil analysis: 516008-SB92605 (480-172916-23), 516008-SB92906 (480-172916-24) and TRIP BLANK-02 (480-172916-27). memo RLs

Method 8260C: The following volatiles samples were analyzed using medium level soil analysis and were diluted due to foaming at the time of purging during the original sample analysis: 516008-SB93006 (480-172916-25) and 516008-SB93106 (480-172916-26). Elevated reporting limits (RLs) are provided. memo

Method 8260C: The following volatiles samples were analyzed using medium level soil analysis and diluted due to foaming at the time of purging during the original sample analysis: 516008-SB92404 (480-172916-20), 516008-SB92505 (480-172916-21) and 516008-SB92505 DUP (480-172916-22). Elevated reporting limits (RLs) are provided. memo

Method 8260C: The following samples were analyzed using medium level soil analysis: 516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), TRIP BLANK-01 (480-172916-12), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17), 516008-SB92011 (480-172916-18), 516008-SB92308 (480-172916-19), 516008-SB92308 (480-172916-19[MS]) and 516008-SB92308 (480-172916-19[MSD]). memo RLs

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

GC/MS Semi VOA
Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: 516008-SB92605 (480-172916-23). These results have been reported and qualified. OK

Method 8270D: The following samples were diluted due to color and appearance: SD-402 (480-172916-1), SD-401 (480-172916-2), SD-401 (480-172916-2[MS]), SD-401 (480-172916-2[MSD]), SD-401D (480-172916-3) and SD-400 (480-172916-4). Elevated reporting limits (RL) are provided. memo

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 480-543581 was outside the method criteria for the following analyte: 2,4,6-Tribromophenol (Surr). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. OK

Method 8270D: 2,4,6-Tribromophenol (Surr) recovered above the upper control limit in the LCS. However, acid extractable analytes are non target analytes for the associated samples. Therefore, re-extraction and re-analysis was not performed. The data have been reported and qualified. SD-402 (480-172916-1), SD-401 (480-172916-2), SD-401D (480-172916-3), SD-400 (480-172916-4), OK

516008-SB90105 (480-172916-5), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90605 (480-172916-8), 516008-SB90907 (480-172916-9), 516008-SB91006 (480-172916-10), 516008-SB91105 (480-172916-11), 516008-SB91207 (480-172916-13), 516008-SB91509 (480-172916-14), 516008-SB91610 (480-172916-15), 516008-SB91710 (480-172916-16), 516008-SB91910 (480-172916-17) and 516008-SB92011 (480-172916-18)

Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: SD-401 (480-172916-2), 516008-SB90304 (480-172916-6), 516008-SB90506 (480-172916-7), 516008-SB90907 (480-172916-9), 516008-SB91105 (480-172916-11), 516008-SB91710 (480-172916-16) and 516008-SB92011 (480-172916-18). These results have been reported and qualified.

OK

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

Organic Prep

Method 3550C: The following samples were decanted prior to preparation: SD-402 (480-172916-1), SD-401 (480-172916-2), SD-401 (480-172916-2[MS]), SD-401 (480-172916-2[MSD]), SD-401D (480-172916-3), SD-400 (480-172916-4), 516008-SB90304 (480-172916-6) and 516008-SB90907 (480-172916-9).

Method 3550C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 8270D preparation: SD-401 (480-172916-2), SD-401 (480-172916-2[MS]) and SD-401 (480-172916-2[MSD]). memo

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

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-542342/2-A
Matrix: Solid
Analysis Batch: 542596

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 542342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		100	19	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Toluene	ND		100	27	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Ethylbenzene	ND		100	29	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
m-Xylene & p-Xylene	ND		200	55	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
o-Xylene	ND		100	13	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Xylenes, Total	ND		200	55	ug/Kg		07/27/20 15:51	07/29/20 11:10	1
Total BTEX	ND		200	100	ug/Kg		07/27/20 15:51	07/29/20 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*50 - 149*	*07/27/20 15:51*	*07/29/20 11:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*53 - 146*	*07/27/20 15:51*	*07/29/20 11:10*	*1*
4-Bromofluorobenzene (Surr)	*96*		*49 - 148*	*07/27/20 15:51*	*07/29/20 11:10*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*	*07/27/20 15:51*	*07/29/20 11:10*	*1*

Lab Sample ID: LCS 480-542342/1-A
Matrix: Solid
Analysis Batch: 542596

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 542342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2500	2480		ug/Kg		99	77 - 125
Toluene	2500	2480		ug/Kg		99	75 - 124
Ethylbenzene	2500	2560		ug/Kg		103	78 - 124
m-Xylene & p-Xylene	2500	2570		ug/Kg		103	77 - 125
o-Xylene	2500	2500		ug/Kg		100	80 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*96*		*53 - 146*
4-Bromofluorobenzene (Surr)	*97*		*49 - 148*
Dibromofluoromethane (Surr)	*96*		*60 - 140*

Lab Sample ID: 480-172916-19 MS
Matrix: Solid
Analysis Batch: 542719

region II limits 70-130

Client Sample ID: 516008-SB92308
Prep Type: Total/NA
Prep Batch: 542342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
Benzene	ND		1300	1760		ug/Kg	☼	135	68 - 137	
Toluene	ND		1300	1750		ug/Kg	☼	134	68 - 137	high recoveries high bias, ND in sample - no impact, no qual
Ethylbenzene	ND	F1	1300	1800	F1	ug/Kg	☼	138	67 - 136	
m-Xylene & p-Xylene	ND		1300	1800		ug/Kg	☼	138	68 - 138	
o-Xylene	ND	F1	1300	1770	F1	ug/Kg	☼	136	67 - 135	

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*
4-Bromofluorobenzene (Surr)	*94*		*49 - 148*
Dibromofluoromethane (Surr)	*92*		*60 - 140*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-172916-19 MSD
Matrix: Solid
Analysis Batch: 542719

Client Sample ID: 516008-SB92308
Prep Type: Total/NA
Prep Batch: 542342

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		1390	1830		ug/Kg	☼	132	68 - 137	4	20
Toluene	ND		1390	1820		ug/Kg	☼	131	68 - 137	4	20
Ethylbenzene	ND	F1	1390	1850		ug/Kg	☼	133	67 - 136	3	20
m-Xylene & p-Xylene	ND		1390	1840		ug/Kg	☼	132	68 - 138	2	20
o-Xylene	ND	F1	1390	1820		ug/Kg	☼	131	67 - 135	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*97*		*53 - 146*
4-Bromofluorobenzene (Surr)	*94*		*49 - 148*
Dibromofluoromethane (Surr)	*93*		*60 - 140*

high recoveries high bias, ND in sample - no impact, no qual

Lab Sample ID: MB 480-542346/2-A
Matrix: Solid
Analysis Batch: 542382

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 542346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		100	19	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Toluene	ND		100	27	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Ethylbenzene	ND		100	29	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
m-Xylene & p-Xylene	ND		200	55	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
o-Xylene	ND		100	13	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Xylenes, Total	ND		200	55	ug/Kg		07/27/20 16:05	07/28/20 11:25	1
Total BTEX	ND		200	100	ug/Kg		07/27/20 16:05	07/28/20 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*50 - 149*	*07/27/20 16:05*	*07/28/20 11:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*	*07/27/20 16:05*	*07/28/20 11:25*	*1*
4-Bromofluorobenzene (Surr)	*95*		*49 - 148*	*07/27/20 16:05*	*07/28/20 11:25*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*	*07/27/20 16:05*	*07/28/20 11:25*	*1*

Lab Sample ID: LCS 480-542346/1-A
Matrix: Solid
Analysis Batch: 542382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 542346

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			2500	2780		ug/Kg		111	77 - 125		
Toluene			2500	2750		ug/Kg		110	75 - 124		
Ethylbenzene			2500	2700		ug/Kg		108	78 - 124		
m-Xylene & p-Xylene			2500	2700		ug/Kg		108	77 - 125		
o-Xylene			2500	2680		ug/Kg		107	80 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*99*		*53 - 146*
4-Bromofluorobenzene (Surr)	*97*		*49 - 148*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

DUSR Calculations Sheet
Water SVOCs

Sample ID: OBS-BB05D
TC: Acenaphthylene
ICAL Level: 5
Val File Result for TC: 1.8 ug/L

Ical Calc

Area TC	83426
Area IS	29528
Conc TC	0.2
Conc IS	0.2
RRF =	2.825318

1	3.1259
2	3.2474
3	2.8859
4	2.7721
5	2.8253
6	2.8583
7	
8	
9	
10	
Avg RRF =	2.952483
Std Dev =	0.189244
%RSD =	6.409661

Sample Calc

Area TC	4367
Area IS	26936
Conc IS	0.2
Avg RRF	2.952483

DF	20
IV	250
FV	2

Conc TC = 0.010982 µg/L
Final Conc = 1.757165

Final Conc = On column (ug/mL)*Final Volume (mL) / Initial Volume (mL) * 1000 (ml to L conversion) * DF

Notes:
Green = matched reported value
Red = did not match reported value

DUSR Calculations Sheet
Soil VOCs

Sample ID:	516008-SB92404		-20
TC:	Toluene	74	
ICAL Level:	3		
Val File Result for TC:	900	ug/kg	

Ical Calc

541609

Area TC	39132	**1**	1.5746
Area IS	301710	**2**	1.6718
		3	1.6213
Conc TC	2	**4**	1.6997
Conc IS	25	**5**	1.795
		6	1.8181
RRF =	1.621259	**7**	1.8986
		8	1.7961
		9	
		10	
		Avg RRF =	1.7344
		Std Dev =	0.110128
		%RSD =	6.349625

Sample Calc

Area TC	127105	**DF**	4		
Area IS	333140	**Sample Wt (g)**	6.555	**(kg)**	0.006555
		Soil MeOH Ext FV (mL)	5	**(L)**	0.005
Conc IS	25	**MeOH Inj (uL)**	100	**(mL)**	0.1
Avg RRF	1.7344	**TS**	96.8		0.968
		mL H2O	5	**(L)**	0.005

On Column Conc TC =	5.499543	µg/L
Final Conc =	866.7195	ug/kg

Notes:
Green = matched reported value
Red = did not match reported value

DUSR Calculations Sheet
SVOC Soils

Sample ID: 516008-SB91610 -15
TC: Acenaphthylene
ICAL Level: 2
Val File Result for TC: 580

Ical Calc

541230

Area TC	64816	**1**	1.4753
Area IS	298603	**2**	1.7365
		3	1.7574
Conc TC	5	**4**	1.7079
Conc IS	40	**5**	1.8146
		6	1.7286
RRF =	1.736513	**7**	1.6951
		8	
		9	
		10	
		Avg RRF =	1.7022
		Std Dev =	0.107332
		%RSD =	6.305478

Sample Calc

Area TC	166294				
Area IS	262767	**TS**	0.847		
		DF	1		
Conc IS	40	**Sample Wt (g)**	30.12		
Avg RRF	1.7022	**FV (mL)**	1	(uL)	1000
		Inj Vol (uL)	1		
Conc TC (ng/uL) =	14.87151	**Final Conc (ug/kg)**	582.9305		

Notes:
Green = matched reported value
Red = did not match reported value